Zgodny z podstawą programową 2019

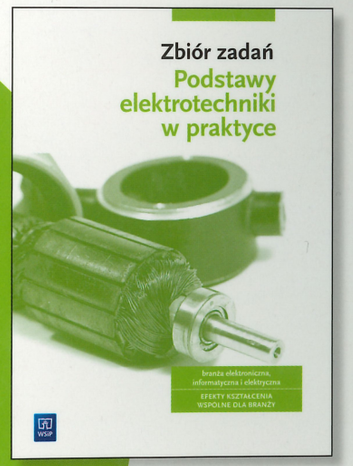
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- W każdym dziale teksty, dialogi i nagrania
- Słownictwo i zadania związane z rynkiem pracy, rozmową kwalifikacyjną, umową o pracę
- Pigułki gramatyczne wyjaśniające trudne zagadnienia
- Testy podsumowujące po działach
- Słownik angielsko-polski z transkrypcją fonetyczną

LISTENING

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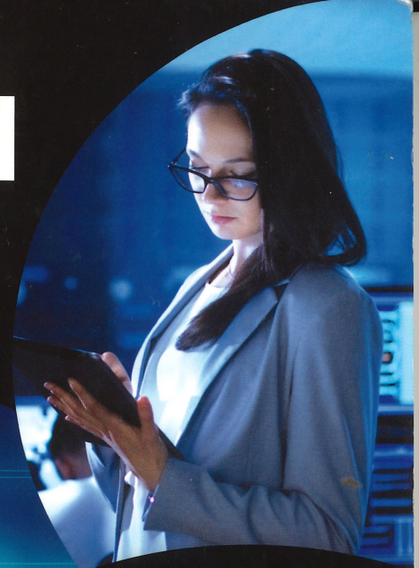
JĘZYK ANGIELSKI

Technik informatyk Technik programista

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LISTENING

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1 Everyday in IT



VOCABULARY ASSISTANT

data	dane
to solve	rozwiązywać
to carry out	przeprowadzać
research	badania
a skill	umiejętność
to stay up to date with sth	być na bieżąco
digital	cyfrowy
a profession	zawód
to be in demand	popyt na
to range from sth to sth	obejmować
to evolve	rozwijać się
knowledge	wiedza
relevant	istotny, dotyczący

to make sure	upewniać się
to ensure / ascertain	zapewniać
to pursue career in	robić karierę w
to prepare	przygotowywać
outdated	nieaktualny
a colleague	współpracownik
to resolve a technological issue	rozwiązać problem techniczny
a query	zapytanie
to deal with	zajmować się
to prevent from	powstrzymać przed
to alleviate	łagodzić
efficiently	wydajnie
to expect	oczekiwać
a mindset	sposób myślenia
a solution	rozwiązanie
to encourage	zachęcać
a benefit	zysk, korzyść
reliable	niezawodny
to oversee	nadzorować
maintenance	konserwacja, utrzymanie
to deploy	wdrożyć, użyć
to debug	wyszukiwać i usuwać usterki
a refinement	udoskonalenie
a major	kierunek studiów
PHP	interpretowany, skryptowy język programowania zaprojektowany do tworzenia stron internetowych
a stakeholder	akcjonariusz
to implement	wdrażać
to have a firm grasp of sth	mieć pojęcie o czymś
a requirement	wymóg
to be in charge of sth	zarządzać czymś
self-motivated	z silną motywacją wewnętrzną
have a flair for sth	mieć smykałkę do czegoś
to pair sth with sth	iść w parze z czymś
to provide	zapewniać, zaopatrywać
mentorship	doradztwo
a contributor	ofiarodawca
portfolio	teczka prac

to team up	działać w drużynie
a characteristic	cecha charakterystyczna
journey mapping	mapa podróży (wizualna interpretacja relacji między produktem a klientem w odniesieniu do czasu i przestrzeni)
scalable	skalowalny
to supervise	nadzorować
an ability	umiejętność
chip in	wtrącać się
quantitative data	dane ilościowe
to come up with	wpaść na pomysł
to confirm	potwierdzić
to identify	zidentyfikować
dental	stomatologiczny
tuition	czesne
an achievement	osiągnięcie



EXERCISE 1.

Discuss. Take notes.
Porozmawiaj na podane tematy. Zrób notatki.

1. What is your dream job?

2. What do you think IT specialists do?

3. Do you have any qualifications, talents or skills to do this job?

EXERCISE 2.

Read the text and decide if the statements 1–10 below are true or false.
Przeczytaj tekst i zdecyduj, czy zdania 1–10 są prawdziwe, czy fałszywe.

1. Business doesn't need IT specialists. T / F
2. Controlling your time and duties is crucial to work in IT. T / F
3. The IT industry is for people who don't like improving their computer skills. T / F
4. Speaking is more important than technical knowledge in IT. T / F
5. If you're quick and efficient, a career in the IT industry is for you. T / F
6. A Data Scientist needs to be good at Maths. T / F
7. An IT Manager should be a reliable person. T / F
8. A QA Tester deals with testing only. T / F
9. A Business Analyst can change customers needs into IT solutions. T / F
10. A Web Developer creates websites. T / F

What is it like working in IT?

Do you have a head for data, you are an organised person and can communicate clearly? You're highly organised, enjoy problem solving and have great communication skills. Furthermore, if you love to carry out research and stay up to date with digital trends. Well if so, working in IT might be a great career choice for you.

IT is a profession that's constantly in demand. After all, businesses are becoming increasingly dependent on technology and data. So, this means they're in constant need of IT specialists. This can range from Data Scientists and Cyber Security Analysts, to obtain and protect data. Alongside this, in today's world, it's very important to have a website or portfolio. Therefore, becoming a Website Designer, or learning how to program and code means you'll always find a business that needs a website built.

With the IT industry constantly evolving, the only way to keep your knowledge relevant is to make sure that you're continuously learning and updating your skills. So, if you're thinking of pursuing a career in the IT industry, you need to prepare to learn and adapt. After all, information can become outdated quickly.

Although working in IT relies heavily on your technical skills, one skill that's particularly useful is your communication. For example, if you work for a help desk, then you'll constantly speak to your colleagues, helping them to resolve any technological issues. This could range from addressing a small technical query, to dealing with frustrated employees who are experiencing major issues. In this case, you need to be able to communicate clearly. After all, the issue may prevent them from doing work, so alleviating any stress they may be experiencing is crucial. You'll need to explain and resolve the issue quickly and efficiently.



What sort of role can I expect to work in IT?

Data Scientist

In order to become a Data Scientist you'll need to be a good problem-solver. You'll also need to have both a strong analytical and statistical mind-set and great communication skills. Day to day responsibilities include working closely with your business to identify issues. You'll also use data to propose solutions for effective decision-making. In addition, you'll be responsible for creating reports that analyse how customers or clients work with the business. Here, you'll be responsible for finding algorithms to solve problems and encourage others to see the benefit of your findings.

IT Manager

An IT Manager is responsible for managing systems and ensuring that they operate securely and reliably. They oversee scheduled upgrades and maintenance whilst consulting with IT users to ascertain user needs. So, if you're analytical, have great communication skills and good use of technical knowledge then becoming an IT Manager could be the right career for you.

Quality Assurance/QA Tester

A QA tester works closely with development teams and ensures they deploy the code they write to a high standard. They test, debug and suggest refinements to ensure that applications work correctly before they're sent to the end user. If you have a high-level understanding of web technologies such as PHP and experience with writing automated tests, then you're definitely the right fit for a QA Tester.

Business Analyst

A Business Analyst builds strong relationships with business stakeholders. In this role, you need to be able to quickly understand ongoing business needs in regards to technology. A BA will work with these individuals to implement required new services and resolve issues affecting existing ones. If you have a firm grasp of modern software development methodologies, such as Agile, and a thorough understanding of how to interpret customer/ business needs and translate them into requirements, then a role as a Business Analyst might be right for you.

Web Developer

Web Developers are in charge of the development and design of a website. They need to be professional, self-motivated and organised. Having a creative flair can also be beneficial if you want to become a Web Developer. Pair this with knowledge in industry-leading graphics packages, including Photoshop and you're on your to becoming a Web Developer.

Adapted from Career guides by Jack Lloyd
https://www.cv-library.co.uk/career-advice/start/career-guides/what-is-it-like-working-in-it/ [30.06.2020].

EXERCISE 3.

Match the words 1–10 with the definitions A–J.
Połącz wyrazy 1–10 z definicjami A–J.

1. data ○	☐ A) to make something less painful, severe, or serious
2. to be in demand ○	☐ B) to have a natural talent or skill for sth
3. to resolve an issue ○	☐ C) to use sth
4. to alleviate ○	☐ D) to be responsible for sth
5. to have a flair for sth ○	☐ E) facts or information
6. to deploy ○	☐ F) a question
7. to prevent from ○	☐ G) to find a solution to a problem
8. to be in charge of sth ○	☐ H) a way of thinking
9. a query ○	☐ I) to stop sth from happening
10. a mind-set ○	☐ J) to be wanted by a lot of people

EXERCISE 4.

Fill in the blanks with the correct words from the above Vocabulary Assistant.
Uzupełnij luki odpowiednimi wyrazami ze słowniczka na początku rozdziału.

1. IT is a _____ that's constantly in _____.
2. Andrew loves to carry out _____ and stay _____ with digital trends.
3. If you're thinking of _____ a career in the IT industry, you need to _____ to learn and adapt.
4. This _____ may _____ them from a computer crash.
5. Data Scientist _____ with finding algorithms to _____ problems.
6. An IT Manager is _____ for managing systems and _____ that they operate securely and _____.
7. After they _____ this solution, the system should work properly.
8. They test, _____ and suggest _____ to _____ that applications work correctly before they're sent to the end user.
9. Stakeholders _____ great _____ from the company's development.
10. Self-motivation is a _____ in this job but your positive _____ is also important.
11. One of the _____ for this job is to _____ a portfolio.
12. An ability to _____ means you can work in a group.
13. My boss is an expert and offers us _____.
14. When we _____ test options we test them to _____ design solutions.
15. It is important to mention your _____ during a job interview.

EXERCISE 5.

Put the verbs in brackets in the correct form.
Wpisz w odpowiedniej formie czasowniki podane w nawiasach.

1. Help desk specialists _____ (enjoy) problem solving.
2. _____ (he/ have) a head for data?
3. People working in IT _____ (have) great communication skills.
4. Bob _____ (not/ be) an organised person.
5. Business _____ (not/ need) IT specialists.
6. What _____ (it/ mean)?
7. Your computer _____ (not/ seem) to work efficiently.
8. _____ (we, understand) each other?
9. Charles _____ (hate) getting up early in the morning.
10. Where _____ (you/ want) to go for lunch?

Grammar Support Reminder

PRESENT SIMPLE

SUBJECT	POSITIVE	NEGATIVE
I/you/we/they	go/work/study	do + not = don't go/work/study
She/he/it	goes/works/studies	do + es + not = doesn't go/work/study

QUESTION	USE	
Do I/you/we/they go/work/study?	1. Present habits	2. Permanent situations
Does she/he/it go/work/study?	3. States	4. General truths

TO BE

SUBJECT	POSITIVE	NEGATIVE	QUESTION
I	am	am + not = I'm not	Am I?
you/we/they	are	are + not = aren't	Are you/we/they?
She/he/it	is	is + not = isn't	Is she/he/it?

ADVERBS OF FREQUENCY

They go before the verb, but after the verb be.

always, usually, often, sometimes, rarely/ seldom, never	I sometimes study hard. They are never tired.

PHRASES

They are at the end of the sentence.

every, each, once, three times	He plays football every Friday.

STATIVE VERBS

They describe states not actions and are used with the Present Simple.

appear, be, believe, belong to, like, love, hate, have, include, know, need, prefer, see, seem, taste, think, understand, want

EXERCISE 6.

Change the sentences from Exercise 5 into negative, positive sentences or questions.
Zamień zdania z zadania 5. na przeczące, twierdzące lub pytające.

1. _____ .
2. _____ .
3. _____ .
4. _____ .
5. _____ .
6. _____ .
7. _____ .
8. _____ .
9. _____ .
10. _____ .

EXERCISE 7.

Write a short note about your habits and routines including adverbs of frequency. You may also use stative verbs.
Opisz swoje nawyki i czynności wykonywane regularnie. Użyj przysłówków częstotliwości. Wykorzystaj również czasowniki wyrażające stan.

Grammar Support Reminder

PRESENT CONTINUOUS

SUBJECT	POSITIVE	NEGATIVE	QUESTION
I	am ('m) working/ studying	am + not = I'm not working/studying	Am I working/ studying?
you/we/they	are ('re) working/ studying	are + not = aren't working/studying	Are you/we/they working/studying?
She/he/it	is ('s) working/ studying	is + not = isn't working/ studying	Is she/he/it working/ studying?

USE	EXAMPLES
Actions happening now	David is revising for a Physics test.
Temporary situations	We aren't going to school until the end of the summer break.
Annoying habits (with always)	You're always using the computer when I need it.

PHRASES

They are at the end of the sentence.

EXAMPLES	
now, right now, at the moment, today, this week/month/year	I'm talking via Skype now. They're living in Spain for the summer.

STATIVE VERBS VS. ACTION VERBS	EXAMPLES
Some state verbs can be used in the Present Continuous to express an action. Then their meaning changes.	Harry is seeing his boss on Monday mornings. (meeting) What are you thinking about? (analyzing) I think you're right. (opinion)
SENSE VERBS	see, hear, smell, taste
Use the Present Simple with them. But if they describe an action, use the Present Continuous.	You smell nice. She's smelling the flowers.
If you want to express them in the context of the moment of speaking use *can*.	I can hear some noise. Can you see me?

EXERCISE 8.

Put the verbs in brackets in the correct form (Present Simple / Present Continuous).
Wpisz w odpowiedniej formie czasowniki podane w nawiasach.

1. Take a raincoat. It _____ (pour) cats and dogs now.
2. IT specialists _____ (be) good at languages. They _____ (usually/ speak) several of them.
3. Let's move on. Everybody _____ (wait) for us.
4. '_____ (you/ hear) what they're saying?'
   'Yes, be quiet. I _____ (listen).
5. The River Vistula _____ (flow) into the Baltic Sea.
6. You _____ (always/ laugh) at your colleagues. You _____ (be) rude.
7. 'What _____ (you/ do)?'
   'I _____ (work) as an QA Tester, but this month I _____ (deal) with Web designing, too.
8. Gary _____ (get) ready. He _____ (look) for his glasses.
9. How _____ (pronounce) this word?
10. _____ (know) the difference between ROM and RAM?

EXERCISE 9.

Change the sentences from Exercise 8 into negative, positive sentences or questions.
Zamień zdania z zadania 8. na przeczące, twierdzące lub pytające.

1. _____.
   _____.
2. _____.
   _____.
3. _____.
   _____.
4. _____.
   _____.
5. _____.
   _____.
6. _____.
   _____.
7. _____.
   _____.
8. _____.
   _____.

9. _____ .
_____ .
10. _____ .
_____ .

EXERCISE 10.

Correct the sentences.
Popraw zdania.

1. It is seeming the water is boiling at 100°C?
_____
2. Look! The water boils. Turn it off, please.
_____
3. Do you see that woman who tries to explain her problem with her mobile?
_____
4. Be quiet, please. I'm not hearing what are they saying.
_____
5. Is the earth going around the moon?
_____
6. Processor speed is getting faster and faster every two years according to the Moore's Law.
_____
7. My parents are never going to work by bus.
_____
8. 'Let's go.' 'No, thanks. I stay at home.'
_____
9. Are you understanding what do I mean?
_____
10. I hate when I'm having a headache.
_____

EXERCISE 11.

Read this brochure and fill in the gaps with the words or phrases from the box in the correct form.
Przeczytaj broszurę i uzupełnij luki wyrazami z ramki w poprawnej formie.

maintain • provide • support • implement • share • increase • range requirement • grasp • design

Information Technology Specialist

Information technologists generally (1) _____, operate or (2) _____ technology products. Not limited to employment with technology companies, information technology (IT) specialists work with any businesses, agencies or organizations that use technology or manage large amounts of information. IT specialists usually (3) _____ similar services related to software, hardware, databases, Web resources, networks and enterprise systems.

Duties of an information technology specialists often include network management, software development and database administration. They may also provide technical (4) _____ to a business or an organization's employees and train non-technical workers on the business's information systems. Advanced specialists design systems and assess the effectiveness of technology resources already in use or new systems that they (5) _____.

Salary and Career Outlook

According to the U.S. Bureau of Labor Statistics (BLS), computer support specialists, who (6) _____ many responsibilities with IT specialists, expect a faster than average increase of 10% in job opportunities from 2018–2028. Similarly, network and systems administrators count on an average (7) _____ of 5% during the same time period. In May 2018, the BLS reported a median salary for network and computer systems administrators of $82,050 per year.

Requirements

Training for an IT specialist usually (8) _____ from a few months in a certificate program to a doctoral degree. Most information technology specialists complete a bachelor's degree program or higher, according to the U.S. Bureau of Labor Statistics (www.bls.gov). Majors that prepare a person for work as an IT specialist include:

- Computer science
- Information science
- Mathematics
- Engineering
- Statistics
- Operations research

Information technology specialists earn certification on particular systems or technologies used regularly. Cisco, Oracle and Microsoft offer certification for their IT products. According to the U.S. Census Bureau other (9) _____ often include training and experience in communication systems and networks, Internet and intranet development, data encryption and security (www.census.gov).

Employers expect IT specialists to have a firm (10) _____ of several programming languages, as well as experience dealing with a range of software and hardware types. Computer science, information science, engineering, and operation research are all majors that may lead to a career as an information technology specialist.

Adapted from https://study.com/articles/Information_Technology_Specialist_Job_Description_and_Requirements.html [13.07.2020]



EXERCISE 12.

Read the text again and answer the questions below. Provide fragments that support your opinions. Ask and answer the questions swapping with your partner.
Przeczytaj tekst ponownie i udziel odpowiedzi na poniższe pytania. Znajdź fragmenty, które potwierdzają twoje opinie. Zadawaj pytania i odpowiadaj na nie na zmianę z rozmówcą.

1. Where do IT specialists usually work?
2. What range of jobs is available for them?
3. What do they mostly deal with?
4. Who can expect a faster job opportunity increase?
5. How much time do you need to become a millionaire if you work as a computer specialist?
6. What three options can you choose from to get a job in IT?
7. How much time do you have to spend to be ready for the job?
8. How do companies help IT specialists with particular systems or technologies?
9. What minimum requirement do most employers expect from a computer specialist?
10. What does a candidate need to major in to get the job?



EXERCISE 13.

Listen to the introduction of a job offer and answer the questions.
Posłuchaj nagrania i odpowiedz na pytania.



1. What is the job offer?

_____

_____

2. What does the employer company deal with?

_____

_____

3. Who does the company help and how?

_____

_____

4. What kind of people are they searching for employment?

_____

_____

5. What is the company's location?

_____

_____

EXERCISE 14.

Listen to the whole advertisement and fill in the gaps.
Posłuchaj całego ogłoszenia i uzupełnij luki.

URStudy.com is looking for (1) _____ that can offer (2) _____ for a team of designers as well as be (3) _____ in an extremely fast-paced active environment.
Ideal candidate should have an outstanding (4) _____ and at least (5) _____ designing for web and mobile. Experience with (6) _____ from user research and personal creation, to information architecture, (7) _____ and process flows, to interaction design and prototyping.

Responsibilities

- Collaborate with engineers, product managers, executives, and other designers to build (8) _____ results to better the user experience.
- (9) _____ a high performing team of UI/UX designers and developers.
- Navigate a fast-paced Agile environment requiring independent self-direction with (10) _____.
- (11) _____ to the product roadmap with ideas for evolving and reuse the experience based on (12) _____ and user research.
- Work with the product owners and cross-functional teams to (13) _____ test options and use A/B testing to (14) _____ design solutions.

Requirements

- (15) _____ years of experience in UX/UI Design.
- Experience building rich, interactive prototypes or web applications using (16) _____.
- Ability to (17) _____ goals and requirements from light specifications.

Benefits

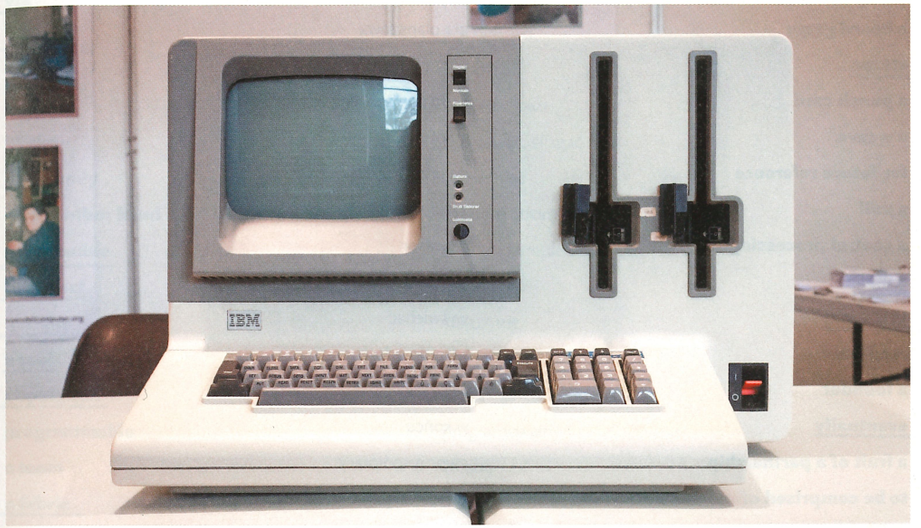
- Medical, (18) _____ and vision plans.
- (19) _____ compensation.
- Happy hours and many fun company events to celebrate (20) _____.

EXERCISE 15.

Discuss.
Porozmawiajcie na poniższe tematy.

1. Would you like to start your career working in this company? Why, why not?
2. What do you think of relocating to the USA to work in the Silicon Valley?
3. What is more important to you – job opportunities, earnings or family relationships? Why?
4. Do you think it is ethical to educate in one country and work elsewhere?
5. What makes you a potentially successful IT specialist?

2 Computer



VOCABULARY ASSISTANT

permanent	stały
an algorithm	algorytm
a computation	obliczenie
a bone	kość
an abacus	liczydło
a century	stulecie
to refer to sth	odnosić się do czegoś
a calculation	wyliczenie
a table / chart	tabela
to receive	otrzymać
exploration	odkrywanie
to respond to sth	zareagować, odpowiedzieć
multiplication	mnożenie

addition	dodawanie
an operand	argument operacji
a value	wartość
a stick	patyk
a rule	reguła
a principle	zasada
to divide	dzielić
a tax	podatek
gear driven	napędzany kołem zębatym
a board game	gra planszowa
steam	para (wodna)
a punch card	karta perforowana
a weave	splot
for future reference	na przyszłość
a mill	zakład produkcyjny
a central processing unit	procesor
a dial	tarcza
to display	wyświetlać
read-only	tylko do odczytu
a founder	założyciel
eventually	w końcu
a fruit of a partnership	owoc współpracy
to be comprised of	składać się z
a relay	przekaźnik
a clutch	sprzęgło
horsepower	koń mechaniczny
reliable	niezawodny
enormous	olbrzymi
to require	wymagać
an integrated circuit	obwód scalony
a postage stamp	znaczek pocztowy
Artificial Intelligence	sztuczna inteligencja
to socket	podłączyć do gniazdka
a circuit board	płytka obwodu drukowanego
core features	kluczowe funkcje
to retrieve	odzyskać
temporary	tymczasowy
an improvement	udoskonalenie
a pebble	kamyk

since	od
B.C. (Before Christ)	przed naszą erą
repetitive	powtarzalny
instead of	zamiast
a tide	pływ morski
to carry out	wykonywać
trade	handel
to invent	wynaleźć
via	przez, za pomocą
initially	początkowo
to carve	wyrzeźbić
ivory	kość słoniowa
to slide	przesuwać, ślizgać
to embody	ucieleśniać
on the other hand	z drugiej strony
to assemble	składać, kompletować
to collect	zbierać
ancient	starożytny
a tool	narzędzie
population	liczba ludności
programmable	programowalny
a loom	krosno
a fabric	materiał
a store	magazyn
a memory unit	blok pamięci
modern	nowoczesny, współczesny
an indicator	wskaźnik
to resemble	przypominać
to convert	przekształcać
to tabulate	ujmować w tabelę
a vacuum tube	lampa elektronowa / próżniowa
entirely	całkowicie
a switch	przełącznik
a rotating shaft	obracający się wał
a wire	kabel
a mainframe	komputer z wieloma terminalami
to contain	zawierać
to replace	wymieniać
assembly	montaż

a semiconductor	półprzewodnik
computing capability	moc obliczeniowa
tremendous	ogromny
to plug sth into sth	podłączyć coś do czegoś
an expansion card	karta rozszerzenia
to cache	przechowywać w pamięci podręcznej
a peripheral	urządzenie zewnętrzne

Grammar Support Reminder

Use Past Simple:

1. For single completed events in the past with a definite time (**in January 1614**, **yesterday**).
2. For habits or facts about the past with a time expression (**last week**, **long time ago**).
3. To present main events in a story from the past.
4. To talk about permanent situations in the past.

Verbs in the past are regular: *John Napier invented logarithms.*
or irregular: *Trade led to spectacular automation of machinery in the 18th century.*

(See the irregular verb list)

STATEMENTS		NEGATIVES		QUESTIONS	
I, you, he, she, it, we	invented		invent	I, you, he, she, it, we	invent?
I, he, she, it	saw	did + not = **didn't**	see	**Did** I, he, she, it	see?
we, you, they	knew		know	we, you, they	know?

The verb *to be*

STATEMENTS		NEGATIVES		QUESTIONS	
I, he, she, it	**was**	was + not = **wasn't**		**Was** I, he, she, it	
we, you, they	**were**	were + not = **weren't**		**Were** we, you, they	

Use Past Continuous:

1. To describe a continuing unfinished action in the past.
2. For two continuing actions happening at the same time or a continuing unfinished event interrupted by a sudden past action.
3. To describe background activities in a story from the past.
4. To present annoying habits in the past.
5. To talk about temporary situations in the past.

STATEMENTS		NEGATIVES		QUESTIONS	
I, he, she, it	**was reading**	was + not = **wasn't reading**		**Was** I, he, she, it	**reading?**
we, you, they	**were reading**	were + not = **weren't reading**		**Were** we, you, they	**reading?**

EXERCISE 1.

Circle the correct word or phrase.
Zakreśl właściwy wyraz lub zwrot.

1. John **met / was meeting** professor Blake at the conference in 1976.
2. I **listened / was listening** to the music when I **saw / was seeing** a lightning.
3. When **did they go / were they going** on holiday to Greece?
4. We **practiced / were practicing** English while **we stayed / were staying** in the UK.
5. At school Steve Jobs always **talked / were always talking** during the lessons.

EXERCISE 2.

Put the verbs in the correct form.
Wpisz w odpowiedniej formie czasowniki podane w nawiasach.

1. I _____ (not / enjoy) playing computer games as a kid.
2. Charles Babbage _____ (carry out) lots of experiments until he _____ (come up) with an idea for an invention.
3. _____ (Bill Gates, own) a company when he _____ (be) a teenager?
4. Gina _____ (keep) her promise and _____ (get up) early to study more last month.
5. I _____ (wait) at the bus stop when it _____ (rain). Then, I _____ (decide) to walk home when it _____ (stop) .

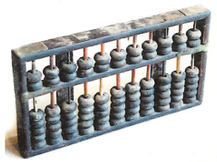
EXERCISE 3.

Think about a situation in the past. Tell your partner the story using both the Past Simple and Continuous.
Pomyśl o sytuacji sprzed lat. Opowiedz tę historię osobie z pary. Użyj czasów Past Simple i Past Continuous.

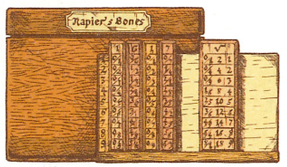
EXERCISE 4.

Listen and read the beginning of the article about a brief history of computers. Choose the correct answers a–d) in questions 1–6 or fill in the blanks.
Posłuchaj opowieści i przeczytaj początek artykułu o historii komputerów. Wybierz właściwą odpowiedź a–d w pytaniach 1–6 bądź wpisz ją w wolne pola.

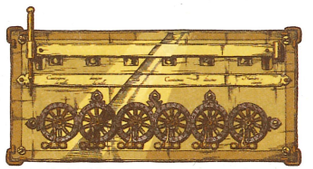
Believe it or not, we have been using the computers for longer than just the past 50 years. However, the beginnings of the ideas, algorithms and the improvements in computations started as long ago as in the early cultures. Simple counting was done in practical ways with stones, pebbles and bones or the abacus since the 6th century B.C.



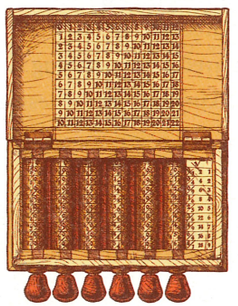
Abacus



Napier's bones



Pascaline



Napier's bones, cylindrical form

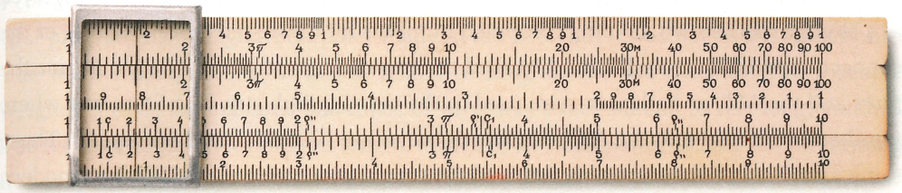


Schickards calculating machine

In the 16th century the first computers were people! A *Computer* was originally a job title. It referred to those human beings, mostly women, whose job was to do the repetitive calculations needed to compute such things as navigational tables, tide charts, and planetary positions for astronomical almanacs. The verb *to compute* is a synonym for the verb *to calculate*. So, mechanical and electronic computers received this name because

they did the work that people had carried out before. Natural exploration of the world and trading created the need for even more correct calculations. Then, in 1614 a Scotsman named John Napier responded to this need and invented logarithms based on a technology that performs multiplication via addition. Initially, he got the logarithm of each operand from a printed table, but Napier also invented an alternative to tables. He carved the logarithm values on ivory sticks which we now call Napier's Bones.

This idea led directly to the slide rule, first developed by Edmund Gunther and later in 1632 embodied by an Englishman William Oughtred in form of an early *analog computer* that used the principles of logarithms to multiply and divide. Blaise Pascal, a Frenchman on the other hand, assembled *Pascaline* for his father to help him with tax collecting. It was a gear driven one-function calculator (it could only add).



A slide rule

1. How old is the idea of a computer?
   a) 50 years
   b) 500 years
   c) more
   d) none of them
2. What did people use to count with before calculators?
   a) _____
   b) _____
   c) _____
   d) _____
3. What is an abacus?
   a) a smoking accessory
   b) an ancient board game
   c) a toy
   d) a counting tool
4. In the 16th century *a computer* was
   a) a job
   b) an animal
   c) a legendary creature
   d) a human being
5. John Napier invented logarithms in 1614, a mathematical method based on:
   a) printed tables
   b) ivory sticks
   c) multiplication via addition
   d) bones
6. What is *a slide rule*?
   a) a classroom accessory
   b) an early analog computer
   c) a mathematical rule
   d) a navigational tool

EXERCISE 5.

Continue reading the article and answer the questions.
Przeczytaj artykuł do końca i odpowiedz na pytania.

Trade, travel, and increase in population led to spectacular automation of machinery in the 18th and 19th century. In 1822 the English mathematician Charles Babbage presented a steam driven calculating machine in the size of a room, which he called the *Difference Engine*. This machine adopted logarithm tables, too. He transformed it into the *Analytic Engine*. This device, then as large as a house and powered by 6 steam engines, had more of general purpose as it was programmable, thanks to the punched card technology of the Frenchman Joseph Marie Jacquard. In 1801 he invented a power loom that could base its weave (and hence the design on the fabric) upon a pattern automatically read from punched wooden cards. Soon after Babbage realized that punched paper could be employed as a storage mechanism, holding computed numbers for future reference. Because of the connection to the Jacquard loom, he called the two main parts of his *Analytic Engine* the *Store* and the *Mill*, as both terms are used in the weaving industry. The Store was where numbers were held and the Mill was where they were "woven" into new results. These same parts are called the memory unit and the central processing unit (CPU) in a modern computer.

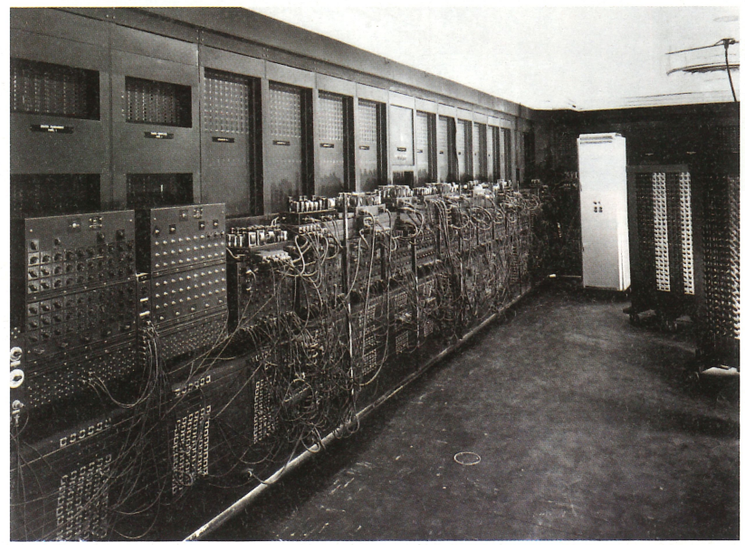
Yet another invention, by Herman Hollerith, known as the *Hollerith desk*, included a card reader which sensed the holes in the cards, a gear driven mechanism which could count, and a large wall of dial indicators to display the results of the count.



Hollerith desk

The patterns on Jacquard's cards were determined when a tapestry was designed and then were not changed. This resembles a modern read-only form of information storage. Hollerith came up with the idea to convert punched cards to what we call a read/write technology today. He is also a founder of the Tabulating Machine Company, which, after a few buyouts, eventually became International Business Machines, IBM as we know it today.

The war time required complicated codes for artillery firing or communication of strategies. This demand led to electromechanical computers. They still employed Babbage's punched card but included magnetic storage and vacuum tubes to input data. First generation computers (1940–1956) – *Eniac, Edvac, Univac* – were huge in size and very expensive to maintain. The one, we could call an early success was the Harvard *Mark I* computer. It was a fruit of a partnership between Harvard and IBM in 1944. This was the first programmable digital computer made in the U.S., but it was not entirely electronic. The *Mark I* comprised of switches, relays, rotating shafts, and clutches. The machine weighed 5 tons, incorporated 500 miles of wire, was 8 feet tall and 51 feet long, and had a 50 feet rotating shaft running its length, turned by a 5 horsepower electric motor, running non-stop for 15 years.



Eniac computer

However, the call for increased speed, precision, immediate results initiated the design of stored program digital computer architecture with CPU and memory to hold instructions together with data. The second generation computers (1956–1963) had transistors instead of vacuum tubes, which made them more reliable, much cheaper, smaller and easier to

maintain. Above all, they had more computing power. The example of the *IBM Stretch* computer of 1959 – it was 33 feet long to hold the 150,000 transistors it contained. These transistors were enormously smaller than the vacuum tubes they replaced, but they were still individual elements requiring individual assembly.



IBM Stretch 7030 computer

By the early 1980s this many transistors could be at the same time fabricated on an integrated circuit, which leads us to the third generation computers (1964–1971). They included integrated circuits. The transistors were miniaturised and kept on silicon chips called the semiconductors. They significantly increased the speed and efficiency of computers. However, the fourth generation computers (1971–2010) used microprocessors or chips. The microprocessors were smaller than a postage stamp and had tremendous computing capabilities. The last, the fifth generation computers (2010–the present) have continued this trend and used the concept of Artificial Intelligence. They come in different forms as a desktop, a notebook or a laptop, a palmtop, a server, a mainframe and a super computer.

Adapted from: https://www.it.iitb.ac.in/; http://www.computersciencelab.com/ComputerHistory/History.htm;
https://interestingengineering.com/a-brief-history-of-computing-and-the-web-from-17th-century-computers-to-todays-digital-empires [13.07.2020].

1. What sparkled spectacular automation of machinery in the 18th and 19th century?

2. What were the differences between the Difference Engine and the Analytic Engine?

3. What did Joseph Marie Jacquard invent?

4. What was the *Store* and the *Mill* in the *Analytic Engine*?

5. What did the *Hollerith desk* include?

6. What did Hollerith establish?

7. What was new in electromechanical computers?

8. What was *Mark I* and what made it special?

9. How many computer generations are there?

10. What makes them different?



EXERCISE 6.

Check your answers and discuss the questions above with your partner.
Sprawdź poprawność swoich odpowiedzi i omów je z osobą z pary.

EXERCISE 7.

Fill in the blanks with the correct words from the Vocabulary Assistant.
Uzupełnij luki właściwymi wyrazami ze słowniczka na początku rozdziału.

1. Simple counting was done in practical ways with _____, _____ and _____ or the _____ since the 6th century B.C.
2. A *Computer* was originally a _____ .
3. The verb _____ is a synonym for the verb _____ .
4. Then, in 1614 a Scotsman named John Napier _____ to this need.
5. An early analog computer that used the principles of logarithms to _____ and _____ .



EXERCISE 8.

Discuss the sentences below with your partner and explain the false information.
Omów poniższe zdania z osobą z pary i sprostuj nieprawdziwe informacje.

1. An invention of a postage stamp improved computing capability. T / F
2. Herman Hollerith founded IBM. T / F
3. The Analytic Engine included the memory unit and the CPU. T / F
4. The first generation computers were entirely mechanical. T / F
5. Vacuum tubes were more reliable than the transistors. T / F



EXERCISE 9.

Discuss with your partner.
Porozmawiaj z osobą z pary na temat poniższych pytań.

1. What does a computer mean for you?
2. How old were you when you used a computer for the first time?
3. What do you use computers for?
4. Do you keep up to date with the latest computer technology?
5. Do you feel addicted to a computer?

EXERCISE 10.

Answer the questions below.
Odpowiedz na poniższe pytania.

1. Which main components does a computer comprise of?

2. Have you ever opened a computer case to see what is inside? Why?

3. Would you like to assemble a PC on your own? Why?

EXERCISE 11.

Read the text to find out how to get ready to assemble a PC.
Przeczytaj tekst i dowiedz się, jak się przygotować do samodzielnego złożenia komputera.

How to get ready to assemble a better PC for your needs?

You'll need a motherboard, a CPU, storage, memory, a power supply, a case, and a monitor. The only thing you probably don't need if you mostly use this PC for home office tasks is a GPU, but it's necessary for photo or video editing and gaming. No matter what your experience level is, you should use a website that lets you build your PC piece by piece right there on the website, making sure all your hardware will work together. For example: https://pcpartpicker.com/.

The Processor

Central Processing Unit sockets directly into the motherboard, and it's the most important component of your PC. Better CPUs can perform more tasks at once, and perform them faster. For example: Intel Core i7-10700K 8-Core 3.8 GHz or AMD Ryzen 3 3200G 4-Core 3.6 GHz.

The Motherboard

Every other component plugs into this circuit board. The motherboard connects all the other components to one another, and is the physical base upon which you build everything else. It contains a lot of your machine's core features, like the number of USB ports, the number of expansion cards you can put in (such as video, sound, and Wi-Fi), and also determines how big your computer will be. For example: MSI MPG Z490 9 (for Intel processors) or ASUS ROG Strix B450-F (for an AMD processor).

The Case

The case holds all of your computer's parts together.

The RAM

RAM, or Random Access Memory, is like our computer's short-term memory. It caches data your computer needs quick access to and helps your programs run faster, also at one time. The more programs you run at once, the more you'll want a computer with. For example: G.Skill Ripjaws V Series 32 GB 288-Pin RAM.

The Graphics Card

Some motherboards come with a GPU already integrated, which is enough to manage your desktop. If you're up to playing games on this PC, you'll need a graphics processing unit, or GPU (also called a graphics card). This is a specialized processor that's designed and optimized for handling primarily visual data like the graphics in games. It's also used in video and photo editing, and other graphics-intensive tasks. For example: MSI GeForce GTX 1660 (for gaming on a budget), MSI Radeon RX 570 (for AMD fans) or MSI GeForce RTX 2060 (for high-end gaming).

The Hard Drive(s) (Storage)

Your hard drives are what store all of your data, ranging from your operating system to your documents, music, and movies. If the RAM is your computer's short-term memory, your hard drive is the long-term memory. The kind of hard drive you choose will be determined mainly by how much data you need to store, but certain kinds of hard drives (like solid state drives) can also affect your computer's speed.

The Optical Drive

An optical drive, more commonly known as a CD or DVD drive, is what you'll use to read CDs, DVDs or Blu-Ray discs.

The Power Supply

The power supply directs electricity to the other components in your machine. Generally speaking, if you have a high performance computer with a fast processor, a graphics card, and a few hard drives, you'll need a higher wattage power supply. For example: EVGA SuperNOVA 750 GA Power Supply.

Other Parts to Consider

While these are the main parts almost every computer has, you probably have other needs. For example, if you're going to use Wi-Fi instead of wired Ethernet for accessing the internet, you'll probably need to buy a Wi-Fi card. If you take a lot of photos, it's probably worth getting an internal SD card reader for easily loading your photos onto your computer. If you have any Bluetooth peripherals, you might consider an internal Bluetooth card, and if you video chat with friends, you'll want to pick up a webcam. And of course you'll need a monitor, a keyboard and a mouse.

Operating System

When you build a PC, you don't automatically have Windows included. You'll have to buy a license from Microsoft or another vendor and make a USB key to install it.

Adapted from https://www.wired.com/story/how-to-build-a-pc/ [13.07.2020].

EXERCISE 12.

Read the text from Exercise 11 again and answer the questions below.
Przeczytaj ponownie tekst z zadania 11. i odpowiedz na pytania.

1. Why is a CPU so important?

2. Why can't a PC function without a motherboard?

3. Why is more RAM better than less?

4. What do you need a GPU for?

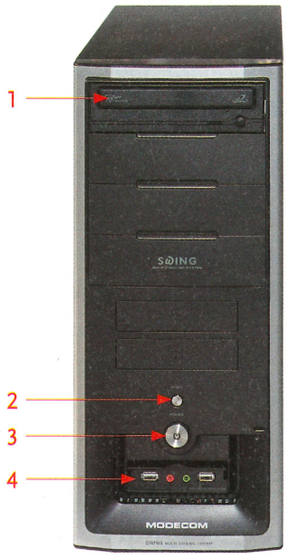
5. What is the difference between a Wi-Fi card and a Bluetooth card?

EXERCISE 13.

Match the things in pictures with the correct items.
Dopasuj właściwe nazwy elementów komputera do pokazanych na zdjęciach części.

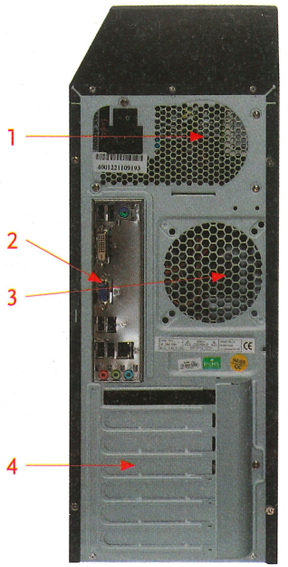
A. Audio slots • D-SUB port • DVI port • Extension slots at the front panel (2 USB slots, microphone and headphones slots) • LAN port • Optical driver • Power button • Power supply unit • PS/2 port • Rear fan • Rear panel • Reset button • USB slots

Central Unit (front)

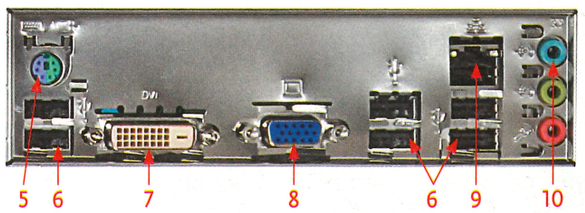


1. _____
2. _____
3. _____
4. _____

Central Unit (back)



1. _____
2. _____
3. _____
4. _____

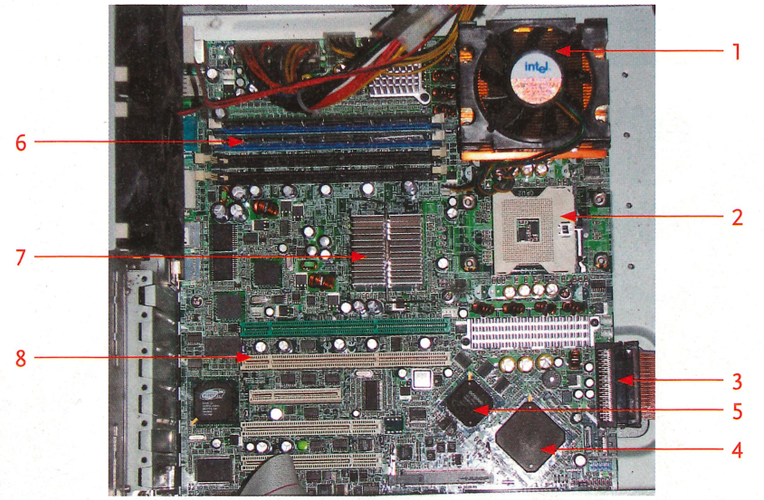


5. _____
6. _____
7. _____

8. _____
9. _____
10. _____

B. 24-pin power connector • 64 PCI slots • ATA connector • BTX Standard Motherboard • Integrated interfaces • Intel processor LGA socket • Northbridge (× 2) • PCI Express x1 port/slot • PCI Express x16 port/slot • PCI port • Processor • Processor Power Supply • RAM slots (× 2) • S-ATA connectors • SCSI Controller • SCSI Interface • Second Processor Socket • Southbridge (× 2)

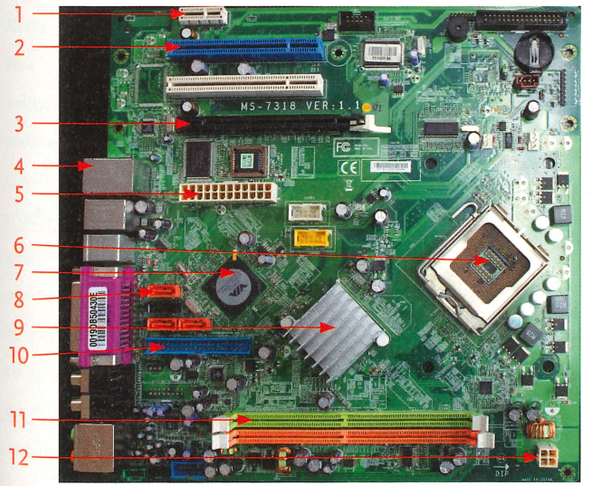
WTX Standard Motherboard



1. _____
2. _____
3. _____
4. _____

5. _____
6. _____
7. _____
8. _____

BTX Standard Motherboard



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

3 Computer and Internet systems



VOCABULARY ASSISTANT

sceptical	sceptyczny
data recovery	odzyskiwanie danych
a target	cel
a capability	zdolność
a plus	zaleta
bright	jasny
additional	dodatkowy
nearly	niemal
almost	prawie
chess	szachy
hassle	kłopot

IoT	Internet rzeczy
to deploy	wykorzystywać
a browser	przeglądarka
computer science	informatyka
to anticipate	przewidywać
to recognize	rozpoznawać
to attempt	próbować
available	dostępny
in order to	w celu
a task	zadanie
to rely on sth	polegać na czymś
recognition	rozpoznanie
major	główny
manageable	dający się kontrolować
to receive	otrzymać
to examine	sprawdzić
instant	natychmiastowy
to transfer	przekazać
a button	przycisk
thunder	grzmot
equipment	sprzęt
luggage	bagaż
permission	pozwolenie
traffic	ruch uliczny
little	mało
few	niewiele
unique	wyjątkowy
existence	istnienie
a collection	zbiór
a billion	miliard
progress	postęp
obvious	oczywisty
to have a grip on sth	mieć kontrolę nad czymś
to appeal to	pociągać, podobać się
an advantage	korzyść
sensitive	wrażliwy

plenty of	mnóstwo
a matrix	matryca
a connection	połączenie
useless	bezużyteczny
a predecessor	poprzednik
hypertext	hipertekst
a site	strona internetowa
IP (Internet Protocol)	protokół internetowy
to transition into sth	zmieniać się w
enormous	olbrzymi
a device	urządzenie
to copy / paste	kopiować / wklejać
an entity	podmiot, jednostka
to complete	uzupełniać
a suite	pakiet
to switch	przełączać, przerzucać
to distinguish	rozróżniać
fiber optics	technika światłowodowa
to assign	przypisywać
an Internet service provider	dostawca internetu
destination	cel
to cross-reference	zaopatrzyć odnośnikiem
related	powiązany
powder	puder
lightning	błyskawica
rubbish	śmieci
accommodation	zakwaterowanie
research	badania
progress	postęp
a little	trochę
a few	kilka
to identify	identyfikować
to make a snowman	ulepić bałwana
within	wewnątrz
a trillion	bilion

EXERCISE 1.

Discuss.
Porozmawiajcie na temat poniższych pytań.

1. What do you think makes Apple products so desirable?

_____

_____

2. Would you prefer a Mac or a PC? Why/ why not?

_____

_____

EXERCISE 2.

Read the questions below. Listen to the dialogue and answer them.
Posłuchaj dialogu i odpowiedz na pytania.

1. Does a customer have a specific choice of a computer type?

_____

_____

2. Which one is the customer more sceptical about? Why?

_____

_____

3. Which one would you choose? Why?

_____

_____

EXERCISE 3.

Listen to the dialogue again. Fill in the gaps in the fragments of the conversation.
Posłuchaj dialogu ponownie. Uzupełnij luki we fragmentach rozmowy.

Customer: Does it matter? Is there any difference between them?
Shop assistant: Well, the most obvious difference between Macs and PCs is (1) _____ .
C: Are there any real advantages of a Mac?
Sa: Speaking of (2) _____ of Macs, Apple laptops and desktops are famously low-maintenance and not often a target for hackers.

(3) _____ really got its start on Macs, and the system still has a pretty tight grip on the artistic community. Even (4) _____ was born on Macs. The company is known for bright and colorful displays, (5) _____ keyboards, and highly sensitive (6) _____ .

C: I see. What about the disadvantages?

Sa: There aren't any Macs with (7) _____ , (8) _____ or (9) _____ capabilities.

C: Fine. Let's talk about pluses in PC's.

Sa: PCs are highly (10) _____ . Many of the well-known manufacturers (Dell, Lenovo, HP, etc.) offer many 11) _____ , such as additional ports, CPUs, GPUs and plenty of accessories.

C: All right. Do I have any alternatives?

Sa: There are OS alternatives that can run on nearly any machine, and several (12) _____ business (13) _____ are currently on the market. The Linux-based (14) _____ is a popular open-source software OS that appeals to people who don't like Windows or Mac but also don't want the hassle of running Linux with no (15) _____ .

EXERCISE 4.

Choose the correct option.
Wybierz właściwą odpowiedź.

1. *Is / are* the news good?
2. Ergonomic / ergonomics *is / are* important in design.
3. Athens *is / are* a popular place for holiday.
4. He doesn't want to play a game of chess / chesses.
5. Flu is a serious illness for many older *people / peoples.*
6. What do you think of company new office *software / softwares?*
7. Our classroom is on the top *floor / floors.*
8. Display has got a *matrix / matrixes.*
9. Local police *is / are* looking for stolen peripherals.
10. We need a data *recovery / recoveries* system.

Grammar Support Reminder

NOUNS

COUNTABLE	UNCOUNTABLE
1. You can count them. *One computer with two disks.*	1. You can't count them. *The Internet.*
2. They are in singular with an article (a/an/the): *a motherboard, an item, the 6th century* or plural form *four cores, three facilities* (without a/an but with -s/es plural ending).	2. They are always in singular. *software* *electricity* *diagnostics*
3. They take a singular or plural verb form. *One apple a day keeps doctors away.*	3. They take a singular verb form *Mathematics is easy.* *Software is universal.*

Some examples of uncountable nouns:

Ideas and experiences:	advice, information, progress, luck, fun, work
Materials and substances:	water, rice, powder, gold, milk, plastic, paste
Weather words:	weather, thunder, lightning, rain, snow
Names for groups or collections of things:	furniture, equipment, rubbish, luggage
Other common uncountable nouns include:	accommodation, homework, knowledge, money, permission, research, traffic

USE:

Some (positives) any (negatives and questions) a lot of = lots of (positives)	with countable and uncountable nouns
a lot of = many/ much	
(a) few (positives) ≠ many (negatives)	with countable nouns
(a) little (positives) ≠ much (negatives)	with uncountable nouns

REMEMBER	*Economics, news, Athens*	are not plural.
	The Police, people, the USA	are not singular.

EXERCISE 5.

Circle a noun in the correct form (singular or plural).
Zakreśl rzeczownik we właściwej formie (liczba pojedyncza lub mnoga).



What is an (1) *OS / OSs*?

Operating (2) *system / systems* are the most important (3) *software / softwares* that runs on a (4) *computer / computers*. It manages the computer's (5) *memory / memories* and (6) *process / processes*, as well as all of its software and (7) *hardware / hardwares*. It also allows you to communicate with the (8) *computer / computers* without knowing how to use the computer's (9) *language / languages*. Without an operating system, a computer is a useless (10) *device / devices*.

EXERCISE 6.

Complete the sentences with *much*, *many* or *a lot of*.
Uzupełnij zdania. Wpisz *much*, *many* lub *a lot of*.

1. There are too _____ chairs in this room.
2. Let's go to the cinema. – I can't. I've got too _____ homework to do.
3. How _____ power does it need?
4. Why is Henry so tired? – Oh, he did _____ work yesterday.
5. How _____ workstations are there in your class?

EXERCISE 7.

Complete the sentences with *some*, *any*, *few*, *a few*, *little* or *a little*.
Uzupełnij zdania. Wpisz *some*, *any*, *few*, *a few*, *little* lub *a little*.

1. There isn't _____ milk in the fridge. Go and buy _____
2. Are there _____ good articles on coding in this magazine?
3. I've got _____ thing for you.
4. This room is so dark. There's _____ thing wrong with the light.
5. We had _____ snow last winter. We could only make a snowman.
6. Joe has _____ friends and feels lonely very often.
7. I have _____ money but I can buy _____ food.
8. Could you buy _____ bottles of water for me, please?
9. There is still _____ sugar left.
10. We don't have _____ time. We must hurry.

EXERCISE 8.

Fill in the gaps.
Uzupełnij luki.

1. _____ people know as much about computers as Jack does.
2. _____ people in the city ride a bike to work because it's faster.
3. Would you like to work as _____ Web developer?
4. There isn't _____ to change in the CPU design.
5. We can replace _____ equipment in the office.

EXERCISE 9.

Read the introduction to the *Brief history of the Internet* and fill in the gaps in the text with one of the words from the box.
Przeczytaj wstęp do *Krótkiej historii Internetu* i uzupełnij luki wyrazami z ramki.

IoT • hypertext • deployed • protocol • sites • predecessor • browser • IP • computer science • networks

The Internet, or simply "the Net", is a network of (1) _____ in which users can get information from any other computer. The ARPANet, the (2) _____ of the Internet, was first (3) _____ in 1969. In 1983, the ARPANet transitioned into using the TCP/IP open networking (4) _____ suite and in 1985, the National Science Foundation Network (NSFN) designed the network to connect university (5) _____ departments around the country.
Communications over the Internet greatly improved in 1989 when the (6) _____ transfer protocol (HTTP) was created, giving different computer platforms the ability to connect to the same Internet (7) _____ . In 1993, the Mosaic Web (8) _____ was created. The Internet has continued to grow and evolve over the years of its existence. IPv6, for example, was designed to anticipate enormous future expansion in the number of available (9) _____ addresses. In a related development, the (10) _____ is the growing environment in which almost any entity or object can be provided with a unique identified (UID) and the ability to transfer data automatically over the Internet.

EXERCISE 10.

Discuss in pairs.
Porozmawiajcie w parach na tematy poruszone w pytaniach.

1. What do you do on the Internet?

_____

_____

2. Which websites do you like visiting? Why?

3. Which browser is the best? Why?

4. How does the Internet work?

5. What is the difference between the World Wide Web and the Internet?

EXERCISE 11.

Read the text below and check your answer to the last two questions. Then, decide if the statements below are true (T) or false (F). Correct the false ones.
Przeczytaj tekst poniżej i sprawdź swoje odpowiedzi na ostatnie dwa pytania. Następnie zdecyduj czy zdania 1–10 są prawdziwe, czy fałszywe. Popraw te fałszywe.

1. The Internet has a set of major components. T / F
2. The protocols, such as the TCP/IP suite, present sets of rules that devices can follow in order to complete tasks. T / F
3. The protocols are also responsible for translating the alphabetic text of a message into sound signals. T / F
4. Hardware also includes satellites, radios, cell phone towers, routers and servers. T / F
5. Devices such as computers, smartphones and laptops are customers. T / F
6. Information transfer from one device to another relies on socket switching. T / F
7. Each computer connected to the Internet gets a unique IP address that allows recognition of the device. T / F
8. The Internet is a global connection of networks while the Web is a collection of information that can be accessed using the Internet. T / F
9. Only words or phrases can be hyperlinks. T / F
10. Hypertext includes hyperlinks. T / F

How the Internet works

Scientifically speaking, the Internet uses a portion of the total resources of the currently existing public telecommunication networks. Technically, what distinguishes the Internet is its use of a set of protocols called Transmission Control Protocol/Internet Protocol (TCP/IP). The Internet has two major components: network protocols and hardware. The protocols, such as the TCP/IP suite, present sets of rules that devices must follow in order to complete tasks. The protocols are also responsible for translating the alphabetic text of a message into electronic signals that can be transmitted over the Internet, and then back again into a text we can read.

Hardware, the second major component of the Internet, includes everything from the computer or smartphone that is used to access the Internet to the cables that carry information from one device to another. Other types of hardware include satellites, radios, cell phone towers, routers and servers. These types of hardware are the connections within the network. Devices such as computers, smartphones and laptops are end points, or clients, while the machines that store the information are the servers. The transmission lines that exchange the data can either be wireless signals from satellites or 4G/5G and cell phone towers, or physical lines, such as cables and fiber optics. The process of transferring information from once device to another relies on packet switching. Each computer connected to the Internet is assigned a unique IP address that allows the device to be recognized. When one device attempts to send a message to another device, the data is sent over the Internet in the form of manageable packets. Each packet is assigned a port number that will connect it to its endpoint. The message will then be sent over the Internet where it is received by the Internet service provider's (ISP) router. The router will examine the destination address assigned to each packet and determine where to send it. Eventually, the packet reaches the client. During this process, the routing data, the port number and IP address, is stripped from the packet. This allows the data to be translated back into alphabetic text and to complete the transmission process.

Difference between the World Wide Web and the Internet

The key difference between the Internet and the World Wide Web (WWW or the Web) is that the Internet is a global connection of networks while the Web is a collection of information that can be accessed using the Internet. In other words, the Internet is the infrastructure and the Web is a service on top. The Web is the most widely used part of the Internet, also thanks to the hypertext, a method of instant cross-referencing. In most Web sites, certain words or phrases appear in text of a different color than the rest; often this text is also underlined. When a user selects one of these words or phrases, they will be transferred to the related site or page. Buttons, images, or portions of images are also used as hyperlinks. The Web provides access to billions of pages of information. Web browsing is done through a Web browser, the most popular of which are Google Chrome, Firefox and Internet Explorer.

Adapted from: https://searchwindevelopment.techtarget.com/definition/Internet [31.07.2020].

Self-check 1

A. Put the verb in the correct form of the Present Simple or Continuous.
Wpisz we właściwej formie czasowniki podane w nawiasach.

1. I _____ (feel) self-motivated. I _____ (install) new computer equipment next week.
2. They shouldn't work in such a lightning storm. It _____ (often / lead) to electric shock.
3. 'How _____ (you/ do) at school?' 'Fine, but I _____ (not / develop) my programming skills anymore.
4. Teachers _____ (give) us more theoretical homework than we _____ (need), I guess.
5. In an IT classroom students _____ (switch on) the computers only when a teacher _____ (ask) them to do it.
6. When _____ (you / press) this button, the printer _____ (stop) working.
7. If your laptop _____ (have) a touch screen, you (not/ have to) use a mouse.
8. What _____ (you / google) for?
9. _____ (not / click) this link!
10. Josh _____ (believe) he _____ (know) a lot about data recovery.

B. Fill in the gaps with the correct word / phrases. The first letter is given.
Uzupełnij luki właściwymi wyrazami lub wyrażeniami. Pierwsza litera jest podana.

1. One of the **r**_____ (wymagań) for this job is to **p**_____ (zaprezentować) a portfolio.
2. An ability to **t**_____ (pracować w zespole) means you can work in a group.
3. My boss is an expert and offers us **m**_____ (mentoring).
4. When we **c**_____ test options we test them to **c**_____ (tworzyć) design solutions.
5. It is important to mention your **a**_____ (zdolności umiejętności) during a job interview.

C. Fill in the blanks with a verb from the box in the Past Simple.
Uzupełnij luki czasownikami z ramki w czasie Past Simple.

attempt • read • replace • make • assemble • write • spend • buy • recover • lose • like

(próbować) (kupować) (odzyskać)

1. I _____ all data two hours ago.
2. You _____ more progress last year.
3. He _____ a post about fiber optics yesterday.
4. She _____ playing chess when she was 10.
5. We _____ an MS Office suite last year.
6. _____ to complete the task yesterday? (they)
7. I _____ all the morning on identifying the problem.
8. They _____ a memory unit some time ago.
9. _____ Internet connection again? (he)
10. We _____ the computer on the office desk.

D. Fill in the blanks with a correct form of the verbs in Past Simple or Past Continuous.
Wpisz w luki podane czasowniki w czasie Past Simple lub Past Continuous.

1. Alice _____ (hurt) herself while she _____ (carry out) the research).
2. I _____ (ask) my colleague to check all the devices while I _____ (debug) company data system.
3. Sally _____ (write) an email while Polly _____ (complete) the table.
4. Peter _____ (fall) asleep while he _____ (analyse) the calculations.
5. Bob _____ (provide) mentorship while we _____ (complete) the project.

E. Match the translation with the correct word.
Połącz wyrazy 1–5 z ich tłumaczeniami a–e.

1. to carry out ○	☐ a) wydajnie
2. research ○	☐ b) oczekiwać
3. to alleviate ○	☐ c) przeprowadzać
4. efficiently ○	☐ d) badania
5. to expect ○	☐ e) łagodzić

F. Mark the following nouns countable (C), uncountable (U) or both (B).
Określ, czy podane rzeczowniki są policzalne (C), niepoliczalne (U), czy mogą występować w obu formach (B).

1. skill _____
2. research _____
3. mindset _____
4. data _____
5. progress _____
6. equipment _____
7. assembly _____
8. mentorship _____
9. maintenance _____
10. circuit board _____
11. light _____
12. device _____
13. population _____
14. steam _____
15. profession _____
16. Artificial Intelligence _____
17. computation _____
18. baggage _____
19. improvement _____
20. existence _____

G. Choose the correct answer.
Wybierz właściwą odpowiedź.

1. What is an abacus?

a) a smoking accessory
b) an ancient board game
c) a toy
d) a counting tool

2. In the 16th century *a computer* was

a) a job
b) an animal
c) a legendary creature
d) a human being

H. Fill in the gaps with *some*, *any*, *much* or *many*.
Uzupełnij luki wyrazami *some*, *any*, *much* lub *many*.

1. A: I'd like _____ refinements in my computer.
B: Of course. How _____ improvements would you like to implement?
A: Are there _____ CPUs matching my computer's motherboard?
B: Certainly. How _____ cores would you like it to have?
A: As _____ as possible.

2. A: I don't know _____ Web developers without a job.
B: How _____ projects did you finish?
A: _____ (not). Are there _____ unique requirements?
B: Certainly. How _____ do you want to work?
A: _____ (not).

I. Circle the correct sentence.
Zakreśl poprawne zdanie.

1. Is there any progress?
a) Yes, there is.
b) Yes, there are.
2. a) Would you like a data?
b) Would you like some data?
3. a) There isn't any equipment.
b) There aren't any equipment.
4. a) Can I get permission?
b) Can I get some permissions?
5. Are there any pluses?
a) No, there isn't.
b) No, there aren't.

F. Circle the odd word out.
Zakreśl słowo niepasujące do pozostałych.

1. skill – maintenance – colleague
2. refinement – achievement – tuition
3. benefit – indicator – mentorship
4. matrix – research – query
5. button – power – wire

4 Web design



VOCABULARY ASSISTANT

main	główny
a component	składnik
content	treść
to render	przedstawiać
user-friendly	przyjazny dla użytkownika
to navigate	poruszać się
a colour scheme	kolorystyka
findability	łatwość znajdowania
to encompass	obejmować
to approach sth	podchodzić do czegoś
no matter	niezależnie od

a gaze point plot	mapa ruchów oka
genuinely	autentycznie
fixed-size	w stałym rozmiarze
usability	użyteczność
an obligation	zobowiązanie
to give advice	radzić
to forbid to do sth	zabraniać
specific	konkretny
instinctive	instynktowny
an association	skojarzenie
a shade	odcień
calming	kojący
strength	siła
secondary	drugorzędowy
to derive from	wywodzić się z
vibrant	żywy
to layer	nakładać, cieniować
power	siła
font	czcionka
to achieve a goal	osiągnąć cel
to optimize	optymalizować
to capture	przyciągać
a variety of	różnorodność
diverse	zróżnicowany
a layout	kompozycja
typography	układ graficzny
accessible	dostępny
attention	uwaga
to customize	dostosowywać
eye-tracking	śledzenie ruchów oka
a fluid grid	elastyczna siatka
a resolution	rozdzielczość
responsive to sth	reagujący na coś
to face	doświadczać
to meet needs	spełniać potrzeby
permission	pozwolenie
to suggest	sugerować

blank	pusty
a reason	powód
mental	umysłowy, psychiczny
to evoke	wywoływać
to make a difference	robić różnicę
to denote	symbolizować
primary	pierwszorzędowy
tertiary	trzeciorzędowy
complementary	uzupełniający się
to enhance	uwydatniać
calmness	spokój, opanowanie
authority	władza
an icon	ikonka

EXERCISE 1.

Discuss in pairs.
Porozmawiajcie w parach.

1. What do you think makes a good website?

EXERCISE 2.

Read the questions below. Think what your answers might be.
Przeczytaj poniższe pytania. Zastanów się, jakich udzieliłbyś / udzieliłabyś odpowiedzi.

1. What should be the main goal of web design?
2. What are the main components of web design?
3. Why is it important to optimize web content?
4. What is a discipline that helps web specialists organize content?
5. Why should a site's design be optimized for various devices?
6. What can help designers identify the areas of a site that capture the most attention?
7. What should web designers use to guarantee that a web page will render well on a variety of devices, windows, and screen sizes?
8. What is the difference between web design and web development?
9. What tools does a web designer use?
10. What tools does a web developer use?

Do domu

EXERCISE 3.

Listen to the dialogue with a web designing expert and answer the questions in Exercise 2.
Wysłuchaj dialogu z ekspertem z zakresu tworzenia stron internetowych. Odpowiedz na pytania z zadania 2.

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

EXERCISE 4.

Discuss in pairs. Use the Vocabulary assistant.
Porozmawiajcie w parach. Skorzystajcie ze słowniczka na początku rozdziału.

1. Would you like to be a Web designer? Why/ why not?
2. Why do you think you have / don't have a flair for web designing?

EXERCISE 5.

Match the words with their definitions.
Połącz wyrazy z ich definicjami.

Na kartkówkę!

1. content ○	☐ A)	a part of something
2. to render ○	☐ B)	a picture that represents something on a computer
3. typography ○	☐ C)	the ability of a screen to produce a sharp and detailed image
4. contrast ○	☐ D)	to show something
5. a component ○	☐ E)	to adapt something to somebody's needs
6. to enhance ○	☐ F)	the arrangement of words and letters on a website, book
7. icon ○	☐ G)	the style of the typed characters on a document
8. to customize ○	☐ H)	to make something more attractive
9. a resolution ○	☐ I)	the material on a web page, including text and graphics
10. a font ○	☐ J)	difference between the dark areas and light areas of an image

Grammar Support Reminder

MODALS

USE:

must /	when something is necessary or you express rules and obligations
mustn't	when you don't give or have permission to do something
can	when you have the ability or know how to do something
	when something is possible in the present
	when you ask people to do something for you (in questions)
can't	when you don't have or give permission / forbid to do something
may	when something is possible in the present or in the future
	when you have or give permission to do something
may not	when you don't give permission / forbid to do something
should /	when you give / ask for advice or suggest something
shouldn't	when you advise somebody not to do something

REMEMBER

1. All the modals have **the same verb form in positives, negatives and questions**.
   I, you, she, he, it, we, they ***must / can / may / should*** *learn English.*
   I, you, she, he, it, we, they ***mustn't / can't / may not / shouldn't*** *stop developing skills.*
   Can / must / may / should *I, you, she, he, it, we, they study more?*
2. **Mustn't** is not a negative form of **must.**
   You must do it. ≠ *You don't have to it.*
   (obligation) (no obligation)
   You mustn't touch electric cables in a socket = *you shouldn't / can't touch it*
   (you don't have permission)
3. In the past **can** becomes **could** and **may** changes into **might**.
   You usually use the other modal verbs in the present only.

EXERCISE 6.

Circle the correct option.
Zakreśl poprawną odpowiedź.

1. You *mustn't / don't have to* smoke in this building.
2. There are a lot of books which Gael *can read / needs to read* as part of his computer course.
3. We *must / may* talk for hours via Skype. This isn't expensive.
4. You *mustn't / should* tell me about your promotion. It's not a secret any more!
5. These files are in the wrong folder. They *shouldn't / mustn't* be here.
6. They didn't put the rubbish in the bin. We *can/ must* clean this mess.
7. There is plenty of time. We *mustn't be / don't have to* be in a hurry.
8. *Must / can* you call me later?
9. Felix *may / should* come home at midnight.
10. We *shouldn't / mustn't* have just one solution.

EXERCISE 7.

Fill in the gaps with one of the modal verbs.
Uzupełnij każdą z luk jednym z czasowników modalnych.

1. At the beginning of computer technology, enthusiasts _____ afford to buy a computer.
2. You _____ test the application before you make it public.
3. Hurry up. We _____ get to the airport on time.
4. Don't you think we _____ stop and ask someone the way?
5. This place is so hot. I _____ go outside.
6. Thanks for your help. Tony _____ fix it.
7. Udine looks really tired. I think she _____ have a holiday.
8. Sorry for coming late. I _____ to pick up the children from school.
9. Tell the students they _____ come in without knocking.
10. I want to know how Terry did it. He _____ show us.

EXERCISE 8.

Use modal verbs in different situations.
Użyj czasowników modalnych w różnych sytuacjach.

1. you / help / solve a problem? _____ ?
2. I / change the layout? _____ ?
3. not / leave blank spaces. _____ .
4. They / come in. _____ .
5. I think / we / have a break. _____ .

EXERCISE 9.

Discuss in pairs.
Porozmawiajcie w parach.

1. What is your favourite colour? Why?

2. Why do you think it matters what colour objects around us are?

3. What colours are associated with different types of feelings?

EXERCISE 10.

Read the text about using colours in Web design and compare your answers. Then answer the questions below.
Przeczytaj tekst i porównaj ze swoimi odpowiedziami z zadania 9. Następnie odpowiedz na poniższe pytania.

1. How many categories of colours are there?

2. Which types of colours do Web designers use to evoke feelings?

3. Which colours are found on opposite sides of the colour wheel from each other?

4. What can complementary colours do?

5. Which colours are electric?

Using colour Theory in Web Design

Colour theory tells us that different colours work together for specific reasons. We all have instinctive mental associations with some colours and individual associations created by the context of our lives. Surprisingly, even the shade can make a difference. A softer shade of blue evokes calming feelings while stronger shades denote strength.

There are three categories of colours – primary, secondary and tertiary. Primary colours cannot be created by mixing other colours together. Secondary colours are formed by mixing two primary colours, e.g. blue and yellow make green, red and yellow make orange. Tertiary colours are derived by combining primary and secondary colours: blue-green or red-orange. Web designers use these types of colours to evoke feelings.



Not every colour looks good together. Complementary colours are on opposite sides of the colour wheel. When you use them together, they contrast against each other, which gives your designs a vibrant look. They can also enhance a specific feeling or layer additional feelings on top of the main emotion you want to give your visitor. Can you believe that colours usually associate with different types of feelings? Here is the code:

- Red – Warm, electric, energizing.
- Blue – Calming, strength, professional.
- Yellow – Exciting and electric.
- Orange – Electric.
- Green – Cool, calming, professional.
- Black – Strength and power.
- Gray – Strength, calmness, power, authority.
- White – Though it may seem an unnecessary colour in web design, don't forget that we need some white areas so the rest of the site comes into focus.

Adapted from: https://www.codeinwp.com/blog/using-color-theory-in-web-design/ [31.07.2020].

EXERCISE 11.

Read the article about web design and fill in the gaps with the words below.
Przeczytaj artykuł o trendach w projektowaniu stron internetowych. Uzupełnij luki poniższymi słowami.

abstract • accent colors • amount of space • clean framing • collage-like • creativity • depth • easy on the eyes • glow-in-the-dark • hand-drawn hyper-realistic • imagery • large-scale • lightweight feel • luminous • neon pops • OLED screens • pixel-perfect • price tag • small devices

The biggest web design trends 2020

1. Dark mode

Dark mode web designs not only look ultra modern, but they're (1) _____ and make colors and design elements pop.

Dark themes are better for (2) _____ – saving power and extending screen lifespans – but that utility doesn't stop them from looking good. Dark backgrounds improve the visibility of other (3) _____ for truly dynamic design.

2. Imperfections that add personality

Imperfect, hand-drawn design elements inject emotion and humanity into websites, which users seem to be craving after seeing perfected yet impersonal graphics dominate web designs for years. Adding some (4) _____ realness gives web designs the heart and soul visitors find appealing.

Unique and stylized, hand-drawn icons and other elements show off your brand personality and stand out from your competitors. In fact, this rebellious trend is almost a countermovement to the trend of (5) _____ flat designs – so flaunt your scratchy edges and open shapes to show how human and lifelike your brand is.

3. Immersive 3D elements

3D visuals have always delighted people; what held this trend back was technology and the (previously) expensive (6) _____.

Until VR becomes more mainstream and cost-effective, (7) _____ 3D that's often taking up the whole screen is the best way to create an immersive experience for your site.

4. Soft shadows, layers and floating elements

This trend is all about creating (8) _____. Like the 3D effect from above but want to tone it down? Soft shadows and floating elements add interest and depth and give your web page a "3D Lite" look. It's not just graphics either: you can use this effect with text and photos, too.

Taking the principles of material design a step further, designers can add a little extra pizzazz to 2D layouts with soft drop shadows and layering elements on top of each other for extended depth. These effects give the design a (9) _____, as if the elements are floating over each other.

5. Mixing photography with graphics

Overlapping original graphics on top of real photographs creates a memorable visual, which lends itself to letting your (10) _____ go wild.

This (11) _____ trend is a versatile one; you can use it to add a special cuteness and charm to otherwise bland product photo (TSP stoneware, above), or you can use its more serious attributes to better communicate complicated or (12) _____ concepts like tech or finance.

6. Solid frames of white space

Full bleed layouts have been trending in web design for quite some time. Now, designers are gravitating towards solid structures and playing with different ways to use lots of white space (and space of any color, for that matter) to give their designs more structure and make use of (13) _____ to give their designs stability and a canvas to jump off of.

In 2020, we'll see wide frames of white space giving web designs a solid structure. By allowing each element on the page a generous (14) _____, framing creates the perfect foundation for making visuals shine.

7. Glowing, luminous color schemes

In 2020 we'll be seeing courageous color pairings, used strategically to make web designs jump off the screen. Web design is becoming more bold and daring, using (15) _____ neons and highly saturated colors in combination with darker, muted shades to give the designs a (16) _____ feel.

Duotone web designs in particular make this trend shine. Duotone keeps reinventing itself to maintain its place at the forefront of design. This latest iteration is the boldest yet, relying on futuristic, (17) _____ of color and stark color opposites to make veritably vivacious visuals.

8. Ultra minimalist navigation

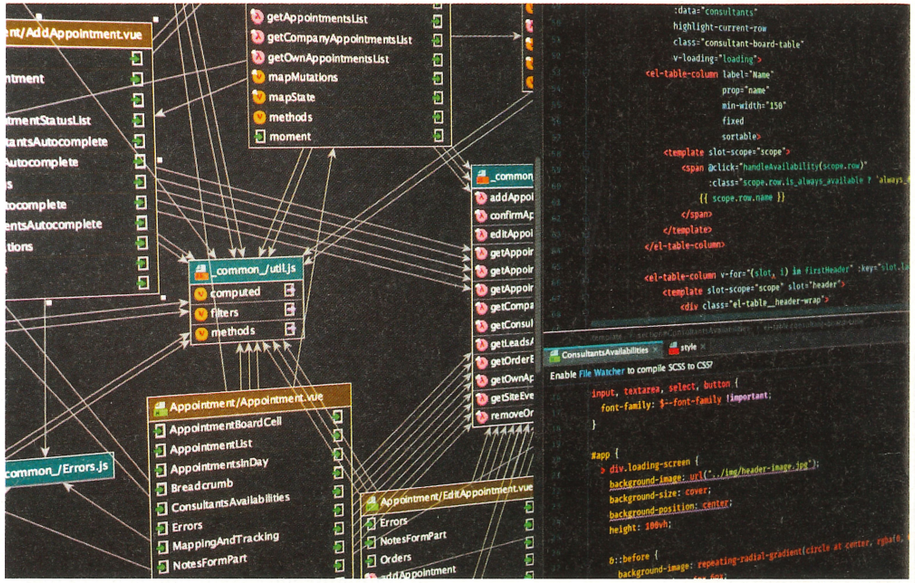
With the rise of wearable devices like smartwatches, web design in general is thinking smaller. The area most affected by this is navigation, the glue that holds a website together. Over the last few years, navigation has been getting simpler and simpler to accommodate extremely (18) _____ and even smaller attention spans.

The less a user has to think about moving around, the more time they spend immersed in the site, actually moving around instead of wondering how.

At the same time, (19) _____ is becoming more important. (20) _____ photos and videos are your chance to impress users – while only using the bare minimum of text.

Adapted from: https://99designs.com/blog/trends/web-design-trends/ [4.08.2020].

5 Database administration



VOCABULARY ASSISTANT

to evaluate	ocenić
a solution	rozwiązanie
alternatively	ewentualnie
fundamental knowledge	podstawowa wiedza
varying	zmieniający się
relevant	odpowiedni
demanding	wymagający
to safeguard	zabezpieczać
in the event	w przypadku
constant	ciągły
data integrity	spójność danych

extensive knowledge	rozległa wiedza
in-depth	dogłębny
a critical-thinking skill	umiejętność krytycznego myślenia
to grant	udzielać
integration	połączenie
access permissions	uprawnienia dostępu
to earn a certification	uzyskać certyfikat
a developer	programista
complex	skomplikowany
a spreadsheet	arkusz kalkulacyjny
deletion	usunięcie
a query	zapytanie, kwerenda
a field	pole (zapisu)
a table	tabela
cross-referencing	odsyłanie
a criterion (plural criteria)	kryterium
to implement	wdrożyć
fast-paced	o szybkim tempie
to prevent from	zapobiec czemuś
to obtain	uzyskać
a release	premiera
in case	na wypadek
average	przeciętny
a loss of	utrata czegoś
system failure	awaria systemu
an analysis	analiza
depending on	zależnie od
to opt	wybierać
decisively	zdecydowanie
to malfunction	źle działać
to determine	wyznaczać
to monitor	nadzorować
prior to	wcześniej
restoration	przywrócenie
assimilation	przyswajanie
to arise	nadarzać się
retrieval	odzyskiwanie

storage	przechowywanie
a record	zapis, rekord
an entity	jednostka
to contain	zawierać
functionality	funkcjonalność
among	pośród

EXERCISE 1.

Discuss with your partner.
Porozmawiajcie w parach.

1. What data do you have on your computer?

2. How often do you perform a backup or a software update?

3. Do you know any database languages and applications, such as SQL, MySQL, SAP or Oracle?

4. Are you able to evaluate situations and implement solutions in fast-paced environments?

EXERCISE 2.

Read this definition of a *database*. Answer the questions below.
Przeczytaj podaną definicję bazy danych. Odpowiedz na poniższe pytania.

1. What are the main features of a database?

2. How do you get information from a database?

3. Where can you store a database?

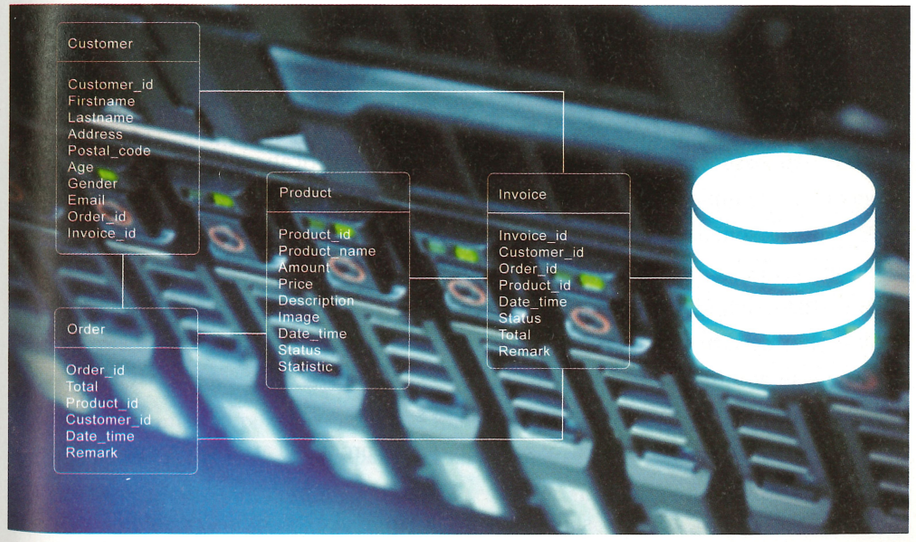
4. How is data categorised in a database?

5. What are fields and tables?

Database

Any collection of information that has been systematised for quick searching and retrieval via a computer is what a database is. They provide modification, deletion, storage, and retrieval of data in connection with different operations. A database management system (DBMS) uses queries to pull out information from the database. You can save a database either as a single file or as a group of files. Different storage devices can hold a database. The data in these files is categorised into records, where each record contains fields. Fields are the primary entity of data storage, and each field holds information on an attribute of the entity defined by the database. Records are also classified into tables which contain information about relationships between fields. Databases generally must provide cross-referencing functionality. Users can search, sort, and select fields from various records for report generation with the use of keywords and search criteria, among other sorting and filtering mechanisms.

Adapted from: https://teachcomputerscience.com/what-is-a-database [31.07.2020].



EXERCISE 3.

Listen to a discussion with Jessy Core, a CompCamp Jobs representative, an expert in computer jobs. Check if a job of a database administrator is for you. Take notes.
Posłuchaj rozmowy z Jessy Core, przedstawicielką firmy CompCamp Jobs, ekspertką w zakresie pracy dla informatyków. Sprawdź, czy zawód administratora baz danych jest dla ciebie. Zrób notatki.

EXERCISE 4.

Listen to a discussion with Jessy Core again and fill in the gaps in the sentences 1–10 below.
Posłuchaj ponownie rozmowy z Jessy Core i uzupełnij luki w poniższych zdaniach.

1. Database administrators are information technology professionals that _____ the optimal storage and _____ to an organization's data.
2. Alternatively, database _____ are responsible for the design, programming, and construction of new databases.
3. They provide _____ access to databases and manage backup solutions to prevent _____ of data in the event of system _____ .
4. The first exam tests you on fundamental knowledge of the daily administration tasks, _____ _____ _____ , IBM database security and creating database objects.
5. Many database administrators _____ obtain certifications for different versions as different employers use varying releases.
6. For this reason, database administrators need to have knowledge of relevant operating systems, like _____ , Linux or _____ .
7. But DBAs should also have a basic understanding of the parts included in a server in case they need to replace any _____ components.
8. Database administrators need to _____ and _____ a whole range of IT-related aspects when managing database systems.
9. They also need to invent creative solutions when problems arise and implement them quickly and _____ .
10. Excellent _____ skills allow a DBA to make the right decision based on all the available information and data.

EXERCISE 5.

Read this short description of the differences between a database and a spreadsheet. Answer the questions below.
Przeczytaj krótki opis różnic między bazą danych a arkuszem kalkulacyjnym. Odpowiedz na poniższe pytania.

1. How is the data stored and manipulated?

2. Who can access the data?

3. How much data can be stored?

What's the difference between a database and a spreadsheet?

We use both databases and spreadsheets (such as Microsoft Excel) to store information. Spreadsheets were originally dedicated for one user. They're a good solution for a small number of users who don't manipulate incredibly complicated data. Databases, on the other hand, are designed to hold much larger collections of organized information. Databases allow multiple users at the same time to quickly and securely access and query the data using highly complex logic and language.

Adapted from: https://www.oracle.com/database/what-is-database.html [31.07.2020].

EXERCISE 6.

Read this fragment describing what a database administrators do in their jobs. Fill in the missing words.
Przeczytaj fragment opisujący, czym administratorzy baz danych zajmują się podczas pracy. W odpowiednie miejsca wstaw wyrazy z ramki.

access • determining • data input • organization • loss of data • grants • analysis • DBA • database management • integration

Database administrators are responsible for the storage, (1) _____ presentation, utilization and analysis of an company's database and (2) _____ software. They provide secure (3) _____ to databases and manage backup solutions to prevent (4) _____ in the event of system failure. A (5) _____ also designs (6) _____

and accumulation methods and protocols, (7) _____ and monitors access permissions or security protocols or repairs damage. This job can also include constant (8) _____ of data integrity, implementation of program updates, (9) _____ and maintaining backup methods, (10) _____ of new data sources and data points into the existing database.

Grammar Support Reminder

ARTICLES

	Indefinite (a, an)	Definite (the)
USE with		
	Singular countable nouns (not specific)	**Singular countable nouns (specific)**
	*It is **a** computer.*	*It's **the** computer I want.*
Before vowels (in speech)	*Eat **an** apple.* *Wait **an** hour.*	*I want **the** apple, not an orange.*
		Plural countable nouns (specific) *They are **the** computers we want.*
		Uncountable nouns (specific) *I've got **the** knowledge they need.*
DON'T USE with		
Plural countable nouns (general)	*Computers are everywhere.*	
Uncountable nouns (general)	*Fundamental knowledge is essential.*	

EXERCISE 7.

Choose the correct option.
Wybierz poprawną odpowiedź.

1. _____ with equal sides is called a square.
   a) rectangle b) a rectangle c) the rectangle
2. How many cores can _____ have?
   a) CPU b) the CPU c) a CPU
3. It's not ___ thing.
   a) cheap b) cheap c) the cheap
4. I watched this presentation from ___ to ___
   a) beginning _ end b) the beginning _ an end c) the beginning _ the end
5. This is ___ place for a conversation.
   a) Perfect b) a perfect c) the perfect

EXERCISE 8.

Fill in the gaps with *a*, *an*, *the* where necessary.
Wpisz w luki ***a***, ***an*** lub ***the*** tam, gdzie to konieczne.

1. He is _____ honest man.
2. I study at _____ small university in ____ USA.
3. Are you _____ DBA?
4. It takes me _____ hour to get to work.
5. Is Turkey _____ European country?
6. Excuse me. Have you got _____ time?
7. I spoke to _____ boss this morning about having next Friday off.
8. Have _____ nice day.
9. Can you tell me _____ way to the post office, please?
10. Where's _____ USB drive I lent you last week?

6 Programming languages



VOCABULARY ASSISTANT

an appliance	urządzenie
well-paying	dobrze płatny
a segment	sektor
to follow your dream	podążać za marzeniem
to pick	wybrać
object-oriented	zorientowany obiektowo
to supercede	wypierać, zastępować
a superset	nadzbiór

GUI GRAPHICAL USER INTERFACE	graficzny interfejs użytkownika
prosperous	dobrze działający, zamożny
immense	olbrzymi
general-purpose	do ogólnego użytku
to remain	pozostawać
to allow	pozwalać
annual	coroczny
a domain	dziedzina
omnipresent	wszechobecny
to extend	rozszerzyć
to maintain	utrzymywać
syntax	składnia
to depend on	zależeć od
especially	zwłaszcza
beyond	poza
to make sth difficult	utrudniać
suitable for	odpowiedni dla
a scripting language	język skryptowy
to aim at	dążyć do czegoś
to work-from-home	pracować w domu
to recommend	polecać
a coder	programista
due to	w związku z
though	chociaż
compatible with	pasujący do
to owe to sth/sb	zawdzięczać czemuś / komuś
ultimate	najlepszy
reputed	uznany
to introduce	wprowadzać
a capability	możliwość
strict	dokładny
sought-after	mający wzięcie

EXERCISE 1.

Discuss the questions below.
Przedyskutujcie w parach odpowiedzi na poniższe pytania.

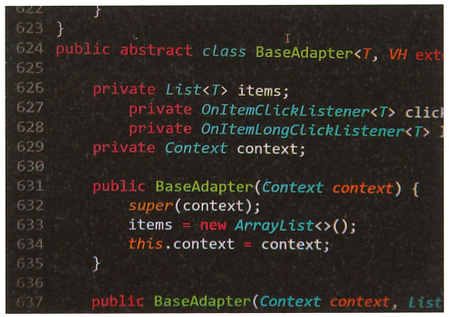
1. Why should everyone learn to code? Why not?

2. Why do you think you could / couldn't be a programmer?

3. Do you know and use any of the programming languages?

EXERCISE 2.

Read the introduction to a fragment of a discussion about programming languages and computer coding. Check your answers to the questions in Exercise 1. Write the answers.
Przeczytaj wstęp do dyskusji o językach programowania i programowaniu. Porównaj z nim swoje odpowiedzi z zadania 1. i je zapisz.





Programming languages and computer coding have made life simpler for us. No matter what the environment is, e.g. cars, banks, home appliances, or hospitals, our lives depends on codes in any aspect. That's why coding is one of the crucial skills required by most well-paying jobs today. This skill is especially valuable in the IT, data analytics, research, web designing, and engineering segments. Here comes the question many coding beginners ask themselves. Which programming languages will continue to be in demand in 2020 and beyond? How many languages should you know to follow your dream?

The growing list of programming languages and protocols can make it difficult for programmers and developers to pick the ones that are most suitable for their jobs or project. Well, every programmer should have knowledge of the following languages: the one that's close to the system (C, Go, or C++), a language that's object-oriented (Java or Python), a functional programming language (Scala), and a powerful scripting language (Python and JavaScript).



1. _____

2. _____

3. _____

Do domu ?

EXERCISE 3.

Read the questions below. Listen to the fragment of the discussion with Giaur Delano, an experienced coder from Computer Society. Answer them.
Przeczytaj poniższe pytania. Wysłuchaj fragmentu dyskusji z Giaurem Delano, doświadczonym programistą z Computer Society. Zapisz odpowiedzi na pytania.

1. What are the five languages that Giaur Delano talks about?

2. What can Python be used for?

3. What are Django and Flask?

EXERCISE 1.

Discuss the questions below.
Przedyskutujcie w parach odpowiedzi na poniższe pytania.

1. Why should everyone learn to code? Why not?

2. Why do you think you could / couldn't be a programmer?

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Przeczytaj wstęp do dyskusji o językach programowania i programowaniu. Porównaj z nim swoje odpowiedzi z zadania 1. i je zapisz.

```
623 }
624 public abstract class BaseAdapter<T, VH ext
625
626     private List<T> items;
627         private OnItemClickListener<T> click
628         private OnItemLongClickListener<T>
629     private Context context;
630
631     public BaseAdapter(Context context) {
632         super(context);
633         items = new ArrayList<>();
634         this.context = context;
635     }
636
637     public BaseAdapter(Context context, List
```



Programming languages and computer coding have made life simpler for us. No matter what the environment is, e.g. cars, banks, home appliances, or hospitals, our lives depends on codes in any aspect. That's why coding is one of the crucial skills required by most well-paying jobs today. This skill is especially valuable in the IT, data analytics, research, web designing, and engineering segments. Here comes the question many coding beginners ask themselves. Which programming languages will continue to be in demand in 2020 and beyond? How many languages should you know to follow your dream?

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1. _____

2. _____

3. _____

Do domu ↓

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1. What are the five languages that Giaur Delano talks about?

2. What can Python be used for?

3. What are Django and Flask?

4. What kind of a language is PHP?

_____

_____

5. How old is Java?

_____

_____



EXERCISE 4.

Read the questions and listen to the discussion again. Answer them.
Przeczytaj pytania i wysłuchaj ponownie dyskusji. Zapisz odpowiedzi.

1. What's the connection between TypeScript and JavaScript?

_____

_____

2. What is Java a practical choice for?

_____

_____

3. Is Java an object-oriented programming language?

_____

_____

4. Which language is compatible with several other programming languages?

_____

_____

5. Which language is expected to supercede JS in 2020?

_____

_____

EXERCISE 5.

Complete the sentences with *since* or *for*.
Uzupełnij zdania wyrazami *since* lub *for*.

1. He has had his new computer _____ some weeks.
2. They have been friends _____ they were at school.
3. I have worked a lot _____ the alarm clock rang in the morning.
4. We haven't seen each another _____ ages.
5. They've given me the same answer every day _____ the last few weeks.
6. Mary has been on holiday _____ the end of last month.
7. It has been sunny _____ the morning.
8. Henry's phoned Jenny four times _____ I gave him her number.
9. That furniture has been here _____ I was a child.
10. I've written a lot of Christmas postcards _____ the 1st December.

Grammar Support Reminder

PRESENT PERFECT SIMPLE

REMEMBER It is a present tense that has a connection with the past.
The activity in the past has a result in the present.
But, the past is not defined.

Statements	I, you, we, they	**have ('ve)**	**past participle**	**(irregular verbs)**
	he, she, it	**has ('s)**	**-ed / -d**	**(regular verbs)**
Negatives	I, you, we, they	**haven't**	**past participle**	**(irregular verbs)**
	he, she, it	**hasn't**	**-ed / -d**	**(regular verbs)**
Questions	**Have**	I, you, we, they	**past participle**	**(irregular verbs)**
	Has	he, she, it	**-ed / -d**	**(regular verbs)**

USE the following expressions with the Present Perfect Simple:

1. **for**	(period of time)	Giaur Delano has worked for Computer Science **for** 5 years.
2. **since**	(the moment in the past)	Giaur Delano has worked for Computer Science **since** 2015.
3. **just**	(a short time ago)	Brian has **just** called.
4. **already**	(sooner than expected)	I've **already** finished the task.
5. **yet**	(until now)	
	(in questions and negatives)	Have you finished it **yet**? No, I haven't done it **yet**.
6. **ever**	(at any time in the past)	Have they **ever** visited Poland?
	(in questions about **experience**)	
7. **never**	(at no time in the past)	They've **never** come.
8. **it's the first time**	(never before)	**It's the first time** I've used Java.

EXERCISE 6.

Complete the sentences with the correct form of the verbs. Use the Past Simple or the Present Perfect Simple.
Uzupełnij zdania poprawnymi formami czasowników podanych w nawiasach. Użyj czasu Past Simple lub Present Perfect Simple.

1. She loves the USA. She _____ (be) there many times.
2. They _____ (code) with Python for 3 years. (They still do it).
3. We _____ (go) to Greece on holiday last summer.
4. I _____ (finish) reading that book last week.
5. His friends _____ (be) here since yesterday.
6. You _____ (go) to Japan when you _____ (be) only 4.
7. _____ you _____ (watch) any film last night?
8. She _____ (eat) anything for breakfast this morning.
9. He _____ (live) in Canada since he was a teenager.
10. The website looks different. _____ you _____ (change) the layout?

EXERCISE 7.

Rewrite the sentences below keeping the meaning similar. Use the Present Perfect Simple.
Przepisz poniższe zdania tak, by zachować ich znaczenie. Użyj czasu Present Perfect Simple.

1. They came here in 2000 and now it's 2020. — I _____ here for _____.
2. She hasn't seen this film before. — This is _____ film.
3. I'm not sleeping. — I _____ just _____ bed.
4. Isabelle began her IT career in 2010. — _____ since 2010.
5. The project isn't ready yet. — _____ yet.
6. They don't know each other. — _____ before.
7. There isn't any data left. — We _____ already _____.
8. Jerry became our boss 10 years ago. — Jerry _____ for _____.
9. I's a long time since he designed the last website. — He _____ for a long time.
10. This is my first job interview. — I _____ never _____.

EXERCISE 8.

Write the past participle of these verbs.
Zapisz podane czasowniki w trzeciej formie.

1. choose _____
2. draw _____
3. give _____
4. hold _____
5. light _____
6. ring _____
7. send _____
8. run _____
9. show _____
10. write _____
11. deal _____
12. freeze _____
13. hide _____
14. know _____
15. make _____
16. say _____
17. see _____
18. shut _____
19. sit _____
20. think _____

EXERCISE 9.

Work in pairs. Ask and answer the questions using the correct form of the verbs. Provide the details of your positive answers in the Simple Past.
Pracujcie w parach. Zadaj pytania i na nie odpowiedz. Użyj poprawnych form czasowników. Szczegóły odpowiedzi twierdzących podaj w czasie Past Simple.

Example: *A) Have you ever used an abacus?* *B) Yes, I have. It was in primary school.*

	Student A	Student B
Have you ever	(go) to the UK?	(find) money?
	(fall) off a wall?	(look) after a baby?
	(watch) TV late	(drink) coffee?
	(travel) by a plane?	(play) golf?
	(spend) a night in a shelter?	(fail) exam?
	(climb) a mountain?	(eat) crocodile meat?
	(see) an accident?	(break) a vase?
	(sleep) over at your friend's house?	(gain) weight?
	(have) a holiday abroad?	(lose) a key?
	(swim) in the ocean?	(donate) money?
	(do) something stupid?	(tell) a lie?
	(forget) homework?	(buy) beer?
	(win) a prize?	(ride) on a camel?

EXERCISE 10.

Match the words 1–10 with their definitions.
Połącz wyrazy 1–10 z ich definicjami A–J.

Na kartkówkę!

1. to extend ○	☐ A) to choose
2. annual ○	☐ B) to keep sth
3. to remain ○	☐ C) matching sth
4. to maintain ○	☐ D) right / correct for sth
5. ultimate ○	☐ E) to make sth bigger or longer
6. compatible with ○	☐ F) huge
7. immense ○	☐ G) to give permission
8. suitable for ○	☐ H) the best, final
9. to allow ○	☐ I) happening every year
10. to pick ○	☐ J) be the same

EXERCISE 11.

Read the article about programming languages and fill in the gaps with the words below.
Przeczytaj artykuł o językach programowania. Uzupełnij luki poniższymi słowami.

bytecode • class definitions • debugger • develop • dictionary types • edit-test-debug cycle • floating point addition • glue language • inheritance play • inspect • low-level implementation • modules and packages • object-oriented • shorter • source code

What is Python? Executive Summary

Python is an interpreted, (1) _____, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports (2) _____, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

Often, programmers fall in love with Python because of the increased productivity it provides. Since there is no compilation step, the (3) _____ is incredibly fast. Debugging Python programs is easy: a bug or bad input will never cause a segmentation fault. Instead, when the interpreter discovers an error, it raises an exception. When the program doesn't catch the exception, the interpreter prints a stack trace. A source level debugger allows inspection of local and global variables, evaluation of arbitrary expressions, setting breakpoints, stepping through the code a line at a time, and so on. The (4) _____ is written in Python itself, testifying to Python's introspective power. On the other hand, often the quickest way to debug a program is to add a few print statements to the source: the fast edit-test-debug cycle makes this simple approach very effective.

Comparing Python to other languages

Java

Python programs are generally expected to run slower than Java programs, but they also take much less time to (5) _____. Python programs are typically 3–5 times (6) _____ than equivalent Java programs. This difference can be attributed to Python's built-in high-level data types and its dynamic typing. For example, a Python programmer wastes no time declaring the types of arguments or variables, and Python's powerful polymorphic list and (7) _____, for which rich syntactic support is built straight into the language, find a use in almost every Python program. Because of the run-time typing, Python's run time must work harder than Java's. For example, when evaluating the expression a+b, it must first (8) _____ the objects a and b to find out their type, which is not known at compile time. It then invokes the appropriate addition operation, which may be an overloaded user-defined method. Java, on the other hand, can perform an efficient integer or (9) _____, but requires variable

declarations for a and b, and does not allow overloading of the + operator for instances of user-defined classes.

For these reasons, Python is much better suited as a "glue" language, while Java is better characterized as a (10) _____ language. In fact, the two together make an excellent combination. Components can be developed in Java and combined to form applications in Python; Python can also be used to prototype components until their design can be "hardened" in a Java implementation. To support this type of development, a Python implementation written in Java is under development, which allows calling Python code from Java and vice versa. In this implementation, Python (11) _____ is translated to Java (12) _____ (with help from a run-time library to support Python's dynamic semantics).

Javascript

Python's "object-based" subset is roughly equivalent to JavaScript. Like JavaScript (and unlike Java), Python supports a programming style that uses simple functions and variables without engaging in (13) _____. However, for JavaScript, that's all there is. Python, on the other hand, supports writing much larger programs and better code reuse through a true object-oriented programming style, where classes and (14) _____ an important role.

C++

Almost everything said for Java also applies for C++, just more so: where Python code is typically 3–5 times shorter than equivalent Java code, it is often 5–10 times shorter than equivalent C++ code! Anecdotal evidence suggests that one Python programmer can finish in two months what two C++ programmers can't complete in a year. Python shines as a (15) _____, used to combine components written in C++.

Adapted from: https://www.python.org/ [4.08.2020].

Na szóstkę ↑

Self-check 2

A. Choose the correct form of the verbs.
Wybierz właściwą formę czasownika.

1. Derek _____ a new CPU every two years.
   a) buys
   b) to buy
   c) will bought
   d) buying
2. We usually _____ our customers' needs.
   a) have met
   b) meeting
   c) meets
   d) meet
3. Specific colours of your website _____ positive emotions.
   a) are evoking
   b) evokes
   c) evoke
   d) to evoke
4. Tom and Linda _____ and give a lot of advice.
   a) takes
   b) took
   c) take
   d) have taken
5. He _____ the right font at the moment.
   a) is choosing
   b) are choosing
   c) chose
   d) has chosen

6. I _____ since yesterday morning.
   a) haven't worked-from-home
   b) hasn't worked-from-home
   c) haven't work-from-home
   d) have worked-from-home
7. We _____ optimizing the web content.
   a) just finished
   b) have just finished
   c) Just have finished
   d) had just finished
8. Jim _____ for the permission since 7:30 a.m.
   a) have waited
   b) is waiting
   c) waited
   d) has waited
9. So far, they _____ anything to prevent from system failure.
   a) haven't done
   b) having done
   c) hasn't done
   d) didn't
10. I _____ this scripting language for 20 years.
    a) knew
    b) know
    c) have known
    d) haven't know

B. Circle the correct modal verb.
Zakreśl właściwą formę czasownika modalnego.

1. We don't have to / mustn't forget to make the site user-friendly.
2. Developers have to / can show extensive knowledge!
3. I could / had to type very well when I was little.
4. You mustn't / aren't grant permission to everyone.
5. Can / Must I suggest another option?

C. Complete the sentences with the correct form of the verbs below.
Uzupełnij zdania poniższymi czasownikami we właściwej formie.

can • must • should • have to

1. I _____ take a break! I've been working on this project for four hours.
2. You _____ be late for the meeting! It's very important for the future of the firm.
3. _____ you lend me your mobile for a while, please?
4. Peter _____ evaluate his work every day.
5. We _____ play computer games only an hour a day when we were children.

D. Match the translation with the words.
Połącz każdy wyraz z jego tłumaczeniem.

a) vibrant ○	☐ 1. siła
b) to layer ○	☐ 2. spokój, opanowanie
c) to enhance ○	☐ 3. nakładać, cieniować
d) calmness ○	☐ 4. żywy
e) power ○	☐ 5. uwydatniać

E. Write five sentences using the words below and translate them.
Napisz pięć zdań w języku angielskim z poniższymi słowami. Następnie przetłumacz je na język polski.

1. authority 2. font 3. to evoke 4. to render 5. content

1. _____
2. _____
3. _____
4. _____
5. _____

F. Fill in the gaps with the correct article where necessary.
Tam, gdzie to konieczne, uzupełnij luki właściwymi przedimkami.

1. George is _____ specialist in this field and he is _____ best to resolve this issue.
2. Helen has always had _____ flair for web designing and has been one of _____ most reputed.
3. _____ job in IT requires _____ extensive knowledge, but _____ critical-thinking matters, too.
4. He's _____ senior network architect and she is his _____ colleague I've told you about.
5. "Do you have any advice for _____ beginner?" " Yes, I have. Explore _____ capabilities."

6. Why don't you earn _____ certification?
7. Why did you use _____ outdated driver?
8. She's got _____ knowledge and _____ achievements.
9. _____ database management system uses _____ queries to pull out _____ information from _____ database.
10. _____ softer shade of _____ blue evokes _____ calming feelings.

G. Fill in the gaps with the correct article where necessary. Do the quiz choosing the correct option a–c.
Tam, gdzie to konieczne, uzupełnij luki właściwymi przedimkami. Następnie wybierz odpowiedź a, b, lub c.

1. Which of these is not _____ early computer?
   a) Eniac b) Univac c) Nasa
2. Which of these is not _____ peripheral, in _____ computer _____ terms?
   a) motherboard b) keyboard c) monitor
3. What does _____ Internet _____ prefix WWW mean?
   a) World Wide Web b) Western Washington World c) World Wide Weather
4. Which ____ language is not close to ____ system?
   a) C b) Go c) Python
5. Which of these is not _____ hardware?
   a) _____ motherboard b) _____ CPU, _____ RAM c) _____ speaker

H. Complete the conversation with the correct form of the verbs.
Uzupełnij luki właściwymi formami czasowników podanych w nawiasach.

A: (1) _____ (you ever, be) to Silicon Valley?
B: Yes, I (2) _____ . A few times.
A: Why (3) _____ (you, go) there so often?
B: My family (4) _____ (live) there. They (5) _____ (move) there 7 years ago.
A: Really? Why (6) _____ (they, decide) to live in the USA?
B: My son (7) _____ (find) a great job in the IT, that (8) _____ (be) the main reason.
A: (9) _____ (you, visit) them recently?
B: No, (10) _____ (I, have) a lot of work lately.

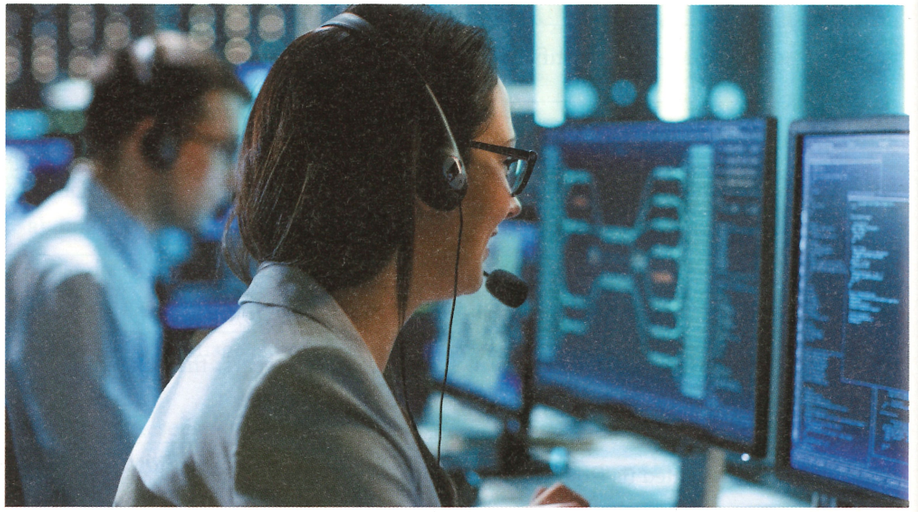
I. Decide if the sentences below are correct or not. Correct them if necessary.
Zdecyduj, czy poniższe zdania są poprawne, czy nie. Popraw te, które uznasz za błędne.

1. Have you ever been at Google in Mountain View, California, the USA?
_____
2. They've had system failure at half past nine.
_____
3. I've enjoyed resolving an issue last night.
_____
4. She's read that article about Artificial Intelligence, but she didn't like it much.
_____
5. Teresa has teamed up last year.
_____
6. My cousins have assembled computers since they've been children.
_____
7. Their skills have been in demand here for a year and a half.
_____
8. My friends pursued IT career in the UK for a couple of years, then they moved to Hungary.
_____
9. Jasmine has prevented us from the loss of data integrity yesterday.
_____
10. I've optimized the website findability. It makes a great difference now.
_____

J. Put in the missing letters in the words and provide translation into Polish.
Wpisz w luki brakujące litery tak, by powstały wyrazy. Przetłumacz je na język polski.

1. to re_ain _____
2. com_at_ble with _____
3. to al_ow _____
4. to o_e to sth/sb _____
5. a_nual _____
6. u_tima_e _____
7. a do_ain _____
8. re_uted _____
9. o_nipresent _____
10. to ai_ at _____

7 Technical support



VOCABULARY ASSISTANT

to go wrong	psuć się
touch	podejście
a tip	wskazówka
right away	natychmiast
to appear	jawić się
a priority	priorytet
at all	w ogóle
grasp of	pojecie o czymś
tech-savvy	obeznany z techniką
a language use	poziom języka
to follow	nadążać
similarly	podobnie
little	mało

the least	najmniej
an impact	wpływ
regardless of	niezależnie od
to avoid	unikać
an enemy	wróg
a sign of sth	znak czegoś
to get on with sth	kontynuować
proactive	pełen inicjatywy
to make sth easy	ułatwiać coś
to follow up with sb	kontynuować rozmowę z kimś
to reach sb	dotrzeć do kogoś
an arrangement	ustalenie
a prediction	przypuszczenie
a request	prośba
noisy	hałaśliwy
to tackle	stawiać czoła
to resolve	rozwiązać
a fix	naprawa
to seem	wydawać się
a cause	przyczyna
to take sth seriously	brać coś poważnie
to troubleshoot	usuwać usterki
a lack of	brak czegoś
to adjust	dostosować
to suit	dopasować
closely	szczegółowo
clearly	wyraźnie
less	mniej
descriptive	opisowo
a nightmare	koszmar
to treat	traktować
jargon	żargon
to impress	robić wrażenie
both parties	obie strony
to reduce	obniżyć
a sense of teamwork	poczucie wspólnoty
to encourage	zachęcać

to assure	zapewniać
welcome	mile widziane
soon	wkrótce
an offer	propozycja
a promise	obietnica
a competition	konkurs



EXERCISE 1.

Discuss the question below.
Przedyskutujcie odpowiedzi na poniższe pytania.

1. Do you usually know how to fix a computer?

2. Can you explain somebody how to solve a problem with a computer?

3. What do you generally expect from an IT technical support?



EXERCISE 2.

Listen to the fragment of the guide *How to be a tech superhero* and find out what technical support looks like from the specialist's perspective. Name the stages of customer's service.
Wysłuchaj fragmentu przewodnika *Jak być technicznym superbohaterem* i dowiedz się, jak wygląda wsparcie techniczne z perspektywy specjalisty. Podaj nazwy poszczególnych etapów obsługi serwisowej.



EXERCISE 3.

Listen to the fragment of the guide again and answer the questions below.
Posłuchaj nagrania ponownie i odpowiedz na poniższe pytania.

1. How does understanding the problem help fixing?

2. Why is it positive to adjust your language use and tone to a customer's grasp of technology?

3. What are negative influences of technical problems?

4. What is one of the best practices in technical support?

5. What does being motivational promote?

EXERCISE 4.

Use the words / expressions from the box in the correct form to fill in the gaps.
Użyj wyrazów i zwrotów z ramki w poprawnej formie i uzupełnij luki.

welcome • complex • right away • to tackle • to enhance • to deal with • to troubleshoot

1. _____ the more technical side of customer service can be difficult.
2. You must _____ your problems or ask somebody for help.
3. Good tips are always _____ .
4. When a problem is _____ a clear solution doesn't come _____ .
5. When you understand the problem, it _____ correct _____ and faster fixing.

Grammar Support Reminder

THE FUTURE

You can express the future in **three different ways**,
but with **the change of the context, situation and meaning**.

USE:

1. The Present Continuous **ARRANGEMENTS**

I'm meeting our best customer next week.

2. The Future Simple (will + bare infinitive, will + not = won't)

a) **FACTS ABOUT THE FUTURE**

IT industry will grow bigger and bigger in the next decades.

b) **PREDICTIONS (without evidence)**

You will find a solution soon.

c) **OFFERS, REQUESTS, PROMISES**

I will introduce you to the whole team.

d) **SPONTANEOUS DECISIONS**

We will tackle this complex issue right away.

3. be going to + bare infinitive

a) **INTENTIONS**

I'm going to finish the task in an hour.

b) **PREDICTIONS (with evidence)**

It's going to explode.

c) **FACTS ABOUT THE FUTURE**

IT industry is going to grow bigger and bigger in the next decades.

EXERCISE 5.

Put the verbs in brackets into the Future Simple.
Zapisz czasowniki podane w nawiasach w czasie Future Simple.

1. Doctors (know) _____ the results in a week.
2. _____ you (be) home this weekend?
3. _____ you (have) time to help us tomorrow?
4. Do you think that she (recognize) _____?
5. I hope I (find) _____ it.

EXERCISE 6.

Put the verbs in brackets in the correct form. Use the Future Simple or *be going to*.
Zapisz czasowniki podane w nawiasach we właściwej formie. Użyj czasu Future Simple lub zwrotu *be going to*.

1. I _____ (be) ready in a minute.
2. What _____ she _____ (wear) at the meeting tomorrow?
3. _____ you _____ (come) with me to the cinema?
4. My hands are very dirty. I _____ (wash) them now.
5. I have a test tomorrow. I _____ (sit) and _____ (study) now.

EXERCISE 7.

Put the verbs in the correct form. Focus on the context. Use the Present Continuous, the Future Simple or *be going to*.
Zapisz czasowniki podane w nawiasach we właściwej formie. Zwróć uwagę na kontekst. Użyj czasu Present Continuous, Future Simple lub zwrotu *be going to*.

1. They _____ (come) here later.
2. _____ you (book) the hotel for this weekend?
3. Greg _____ (not help) you anymore.
4. It _____ (snow). Look at the sky.
5. We _____ (win) the next competition.
6. I _____ (ask) him to go with me.
7. I _____ (be) busy all weekend.
8. They _____ (come) at seven o'clock.
9. I _____ (not tell) anyone. I promise.
10. We _____ (not stay) in this hotel. It's noisy.
11. I _____ (have) a discussion with her when she gets home.
12. The President is standing up. He _____ (leave).
13. The Browns _____ (travel) across Asia in August.
14. _____ you (go) to the cinema tomorrow?
15. Kids _____ (be) very happy when they see the toys.

EXERCISE 8.

Work in pairs. Ask and answer the questions using the correct form of the verbs.
Pracujcie w parach. Zadawaj pytania i odpowiadaj na nie, używając poprawnych form czasowników.

1. Are you going to do yoga now? (have / a rest)

_____

2. Are you going to work today? (stay / at home / all day)

_____

3. Is he going to buy a new scooter? (buy / a pair of roller skates)

_____

4. Are they going to wash the car tomorrow morning? (ride / the bicycle)

_____

5. Is your mum going to cook dinner? (go / to a restaurant)

_____

6. Are you going to do gymnastics? (play basketball / friends)

_____

EXERCISE 9.

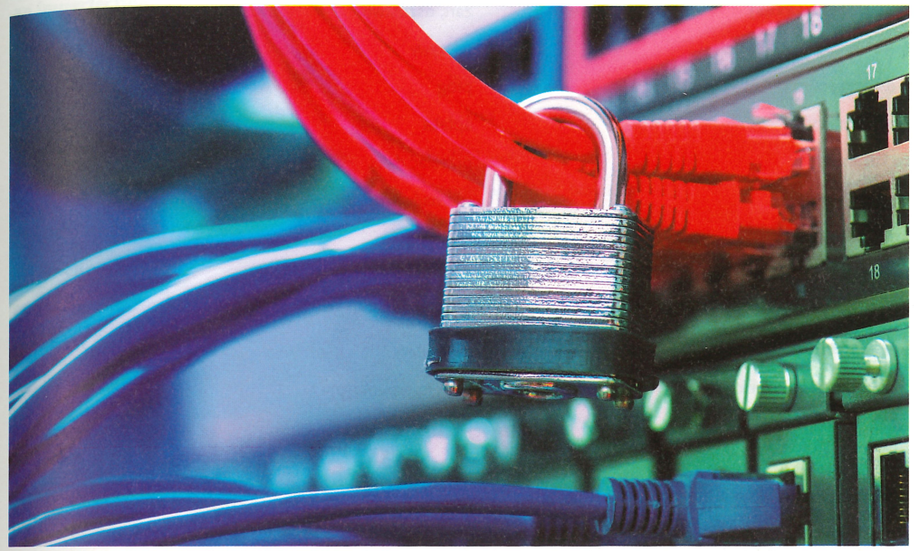
Read the fragment of the guide *How to be a tech superhero*. Fill in the gaps with the correct word.
Przeczytaj fragment przewodnika *Jak być technicznym superbohaterem*. Wpisz w luki odpowiednie słowa.

Understand the customer's grasp of technology ... or the lack of it



Some people are more (1) _____ than others. Just be sure to (2) _____ the customer's (3) _____ of technology when you start your tech support call. This will help you (4) _____ your language use and tone to (5) _____ their knowledge. For example, a customer that has almost no grasp of technology might find even a simple (6) _____ difficult to follow, so you'll need to (7) _____ them through more closely than others. (8) _____ if a customer clearly has a strong knowledge of computing and technology, being less (9) _____ with your service is fine. Just guide them through steps that they can easily (10) _____ themselves.

8 Internet security



VOCABULARY ASSISTANT

a rootkit	rootkit
protection	ochrona
to commit a crime	popełnić przestępstwo
to embed	wbudowywać
malware	złośliwe oprogramowanie
a subscriber	abonent, prenumerator
to take over	przejmować
spam	niechciane wiadomości
to infect	zarażać
a computer worm	robak komputerowy
to detect	wykrywać
an instant message	wiadomość w komunikatorze

an attachment	załącznik
to keep sb away	trzymać kogoś z dala
to place	umiejscowić
a vulnerability	słaby punkt
to discover	odkryć
vast	rozległy, nieprzebrany
self-replication	samokopiujący się
luckily	na szczęście
a hoax (pl hoaxes)	żart, oszustwo
fake	fałszywy
a doorstep	próg
a pharmacy	apteka
to forward	przesłać dalej
to break into	włamać się do
key	kluczowy
to make an educated guess	postawić hipotezę
random	losowy
lower case letters	małe litery
a punctuation mark	znak interpunkcyjny
to encrypt	szyfrować
however	jednakże
a stranger	obcy
to avoid	unikać
straightforward	prosty
by default	domyślnie
to launch	wprowadzać na rynek
malicious	złośliwy
in real-time	w czasie rzeczywistym
to monitor	śledzić, obserwować
ransomware	oprogramowanie szantażujące
to double-click	dwukrotnie kliknąć
a bot	bot
spyware	program szpiegujący
to involve	wymagać, angażować
to mask	ukrywać
to alert	wywoływać alarm
remotely	zdalnie

a source	źródło
a family member	członek rodziny
an attack	napaść, atak
a trojan horse	koń trojański
to steal	kraść
to contain	zawierać
fraudulent	oszukańczy
intrusive	niepożądany, natrętny
an imperfection	niedoskonałość
to access	mieć dostęp
a patch	poprawka
a scope of	zakres
either ... or ...	albo ..., albo ...
to disable	unieruchamiać, blokować
a scam	przekręt
an amount of	ilość
at a discount	na przecenie
in return	w zamian
to ask for trouble	prosić się o kłopoty
to get access to sth	uzyskać dostęp do czegoś
to last forever	trwać wieki
although	chociaż
upper case letters	wielkie litery
a numeral	liczebnik
unbeatable	nie do pobicia
reputable	mający reputację
to post	zamieszczać w internecie
a rule of thumb	sprawdzona zasada
an identity theft	przywłaszczenie tożsamości
a notification	powiadomienie
a shield	tarcza
to configure	ustawiać
an interface	interfejs
an intruder	intruz
a firewall	zapora sieciowa
to right-click	kliknąć prawym przyciskiem myszki
to compare	porównywać

EXERCISE 1.

Discuss the questions in pairs.
Przedyskutujcie w parach odpowiedzi na poniższe pytania.

1. How can people keep their computer safe?

2. What is a rootkit?

3. What is a bot protection?

4. What is spyware?

EXERCISE 2.

Listen to the beginning of the report on *Computer Security Tips* and check your answers.
Posłuchaj początku raportu dotyczącego bezpieczeństwa komputerowego i sprawdź swoje odpowiedzi z zadania 1.

1.

2.

3.

4.

EXERCISE 3.

Listen to the fragment of the report. Fill in the missing words.
Posłuchaj drugiego fragmentu raportu. Uzupełnij luki odpowiednimi wyrazami.

1. Cybercriminals use imperfections in software (known as _____) to access a target computer.
2. Software manufacturers work to correct the issue and create a fix, usually called a _____ .
3. A computer virus is a very specific form of malware that specializes in _____ and needs to be activated to work.
4. Many cybercriminals employ _____ and _____ to spread malware or steal information.
5. Opening _____ from an e-mail that either comes from an unknown _____ or has been _____ many times is asking for trouble.
6. Although choosing _____ combinations of letters (upper and lower _____), numerals, and _____ marks is unbeatable, some antivirus programs can help you _____ personal information and passwords.
7. As a general rule of thumb, everybody should know how to avoid _____ theft.

EXERCISE 4.

Discuss in pairs.
Przedysutujcie w parach odpowiedzi na pytania.

1. What do you do to keep your computer safe?

2. Why do you think people ignore safety rules?

3. Have you ever had a virus, spyware, malware, worms or trojan horses on your computer? What did you do?

Grammar Support Reminder

ADJECTIVES

		Examples	
1. They describe nouns, so they always come **before** them.			*an **intrusive** attack*
2. A **noun** can function as an adjective.			*a **computer** worm*
3. A **verb** with **-ed** / **-ing** ending becomes a participle adjective.			*a **disabled** function*
			*an **involving** task*
4. Adjectives have three forms:		one syllable	two or more syllables
	positive / neutral	*small*	*expensive*
	comparative	*smaller*	***more** expensive*
	(***-er**/-r ending* / ***more**, **less***)		***less** expensive*
	superlative	***the** smallest*	***the most** expensive*
	(***-est**/-est ending* / ***the most**, **the least***)		***the least** expensive*
5. Use comparatives to compare.		*This CPU is **smaller than** a matchbox.*	
6. Use superlatives to say what thing, person, or idea has the most of a particular quality within a group.		*The CPU is **the most important** part of a computer.*	
7. Some adjectives are irregular.		*good*	*better*	*the best*
		bad	*worse*	*the worst*
		little	*less*	*the least*
		far	*farther*	*the farthest*
		much, many	*more*	*the most*
8. Adjectives ending in **-y** take the ***-er**/-est* ending (no matter how many syllables there are).		*busy*	*busier*	*the busiest*
9. In one-syllable adjectives you double the last consonant.		*big*	*bigger*	*the biggest*
		hot	*hotter*	*the hottest*

EXERCISE 5.

Fill in the gaps with the correct form of an adjective.
Zapisz we właściwej formie przymiotniki podane w nawiasach.

1. This summer is _____ (hot) than ever.
2. It is _____ (difficult) rule of all.
3. Tom is _____ (clever) pupil in the class.
4. This is _____ (old) castle in Britain.
5. Health is _____ (important) than money.

6. This actor is _____ (famous) actor in Spain.
7. My _____ (old) sister is afraid of mice.
8. We have _____ (much) homework today than we had yesterday.
9. If you need any _____ (far) information, please contact our assistant.
10. The second part of the film is _____ (boring) than the first.

EXERCISE 6.

Use the prompts to write sentences.
Użyj podpowiedzi i napisz zdania.

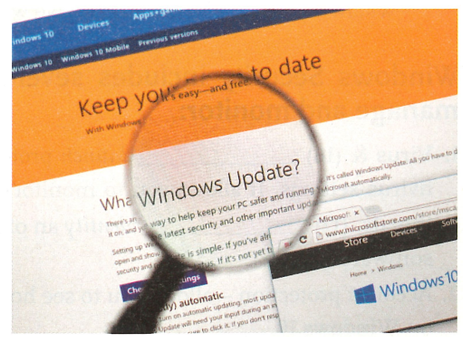
1. A plane _____ a car. (clean)
2. Canada _____ Jamaica. (industrialized)
3. Sonya _____ person I know. (attractive)
4. Los Angeles _____ Boston. (modern)
5. It _____ part of the city. (ruined)
6. Amazon _____ river in the world. (long)
7. Dolphins _____ sharks. (intelligent)
8. Who _____ your _____ friend? (kind)
9. IT _____ industry in my opinion. (promising)
10. Sara looks _____ Roxana. (happy)

EXERCISE 7.

Read the fragments of the *Beginner's guide to Windows Security on Windows 10.*
Przeczytaj fragmenty *Przewodnika po Windows Security w Windows 10 dla początkujących.*

A. Fill in the blanks with the correct words.
Wpisz w luki odpowiednie wyrazy.

Windows Security is a built-in (1) _____ available on Windows 10 that provides a user-friendly (2) _____ and tools to manage common security features. For example, the Microsoft Defender Anti-virus, which offers (3) _____ protection for your computer and data against viruses and many other kinds of malware. Also, you can manage the Microsoft Defender Firewall to block (4) _____ from sneaking in. You can (5) _____ the device's performance and health as well as your identity with the account protection settings, and even more advanced features to keep everything a little more secure.



B. Now choose the words from the box.
Zapisz w lukach odpowiednie wyrazy z ramki.

firewall • default • view • ransomware • manage •

Windows Security vs. Microsoft Defender Antivirus

There is a difference between „Microsoft Defender Antivirus" and „Windows Security". Windows Security is the application to (6) _____ status and to (7) _____ security features, such as antivirus, (8) _____, performance, and other security features. On the other hand, Microsoft Defender Antivirus is the (9) _____ anti-malware engine that offers real-time protection against may forms of malware, including viruses, spyware, (10) _____, and hackers. Installing a third-party antivirus will disable the Microsoft Defender Antivirus automatically, but it'll not affect the functionality of Windows Security.

C. Now the first letter of the correct word is given.
Zapisz w lukach odpowiednie wyrazy. Pierwsza litera każdego jest już podana.

How to navigate Windows Security

Windows Security is a (11) s_____ application. You can open it from the Start menu or double-click the shield icon from the (12) n_____ area in the taskbar. In the Home page, you can view the security status of the different protection features available by (13) d_____ on Windows 10. You can also see alerts of any action that needs to be taken to keep your computer secure. The (14) s_____ icon in the notification area can also alert you when other actions must / should be taken. If there is more than one alert, only the most severe warning will appear. Also, if you (15) r_____-click the app icon, you'll have access to actions, such as quick scan, download updates, adjust notifications, and access the dashboard.

D. Put the words in the correct gap.
Wstaw wyrazy zapisane kursywą we właściwe luki.

Windows Security includes seven areas of protection that you can manage and monitor:

1. Virus & (16) _____ *launch* protection – houses the Microsoft Defender Antivirus settings. It allows you to monitor the malware protection, scan the device for threats, (17) _____ *identity* an offline scan, and set up the advanced anti-ransomware feature.
2. Account protection – allows you to see how to protect your (18) _____ *threat* on Windows 10.

3. Firewall & network protection – lets you monitor network connections, and you can (19) _____ *malicious* various Microsoft Defender Firewall settings.
4. App & browser control – helps you protect your device and data from (20) _____ *configure* code hidden on apps, files, and websites.
5. Device security – provides (21) _____ *performance*-level security features, such as (22) _____ *hardware* isolation and Security processor, to protect your computer from certain attacks.
6. Device (23) _____ *core* & health – display the health and performance report of your computer.
7. Family options – offers easy access to manage your devices and kids' online (24) _____ *account* using a Microsoft (25) _____ *experience*.

Adapted from: https://www.windowscentral.com/beginners-guide-windows-security-windows-10 [3.08.2020].

9 Social and personal competences, teamwork



VOCABULARY ASSISTANT

to land	zapewnić
joy	radość
interpersonal	międzyludzki
a desire	pragnienie
in most cases	w większości przypadków
hands-on experience	praktyczne doświadczenie
well	dobrze
a colleague	kolega z pracy
to jump around	obskakiwać
to keep track of sth	śledzić
a donkey	osioł

on a daily basis	codziennie
to arise	pojawiać się
a mogul	magnat
to fulfill a need	spełnić potrzebę
multiple	liczny, wielokrotny
to hit benchmarks	spełniać standardy
to bring sth to fruition	przynosić owoce
to go far in sth	daleko zajść
to go on	kontynuować
to solve a puzzle	rozwiązać zagadkę
by trial and error	metodą prób i błędów
to perceive sth as	postrzegać coś jako
an ingredient	składnik
a myth	mit
a realm of sth	królestwo czegoś
after all	w ostateczności
to mistake	pomylić
to pay attention to sth	zwracać uwagę na coś
a piece of sth	kawałek czegoś
a peer	rówieśnik
QA (quality assurance)	dział zapewnienia jakości
to become a leader	stać się liderem
eclipse	zaćmienie
to be cut out for sth	być stworzonym do
willingness to do sth	chęć do robienia
a tract	ścieżka, szlak
an excitement about sth	podekscytowanie
an effort	wysiłek
to move on to sth	przechodzić do
a supervisor	przełożony
verbal	ustny
properly	właściwie
a schedule	rozkład
to prioritize	nadawać priorytet
to yield	przynosić rezultat
useful	użyteczny
to come up with sth	wymyślić, wpadać na

to move sth forward	pchać do przodu
to meet a deadline	dotrzymać terminu
critical	istotny
to give up	poddawać się
a commitment to sth	zaangażowanie w
self-improvement	samodoskonalenie
to figure out sth	rozwikłać coś
resourceful in sth	pełen pomysłów w
genuinely	prawdziwie
innate to	wrodzony
to score a goal	strzelić gola
to assume	zakładać
alone	samodzielnie
instead	zamiast
to respond to sth	odpowiadać na
to take sth/sb to do sth	wymagać, żeby zrobić
a manual for sth	instrukcja obsługi
to set oneself apart from sth	oderwać się od
a field	dziedzina

EXERCISE 1.

Discuss.
Przedyskutujcie odpowiedź na poniższe pytania.

1. What skills do you think you should have to get a job in IT industry?

2. How many skills do you think you already have?

3. Why do you like helping others? Why not?

4. Do you like socialising? Why / why not?

EXERCISE 2.

Read the questions below. Listen to the presentation *10 skills that could land you an IT job*. Answer them.
Przeczytaj poniższe pytania. Wysłuchaj prezentacji *10 umiejętności, które mogłyby zapewnić ci pracę w IT*. Odpowiedz na pytania.

1. What are the key ingredients to success in IT?

2. What is the problem with the soft skills?

3. What is the most important soft skill?

4. What is essential in multitasking?

5. What might help you identify problems even before they arise?

6. Why should you be creative in IT?

7. How is solving puzzles related to IT?

EXERCISE 3.

Listen to the presentation again. Decide if the statements 1–10 are true or false. Correct the false sentences.
Wysłuchaj prezentacji ponownie. Zdecyduj, czy zdania 1–10 są prawdziwe, czy fałszywe. Popraw te fałszywe.

1. Soft skills aren't qualities that are innate to your personality. T/F

2. In many cases, it's a myth that you have to be good at math or science to get into IT. T/F

3. In most cases, you can't pick up technical skills with time and effort through training, certification and hands-on experience. T/F

4. If you also enjoy teaching people about technology and explaining technical subjects in terms anyone can understand, you should be a teacher. T/F

5. Being organized makes you less efficient and productive at work. T/F

6. Good project management involves the ability to make professional plans, score goals and work with colleagues to resolve project issues. T/F

7. Analytical abilities allow you to diagnose technology issues and fix them. T/F

8. Technology jobs don't require a commitment to learning and self-improvement. T/F

9. Every IT job involves helping people in different ways. T/F

10. Even if you plan to be the next Bill Gates, your tech job won't require you to come up with ideas. T/F

Grammar Support Reminder

CONDITIONALS

They describe **situations in the present, future** and **the results** of those situations in the **future**. They must include the word **if** which presents the situation.
But **not every** sentence with **if** is a conditional.

	Examples
ZERO CONDITIONAL	
It describes scientific facts or truths.	*If you **breathe**, you **live**.*
If + **Present Simple**, **Present Simple**.	
1. FIRST CONDITIONAL	
It describes **real** / **possible** situations	
in the present or **future** and their results.	*If you **help** me, I **will help** you.*
If + **Present Simple**, **Future Simple**	
2. SECOND CONDITIONAL	
It describes **unreal** / **impossible** situations	*If you **helped** me, I **would help** you.*
in the present or ***future*** and their results.	
If + **Past Simple**, **would + bare infinitive**	
3. THIRD CONDITIONAL	
It is the only one that describes situations **in the past** and	*If you **had helped** me,*
their **unreal** / **hypothetical results** also **in the past**.	*I **would have helped** you.*
If + **Past Perfect Simple**, **would + have + past participle**	

EXERCISE 4.

Match first conditional sentences 1–10 with their correct endings.
Połącz zdania 1–10 z właściwymi zakończeniami w I okresie warunkowym.

1. If we sell the house, ○
2. We will be very proud of you ○
3. If she comes late, ○
4. You will miss the train ○
5. If I find your pendrive, ○
6. If you need some money, ○
7. If we take the donkey, ○
8. You won't find a parking space ○
9. If she wants to catch this plane, ○
10. I'll be furious ○

□ A) if you pass your exams.
□ B) if the system crashes.
□ C) if you don't hurry up.
□ D) if you stop the car.
□ E) Bill will lend you some.
□ F) the journey will be slow.
□ G) I'll give it back to you.
□ H) I won't invite her again.
□ I) we'll make a lot of money.
□ J) I'll have to give her a lift to the airport.

EXERCISE 5.

What would you do in these situations? Finish the sentences putting the verbs in the correct form of the second conditional.
Co zrobiłabyś / zrobiłbyś w podanych sytuacjach? Dokończ zdania – wpisz czasowniki we właściwej formie w II okresie warunkowym.

1. If I ate too much junk food, _____
2. If it was a sunny day, _____
3. If I went to sleep late, _____
4. If my parents left me alone for a week, _____
5. If I got a bad mark, _____
6. If my dog chewed my shoes, _____
7. If I went to the USA, _____
8. If I saw a small kitten in the street, _____
9. If my friend asked me to cook dinner, _____
10. If I had $1000, _____

EXERCISE 6.

Put the verbs in the correct form of the third conditional.
Zapisz czasowniki z nawiasów we właściwej formie w III okresie warunkowym.

1. If my brother _____ (study) , he _____ (pass) the exam.
2. If they _____ (plan) their trip, they _____ (find) a place to sleep.
3. If she _____ (eat) so many cookies, she _____ (feel) sick.
4. If I _____ (take) a photo of the girl I _____ (remember) her face.
5. If my neighbours _____ (be) at home, I _____ (ask) for some eggs.

EXERCISE 7.

Choose the correct verb form.
Wybierz właściwą formę czasownika.

1. I would be very happy if they _____ to join my team.
   a) agree
   b) agrees
   c) agreed
2. If you go to New York, _____ to visit all the museums.
   a) have
   b) will have
   c) Would have
3. If you ask IT Department for help, they always _____ you a solution to your problem.
   a) offer
   b) will offer
   c) offered
4. You'd have seen the eclipse if you _____ 10 minutes ago.
   a) arrived
   b) would arrive
   c) had arrived
5. She _____ this 3D printer if she gets a discount.
   a) will buy
   b) would buy
   c) buy

EXERCISE 8.

Read the article and answer the questions below.
Przeczytaj tekst i odpowiedz na poniższe pytania.

1. Why are communication skills important in the IT industry?
   _____
   _____
2. What do you need interpersonal communication abilities for?
   _____
   _____
3. Why is listening not the same as hearing?
   _____
   _____

4. Why is collaboration so important?

_____

_____

5. How can you use your writing skills in IT?

_____

_____

Communication skills are of little value in the realm of technology as well as soft skills which are graded below technical abilities. Many people assume that they do not need strong communication abilities to work in tech. After all, won't they be spending more time with computers than people? This is a false assumption. You are responsible for communicating clearly and effectively with your managers, your colleagues, and your clients. All the technical skills in the world are useless without the ability to communicate.

Even if your position is based around technology, all jobs require interaction with other people such as coworkers. Collaboration is very valuable. Your teammates will be able to help you solve problems that you would be unable to find answers to alone. Training is another important part of interpersonal communication. At some point, you will be required to transfer knowledge to others. If you are a support specialist, you will have to communicate with clients and help them understand computer software without any technological jargon. This is a very valuable skill that can take years to develop.



Listening is another important aspect of good communication. Do not mistake listening for a lack of speaking. Instead, seek to be an active listener who pays attention and asks questions at appropriate times. This will help you better understand your coworkers' techniques and ideas. The skill will also help you respond to your clients' questions.

Remember, you are not alone in the IT world. Most of the time, you will be working on a team with other individuals. No single person develops a new piece of technology. Instead, it takes a team of people to successfully create something new. This is the most important reason IT professionals need to be comfortable working in a team environment and collaborating with others.

Your interpersonal communication abilities are not the only way to share knowledge with your peers. Written communication is another necessary soft skill. Communicating your thoughts through writing is important in every aspect of your work. Examples of writing in the IT industry include creating a user manual for a new program, writing an effective ticket for QA, and putting together a requirements document for an important project.

Strong communication skills are a key element of your success in the IT industry. By exercising great interpersonal communication abilities, collaboration, and writing skills, you'll be able to set yourself apart from other professionals and become a leader in your field.

Adapted from: https://thriveglobal.com/stories/why-communication-skills-are-important-in-the-it-industry/ [3.08.2020].

Self-check 3

A. Put the verbs in the correct forms.
Zapisz we właściwej formie czasowniki podane w nawiasach.

1. If she _____ (not hurry), she _____ (not hit) benchmark.
2. If I still _____ (not come up) with a solution tomorrow, I _____ (not meet) the deadline.
3. If I _____ (can get) get access to the database, I _____ (go) on with filing the records.
4. We _____ (buy) this suite, only if it _____ (be) compatible with our documents.
5. If you _____ (help) me solve this puzzle, I _____ (move) the implementation forward.

B. Finish the sentences using the first conditional.
Dokończ zdania. Użyj I okresu warunkowego.

1. If my phone's battery dies _____
2. If you open this attachment, _____
3. If I can't get access to my email account, _____
4. If I don't find a customized protection offer, _____
5. If I don't become a PC World subscriber, _____

C. Choose the correct option a or b.
Wybierz odpowiedź *a* lub *b*.

1. I would become a leader if I _____ more commitment to work.
   a) would have b) had
2. If she _____, she would tell him how to change the interface.
   a) figures it out b) figured it out
3. I _____ that by default if I were you.
   a) will not set b) wouldn't set

4. I _____ to this offer if I knew it's not a hoax.
   a) would respond b) will respond
5. If I were a millionaire, _____ an Internet mogul.
   a) I'd become b) I'm going to become

D. Put the verbs in the correct forms.
Uzupełnij luki czasownikami we właściwej formie.

1. Our boss will be absolutely frustrated if our program _____ (succeed).
2. If they had stolen your password, _____ you _____ (alert)?
3. We would be unbeatable if we _____ (troubleshoot) in less than five minutes.
4. If she (not, be) _____ in a hurry, she would have sent this notification.
5. You won't resolve the problem if you (not, change) _____ your mindset.

E. Fill in the gaps with the correct form of the verbs to express the future.
Uzupełnij luki czasownikami z nawiasów we właściwej formie wyrażającej przyszłość.

1. Tomorrow they _____ (monitor) the competition.
2. I promise I _____ (be) proactive.
3. Reduce your jargon. It _____ (impress) anyone.
4. What _____ (they aim) at this year?
5. This attack looks malicious. I _____ (help) you.

F. Write the comparative and the superlative forms of the adjectives.
Zapisz podane przymiotniki w stopniu wyższym i najwyższym.

	Comparative	Superlative
1. little	_____	_____
2. modern	_____	_____
3. few	_____	_____
4. strict	_____	_____
5. complicated	_____	_____
6. useful	_____	_____
7. relevant	_____	_____
8. soon	_____	_____
9. noisy	_____	_____
10. cheap	_____	_____

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5. If you _____ (help) me solve this puzzle, I _____ (move) the implementation forward.

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Dokończ zdania. Użyj I okresu warunkowego.

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2. If you open this attachment, _____
3. If I can't get access to my email account, _____
4. If I don't find a customized protection offer, _____
5. If I don't become a PC World subscriber, _____

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Uzupełnij luki czasownikami z nawiasów we właściwej formie wyrażającej przyszłość.

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Zapisz podane przymiotniki w stopniu wyższym i najwyższym.

	Comparative	Superlative
1. little	_____	_____
2. modern	_____	_____
3. few	_____	_____
4. strict	_____	_____
5. complicated	_____	_____
6. useful	_____	_____
7. relevant	_____	_____
8. soon	_____	_____
9. noisy	_____	_____
10. cheap	_____	_____

G. Write the correct form of the adjectives.
Uzupełnij luki właściwymi formami przymiotników.

1. My present boss is _____ (easy) to work with than my previous one.
2. Our new database system is _____ (expensive), but it is _____ (comfortable) and _____ (modern).
3. This year we have expected even _____(many) benefits than last year.
4. It is obviously _____ (safe) to rely on updated protection systems.
5. Blue is _____ (calming) than red.

H. Find three synonyms of the verb *to invent*.
Podaj trzy angielskie synonimy czasownika „wynaleźć".

1. _____
2. _____
3. _____

I. Fill in the gaps.
Uzupełnij luki.

Strong Passwords

Another way to (1) _____ computers and then get access to key information is to steal passwords. Making educated guesses at someone's (2) _____ (such as the login, a street address, a child's name, a pet's name, etc.) could last forever, so computer criminals are more likely to use a program to (3) _____ all the combinations until it finds the right one. But creating strong passwords and avoiding (4) _____ words (like *password* or *1234*) can help and is easy. Although choosing random combinations of letters (upper and lower case), numerals, and punctuation marks is unbeatable, some antivirus programs can help you (5) _____ personal information and passwords.

J. Put in the missing letters in the words connected with technical support.
Dopisz brakujące litery w wyrazach związanych ze wsparciem technicznym.

1. te_h-sa_vy
2. to ad_u_t
3. to t_ck_e
4. _ou_h
5. to re_ol_e

10 Summer / intern job in IT industry



VOCABULARY ASSISTANT

a chat	pogawędka
brief	zwięzły
an overview of	przegląd
a characteristic	cecha charakterystyczna
strict	surowy, sztywny
a hierarchy	hierarchia
an employee	pracownik
a department	dział
to be blazed	najarany

vital	istotny
due to	z powodu
an attitude	postawa
to take the next step	zrobić następny krok
a summer job	sezonowa praca w lecie
an intern(ship)	praktyka
to mingle with sb	obracać się w towarzystwie
to take instruction	przyjmować wskazówki
to type	pisać na klawiaturze
to smile at sb	uśmiechać się do kogoś
a conflict	konflikt
over the phone	przez telefon
an outline of	zarys
a fit for the role	dopasowanie do roli
substantial	znaczny
staff	pracownicy
onsite	na miejscu
office space	przestrzeń biurowa
to be ablaze about	być podekscytowanym
to work remotely	pracować zdalnie
a limitation	ograniczenie
flexible	elastyczny
an assignment	zadanie
to matter	mieć znaczenie
a regular job	stała praca
a phase	faza, etap
an applicant	ubiegający się o pracę
to shadow	naśladować
necessary	konieczny
to hire	zatrudnić
a habit	zwyczaj, nawyk

EXERCISE 1.

Discuss.
Przedyskutujcie odpowiedzi na poniższe pytania.

1. Why do you think a job interview is necessary to get a job?

2. What do you think matters during an interview?

3. How is a summer / intern job different from a regular job?

EXERCISE 2.

Read the questions below. Listen to an extract describing an interview process at Beablaze – a software and programming company. Answer the questions.
Przeczytaj poniższe pytania. Wysłuchaj fragmentu opisującego proces rekrutacji w Beablaze, firmie zajmującej się tworzeniem oprogramowania. Odpowiedz na pytania.

1. What is the first phase of a phone interview?

2. What does a recruiter check if a candidate has?

3. Why is it possible to mingle with everyone in the office?

4. Can you work remotely in this company?

5. What is a take-home assignment?



EXERCISE 3.

Listen to the extract again. Fill in the gaps in sentences 1–5.
Wysłuchaj fragmentu ponownie. Uzupełnij luki w zdaniach 1–5.

1. It begins with a brief _____ of the company history, an _____ of products and cultural environment, as well as the _____ of the interview process.
2. We obviously search for the typical _____ like ability to _____, _____, and friendliness (the soft skills) [...].
3. At Beablaze, opinions of all teammates are _____ and we try to avoid strict staff _____.
4. Anther characteristic that our recruiters look for is a candidate's ability to interact _____.
5. After _____ a candidate's cultural fit positively, the recruiter sends them a take-home _____.

Grammar Support Reminder

RELATIVE CLAUSES

They give more information about somebody or something.
They include relative pronouns:

who	for people
which	for things and animals
where	for places
whose	for possessions referring to people and things

DEFINING

They define somebody or something providing key information.
Pronouns **who** and **which** can be substituted with universal **that**.
There is **no comma before a relative pronoun**.

*Tim Berners-Lee is the man **who invented the World Wide Web**.*

NON-DEFINING

They give more information but it does not define anybody or anything.
Pronouns **who** and **which can't** be substituted with universal **that**.
There is **a comma before a relative pronoun and at the end of the clause**.

*Tim Berners-Lee, **whose parents were early computer scientists**, invented the World Wide Web.*

EXERCISE 4.

Choose the correct answer.
Wybierz poprawną odpowiedź.

1. The man, _____ was talking to us, is a famous graphic designer.
   a) who b) which c) that
2. The girl, _____ works in the canteen, doesn't speak English.
   a) who b) whom c) which
3. The specialist, _____ computer had broken down, asked us to help him.
   a) who b) which c) whose
4. Thomas, _____ design was stolen, was devastated.
   a) who b) which c) whose
5. Do you know anyone _____ drives a sports car?
   a) which b) that c) that or who
6. The film, _____ we saw, was really funny.
   a) that b) which c) whose
7. The company, _____ solution we adopted, closed down.
   a) whose b) which c) that
8. Mr Paulack, _____ lives next door, is my colleague now.
   a) who b) which c) whose
9. How are you going to spend the time _____ our boss gave you for the project?
   a) which b) that c) which or that
10. I met somebody _____ knows you.
    a) which b) that c) whose

EXERCISE 5.

Read the sentences and fill in the gaps with relative pronouns and commas where necessary.
Przeczytaj zdania. Tam, gdzie to konieczne, uzupełnij luki zaimkami względnymi i przecinkami.

1. The owner of that black car _____ has a scratch has parked it on a zebra crossing.
2. The graphic card _____ we installed isn't working properly.
3. I live in the house _____ is behind the corner of the street.
4. John _____ is 65 is still working.
5. Those girls _____ smiling at us are my friends.
6. That is the man _____ surname is Gates.
7. Is this the computer _____ broke down?
8. That's the hotel _____ I stayed last summer.
9. That woman at helpdesk _____ answers the phone is always polite.
10. 'I want to thank the man _____ fixed my router.'

EXERCISE 6.

Rewrite as one sentence using a relative clause.
Przepisz zdania tak, by utworzyć zdania przydawkowe.

1. A bus goes to the airport. It runs every half hour.

2. Who are those students? They are talking to Mrs. Hinton.

3. This is the package I was waiting for. It came in the mail today.

4. Here's the sound card you told me about. I've just bought it.

5. Bill Gates is the man. He started Microsoft.

EXERCISE 7.

Read the internship offer below. Discuss the questions below.
Przeczytaj ofertę stażu. Przedyskutujcie odpowiedzi na poniższe pytania.

Computer Network Engineer needed at Ri-flex Company Inc.
Hours: Monday–Friday 9am–5pm
Location: Warsaw, Poland
Requirements:

This job is an internship, so no experience in computer maintenance is necessary but applicant must be willing to learn and take instruction. This position will provide the applicant with training opportunities and a regular payment while they shadow and study under a trained computer network engineer. A good memory and an ability to type at least 40 words per minute is required.
Salary: 2,000 PLN per month

1. Do you have a part-time job?

2. What kind of job have you done before?

3. Why would you apply for this offer? Why not?

4. In your opinion, what can we get from an internship / part-time jobs?



EXERCISE 8.

Read the questions below which come from a job interview. Think about your answers. Ask and answer them in pairs.
Przeczytaj poniższe pytania dotyczące rozmowy o pracę. Zastanów się nad odpowiedziami. Następnie w parach zadawajcie sobie pytania i odpowiadajcie na nie.

1. What situation brings you here today?

2. How would your best friend describe you?

3. What are your strengths? / What are your weaknesses?

4. Why should we hire you?

5. What can you do for us that other candidates can't?

6. What are your goals?

7. Where do you see yourself in five years?

8. What salary do you expect?

9. What is your typical way of dealing with conflict?

10. What tools or habits do you use to keep organized?

11 Applying for a job in IT



VOCABULARY ASSISTANT

a sense of	poczucie
initial	początkowy
anxious	podenerwowany
to handle	radzić sobie
to prove	udowodnić
to detail	podać szczegóły
to highlight	podkreślać
to log	rejestrować
to list out sth	wypisać

to mention	wspomnieć
to regret	żałować
to stress	kłaść nacisk
to rehearse	próbować
self-confidence	pewność siebie
to look forward to sth	cieszyć się na
to submit	składać
enough	wystarczająco
to lie	kłamać
unforgivable	niewybaczalny
until	dopóki
cardinal	główny
beneficial	korzystny
an evaluation	ocena
pressure	presja
behavioral	związany z zachowaniem
to accomplish	osiągnąć
rewarding	satysfakcjonujący
convincing	przekonywający
to date	opatrzyć datą
to emphasize	uwypuklać
to get to know sth	dowiedzieć się, poznać
to conclude	podsumować
apart from	oprócz
to boost	wzmocnić
to hear from sb	mieć wieści od
too	zbyt, za
to exaggerate	przesadzać
neat	staranny, schludny
optional	nieobowiązkowy
a numeral	liczebnik
ordinal	porządkowy

EXERCISE 1.

Discuss.
Przedyskutujcie odpowiedzi na poniższe pytania.

1. Why do you think getting a job in IT is easy? Why not?

2. What do you think attract people to you?

EXERCISE 2.

Listen to the extract of the discussion with an expert about a job interview for a Help desk specialist. Answer the questions below.
Wysłuchaj fragmentu wypowiedzi eksperta na temat rozmowy o pracę na stanowisku specjalisty działu pomocy technicznej. Odpowiedz na poniższe pytania.

1. What do employers really want to know?

2. What type of candidates is valuable in this job?

3. What types of questions does a candidate need to answer?

4. Why should a candidate practice answering interview questions?

5. What's the difference between behavioral and situational questions?

EXERCISE 3.

Work in pairs. One of you is an interviewer, the other is an interviewee. Try and answer the interview questions for yourself.
Pracujcie w parach. Jedno z was jest rekrutującym, drugie – rekrutowanym na dane stanowisko. Udzielcie odpowiedzi na pytania z wysłuchanego materiału.

1. What does excellent customer service mean to you?

2. What is your biggest strength? What is your biggest weakness?

3. What do you find most rewarding about working at a help desk?

4. In which IT areas do you think you are an expert?

5. How do you keep your IT knowledge and skills up-to-date?

6. What is ITIL? How can you apply ITIL to your position at a help desk?

7. What programs have you used to log and date calls?

8. Tell me about a time when it was significantly difficult for a caller to explain a problem to you. How did you get to know the issue?

9. Give me an example of a problem when you had to explain complex information to a caller in a simpler way.

10. Tell me about a time when you had to deal with a particularly aggressive customer or caller. How did you solve the issue? Is there anything you regret?

Grammar Support Reminder

NUMERALS

CARDINAL AND ORDINAL NUMBERS

	CARDINAL		ORDINAL
0	Zero, love, nil, nought	–	–
1	one	1st	first
2	two	2nd	second
3	three	3rd	third
4	four	4th	fourth
5	five	5th	fifth
6	six	6th	sixth
7	seven	7th	seventh
8	eight	8th	eighth
9	nine	9th	ninth
10	ten	10th	tenth
11	eleven	11th	eleventh
12	twelve	12th	twelfth
13	thirteen	13th	thirteenth
14	fourteen	14th	fourteenth
15	fifteen	15th	fifteenth
16	sixteen	16th	sixteenth
17	seventeen	17th	seventeenth
18	eighteen	18th	eighteenth
19	nineteen	19th	nineteenth
20	twenty	20th	twentieth
21	twenty-one	21st	twenty-first
22	twenty-two	22nd	twenty-second
23	twenty-three	23rd	twenty-third

	CARDINAL		ORDINAL
30	thirty	30th	thirtieth
40	forty	40th	fortieth
50	fifty	50th	fiftieth
60	sixty	60th	sixtieth
70	seventy	70th	seventieth
80	eighty	80th	eightieth
90	ninety	90th	ninetieth
100	one hundred	100th	one hundredth
101	one hundred and one	101st	one hundred and first
102	one hundred and two	102nd	one hundred and second
103	one hundred and three	103rd	one hundred and third
200	two hundred	200th	two hundredth
1000	one thousand	1000th	one thousandth

EXERCISE 4.

Write the numbers.
Zapisz liczby słownie.

3	_____	5	_____	11	_____
13	_____	15	_____	19	_____
38	_____	80	_____	100	_____
199	_____			200	_____
999	_____			1000	_____

EXERCISE 5.

Change the cardinal numbers into ordinal ones and write them.
Zamień liczebniki główne na porządkowe i zapisz je słownie.

1	_____	2	_____	3	_____
5	_____	8	_____	12	_____
20	_____	21	_____	30	_____
40	_____	50	_____	100	_____

EXERCISE 6.

Read this example of a cover letter sent via email. Discuss the questions below.
Przeczytaj przykład listu motywacyjnego w formie e-maila. Przedyskutujcie odpowiedzi na poniższe pytania.

From: Leon Nowak
To: Kelly Phewlet, HR Manager
Subject: Application for IT Support Manager position

Dear Ms Phewlet, I am writing in response to the job advertisement on the Phewlet Career website for the position of IT Support Manager.

I have ten years of experience in IT System management. For the last five years, I have worked as a team leader, managing a team of ten IT Support assistants in an IT company. I have experience in hiring, training and managing staff. I have good communication skills and apart from English I am a native speaker of Polish.

I have attached my CV with more information about my background and qualifications.

I look forward to hearing from you soon.

Best regards,

Leon Nowak

1. What should the subject line say?

2. How should you start your email?

3. What should you write about in the first paragraph?

4. What should you do in the next paragraph?

5. Should you attach your CV and inform about this in the email? Why / why not?

6. What is the most universal ending?

7. Should you sign your email? Why / why not?

EXERCISE 7.

Read the text and and decide if the statements 1–7 are true or false.
Przeczytaj tekst i zdecyduj czy zdania 1–7 są prawdziwe, czy fałszywe.

Before you start preparing for a job interview
you should apply for it submitting your CV
in which you list your qualifications and work experience.
Read the tips below to find out how to do it in a successful way.

1. Don't make it long or too short! One to two sides of A4 paper will be enough. Too much information can kill the recruiter. Choose only the points which are most relevant to the position you're applying for. Forget about one CV that suits all the positions and employers.
2. Use active verbs to create a strong positive impression of you. Instead of *responsible for*, use verbs like *led* or *managed* (a group / a team); *created* or *developed* (a patch / internship programme); *delivered* (a solution / a presentation); and *provided* (support / training).
3. Check if your CV is up to date. List your experience.
4. Don't exaggerate or lie. Tell the truth about where you have studied and worked or about your expertise.
5. Think about the layout of your CV. It must be clear, neat and easy to read. Check punctuation, spacing, sentence structure.
6. Mistakes in a CV are unforgivable. Use computer tools (spell check, etc.) and read your CV until you find mistakes no more.
7. Don't forget about a cover letter. Sometimes employers expect you to add a cover letter or an email to submit your application. You can show your personal interest in the role or highlight your talents in the cover letter and convince the employer to read the attached CV.

Adapted from: https://learnenglish.britishcouncil.org/business-english/business-magazine/writing-a-good-cv [3.08.2020].

1. When you list your work experience, put the first job you did first. **T / F**
2. A longer CV is better it is. **T / F**
3. Active verbs helps to create a good impression. **T / F**
4. Updating your CV is necessary. **T / F**
5. You should never lie in your CV. **T / F**
6. Mistakes don't matter – it's you who is important. **T / F**
7. Cover letters are optional. **T / F**



NAME SURNAME

Graphic Designer & Web Developer

PROFILE

123 456 7890
info@companyname.com
www.companyname.com
93 Street, Country, 12345

EDUCATION

2011-2019
Master Graduate / Major
University Name Here - Location

2011-2019
Bachelor Graduate / Major
University Name Here - Location

REFERENCE

Name Surname
Company Name / Position
P: +11 123 456 7890
E: info@companyname.com

Name Surname
Company Name / Position
P: +11 123 456 7890
E: info@companyname.com

AWARDS

Best Award Name 2018
Your Category Here

EXPERIENCES

2018-2019 Position Title Here
Company Name/location Text Here

2019-2020 Position Title Here
Company Name/location Text Here

2020- Position Title Here
Company Name/location Text Here

SKILLS

Skill Name 1
Skill Name 2
Skill Name 3
Skill Name 4
Skill Name 5
Skill Name 6

EXERCISE 8.

Read the job descriptions below. Right two letters applying for tech suport and database administrator.

Przeczytaj oferty pracy. Napisz dwa listy: w pierwszym będziesz ubiegać się o pracę jako specjalista do spraw wsparcia technicznego, w drugim – administrator danych.

Tech Support

Technical support staff maintains computer systems, ensuring that they run smoothly and fixes problems as they arise. Tech support staff may also install and configure new hardware and software, undertake regular upgrades, and help other employees set up accounts, reset passwords, and respond to other computer system-related questions. Duties also include maintaining records of software licenses, re-stocking equipment, and staying abreast of current developments in technology.

Aptitude for new ideas plus willingness to learn are vital, due to the simple fact that technologies change so quickly.

Additionally, experience in customer service also helps. Experience or training in recent computer/software developments helps a great deal.

Technical and Analytical

Of course, you need to know how computers, tablets, and other related electronics work and how to troubleshoot them. You must not only understand the systems that you work with but also any new developments in related hardware or software.

While the technical part of technical support is indispensable, it's not enough by itself. You also must have the soft skills necessary to work efficiently and to work well with others that lack the same experience that you do: ability to learn new software and hardware, active listening, adaptability, analysis of technical issues, application support, assessing customer support needs, attention to detail, case notes, data migration, data settings, detail oriented, diagnosing hardware, diagnosing software, error logs, explaining technical information clearly, identifying process improvements, mechanical reasoning, mobile devices, operating systems, networks, patience, redirecting problems to appropriate resources, web applications, web support, troubleshooting.

Organizational

To work efficiently, you will need to organize both your time and your equipment properly. While being organized comes more easily to some than to others, these are skills you can learn and practice.

There are various techniques you can use to improve your attention management, keep better track of your materials, and plan your projects well.

Interpersonal skills and Communication

Tech support means working with both machines and people. Not only do you need to work well with your coworkers, but a major component of tech support is customer service.

Most of the people you assist will not know anywhere near as much as you do about technology. That means that you must rely on your interpersonal skills to demonstrate that you are taking their problems seriously and working to resolve the issue as rapidly as possible.

If your first suggestion does not work or if the problem recurs, your clients won't be able to tell that there is a legitimate reason – unless you can earn their trust.

Adapter from: https://www.thebalancecareers.com/tech-support-skills-list-2063774 [4.08.2020].

Database administrator

Your responsibility as a database administrator (DBA) will be the performance, integrity and security of a database. You'll be involved in the planning and development of the database, as well as in troubleshooting any issues on behalf of the users.

You'll ensure that:

- data remains consistent across the database
- data is clearly defined
- users access data concurrently, in a form that suits their needs
- there is provision for data security and recovery control (ensuring all data is retrievable in an emergency).

Responsibilities

As a database administrator, you'll need to:

- establish the needs of users and monitor user access and security
- monitor performance and manage parameters in order to provide fast responses to front-end users
- map out the conceptual design for a planned database
- consider both back-end organisation of data and front-end accessibility for end-users
- refine the logical design so that it can be translated into a specific data model
- further refining the physical design to meet system storage requirements
- install and test new versions of the database management system (DBMS)
- maintain data standards, including adherence to the Data Protection Act
- write database documentation, including data standards, procedures and definitions for the data dictionary (metadata)
- control access permissions and privileges
- develop, manage and test back-up and recovery plans
- ensure that storage and archiving procedures are functioning correctly
- carry out capacity planning
- work closely with IT project managers, database programmers and multimedia programmers
- communicate regularly with technical, applications and operational staff to ensure database integrity and security
- commission and install new applications and customise existing applications in order to make them fit for purpose
- manage the security and disaster recovery aspects of a database.

What to expect

- The working environment is informal and it's possible for work to be carried out from home or from other remote locations. There's an increasing trend towards working from home.
- You'll find that the work can be demanding as organisations depend on effective databases, and there can be significant pressure to ensure that they operate smoothly, particularly if accessed online.

- Travel and absence from home overnight may occasionally be required.
- There are numerous opportunities to work abroad.
- Women are currently underrepresented in the IT profession. For information and jobs for women who want to work in technology take a look at Women in Technology.

Qualifications

You can enter this career with a degree in any subject but the following may be particularly useful:

- computer science
- computer software/computer systems engineering
- electronics
- information technology
- mathematics
- operational research

Skills

You will need to show:

- excellent problem-solving and analytical skills
- good communication, teamwork and negotiation skills
- familiarity with the main data manipulation languages and the principles of database design
- the ability to work to tight deadlines under pressure
- good organisational skills
- flexibility and adaptability
- the ability to create and maintain strong working relationships with colleagues and customers
- business awareness and understanding of business requirements of IT
- willingness to keep up to date with developments in new technology
- a commitment to continuing professional development (CPD)
- understanding of information legislation, such as the Data Protection Act.

Work experience

Most database administrator jobs require some sort of experience in the IT industry. Look out for sandwich degrees that include a work placement. These offer invaluable hands-on experience and can sometimes lead to employment after graduation. It's a good idea to gain some experience in programming and to familiarise yourself with as many database technologies and operating systems as possible. Most positions require knowledge of structured query language (SQL), Unix and DBMS.

Professional development

Most of your training will be provided on the job. It will largely consist of technical training on the systems used by your employer and in any relevant software developments. In-house training will be supplemented by short, internal or external courses, as appropriate.

Taking additional courses can help you progress professionally and most employers will expect experienced staff to have completed a database certification programme such as:

- Microsoft Certified Solutions Expert (MCSE) – Data Platform or Business Intelligence
- IBM Certified Database Administrator
- Oracle Database Certification.

To understand user needs, you'll need to be able to work in multidisciplinary teams and so will usually be given in-house soft skills training to help facilitate this. This will usually cover communication, time management and customer service skills, as well as sessions on company products and procedures.

If you work at a smaller company you may be required to use technical manuals, CD-ROMs and web-based programmes for self-study. Larger companies may offer mentoring schemes and individually-tailored training plans.

It's vital to keep your technical skills up to date and taking a professional qualification can help with this.

Career prospects

Your career prospects will depend on the type of organisations you work for. Larger organisations may offer structured career paths to the level of lead or senior database administrator, with increasing management and technical responsibility.

You could move into other areas, such as:

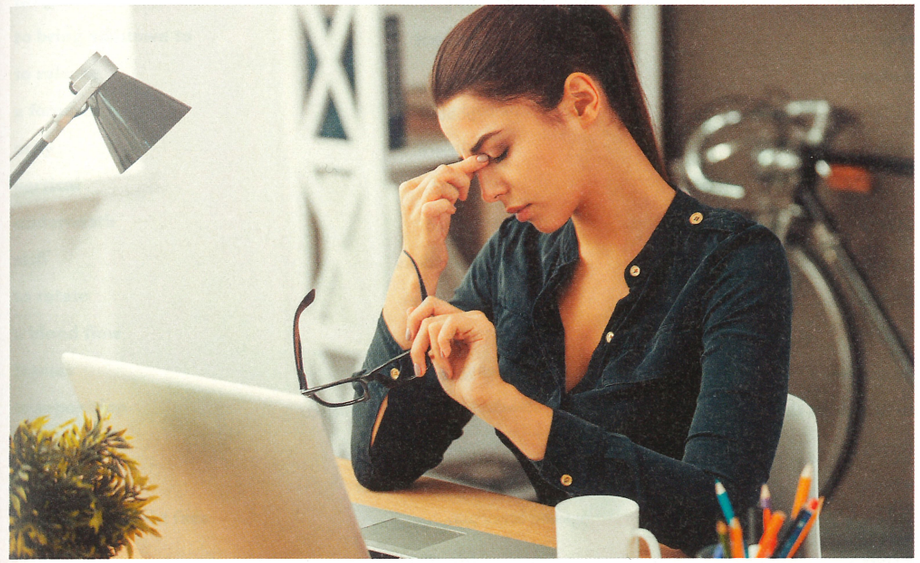
- systems development
- project management
- network management
- database architecture.

Working towards a management position is a natural step and you could eventually end up running a team or whole department if you gain the right experience and undertake any necessary and relevant qualifications. As a result, with the right effort and focus, you could end up working at a more strategic level.

Alternatively, you could choose to work as a freelance consultant or contractor, capitalising on your specialist technical knowledge. As a contractor, the projects you work on might include the design and development of a smaller database or working as part of a large-scale project in conjunction with specialist IT firms and consultants. This does require substantial experience, but you may find the financial benefits and freedom to take time off between contracts attractive.

Adapted from: https://www.prospects.ac.uk/job-profiles/database-administrator [4.08.2020].

12 Occupational health and safety in IT industry



VOCABULARY ASSISTANT

(occupational) health and safety	bhp
a regulation	przepis prawny
tiltable	taki, który można pochylić
lighting	oświetlenie
as a rule	co do zasady
trailing wires	kable plączące się po podłodze
to stare	wpatrywać się
to flicker	migotać
to emit	wydzielać
a backache	ból pleców
Repetitive Strain Injury	zespół RSI
a wrist	nadgarstek

irritation	podrażnienie
to lean forward	pochylać się
upright	wyprostowany
to stretch	rozciągać się
a spine	kręgosłup
to put hands together	złożyć ręce
to twist	obracać się
a stand	podstawka, stojak
upwards	do góry
tension	napięcie
a shoulder	bark
a chin	podbródek
room	miejsce
to push	pchać
to bend	zginać
a palm	spód dłoni
a footrest	podnóżek
a thigh	udo
an ankle	kostka
to march on the spot	maszerować w miejscu
tiptoe	na palcach
a lense	szkło, soczewka
sharp	ostry, wyraźny
a telly	telewizor
to interlock	splatać
to make sb do sth	sprawiać, że ktoś coś zrobi
adjustable	dający się regulować
an optician	optyk
electrical appliances	urządzenia elektryczne
eyestrain	zmęczenie oczu
a glare	blask, oślepienie
harmful	szkodliwy
to get rid of	pozbyć się
eyesore	ból oczu
a finger	palec
ozone	ozon
to slouch down into	garbić się

a cushion	poduszka
a chest	klatka piersiowa
a side	bok (ciała)
to stand up	wstać
an elbow	łokieć
to level	równać
to angle	ustawiać pod kątem
downwards	w dół
fatigue	zmęczenie
to bring sth down to	obniżać
to release	wypuścić
a forearm	przedramię
achy	obolały
vertical	pionowy
underneath	pod spodem
stiff	sztywny
to rotate	obracać
a blood flow	przepływ krwi
frames	oprawki
to reposition	przestawić
legible	czytelny
otherwise	w przeciwnym razie
to keep a straight face	zachować powagę



EXERCISE 1.

Discuss.
Przedyskutujcie odpowiedzi na poniższe pytania.

1. Why do you think computers are dangerous for people's health?

2. What do you do to avoid health problems related to computers?

3. If you were your own parent, would you ever allow yourself to spend more than six hours a day at a computer desk? Why / why not?

EXERCISE 2.

Listen to the extract about health and safety when working with computers. Answer the questions below.
Wysłuchaj fragmentu o bhp podczas pracy z komputerem. Odpowiedz na poniższe pytania.

1. What must an employer provide according to computer health and safety regulations?

_____

_____

2. Do you pay for your glasses if you work with computers?

_____

_____

3. What are some computer related health problems?

_____

_____

4. What causes RSI?

_____

_____

5. What can help avoid these problems?

_____

_____

EXERCISE 3.

Listen to the extract again. Fill in the missing words.
Posłuchaj nagrania ponownie. Wpisz brakujące słowa.

There are of course computer _____ and _____ regulations, mostly addressing an employer who must provide for example _____ screens, _____ chairs, suitable lighting or _____ service.
This means there shouldn't be for example any _____ wires but adequate space around the _____ .
Another frequent problem is _____ .
Eyes become tired after _____ at a computer screen for a long time, particularly when you work in poor light conditions, in _____ or with a _____ screen.
It helps both to get rid of _____ and the _____ .

Grammar Support Reminder

QUESTIONS TAGS

USE	Examples
To make sure something is true.	*You are John, **aren't** you?*
To make somebody agree with you.	*I don't like Mondays, **do** you?*
REMEMBER	
When **the verb** in a sentence is **positive** **the question tag** is **negative**.	*He **has worked** with Steve Jobs, **hasn't** he?*
When **the verb** in a sentence is **negative** **the question tag** is **positive**.	*Nicola Tesla **didn't invent** a Tesla car, **did** he?*
INTONATION ***influences the meaning.***	
When it **falls**, you **make sure what you already know**.	*You will come, won't you?*
When it **rises**, you **check if you think correctly**.	*I **am** late, **aren't** I?*

EXERCISE 4.

Fill in the gaps with the correct question tag.
Uzupełnij luki właściwym pytaniem typu „nieprawdaż".

1. She isn't playing computer games now, _____?
2. Peter was sleeping when you arrived, _____?
3. You were using a computer when the lights went out, _____?
4. Mary and John weren't swimming when it started to rain, _____?
5. Derek has called them before, _____?
6. Let's play volleyball, _____?
7. Let me explain it to you, _____?
8. You aren't listening to me, _____?
9. It is called a peripheral, _____?
10. You can speak English, _____?
11. Hanna has lost her job, _____?
12. You haven't broken that plastic part, _____?
13. They decided to study IT engineering, _____?
14. They won't tell the truth, _____?
15. Friends should help each other, _____?

EXERCISE 5.

Fill in the gaps with the correct question tag.
Uzupełnij luki właściwym pytaniem typu „nieprawdaż".

1. We visit our friends every weekend, _____?
2. Teenagers write thousands of text messages every month, _____?
3. Students never start learning a day before the test, _____?
4. Tina left the company too early, _____.
5. Grandpa didn't work on a huge farm as a boy, _____?
6. They've got a pay rise without asking, _____?
7. Peter and I will always be the best friends, _____?
8. Chris didn't want to stay there any longer, _____?
9. You won't finish it in a minute, _____?
10. We are very busy at the moment, _____?
11. They have been interested in programming since childhood, _____?
12. Lyra is going to buy a new laptop and a tablet, _____?
13. Everyone expected an improvement, _____?
14. You have studied in Cracow, _____?
15. My computer won't start any more, _____?



EXERCISE 6.

Discuss in pairs. You can take notes.
Omówcie poniższą kwestię w parach. Możecie zrobić wcześniej notatkę na ten temat.

Have you ever had any health problems because of a computer use?

EXERCISE 7.

Read the first part of the *Office Guide* and answer the questions.
Przeczytaj pierwszą część *Biurowego przewodnika* i odpowiedz na pytania.

1. What causes headaches, back pain or sore wrists?

2. How can you keep your back away from strain?

3. How can you keep your eyes away from fatigue?

Health and Safety When Working With Computers: An Office Guide

Many people spend a large part of their day in front of a different screen both at work – a desktop computer, a laptop, a tablet, a smartphone and a telly at home. Nowadays, it's difficult to find a working or non-working environment without screens.

Ask yourself simple questions. How many hours do you spend working and looking at it? How often is computer work mixed with other tasks? Do you take a lunch break away from your desk?

Luckily, most of the time, display screen equipment is completely harmless. But, if you spend long periods of time in front of it, it can cause serious health risks. You've probably connected getting headaches, back pain, or sore wrists with working at your desk, haven't you?



Well, aches and pains related to a computer use can be the effects of:

a) repetitive work
b) uncomfortable working postures
c) incorrect screen settings
d) carrying out tasks for long periods without suitable rest breaks

When you sit in your desk chair, your spine should be in an upright position. Slouching down into your chair or leaning forward onto the desk lead to strains, aches and pains. Support your lower back by adjusting the chair or use a cushion so that sitting upright feels comfortable and natural. So, to keep your back away from strain choose from the following exercises:

a) stand up and walk around every hour
b) stretch your sides and spine by leaning your chest over to one side of the chair to the other
c) stand up, put your hands together, elbows out and twist to the left and to the right.

Try to keep your neck straight as much as possible, too. Your eyes level should be 5 cm below the top of the screen. Adjust the tilt and height of your screen or your chair. If you have a laptop, use a stand to raise it up. Remember, if you have to angle your head upwards or downwards to see the screen, the tension in your neck builds up leading to headaches and fatigue. How to avoid it?

a) move your neck and shoulders regularly
b) sit up straight and slowly tilt your head down from one shoulder to the other to stretch your neck
c) move your shoulders around in small circles, both forwards and backwards
d) slowly bring your chin down to your chest, hold for 3 seconds, and then release

EXERCISE 8.

Read the second part of the guide and put the sentences in the gaps 1–3.
Przeczytaj drugą część przewodnika i wpisz odpowiednie zdania w luki 1–3.

- stand up and march on the spot for 30 seconds to improve the blood flow in your legs
- look away from the screen into the distance at least 15 times a days, focus on something 30 metres away for 30 seconds every 30 minutes
- reach your arms ahead and draw big circles with your wrists, forwards and backwards
- try to keep your face straight as much as possible

There should be enough room in front of your keyboard to support both your forearms and your wrists on the desk. Move your computer screen and keyboard back if you need. When you type, keep your wrists straight. If you have to bend your wrists upwards to reach the keyboard, you must use a wrist support. Otherwise you risk a repetitive strain injury (RSI). How to keep your arms and wrists ache-free:

a) (1) _____
b) stretch your arms out to the side as far as you can and then above your head as high as you can
c) interlock your fingers and then push them out in front of you, with palms facing out

You should sit comfortably with your feet flat on the floor and your lower legs vertical. Use a footrest underneath your desk if you need more support, or if the chair is putting pressure on your thighs. Make sure that there's enough space to change position and stretch your legs out. How to prevent stiff legs, ankles and feet:

a) rotate your ankles round in circles under the desk in both directions
b) (2) _____
c) stand on your tiptoe and stretch upwards to release some of the tension in your whole body

Long use of a screen can cause visual fatigue and eye strain. If your job involves working with a display screen for most of the day, your employer has to provide you with eye tests to check if you see the screen clearly. If an eye test shows that you need glasses for computer work, again your employer has to pay for the basic frames and lenses. How to reduce the risks of visual problems:

a) adjust the screen to avoid glare from lights or windows
b) keep the screen clean
c) use a desk lamp
d) make the screen colours natural and easy to look at and the characters sharp and legible
e) (3) _____

Adapted from: https://www.highspeedtraining.co.uk/hub/computer-health-and-safety/ [3.08.2020].

EXERCISE 9.

Do all of these exercises in the classroom and check if you feel better. Take notes.
Wykonaj w klasie wszystkie ćwiczenia opisane w poprzednim zadaniu i sprawdź, czy czujesz się lepiej. Zrób notatkę w języku angielskim na ten temat.

EXERCISE 10.

Match the things in pictures with the correct names.
Dopasuj właściwe nazwy do rzeczy pokazanych na ilustracjach.

backache • eye hypermia • feet on the floor • wrist straight • knee angle 90° • headache • neck pain • seat back angle 90° • shoulder pain • tunnel syndrome • view angle 20–50° • viewing distance 40–75 cm • wrist bend 20°



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Self-check 4

A. Put the correct relative pronoun in the sentences below.
Dopisz w każdym z poniższych zdań właściwy zaimek względny.

1. We work in a company _____ general rule is to teamwork.
2. This is the manual _____ I wrote last year.
3. Is that the place _____ hierarchy is strict?
4. Ryan, _____ with I work in QA, is a very tech-savvy colleague.
5. Do you know the name of the street _____ Google has its offices?

B. Rewrite as one sentence using a relative clause.
Zamień podane zdania na zdanie przydawkowe.

1. She's the Web developer. I hired her.

_____

2. That's the an applicant. He applied for an intern.

_____

3. It's the solution. We lack it.

_____

4. You are the person. We think is a fit for the role.

_____

5. They are employees. They are very resourceful.

_____

C. Decide if the sentences below are defining (D) or non-defining (N) relative clauses. Fill in the gaps with the correct relative pronoun. Put the commas where necessary.
Zdecyduj, czy poniższe zdania są zdaniami przydawkowymi ograniczającymi (D), czy zdaniami przydawkowymi opisującymi (N). Wpisz właściwy zaimek względny. Wstaw przecinki tam, gdzie to konieczne.

1. Anna _____ works as a Data specialist in Sydney is writing to colleagues in England.
2. Software engineering _____ is Geoff's field of interest is very popular in Japan.
3. An identity theft _____ is a crime can influence your computer.

4. The person _____ is an intruder works in Russia.
5. Meg _____ is your supervisor has extensive knowledge about C++.

D. The sentences below are incorrect. Find the mistakes and correct them.
Poniższe zdania są niepoprawne. Znajdź w nich błędy i je popraw.

1. I don't like people which reject new technologies.

_____

2. The CPU is an invention who has revolutionized the world.

_____

3. I know many people who dream is to become an IT specialist.

_____

4. My best friend where commitment to work is her priority.

_____

5. I like people how encourage me develop a critical-thinking skill.

_____

E. Fill in the gaps with the correct question tag.
Uzupełnij luki właściwymi pytaniami typu „nieprawdaż".

1. It's great to achieve a goal again, _____
2. He has grasp of programming languages, _____
3. You're an intern, _____
4. She isn't achy, _____
5. He hasn't configured the firewall yet, _____

F. Some sentences are incorrect. Find them and fill in the gaps with the correct question tag.
Niektóre z podanych zdań zawierają błąd. Znajdź je i popraw – dopisz właściwe pytanie typu „nieprawdaż".

1. These fonts look good, do they?

_____

2. We can develop Repetitive Strain Injury, can't we?

_____

3. You don't mind taking instruction, don't you?

_____

4. I should tell them about Health and Safety regulations, don't I?

_____

5. Nobody's suggested this solution, have they?

_____

G. Write ordinal numbers.
Zapisz słownie liczebniki porządkowe.

1. 0 _____
2. 52 _____
3. 100 _____
4. 283 _____
5. 1001 _____

H. Match the words with their meanings.
Połącz wyrazy z ich znaczeniami.

1. to march on the spot ○
2. to flicker ○
3. to stress ○
4. anxious ○
5. an intern(ship) ○

□ **a)** kłaść nacisk
□ **b)** podenerwowany
□ **c)** praktyka
□ **d)** migotać
□ **e)** maszerować w miejscu

I. Circle the odd word out.
Zakreśl wyraz, który nie pasuje do pozostałych.

1. staff – applicant – employee
2. type – matter – to smile
3. regulation – tiltable – adjustable
4. lighting – highlight – emphasize
5. beneficial – rewarding – unforgivable

J. Put in the missing letters.
Wpisz brakujące litery.

1. a ha_i_
2. to h_n_le
3. to a_com_li_h
4. a gl_re
5. to a_gle

Post-holiday grammar and vocabulary revision test*

* to be done at the beginning of the school year

EXERCISE 1.

Choose the correct option a, b, c or d.
Wybierz właściwą odpowiedź a, b, c lub d.

1. I _____ a student of English.
   a) are
   b) is
   c) am
   d) aren't

2. This is Carlos. He's _____.
   a) Japan
   b) Spain
   c) Italian
   d) France

3. She's from Bejing. She _____ Chinese.
   a) is from
   b) is
   c) isn't
   d) are from

4. They _____ American. They're from Greece.
   a) are
   b) is
   c) isn't
   d) aren't

5. _____ 's your first name?
   a) Who
   b) What
   c) How
   d) Where

6. These are mine books and _____ are yours.
   a) those
   b) this
   c) it
   d) that

7. We love computers but they _____ like online TV.
   a) do
   b) does
   c doesn't
   d) don't

8. _____ she like e-sport?
   a) Do
   b) Does
   c) Is
   d) ---

9. When _____ have breakfast?
   a) is he
   b) he's
   c) do he
   d) does he

10. Do you like _____ films?
    a watch
    b) watching
    c) watches
    d) to watching

11. They start _____ school at 7.30 in the morning.
    a) to
    b) at
    c) ---
    d) the

12. Paul's _____ name is Peter.
    a) brother's
    b) sister's
    c) sister is
    d) brother is

13. He's very friendly but he _____ very quiet.
    a) never is
    b) 's often
    c) often is
    d) never

14. She hasn't got _____ brothers and sisters.
    a) some
    b) a
    c) the
    d) any

15. How many children _____ got?
    a) they've
    b) have they
    c) they
    d) do they

16. There are a lot of books on the _____.
    a) cupboard
    b) sink
    c) shelves
    d) kitchen

17. _____ a bed and two chairs in this room.
    a) It's
    b) There's
    c) There have
    d) There are

18. Are there _____ tables in the bedroom?
    a) any
    b) some
    c) the
    d) a

19. The cafe is _____ the post office.
    a) next
    b) in front
    c) opposite
    d) under

20. Can I have a _____ of orange juice, please?
    a) bar
    b) jar
    c) box
    d) bottle

21. You _____ buy food in a bank.
    a) can to
    b) can't
    c) can
    d) are

22. How _____ bananas do you eat every day?
    a) many
    b) long
    c) more
    d) much

23. Is there _____ soup in the fridge?
    a) one
    b) some
    c) any
    d) an

24. She _____ afraid of the spiders when she was young.
    a) wasn't
    b) weren't
    c) were
    d) didn't

25. We _____ born in 2005.
    a) is
    b) were
    c) was
    d) did

26. My birthday is on June _____.
    a) 22th
    b) 22st
    c) 22nd
    d) 22rd

27. My family _____ to the UK when I was six.
    a) moves
    b) moved
    c) move
    d) moving

28. _____ did you last meet them?
    a) What
    b) When
    c) Who
    d) Which

29. They went for a picnic with some friends _____ Saturday.
    a) at
    b) the
    c) on
    d) in

30. We went _____ at the weekend.
a) the shops
b) to shops
c) shopping
d) shops

31. _____ they do a lot of sport when they were at school?
a) Were
b) Is
c) Was
d) Did

32. Is Chinese food _____ than English food?
a) best
b) more good
c) better
d) well

33. He stayed at the _____ hotel in town.
a) more expensive
b) expensivest
c) expensive
d) most expensive

34. Today is _____ than yesterday.
a) cold
b) coldest
c) more cold
d) colder

35. They _____ their homework now.
a) are do
b) did
c) are doing
d) does

36. What _____ doing at the moment?
a) is he
b) does he
c) is
d) he's

37. What _____ your sister look like?
a) is
b) do
c) are
d) does

38. She _____ jeans to work.
a) wears usually
b) is usually wearing
c) usually wears
d) is wearing usually

39. They _____ a taxi to the airport an hour ago.
a) take
b) took
c) are taking
d) takes

40. He goes to work _____ train.
a) in
b) on
c) by the
d) by

41. Can you tell me the _____ to the library?
a) road
b) way
c) street
d) place

42. You _____ drive a car in the centre of town. It isn't allowed.
a) don't have to
b) can
c) have to
d) can't

43. You _____ to walk, you can take a bus.
a) mustn't
b) have
c) must
d) don't have

44. He _____ to move to another country.
a) want
b) 'd like
c) likes
d) goes

45. I'm _____ learn to cook.
a) go to
b) going
c) going to
d) go

46. We walked ten kilometres so we _____ hungry now.
   a) are getting
   b) get
   c) got
   d) has got

47. Don't stay up late or you _____ be tired tomorrow.
   a) must
   b) won't
   c) should
   d) 'll

48. Let's _____ tennis this afternoon.
   a) play
   b) go
   c) to go
   d) playing

49. I've got a bad headache. I _____ take an aspirin.
   a) shouldn't
   b) might not
   c) will
   d) should

50. I woke up late _____ I missed my train.
   a) because
   b) but
   c) so
   d) for

51. Please turn the radio down. It's _____ .
   a) too loud
   b) enough loud
   c) too loudly
   d) very quiet

52. Sorry, I don't understand. Please speak _____ .
   a) clearly
   b) more clear
   c) slow
   d) fast

53. _____ you ever flown in a helicopter?
   a) Did
   b) Do
   c) Have
   d) Has

54. _____ make you a coffee?
   a) Will you
   b) Let
   c) Shall I
   d) Do I

55. He _____ climbed a mountain in his life.
   a) has never
   b) never has
   c) will never
   d) won't never

56. Our last family celebration _____ my sister's wedding.
   a) is
   b) was
   c) were
   d) did

57. I _____ London because I got a job there.
   a) go to
   b) went the
   c) went to
   d) went

58. When did she decide _____ married?
   a) to get
   b) got
   c) to
   d) get

59. What's the first thing you do when you _____ work?
   a) got to
   b) get to
   c) are getting
   d) get

60. She's a very busy personal trainer so she _____ takes a holiday.
   a) hardly ever
   b) often
   c) always
   d) once in a while

61. What _____ on at the moment?
   a) they work
   b) do they work
   c) are they working
   d) are they work

62. I don't mind _____ up sometimes.
a) wash
b) to wash
c) washing
d) the wash

63. Are you _____ the new exhibition at the National Gallery?
a) going to see
b) seeing
c) going see
d) go to see

64. I _____ them for dinner at eight tonight.
a) meeting
b) meets
c) 'm meeting
d) met

65. Have you ever _____ a dangerous sport?
a) do
b) made
c) make
d) done

66. _____ wrote the play Hamlet?
a) Who did
b) Who
c) Who was
d) When

67. I _____ dinner when I heard a strange noise.
a) was cook
b) did cook
c) was cooking
d) am doing

68. You _____ be late for school again.
a) mustn't
b) have to
c) vmust
d) can

69. We should avoid _____ in August.
a) travelled
b) to travel
c) travelling
d) to travelling

70. You _____ wear a suit. It's a very formal party.
a) shouldn't
b) must
c) mustn't
d) might

71. He's studied Spanish _____ last year.
a) since
b) the
c) at
d) ---

72. How long have you _____ him?
a) know
b) knew
c) knows
d) known

73. What's the matter? Have you _____ a cold?
a) get
b) caught
c) felt
d) catch

74. It _____ rain tomorrow. It's going to be a very wet day.
a) 'll
b) might
c) won't
d) might not

75. I _____ wear a uniform to school.
a) use to
b) didn't use to
c) used
d) didn't used to

76. They used to live _____ Australia.
a) the
b) at
c) in the
d) in

77. There aren't any cinemas in the town _____ I live.
a) when
b) which
c) where
d) what

78. I travelled around the world for a year _____ learn about other cultures.
a) for
b) for to
c) to
d) in order

79. He married the girl _____ used to sit next to him at school.
a) who
b) which
c) what
d) whose

80. Children spend _____ hours watching TV.
a) too many
b) not enough
c) very
d) too much

81. Can I try this coat _____, please?
a) in
b) on
c) to
d) up

82. I don't have _____ to do the things I enjoy.
a) time enough
b) enough time
c) too many time
d) some time

83. It's _____ beautiful house I've ever seen.
a) most
b) more
c) the most
d) a most

84. There's more traffic and _____ space to walk in the streets nowadays.
a) more
b) less
c) least
d) bigger

85. I think travelling by plane is _____ easier than travelling by car.
a) more
b) most
c) ---
d) the most

86. She worked as a teacher in _____ Africa.
a) ---
b) a
c) an
d) the

87. The phone's ringing. It _____ be Maria. She always calls me at this time.
a) can
b) might not
c) can
d) must

88. He _____ to work in his company's office in Shanghai.
a) sent
b) was
c) was send
d) was sent

89. I _____ that I'm like my father.
a) 'm told
b) told
c) was said
d) am said

90. The postmen hasn't delivered the parcel _____ .
a) just
b) already
c) yet
d) never

91. My brother _____ passed his exams.
a) just has
b) already has
c) yet
d) 's just

92. A lot of people think that if they _____ lots of money, they'll be very happy.
a) will have
b) have
c) had
d) won't have

93. What _____ happen if he doesn't get here in time?
a) will
b) it would
c) will it
d) it will

94. If you save some money, you _____ to worry any more.
   a) 'll have
   b) don't
   c) will
   d) won't have

95. He _____ me my book would be a great success.
   a) told
   b) said
   c) say
   d) tell

96. She told me she _____ buy me a new one.
   a) don't
   b) won't to
   c) 'll
   d) 'd

97. What would they do if they _____ have any money?
   a) were
   b) didn't
   c) won't
   d) 'd

98. I'd do more exercise if I _____ time.
   a) have
   b) 'd have
   c) 'll have
   d) had

99. _____ be possible to reserve a table for tonight?
   a) Can I
   b) Could you
   c) Would it
   d) Will

100. Could you _____ a good film?
   a) say me
   b) recommend
   c) tell me
   d) advice

Total marks = 100

Test questions

UNIT 1

1. The clock rate of a processor is measured in
   A. Megahertz or Gigahertz
   B. nanoseconds
   C. milliseconds
   D. micro hertz

2. USB stands for
   A. Uniforms Sector Buffer
   B. Universe Service Bus
   C. Uniform Service Bus
   D. Universal Serial Bus

3. Which is used for manufacturing chips?
   A. Bus
   B. Control unit
   C. Semiconductors
   D. Bus and control unit

4. The BIOS is the abbreviation of
   A. Best Input Output System
   B. Base Input Output System
   C. Basic Input Output System
   D. Basic Input Output Symbol

5. The malware that fetches the personal data such as bank details, credit/card details, password, etc. from remotely located computers is known as
   A. virus
   B. worms
   C. trojans
   D. spyware

UNIT 2

1. **Quad core processor has**
   - A. one CPU
   - B. two CPU
   - C. three CPU
   - D. four CPU

2. **A computer port is used to?**
   - A. download files
   - B. none of the above
   - C. communicate with hard disks
   - D. communicate with other computer peripherals

3. **Which of the following is an example of non-volatile memory?**
   - A. RAM
   - B. ROM
   - C. Cache memory
   - D. None of the above

4. **The CPU and memory are located on the**
   - A. keyboard
   - B. sound board
   - C. motherboard
   - D. graphics board

5. **Who developed a mechanical device in the 17th century that could add, subtract, multiply, divide and find square roots?**
   - A. Leibnitz
   - B. Babbage
   - C. Napier
   - D. Pascal

UNIT 3

1. **What does SSL stand for?**
   - A. Secure Socket Layer
   - B. System Socket Layer
   - C. Secure System Login
   - D. Superuser System Login

2. **Which is NOT an internet protocol?**
   - A. IP
   - B. STP
   - C. FTP
   - D. HTTP

3. **The software that allows user to surf the Internet is called a/an**
   - A. Browser
   - B. Search engine
   - C. Multimedia application
   - D. Internet Service Provider (ISP)

4. **Cache memory acts between**
   - A. CPU and Hard disk
   - B. RAM and ROM
   - C. CPU and RAM
   - D. All of these

5. **Linux is a(n) _____ type of software.**
   - A. shareware
   - B. proprietary
   - C. commercial
   - D. open source

UNIT 4

1. **The primary colors are**
   - **A.** red, green, yellow
   - **B.** red, white, yellow
   - **C.** red, yellow, blue
   - **D.** red, green, blue

2. **What is the abbreviation of HTTP?**
   - **A.** Hyper Text Transfer Protocol
   - **B.** Hypertext Transfer Path
   - **C.** Hypertext Tag Path
   - **D.** None

3. **Web page editors works on a _____ principle.**
   - **A.** WWW
   - **B.** HTML
   - **C.** WYSIWYG
   - **D.** WYGWYSI

4. **What is the advantage of using basic HTML to create a document?**
   - **A.** HTML is very easy to use.
   - **B.** The document can be displayed by all browsers.
   - **C.** The document can be displayed by all programs.
   - **D.** The document can be displayed by all word processors.

5. **A _____ is a set of rules.**
   - **A.** URL
   - **B.** protocol
   - **C.** hypertext
   - **D.** resource locator

UNIT 5

1. **Which of the following is used to manage a database?**
   - **A.** DBMS
   - **B.** Compiler
   - **C.** Operating System
   - **D.** None of the above

2. **Oracle is an example of ____ application software.**
   - **A.** presentation graphics
   - **B.** project management
   - **C.** word processing
   - **D.** database

3. **A repository for data, usually covering specific topic is**
   - **A.** database
   - **B.** databank
   - **C.** data collection
   - **D.** data requisition

4. **Administrative supervision of database activities is the responsibility of the**
   - **A.** DP manager
   - **B.** DB manager
   - **C.** VP-DP administration
   - **D.** Database administrator

5. **Which language is used by most of DBMSs for helping their users to access data?**
   - **A.** HLL
   - **B.** SQL
   - **C.** 4 GL
   - **D.** Query language

UNIT 6

1. **Most application software today come with an interface called a(n)**
   - A. Icon User Interface
   - B. Button User Interface
   - C. Character User Interface
   - D. Graphical User Interface

2. **Which language is object oriented?**
   - A. C
   - B. C++
   - C. Java
   - D. C++ and Java

3. **Which one is not a language?**
   - A. HTML
   - B. HTTP
   - C. XML
   - D. SQL

4. **In object oriented design of software, objects have**
   - A. attributes name and operations
   - B. operations and name only
   - C. attributes and name only
   - D. none of these

5. **Programming language which is based on C++ and Java, which is developed for integrating the Internet and web into computer applications, is termed as**
   - A. Java
   - B. Basic
   - C. Visual C#
   - D. Visual Basic

UNIT 7

1. **Errors in a computer program are called**
   - A. bugs
   - B. mistakes
   - C. blunders
   - D. items overlooked

2. **_____ is the process of finding errors in software code.**
   - A. Testing
   - B. Compiling
   - C. Debugging
   - D. Interpreting

3. **A repair for a software bug, usually available for free on the internet, is called a(n)**
   - A. FAQ
   - B. patch
   - C. tutorial
   - D. version

4. **To write a program that solves a given problem, a programmer**
   - A. codes an algorithm in a programming language
   - B. designs an algorithm
   - C. debugs the program
   - D. all of these

5. **The ____ settings are automatic and standard.**
   - A. CPU
   - B. default
   - C. peripheral
   - D. user friendly

UNIT 8

1. **Applications are often referred to as**
   - A. the operating system
   - B. system software
   - C. executable files
   - D. data file

2. **Firewalls are to protect against**
   - A. fire attacks
   - B. virus attacks
   - C. data driven attacks
   - D. unauthorized attacks

3. **The phrase _____ describe viruses, worms, Trojan horse attack applets and attack scripts.**
   - A. Spam
   - B. Virus
   - C. Malware
   - D. Phishing

4. **A strong password should contain:**
   - A. at least 8 characters, and a combination of letters, numbers, and characters.
   - B. a word that is easy to remember, such as the name of a pet.
   - C. both uppercase and lowercase letters.
   - D. none.

5. **Which of the following is required to create an HTML document?**
   - A. Search engines
   - B. Text editor
   - C. Browser
   - D. Internet

UNIT 9

1. **The first phase of software development is**
   - A. design
   - B. coding
   - C. testing
   - D. requirement analysis

2. **Which of the following is NOT a computer programming language?**
   - A. Microsoft Vista
   - B. Java
   - C. C++
   - D. C

3. **_____ marks the link to other sites.**
   - A. Hypermedia
   - B. Hyperweb
   - C. Hyperlink
   - D. Hypertext

4. **The main computer that stores files that can be sent to computers that are networked together is**
   - A. clip art
   - B. file server
   - C. peripheral
   - D. motherboard

5. **Why are communication skills important in the IT industry?**
   - A. To understand tasks.
   - B. To let your teammates help you.
   - C. To be able to express your needs.
   - D. To be able to communicate clearly and effectively with your managers, your colleagues, and your clients.

UNIT 10

1. **To "debug" the system means**
   - A. find the correct software
   - B. find the correct hardware
   - C. find and install correct system
   - D. find and correct errors on system

2. **Which of these is a documented hoax virus?**
   - A. McDonalds screensaver
   - B. Merry Xmas
   - C. Alien.worm
   - D. Adolph

3. **Computers which offer information are called _____ and those which seek information are called _____.**
   - A. servers / clients
   - B. clients / servers
   - C. applications / complex soft-wares
   - D. system software / application software

4. **Python, PHP and Ruby languages are type of**
   - A. object oriented programming
   - B. interpretation language
   - C. assembly language
   - D. machine language

5. **An *internship* is:**
   - A. an international ship
   - B. a kind of punishment
   - C. unpaid community work
   - D. a temporary job that helps to get experience

UNIT 11

1. **The central processing unit is an example of**
   - A. software
   - B. hardware
   - C. peripheral
   - D. an output unit

2. **Integrated circuit, solid state technology was used in following generation of computers.**
   - A. First
   - B. Second
   - C. Third
   - D. Fourth

3. **The first mechanical computer designed by Babbage was called**
   - A. abacus
   - B. calculator
   - C. all of these
   - D. analytical engine

4. **What should help you get a job in IT?**
   - A. Lies.
   - B. Your skills.
   - C. Misinformation.
   - D. People you know.

5. **What types of questions does a candidate need to answer during a job interview for an IT position?**
   - A. Standard and personal interview questions.
   - B. Technical questions / standard IT questions.
   - C. Behavioral and situational interview questions.
   - D. All of these.

UNIT 12

1. **What causes a repetitive strain injury (RSI)?**
   - A. Repeated movements over a long period of time.
   - B. Uncomfortable working postures.
   - C. Incorrect screen settings.
   - D. Lack of space.

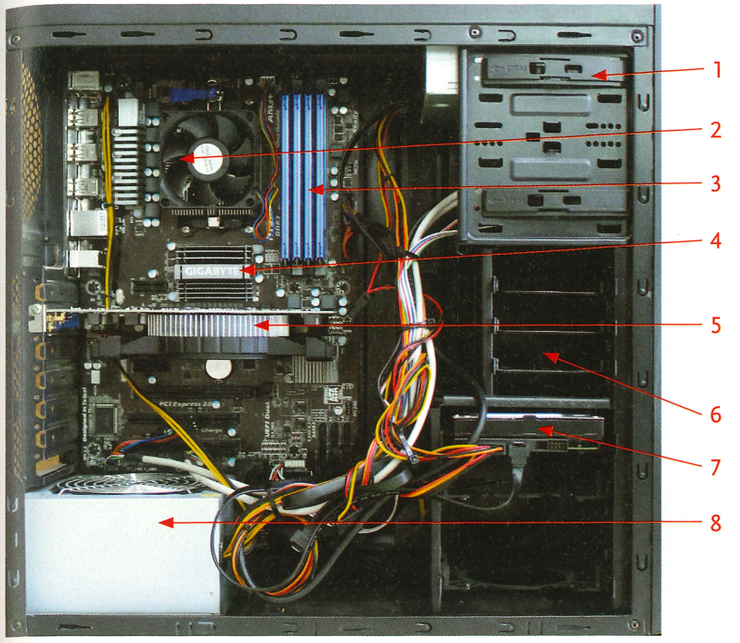
2. **Which one does not strain your eyes when working with a computer?**
   - A. Glare.
   - B. A flickering screen.
   - C. Poor light conditions.
   - D. Looking away from the screen into the distance.

3. **Which of the following statements is NOT a health and safety issue in an IT environment?**
   - A. There should be no trailing wires.
   - B. Electrical sockets must not be overloaded.
   - C. All hardware should be in perfect working order.
   - D. There must be adjustable chairs for computer users.

4. **Which of the following can help to prevent backache?**
   - A. Blinds at the window.
   - B. Anti-glare screens.
   - C. Ventilation.
   - D. Foot rests.

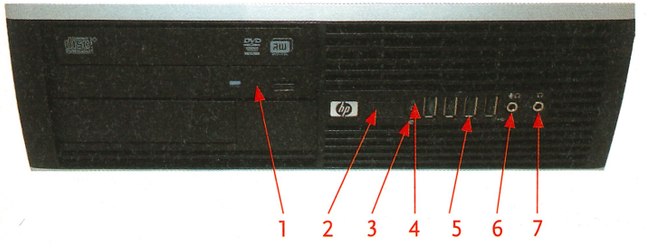
5. **Which of the following is NOT an example of ergonomics in IT?**
   - A. Noise reduction.
   - B. Furniture design.
   - C. Interior decoration.
   - D. Lighting arrangements.

Central unit (interior)



1 Optical Drive
2 CPU
3 RAM Memory
4 Chipset with radiator
5 GPU (Graphic Processing Unit)
6 SSD Disk space
7 Hard Disk Drive
8 Power Supply Unit

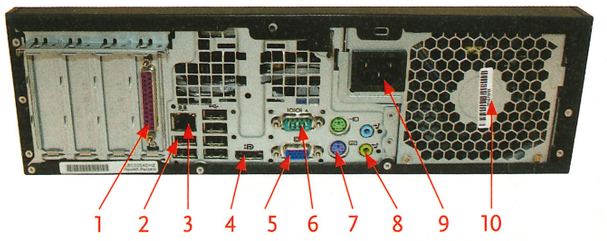
Desktop PC Case (front)



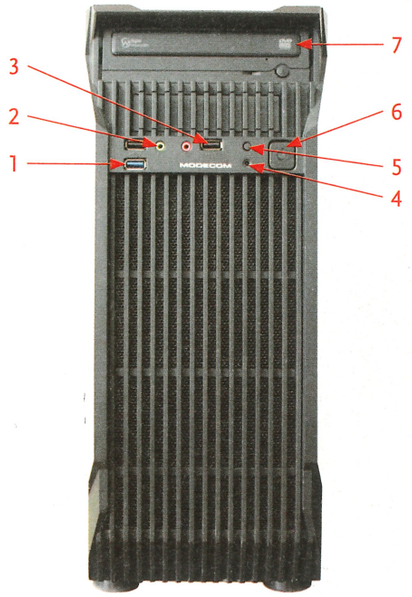
1 Optical drive
2 Power button
3 Hard disk operation LED
4 Power on LED
5 USB slots
6 Microphone slot
7 Headphones 3,5 mm jack slot

1 Parallel Port LPT socket
2 USB slots/ports
3 Network Interface Card port
4 Display Port
5 VGA port
6 RS-232 serial port
7 PS/2 ports
8 (3,5 mm) headphones/ microphone slots
9 Power Supply socket
10 Power Supply unit

Desktop PC Case (back)

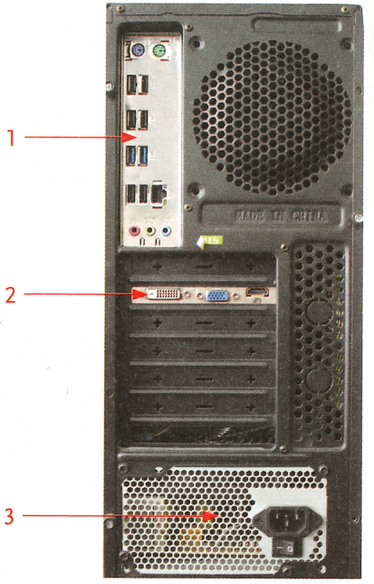


Desktop PC Tower Case (front)



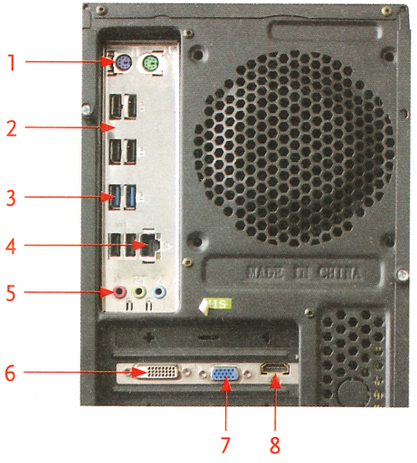
1 USB 3.0 slot
2 3,5 mm jack slots
3 USB 2.0 slot
4 Hard Disk operation LED
5 Reset button
6 Power button
7 Optical drive

Desktop PC Tower Case (back)



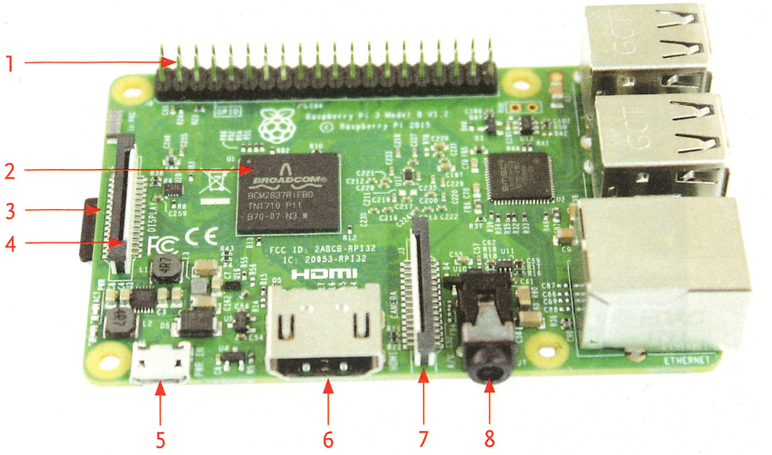
1 peripheral interfaces
2 GPU (Graphic Processing Unit)
3 Power Supply Unit

Desktop PC Tower Case (peripheral interfaces)



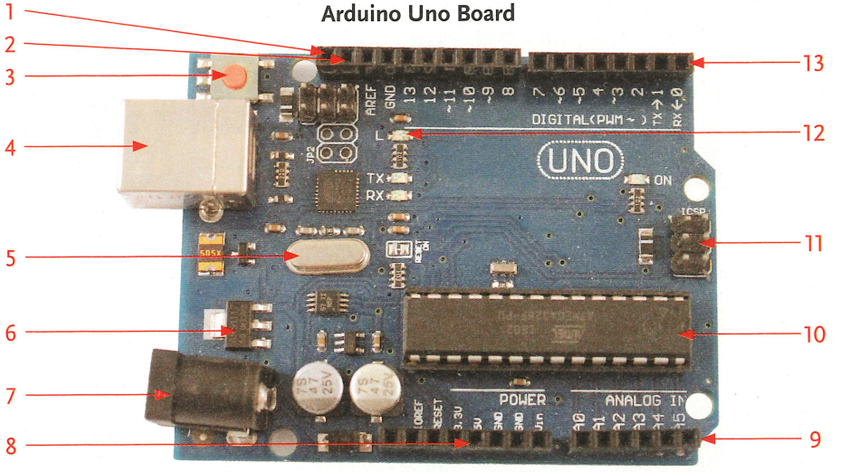
1 PS/2 ports
2 USB 2.0 ports
3 USB 3.0 ports
4 LAN port (Local Area Network) Network Interface Card
5 Sound card jack ports
6 DVI port
7 D-SUB port
8 HDMI Port

Raspberry Pi Board



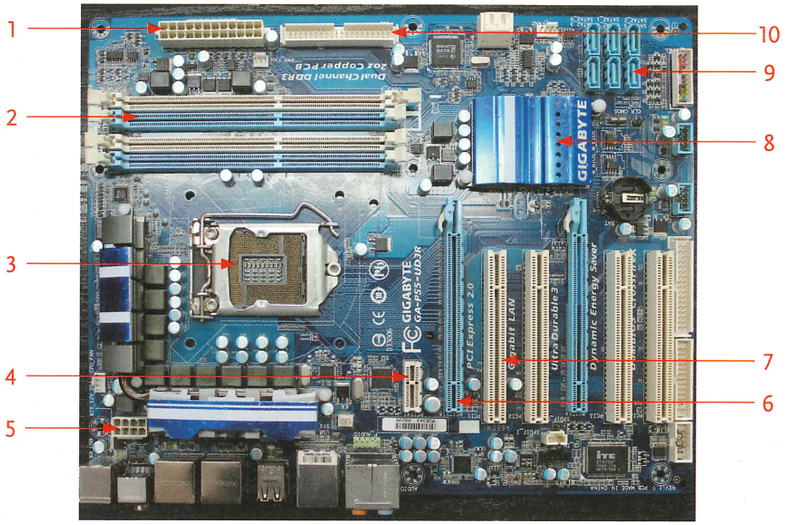
1 40-Pin General Purpose Input Output Connector
2 BCM2835 CPU
3 MicroSD Card Reader
4 DSI EXternal Display Connector
5 5V Micro USB Power Supply Port
6 HDMI Video Port
7 CSI Camera Connector
8 3,5 mm audio Jack

Arduino Uno Board



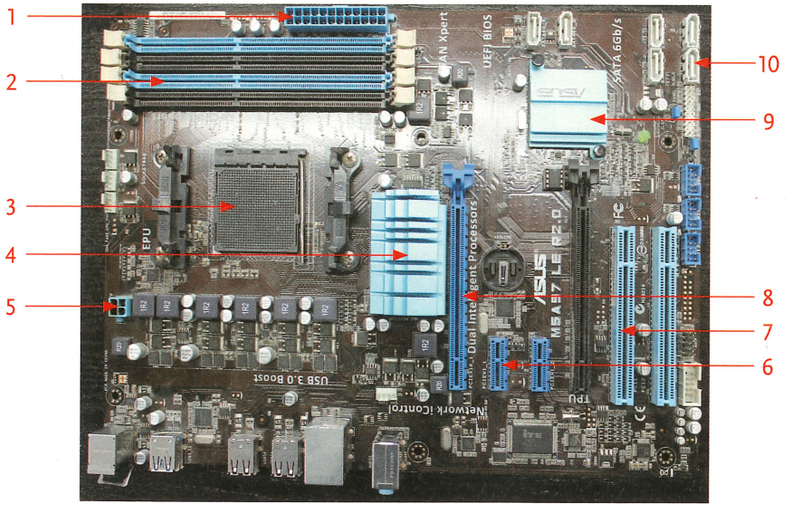
1 Serial Clock Line
2 Serial Data Line
3 Reset button
4 Power USB Interface
5 CrystalOscillator 16 MHz
6 Voltage Regulator 5V
7 External AC mains power supply
8 Power supply
9 6 Analog input pins
10 Main microcontroller ATMEGA 328
11 SPI(Serial Peripheral Interface) 8 MHZ
12 Pin 13 LED
13 14 digital I/O pins (input/ output)

Motherboard for Intel processors with LGA port



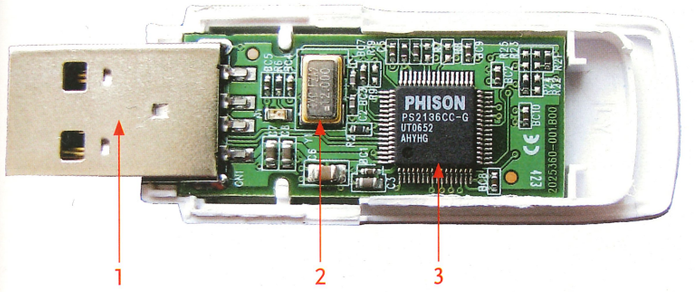
1 24-pin power connector
2 RAM slots
3 Intel processor LGA socket
4 PCI Express x1 port/slot
5 Processor Power Supply
6 PCI Express x16 port/slot
7 PCI port/slot
8 Chipset
9 S-ATA connectors
10 ATA connector

Motherboard for AMD processor with Socket



1 24-pin power connector
2 RAM slots
3 AMD processor Socket
4 Northbridge
5 Processor Power Supply
6 PCI Express x1 port/slot
7 PCI port/slot
8 PCI Express x16 port/slot
9 Southbridge
10 S-ATA connectors

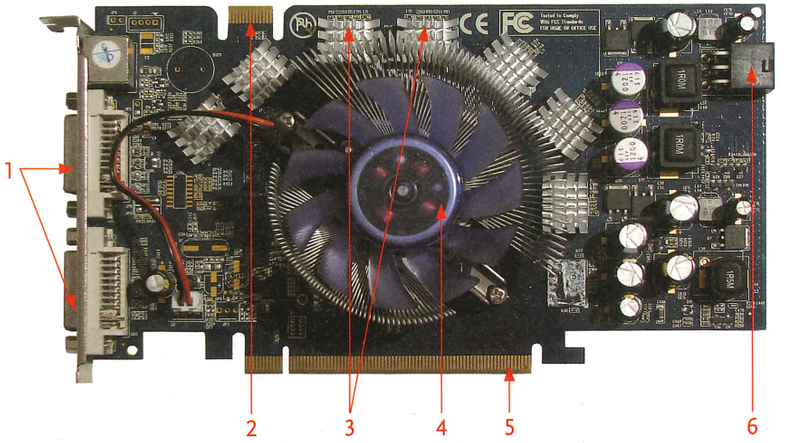
Flash Drive Structure



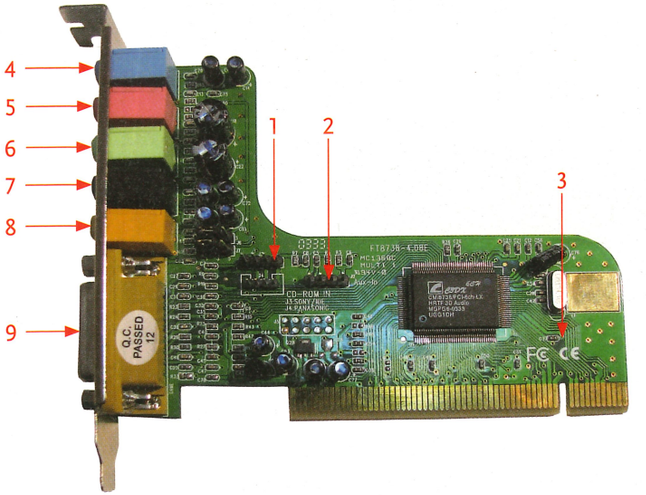
1 USB Interface connector
2 Crystal oscillator
3 Controller

GPU Structure

1 DVI port
2 SLI interface
3 Memory cooling
4 Active chipset cooling
5 PCI Express x16 Interface
6 PCI Express Power supply port

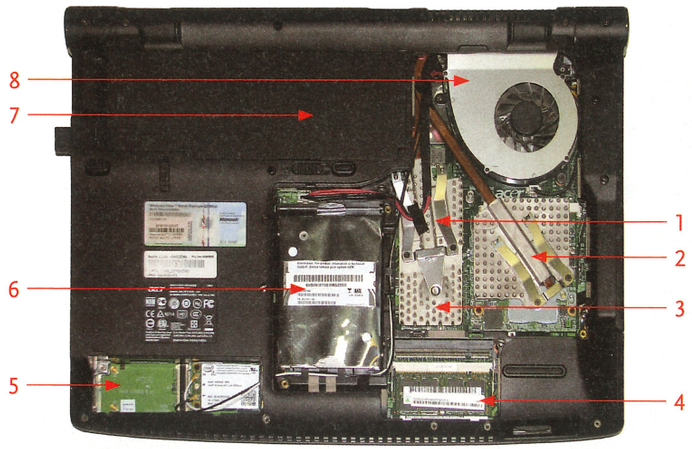


Sound card structure



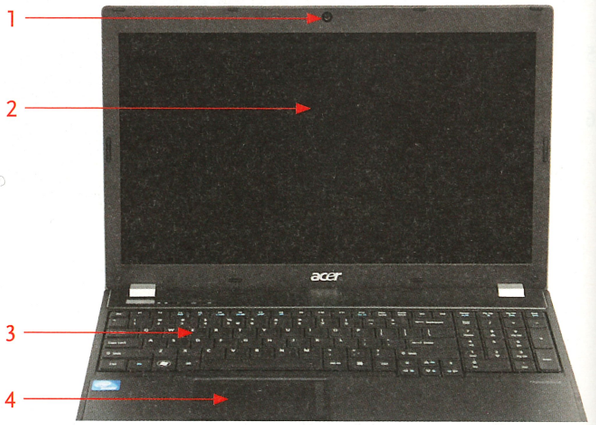
1 AUX-IN
2 CD connector
3 DSP processor
4 LINE-IN
5 MIC-IN
6 FRONT Speakers OUT
7 REAR Speakers OUT
8 CENTRAL Speaker and SUBWOOFER OUT
9 MIDI connector

Laptop components



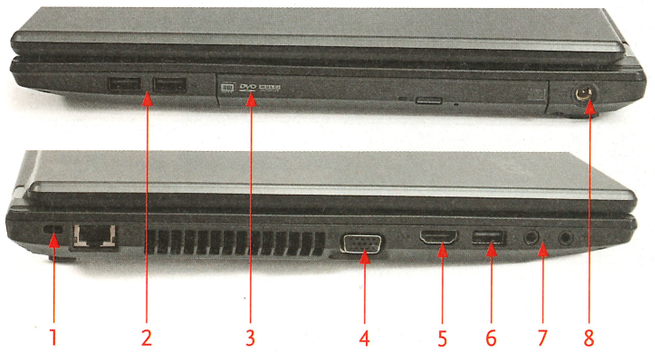
1 processor
2 GPU
3 Chipset
4 RAM
5 Extension cards
6 HDD
7 Battery
8 Fan

Laptop (front)



1 Camera
2 Matt Display/Matrix
3 Keyboard
4 Touchpad

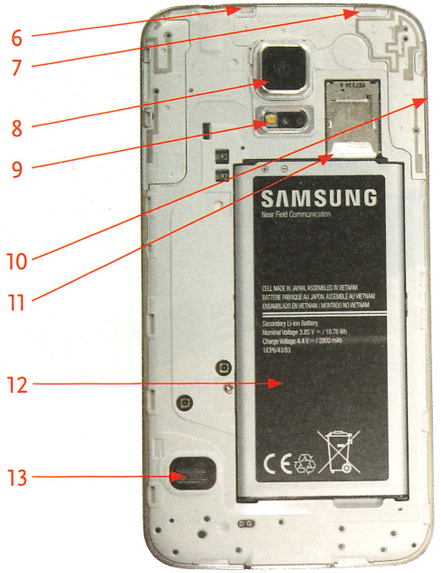
Laptop (side view)



1 LAN port
2 USB 2.0 ports
3 Optical drive
4 D-SUB port
5 HDMI Port
6 USB 2.0 slots
7 3,5 mm audio Jacks
8 Power supply socket

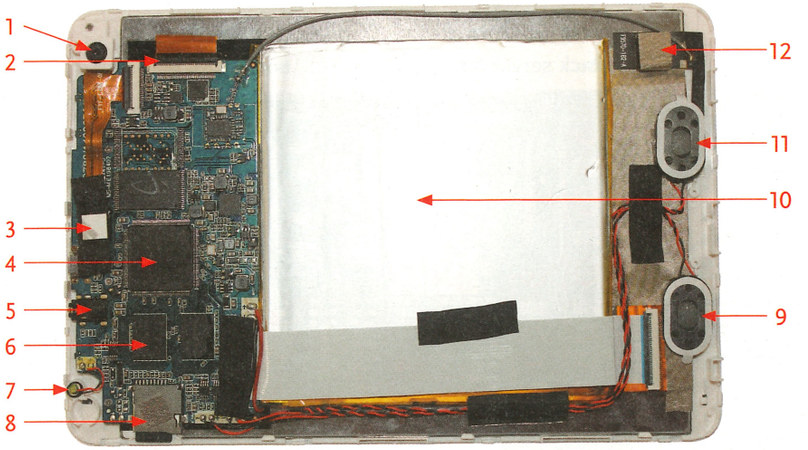
Smartphone





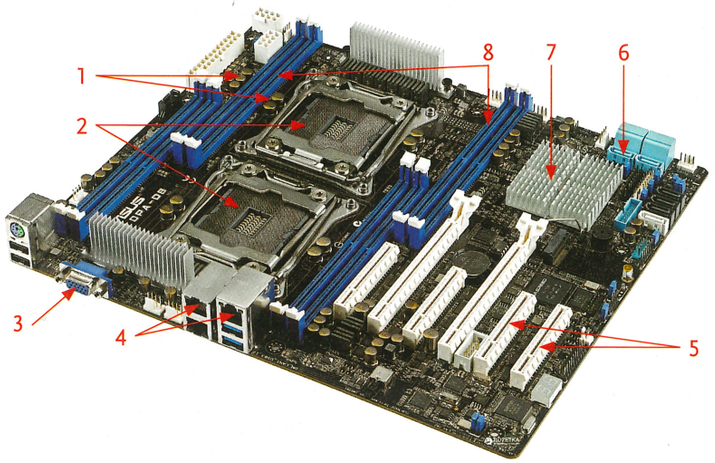
1 Receiver
2 Proximity light sensor
3 Front camera
4 Touchscreen
5 Power button
6 Jack port
7 Microphone
8 Rear camera (main)
9 Flashlight
10 Volume button
11 SIM and MicroSD slots
12 Battery
13 Speaker
14 Home button

Tablet



1 Rear camera
2 Matrix connector
3 Front camera
4 Processor
5 Jack slot
6 Internal memory
7 Microphone
8 microSD Card slot
9 Speaker R
10 Battery
11 Speaker L
12 WiFi antenna

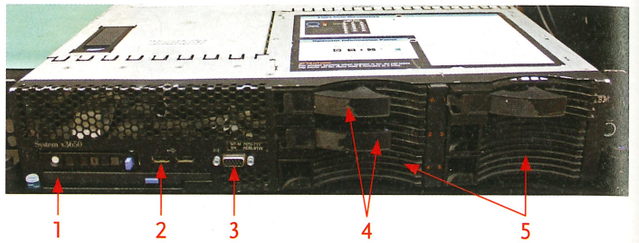
Example of modern server board



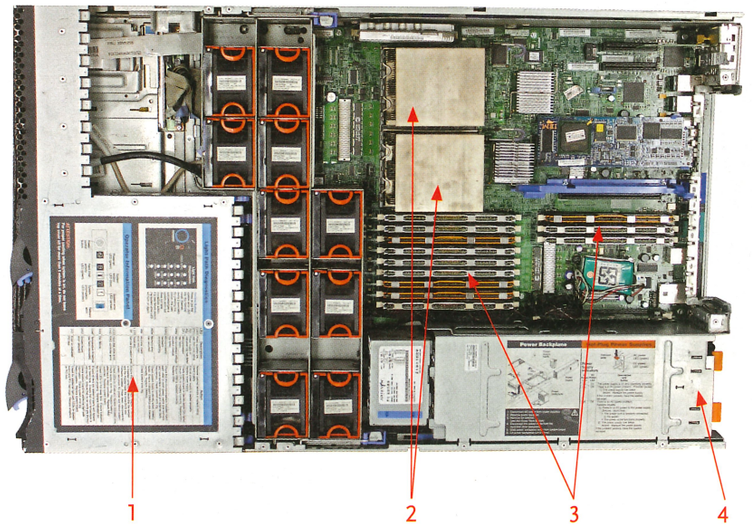
1 Power supply from Power Supply Units
2 LGA 2011 Processor Sockets
3 VGA port for display
4 Three LAN ports
5 PCI Express ports
6 S-ATA connectors
7 Chipset
8 RAM slots

Rack server (front)

1 Optical drive
2 USB 2.0 slots
3 VGA port for display
4 Hot-swap disks
5 Six Hot-swap disks slots



Rack server (top view)



1 Hot-swap disks slots
2 Two server processors
3 RAM
4 Two hot-swap power supply units

VOCABULARY LIST

A

abacus	/ˈæbəkəs/	liczydło
ability	/əˈbɪləti/	umiejętność
access permissions	/ˈækses pəˈmɪʃn̩z/	uprawnienia dostępu
access	/ˈækses/	mieć dostęp
accessible	/əkˈsesəbl̩/	dostępny
accommodation	/əˌkɒməˈdeɪʃn̩/	zakwaterowanie
accomplish	/əˈkʌmplɪʃ/	osiągnąć
achieve a goal	/əˈtʃiːv ə ˈgəʊl/	osiągnąć cel
achievement	/əˈtʃiːvmənt/	osiągnięcie
achy	/ˈeɪki/	obolały
addition	/əˈdɪʃn̩/	dodawanie
additional	/əˈdɪʃn̩əl/	dodatkowy
adjust	/əˈdʒʌst/	dostosować
adjustable	/əˈdʒʌstəbl̩/	dający się regulować
advantage	/ədˈvɑːntɪdʒ/	korzyść
after all	/ˈɑːftər ɔːl/	w ostateczności
aim at	/eɪm /æt	dążyć do czegoś
alert	/əˈlɜːt	wywoływać alarm
algorithm	/ˈælgərɪðm/	algorytm
alleviate	/əˈliːvɪeɪt/	łagodzić
allow	/əˈlaʊ/	pozwalać
almost	/ˈɔːlməʊst/	prawie
alone	/əˈləʊn/	samodzielnie
alternatively	/ɔːlˈtɜːnətɪvli/	ewentualnie
although	/ɔːlˈðəʊ/	chociaż
among	/əˈmʌŋ/	pośród
amount of	/əˈmaʊnt /ɒv/	ilość
analysis	/əˈnæləsɪs/	analiza
ancient	/ˈeɪnʃ(ə)nt/	starożytny
angle	/ˈæŋgl/	ustawiać pod kątem
ankle	/ˈæŋkl/	kostka
annual	/ˈænjʊəl/	coroczny
anticipate	/ænˈtɪsɪpeɪt/	przewidywać
anxious	/ˈæŋkʃəs/	podenerwowany
apart from	/əˈpɑːt /frɒm/	oprócz
appear	/əˈpɪə/	jawić się
appliance	/əˈplaɪəns/	urządzenie
applicant	/ˈæplɪkənt/	ubiegający się o pracę

approach sth	/əˈprəʊʧ sth/	podchodzić do czegoś
arise	/əˈraɪz/	nadarzać się, pojawiać się
arrangement	/əˈreɪnʤmənt/	ustalenie
artificial	/ˌɑːtɪˈfɪʃ(ə)l/	sztuczna
as a rule	/əz /ə /ruːl/	co do zasady
ascertain	/ˌæsəˈteɪn/	zapewniać
ask for trouble	/ɑːsk /fə /ˈtrʌbl/	prosić się o kłopoty
assemble	/əˈsembl/	składać, kompletować
assembly	/əˈsembli/	montaż
assign	/əˈsaɪn/	przypisywać
assignment	/əˈsaɪnmənt/	zadanie
assimilation	/əˌsɪmɪˈleɪʃ(ə)n/	przyswajanie
association	/əˌsəʊsɪˈeɪʃ(ə)n/	skojarzenie
assume	/əˈsjuːm/	zakładać
assure	/əˈʃʊə/	zapewniać
at a discount	/ət /ə /ˈdɪskaʊnt/	na przecenie
at all	/ət /ɔːl/	w ogóle
attachment	/əˈtæʧmənt/	załącznik
attack	/əˈtæk/	napaść, atak
attempt	/əˈtempt/	próbować
attention	/əˈtenʃ(ə)n/	uwaga
attitude	/ˈætɪtjuːd/	postawa
authority	/ɔːˈθɒrɪti/	władza
available	/əˈveɪləbl/	dostępny
average	/ˈævərɪʤ/	przeciętny
avoid	/əˈvɔɪd/	unikać

B

B.C. (Before Christ)	/ biː /siː/	przed naszą erą
backache	/ˈbækeɪk/	ból pleców
be ablaze about	/bi əˈbleɪz əˈbaʊt/	być podekscytowanym
be blazed	/bi bleɪzd/	najarany
be comprised of	/bi kəmˈpraɪzd ɒv/	składać się z
be cut out for sth	/bi kʌt aʊt fə sth/	być stworzonym do
be in charge of sth	/bi ɪn ʧɑːdʒ əv sth/	zarządzać czymś
be in demand	/bi ɪn dɪˈmɑːnd /	popyt na
become a leader	/bɪˈkʌm ə ˈliːdə/	stać się liderem
behavioral	/bɪˈheɪvjərəl/	związany z zachowaniem
bend	/bend/	zginać
beneficial	/benɪˈfɪʃl/	korzystny
benefit	/ˈbenɪfɪt/	zysk, korzyść
beyond	/bɪˈjɒnd/	poza

blank	/blæŋk/	pusty
blood flow	/blʌd fləʊ/	przepływ krwi
board game	/bɔːd geɪm/	gra planszowa
bone	/bəʊn/	kość
boost	/buːst/	wzmocnić
bot	/bot/	bot
both parties	/bəʊθ ˈpɑːtɪz/	obie strony
break into	/ˈbreɪk ˈɪntə/	włamać się do
brief	/briːf/	zwięzły
bright	/braɪt/	jasny
bring sth down to	/brɪŋ sth daʊn tuː/	obniżać
bring sth to fruition	/brɪŋ sth tu fruːˈɪʃn̩/	przynosić owoce
browser	/ˈbraʊzə/	przeglądarka
button	/ˈbʌtn̩/	przycisk
by default	/ˈbaɪ dɪˈfɔːlt/	domyślnie
by trial and error	/ˈbaɪ ˈtraɪəl ənd ˈerə/	metodą prób i błędów

C

cache	/kæʃ/	przechowywać w pamięci podręcznej
calculation	/ˌkælkjʊˈleɪʃən/	wyliczenie
calming	/ˈkɑːmɪŋ/	kojący
calmness	/ˈkɑːmnɪs/	spokój, opanowanie
capability	/ˌkeɪpəˈbɪlɪti/	możliwość, zdolność
capture	/ˈkæpʧə/	przyciągać
cardinal	/ˈkɑːdɪnl/	główny
carry out	/ˈkæri/ /aʊt/	przeprowadzać, wykonywać
carve	/kɑːv/	wyrzeźbić
cause	/kɔːz/	przyczyna
central processing unit	/ˈsentrəl/ /ˈprəʊsesɪŋ/ /ˈjuːnɪt/	procesor
century	/ˈsenʧʊri/	stulecie
characteristic	/ˌkærɪktəˈrɪstɪk/	cecha charakterystyczna
chart	/ʧɑːt/	tabela
chat	/ʧæt/	pogawędka
chess	/ʧes/	szachy
chest	/ʧest/	klatka piersiowa
chin	/ʧɪn/	podbródek
chip in	/ʧɪp/ /ɪn/	wtrącać się
circuit board	/ˈsɜːkɪt/ /bɔːd/	płytka obwodu drukowanego
clearly	/ˈklɪəli/	wyraźnie
closely	/ˈkləʊsli/	szczegółowo
clutch	/klʌʧ/	sprzęgło

coder	/ˈkəʊdə/	programista
colleague	/ˈkɒliːg/	współpracownik
collect	/kəˈlɛkt/	zbierać
collection	/kəˈlɛkʃən/	zbiór
colour scheme	/ˈkʌlə/ /skiːm/	kolorystyka
come up with sth	/kʌm/ /ʌp/ /wɪð/ sth	wymyślić, wpadać na
come up with	/kʌm/ /ʌp/ /wɪð/	wpaść na pomysł
commit a crime	/kəˈmɪt/ /ə/ /kraɪm/	popełnić przestępstwo
commitment to sth	/kəˈmɪtmənt/ /tə/ sth	zaangażowanie
compare	/kəmˈpeə/	porównywać
compatible with	/kəmˈpætəbl/ /wɪð/	pasujący do
competition	/ˌkɒmpɪˈtɪʃən/	konkurs
complementary	/ˌkɒmplɪˈmɛntəri/	uzupełniający się
complete	/kəmˈpliːt/	uzupełniać
complex	/ˈkɒmplɛks/	skomplikowany
component	/kəmˈpəʊnənt/	składnik
computation	/ˌkɒmpjuː)ˈteɪʃən/	obliczenie
computer science	/kəmˈpjuːtə/ /ˈsaɪəns/	informatyka
computer worm	/kəmˈpjuːtə/ /wɜːm/	robak komputerowy
computing capability	/kəmˈpjuːtɪŋ/ /ˌkeɪpəˈbɪlɪti/	moc obliczeniowa
conclude	/kənˈkluːd/	podsumować
configure	/kənˈfigə/	ustawiać
confirm	/kənˈfɜːm/	potwierdzić
conflict	/ˈkɒnflɪkt/	konflikt
connection	/kəˈnɛkʃən/	połączenie
constant	/ˈkɒnstənt/	ciągły
contain	/kənˈteɪn/	zawierać
content	/ˈkɒntɛnt/	treść
contributor	/kənˈtrɪbjʊtə/	ofiarodawca
convert	/ˈkɒnvɜːt/	przekształcać
convincing	/kənˈvɪnsɪŋ/	przekonywający
copy	/ˈkɒpi/	kopiować
core features	/kɔː/ /ˈfiːʧəz/	kluczowe funkcje
criterion (pl criteria)	/kraɪˈtɪərɪən/ (/kraɪˈtɪərɪə/)	kryterium
critical	/ˈkrɪtɪkəl/	istotny
critical-thinking skill	/ˈkrɪtɪkəl/-/ˈθɪŋkɪŋ/ /skɪl/	umiejętność krytycznego myślenia
cross-reference	/krɒs/-/ˈrɛfrəns/	zaopatrzyć odnośnikiem
cross-referencing	/krɒs/-/ˈrɛfrənsɪŋ/	odsyłanie
cushion	/ˈkʊʃən/	poduszka
customize	/ˈkʌstəˌmaɪz/	dostosowywać

D

data	/ˈdeɪtə/	dane
data integrity	/ˈdeɪtə/ /ɪnˈtɛgrɪti/	spójność danych
data recovery	/ˈdeɪtə/ /rɪˈkʌvəri/	odzyskiwanie danych
date	/deɪt/	opatrzyć datą
deal with	/diːl/ /wɪð/	zajmować się
debug	/diːˈbʌg/	wyszukać i usuwać usterki
decisively	/dɪˈsaɪsɪvli/	zdecydowanie
deletion	/dɪˈliːʃən/	usunięcie
demanding	/dɪˈmɑːndɪŋ/	wymagający
denote	/dɪˈnəʊt/	symbolizować
dental	/ˈdɛntl/	stomatologiczny
department	/dɪˈpɑːtmənt/	dział
depend on	/dɪˈpɛnd/ /ɒn/	zależeć od
depending on	/dɪˈpɛndɪŋ/ /ɒn/	zależnie od
deploy	/dɪˈplɔɪ/	wdrożyć, użyć, wykorzystywać
derive from	/dɪˈraɪv/ /frɒm/	wywodzić się z
descriptive	/dɪsˈkrɪptɪv/	opisowo
desire	/dɪˈzaɪə/	pragnienie
destination	/ˌdɛstɪˈneɪʃən/	cel
detail	/ˈdiːteɪl/	podać szczegóły
detect	/dɪˈtɛkt/	wykrywać
determine	/dɪˈtɜːmɪn/	wyznaczać
developer	/dɪˈvɛləpə/	programista
device	/dɪˈvaɪs/	urządzenie
dial	/ˈdaɪəl/	tarcza
digital	/ˈdɪʤɪtl/	cyfrowy
disable	/dɪsˈeɪbl/	unieruchamiać, blokować
discover	/dɪsˈkʌvə/	odkryć
display	/dɪsˈpleɪ/	wyświetlać
distinguish	/dɪsˈtɪŋgwɪʃ/	rozróżniać
diverse	/daɪˈvɜːs/	zróżnicowany
divide	/dɪˈvaɪd/	dzielić
domain	/dəʊˈmeɪn/	dziedzina
donkey	/ˈdɒŋki/	osioł
doorstep	/ˈdɔːstɛp/	próg
double-click	/ˈdʌbl/-/klɪk/	dwukrotnie kliknąć
downwards	/ˈdaʊnwədz/	w dół
due to	/djuː/ /tʊ/	z powodu, w związku z

E

earn a certification	/ɜ:n/ /ə/ /ˌsɜ:tɪfɪˈkeɪʃən/	uzyskać certyfikat
eclipse	/ɪˈklɪps/	zaćmienie
efficiently	/ɪˈfɪʃəntli/	wydajnie
effort	/ˈɛfət/	wysiłek
either ... or ...	/ˈaɪðə/ ... /ɔ:/ ...	albo..., albo...
elbow	/ˈɛlbəʊ/	łokieć
electrical appliances	/ɪˈlɛktrɪkəl/ /əˈplaɪənsɪz/	urządzenia elektryczne
embed	/ɪmˈbɛd/	wbudowywać
embody	/ɪmˈbɒdi/	ucieleśniać
emit	/ɪˈmɪt/	wydzielać
emphasize	/ˈɛmfəsaɪz/	uwypuklać
employee	/ˌɛmplɔɪˈi:/	pracownik
encompass	/ɪnˈkʌmpəs/	obejmować
encourage	/ɪnˈkʌrɪdʒ/	zachęcać
encrypt	/ɪnˈkrɪpt/	szyfrować
enemy	/ˈɛnɪmi/	wróg
enhance	/ɪnˈhɑ:ns/	uwydatniać
enormous	/ɪˈnɔ:məs/	olbrzymi
enough	/ɪˈnʌf/	wystarczająco
ensure	/ɪnˈʃʊə/	zapewniać
entirely	/ɪnˈtaɪəli/	całkowicie
entity	/ˈɛntɪti/	jednostka, podmiot
equipment	/ɪˈkwɪpmənt/	sprzęt
especially	/ɪsˈpɛʃəli/	zwłaszcza
evaluate	/ɪˈvæljʊeɪt/	oceniać
evaluation	/ɪˌvæljʊˈeɪʃən/	ocena
eventually	/ɪˈvɛnʧəli/	w końcu
evoke	/ɪˈvəʊk/	wywoływać
evolve	/ɪˈvɒlv/	rozwijać się
exaggerate	/ɪgˈzæʤəreɪt/	przesadzać
examine	/ɪgˈzæmɪn/	sprawdzić
excitement about sth	/ɪkˈsaɪtmənt/ /əˈbaʊt/	podekscytowanie
existence	/ɪgˈzɪstəns/	istnienie
expansion card	/ɪksˈpænʃən/ /kɑ:d/	karta rozszerzenia
expect	/ɪksˈpɛkt/	oczekiwać
exploration	/ˌɛksplɔ:ˈreɪʃən/	odkrywanie
extend	/ɪksˈtɛnd/	rozszerzyć
extensive knowledge	/ɪksˈtɛnsɪv/ /ˈnɒlɪʤ/	rozległa wiedza
eyesore	/ˈaɪsɔ:/	ból oczu
eyestrain	/aɪ/ /streɪn/	zmęczenie oczu
eye-tracking	/aɪ/-/ˈtrækɪŋ/	śledzenie ruchów oka

F

fabric	/ˈfæbrɪk/	materiał
face	/feɪs/	doświadczać
fake	/feɪk/	fałszywy
family member	/ˈfæmɪli/ /ˈmɛmbə/	członek rodziny
fast-paced	/fɑ:st/-/peɪst/	o szybkim tempie
fatigue	/fəˈti:g/	zmęczenie
few / a few	/fju:/ / /ə/ /fju:/	niewiele / kilka
fiber optics	/faɪbər/ /ˈɒptɪks/	technika światłowodowa
field	/fi:ld/	pole (zapisu), dziedzina
figure out sth	/ˈfɪgər/ /aʊt/	rozwikłać coś
findability	/faɪndəˈbɪlɪti/	łatwość znajdowania
finger	/ˈfɪŋgə/	palec
firewall	/ˈfaɪəwɔ:l/	zapora sieciowa
fit for the role	/fɪt/ /fə/ /ðə/ /rəʊl/	dopasowanie do roli
fix	/fɪks/	naprawa
fixed-size	/fɪkst/-/saɪz/	w stałym rozmiarze
flexible	/ˈflɛksəbl/	elastyczny
flicker	/ˈflɪkə/	migotać
fluid grid	/ˈflu(:)ɪd/ /grɪd/	elastyczna siatka
follow	/ˈfɒləʊ/	nadążać
follow up with sb	/ˈfɒləʊ/ /ʌp/ /wɪð/	kontynuować rozmowę z kimś
follow your dream	/ˈfɒləʊ/ /jə/ /dri:m/	podążać za marzeniem
font	/fɒnt/	czcionka
footrest	/fʊt rɛst/	podnóżek
for future reference	/fə/ /ˈfju:ʧə/ /ˈrɛfrəns/	na przyszłość
forbid to do sth	/fəˈbɪd/ /tə/ /dʊ/	zabraniać
forearm	/ˈfɔ:rɑ:m/	przedramię
forward	/ˈfɔ:wəd/	przesłać dalej
founder	/ˈfaʊndə/	założyciel
frames	/freɪmz/	oprawki
fraudulent	/ˈfrɔ:djʊlənt/	oszukańczy
fruit of a partnership	/fru:t/ /əv/ /ə/ /ˈpɑ:tnəʃɪp/	owoc współpracy
fulfill a need	/fʊlˈfɪl/ /ə/ /ni:d/	spełnić potrzebę
functionality	/ˌfʌŋkʃəˈnælɪti/	funkcjonalność
fundamental knowledge	/ˌfʌndəˈmɛntl/ /ˈnɒlɪʤ/	podstawowa wiedza

G

gaze point plot	/geɪz/ /pɔɪnt/ /plɒt/	mapa ruchów oka
gear driven	/gɪə/ /ˈdrɪvn/	napędzany kołem zębatym
general-purpose	/ˈʤɛnərəl/-/ˈpɜ:pəs/	do ogólnego użytku

genuinely	/ˈʤɛnjʊɪnli/	autentycznie
get access to sth	/gɛt/ /ˈæksɛs/ /tə/	uzyskać dostęp do czegoś
get on with sth	/gɛt/ /ɒn/ /wɪð/	kontynuować
get rid of	/gɛt/ /rɪd/ /ɒv/	pozbyć się
get to know sth	/gɛt/ /tə/ /nəʊ/	dowiedzieć się, poznać
give advice	/gɪv/ /ədˈvaɪs/	udzielać porady
give up	/gɪv/ /ʌp/	poddawać się
glare	/gleə/	blask, oślepienie
go far in sth	/gəʊ/ /fɑːr/ /ɪn/	daleko zajść
go on	/gəʊ/ /ɒn/	kontynuować
go wrong	/gəʊ/ /rɒŋ/	psuć się
grant	/grɑːnt/	udzielać
grasp of	/grɑːsp/ /ɒv/	pojęcie o czymś
GUI użytkownika	/ʤiː-juː-aɪ/	graficzny interfejs

H

habit	/ˈhæbɪt/	zwyczaj, nawyk
handle	/ˈhændl/	radzić sobie
hands-on experience	/hændz/-/ɒn/ /ɪksˈpɪərɪəns/	praktyczne doświadczenie
harmful	/ˈhɑːmfʊl/	szkodliwy
hassle	/ˈhæs(ə)l/	kłopot
have a firm grasp of sth	/həv/ /ə/ /fɜːm/ /grɑːsp/ /əv/	mieć pojęcie o czymś
have a flair for sth	/həv/ /ə/ /fleə/ /fə/	mieć smykałkę do czegoś
hear from sb	/hɪə/ /frəm/	mieć wieści od
hierarchy	/ˈhaɪərɑːki/	hierarchia
highlight	/ˈhaɪˌlaɪt/	podkreślać
hire	/ˈhaɪə/	zatrudnić
hit benchmarks	/hɪt/ /ˈbɛnʧmɑːks/	spełniać standardy
hoax (pl hoaxes)	/həʊks/ (pl /ˈhəʊksɪz/)	żart, oszustwo
horsepower	/ˈhɔːsˌpaʊə/	koń mechaniczny
however	/haʊˈɛvə/	jednakże
hypertext	/ˈhaɪpərˌtɛkst/	hipertekst

I

icon	/ˈaɪkɒn/	ikonka
identify	/aɪˈdɛntɪfaɪ/	identyfikować
identity theft	/aɪˈdɛntɪti/ /θɛft/	przywłaszczenie tożsamości
immense	/ɪˈmɛns/	olbrzymi
impact	/ˈɪmpækt/	wpływ
imperfection	/ˌɪmpəˈfɛkʃən/	niedoskonałość
implement	/ˈɪmplɪmənt/	wdrażać

impress	/ˈɪmprɛs/	robić wrażenie
improvement	/ɪmˈpruːvmənt/	udoskonalenie
in case	/ɪn/ /keɪs/	na wypadek
in most cases	/ɪn/ /məʊst/ /ˈkeɪsɪz/	w większości przypadków
in order to	/ɪn/ /ˈɔːdə/ /tʊ/	w celu
in real-time	/ɪn/ /rɪəl/-/taɪm/	w czasie rzeczywistym
in return	/ɪn/ /rɪˈtɜːn/	w zamian
in the event	/ɪn/ /ði/ /ɪˈvɛnt/	w przypadku
in-depth	/ɪn/-/dɛpθ/	dogłębny
indicator	/ˈɪndɪkeɪtə/	wskaźnik
infect	/ɪnˈfɛkt/	zarażać
ingredient	/ɪnˈgriːdiənt/	składnik
initial	/ɪˈnɪʃəl/	początkowy
initially	/ɪˈnɪʃəli/	początkowo
innate to	/ɪˈneɪt/ /tʊ/	wrodzony
instant	/ˈɪnstənt/	natychmiastowy
instant message	/ˈɪnstənt/ /ˈmɛsɪʤ/	wiadomość w komunikatorze
instead of	/ɪnˈstɛd/ /ɒv/	zamiast
instinctive	/ɪnˈstɪŋktɪv/	instynktowny
integrated circuit	/ˈɪntɪgreɪtɪd/ /ˈsɜːkɪt/	obwód scalony
integration	/ˌɪntɪˈgreɪʃən/	połączenie
intelligence	/ɪnˈtɛlɪʤəns/	inteligencja
interface	/ˈɪntəˌfeɪs/	interfejs
interlock	/ˌɪntə(ː)ˈlɒk/	splatać
intern(ship)	/ˈɪntɜːn/(/ʃɪp/)	praktyka
Internet service provider	/ˈɪntəˌnɛt/ /ˈsɜːvɪs/ /prəˈvaɪdə/	dostawca internetu
interpersonal	/ˌɪntəˈpɜːsən(ə)l/	międzyludzki
introduce	/ˌɪntrəˈdjuːs/	wprowadzać
intruder	/ɪnˈtruːdə/	intruz
intrusive	/ɪnˈtruːsɪv/	niepożądany, natrętny
invent	/ɪnˈvɛnt/	wynaleźć
involve	/ɪnˈvɒlv/	wymagać, angażować
IoT	/aɪ/ /əʊ/ /tiː/	Internet rzeczy
IP (Internet Protocol)	/aɪ-piː/ (/ˈɪntəˌnɛt/ /ˈprəʊtəkɒl/)	protokół internetowy
irritation	/ˌɪrɪˈteɪʃən/	podrażnienie
ivory	/ˈaɪvəri/	kość słoniowa

J

jargon	/ˈʤɑːgən/	żargon
journey mapping	/ˈʤɜːni/ /ˈmæpɪŋ/	mapa podróży*
joy	/ʤɔɪ/	radość
jump around	/ʤʌmp/ /əˈraʊnd/	obskakiwać

K

keep a straight face	/kiːp/ /ə/ /streɪt/ /feɪs/	zachować powagę
keep sb away	/kiːp/ /əˈweɪ/	trzymać z dala
keep track of sth	/kiːp/ /træk/ /əv/	śledzić
key	/kiː/	kluczowy
knowledge	/ˈnɒlɪdʒ/	wiedza

L

lack of	/læk/ /ɒv/	brak czegoś
land	/lænd/	zapewnić
language use	/ˈlæŋgwɪdʒ/ /juːz/	poziom języka
last forever	/lɑːst/ /fəˈrɛvə/	trwać wieki
launch	/lɔːnʧ/	wprowadzać na rynek
layer	/ˈleɪə/	nakładać, cieniować
layout	/ˈleɪaʊt/	kompozycja
lean forward	/liːn/ /ˈfɔːwəd/	pochylać się
legible	/ˈlɛʤəbl/	czytelny
lense	/ˈlɛnz/	szkło, soczewka
less / the least	/lɛs/ / /ðə/ /liːst/	mniej / najmniej
level	/ˈlɛvl/	równać
lie	/laɪ/	kłamać
lighting	/ˈlaɪtɪŋ/	oświetlenie
lightning	/ˈlaɪtnɪŋ/	błyskawica
limitation	/ˌlɪmɪˈteɪʃən/	ograniczenie
list out sth	/lɪst/ /aʊt/	wypisać
little / a little	/ˈlɪtl/ / /ə/ /ˈlɪtl/	mało / trochę
log	/lɒg/	rejestrować
look forward to sth	/lʊk/ /ˈfɔːwəd/ /tə/	cieszyć się na
loom	/luːm/	krosno
loss of	/lɒs/ /ɒv/	utrata czegoś
lower case letters	/ˈləʊə/ /keɪs/ /ˈlɛtəz/	małe litery
luckily	/ˈlʌkɪli/	na szczęście
luggage	/ˈlʌgɪʤ/	bagaż

M

main	/meɪn/	główny
mainframe	/ˈmeɪnfreɪm/	komputer z wieloma terminalami
maintain	/meɪnˈteɪn/	utrzymywać
maintenance	/ˈmeɪntənəns/	konserwacja, utrzymanie
major	/ˈmeɪʤə/	główny, kierunek studiów
make a difference	/meɪk/ /ə/ /ˈdɪfrəns/	robić różnicę

make an educated guess	/meɪk/ /ən/ /ˈɛdju(ː)keɪtɪd/ /gɛs/	postawić hipotezę
make sb do sth	/meɪk/ /dʊ/	sprawiać, że ktoś coś zrobi
make sth difficult	/meɪk/ /ˈdɪfɪkəlt/	utrudniać
make sth easy	/meɪk/ /ˈiːzi/	ułatwiać coś
make sure	/meɪk/ /ʃʊə/	upewniać się
malfunction	/mælˈfʌŋkʃən/	źle działać
malicious	/məˈlɪʃəs/	złośliwy
malware	/ˈmælweə/	złośliwe oprogramowanie
manageable	/ˈmænɪʤəbl/	dający się kontrolować
manual for sth	/ˈmænjʊəl/ /fə/	instrukcja obsługi
march on the spot	/mɑːʧ/ /ɒn/ /ðə/ /spɒt/	maszerować w miejscu
mask	/mɑːsk/	ukrywać
matrix	/ˈmeɪtrɪks/	matryca
matter	/ˈmætə/	mieć znaczenie
meet a deadline	/miːt/ /ə/ /ˈdɛdlaɪn/	dotrzymać terminu
meet needs	/miːt/ /niːdz/	spełniać potrzeby
memory unit	/ˈmɛməri/ /ˈjuːnɪt/	jednostka pamięci
mental	/ˈmɛntl/	umysłowy, psychiczny
mention	/ˈmɛnʃən/	wspomnieć
mentorship	/ˈmɛntɔːʃɪp/	doradztwo
mill	/mɪl/	zakład produkcyjny
mindset	/ˈmaɪndsɛt/	sposób myślenia
mingle with sb	/ˈmɪŋgl/ /wɪð/	obracać się w towarzystwie
mistake	/mɪsˈteɪk/	pomylić
modern	/ˈmɒdən/	nowoczesny, współczesny
mogul	/məʊˈgʌl/	magnat
monitor	/ˈmɒnɪtə/	nadzorować, śledzić
move on to sth	/muːv/ /ɒn/ /tə/	przechodzić do
move sth forward	/muːv/ /ˈfɔːwəd/	pchać do przodu
multiple	/ˈmʌltɪpl/	liczny, wielokrotny
multiplication	/ˌmʌltɪplɪˈkeɪʃən/	mnożenie
myth	/mɪθ/	mit

N

navigate	/ˈnævɪgeɪt/	poruszać się
nearly	/ˈnɪəli/	niemal
neat	/niːt/	staranny, schludny
necessary	/ˈnɛsɪsəri/	konieczny
nightmare	/ˈnaɪtmeə/	koszmar
no matter	/nəʊ/ /ˈmætə/	niezależnie od
noisy	/ˈnɔɪzi/	hałaśliwy
notification	/ˌnəʊtɪfɪˈkeɪʃən/	powiadomienie
numeral	/ˈnjuːmərəl/	liczebnik

O

object-oriented	/ˈɒbʤɪkt/-/ˈɔːriəntɪd/	zorientowany obiektowo
obligation	/ˌɒblɪˈgeɪʃən/	zobowiązanie
obtain	/əbˈteɪn/	uzyskać
obvious	/ˈɒbvɪəs/	oczywisty
Occupational	/ˌɒkju(ː)ˈpeɪʃənl/	
Health and Safety	/hɛlθ/ /ənd/ /ˈseɪfti/	bhp
offer	/ˈɒfə/	propozycja
office space	/ˈɒfɪs/ /speɪs/	przestrzeń biurowa
omnipresent	/ˌɒmnɪˈprɛzənt/	wszechobecny
on a daily basis	/ɒn/ /ə/ /ˈdeɪli/ /ˈbeɪsɪs/	codziennie
on the other hand	/ɒn/ /ði/ /ˈʌðə/ /hænd/	z drugiej strony
on site	/ɒn/ /saɪt/	na miejscu
operand	/ˈɒpərənd/	argument operacji
opt	/ɒpt/	wybierać
optician	/ɒpˈtɪʃən/	optyk
optimize	/ˈɒptɪmaɪz/	optymalizować
optional	/ˈɒpʃənl/	nieobowiązkowy
ordinal	/ˈɔːdɪnl/	porządkowy
otherwise	/ˈʌðəwaɪz/	w przeciwnym razie
outdated	/aʊtˈdeɪtɪd/	nieaktualny
outline of	/ˈaʊtlaɪn/ /ɒv/	zarys
over the phone	/ˈəʊvə/ /ðə/ /fəʊn/	przez telefon
oversee	/ˌəʊvəˈsiː/	nadzorować
overview of	/ˈəʊvəvjuː/ /ɒv/	przegląd
owe to sth/sb	/əʊ/ /tə/	zawdzięczać czemuś/komuś
ozone	/ˈəʊzəʊn/	ozon

P

pair sth with sth	/peə//wɪð/	iść w parze z czymś
palm	/pɑːm/	spód dłoni
paste	/peɪst/	wklejać
patch	/pæʧ/	poprawka
pay attention to sth	/peɪ/ /əˈtɛnʃ(ə)n/ /tə/	zwracać uwagę na coś
pebble	/ˈpɛbl/	kamyk
peer	/pɪə/	rówieśnik
perceive sth as	/pəˈsiːv/ /æz/	postrzegać coś jako
peripheral	/pəˈrɪfərəl/	urządzenie zewnętrzne
permanent	/ˈpɜːmənənt/	stały
permission	/pəˈmɪʃən/	pozwolenie
pharmacy	/ˈfɑːməsi/	apteka
phase	/feɪz/	faza, etap

pick	/pɪk/	wybrać
piece of sth	/piːs/ /əv/	kawałek czegoś
place	/pleɪs/	umiejscowić
plenty of	/ˈplɛnti/ /ɒv/	mnóstwo
plug sth into sth	/plʌg//ˈɪntə/	podłączyć coś do czegoś
plus	/plʌs/	zaleta
population	/ˌpɒpjʊˈleɪʃən/	liczba ludności
portfolio	/pɔːtˈfəʊliəʊ/	teczka prac
post	/pəʊst/	zamieszczać w internecie
postage stamp	/ˈpəʊstɪʤ/ /stæmp/	znaczek pocztowy
powder	/ˈpaʊdə/	puder
power	/ˈpaʊə/	siła
predecessor	/ˈpriːdɪsɛsə/	poprzednik
prediction	/prɪˈdɪkʃən/	przypuszczenie
prepare	/prɪˈpeə/	przygotowywać
pressure	/ˈprɛʃə/	presja
prevent from	/prɪˈvɛnt/ /frɒm/	zapobiec czemuś
primary	/ˈpraɪmərɪ/	pierwszorzędowy
principle	/ˈprɪnsəpl/	zasada
prior to	/ˈpraɪə/ /tʊ/	wcześniej
prioritize	/praɪˈɒrɪˌtaɪz/	nadawać priorytet
priority	/praɪˈɒrɪti/	priorytet
proactive	/prəʊˈæktɪv/	pełen inicjatywy
profession	/prəˈfɛʃən/	zawód
programmable	/ˈprəʊgræməbl/	programowalny
progress	/ˈprəʊgrəs/	postęp
promise	/ˈprɒmɪs/	obietnica
properly	/ˈprɒpəli/	właściwie
prosperous	/ˈprɒspərəs/	dobrze działający, zamożny
protection	/prəˈtɛkʃən/	ochrona
prove	/pruːv/	udowodnić
provide	/prəˈvaɪd/	zapewniać, zaopatrywać
punch card	/pʌnʧ/ /kɑːd/	karta perforowana
punctuation mark	/ˌpʌŋktjʊˈeɪʃən/ /mɑːk/	znak interpunkcyjny
pursue career in	/pəˈsjuː/ /kəˈrɪər/ /ɪn/	robić karierę w
push	/pʊʃ/	pchać
put hands together	/pʊt/ /hændz/ /təˈgɛðə/	złożyć ręce

Q

QA (quality assurance)	/kjuːˈeɪ/ (/ˈkwɒlɪti/ /əˈʃʊərəns/)	dział zapewnienia jakości
quantitative data	/ˈkwɒntɪtətɪv/ /ˈdeɪtə/	dane ilościowe
query	/ˈkwɪəri/	zapytanie, kwerenda

R

random	/ˈrændəm/	losowy
range from sth to sth	/reɪndʒ/ /frəm/ /tə/	obejmować
ransomware	/ˈrænsəm weə/	oprogramowanie szantażujące
reach sb	/riːʧ/	dotrzeć do kogoś
read-only	/riːd/-/ˈəʊnli/	tylko do odczytu
realm of sth	/rɛlm/ /əv/	królestwo czegoś
reason	/ˈriːzn/	powód
receive	/rɪˈsiːv/	otrzymać
recognition	/ˌrɛkəgˈnɪʃən/	rozpoznanie
recognize	/ˈrɛkəgnaɪz/	rozpoznawać
recommend	/ˌrɛkəˈmɛnd/	polecać
record	/ˈrɛkɔːd/	zapis, rekord
reduce	/rɪˈdjuːs/	obniżyć
refer to sth	/rɪˈfɜː/ /tə/	odnosić się do czegoś
refinement	/rɪˈfaɪnmənt/	udoskonalenie
regardless of	/rɪˈgɑːdlɪs/ /ɒv/	niezależnie od
regret	/rɪˈgrɛt/	żałować
regular job	/ˈrɛgjʊlə/ /ʤɒb/	stała praca
regulation	/ˌrɛgjʊˈleɪʃən/	przepis prawny
rehearse	/rɪˈhɜːs/	próbować
related	/rɪˈleɪtɪd/	powiązany
relay	/riːˈleɪ/	przekaźnik
release	/rɪˈliːs/	premiera, wypuścić
relevant	/ˈrɛlɪvənt/	istotny, dotyczący, odpowiedni
reliable	/rɪˈlaɪəbl/	niezawodny
rely on sth	/rɪˈlaɪ/ /ɒn/	polegać na czymś
remain	/rɪˈmeɪn/	pozostawać
remotely	/rɪˈməʊtli/	zdalnie
render	/ˈrɛndə/	przedstawiać
Repetitive Strain Injury	/rɪˈpɛtɪtɪv/ /streɪn/ /ˈɪnʤəri/	zespół RSI
repetitive	/rɪˈpɛtɪtɪv/	powtarzalny
replace	/rɪˈpleɪs/	wymieniać
reposition	/ˌriːpəˈzɪʃən/	przestawić
reputable	/ˈrɛpjʊtəbl/	mający reputację
reputed	/rɪˈpjuːtɪd/	uznany
request	/rɪˈkwɛst/	prośba
require	/rɪˈkwaɪə/	wymagać
requirement	/rɪˈkwaɪəmənt/	wymóg
research	/rɪˈsɜːʧ/	badania

resemble	/rɪˈzɛmbl/	przypominać
resolution	/ˌrɛzəˈluːʃən/	rozdzielczość
resolve an issue	/rɪˈzɒlv/ /ən/ /ˈɪʃuː/	rozwiązać problem
resourceful in sth	/rɪˈsɔːsfʊl/ /ɪn/	pełen pomysłów w
respond to sth	/rɪsˈpɒnd/ /tə/	zareagować, odpowiedzieć
responsive to sth	/rɪsˈpɒnsɪv/ /tə/	reagujący na coś
restoration	/ˌrɛstəˈreɪʃən/	przywrócenie
retrieval	/rɪˈtriːvəl/	odzyskiwanie
retrieve	/rɪˈtriːv/	odzyskać
rewarding	/rɪˈwɔːdɪŋ/	satysfakcjonujący
right away	/raɪt/ /əˈweɪ/	natychmiast
right-click	/raɪt/-/klɪk/	kliknąć prawym przyciskiem myszki
room	/ruːm/	miejsce
rootkit	/ruːt kɪt/	rootkit
rotate	/rəʊˈteɪt/	obracać
rotating shaft	/rəʊˈteɪtɪŋ/ /ʃɑːft/	obracający się wał
rubbish	/ˈrʌbɪʃ/	śmieci
rule	/ruːl/	reguła
rule of thumb	/ruːl/ /əv/ /θʌm/	sprawdzona zasada

S

safeguard	/ˈseɪfgɑːd/	zabezpieczać
scalable	/ˈskeɪləbl/	skalowalny
scam	/skæm/	przekręt
sceptical	/ˈskɛptɪkəl/	sceptyczny
schedule	/ˈʃɛdjuːl/	rozkład
scope of	/skəʊp/ /ɒv/	zakres
score a goal	/skɔːr/ /ə/ /gəʊl/	strzelić gola
scripting language	/ˈskrɪptɪŋ/ /ˈlæŋgwɪʤ/	język skryptowy
secondary	/ˈsɛkəndəri/	drugorzędowy
seem	/siːm/	wydawać się
segment	/ˈsɛgmənt/	sektor
self-confidence	/sɛlf/-/ˈkɒnfɪdəns/	pewność siebie
self-improvement	/sɛlf/-/ɪmˈpruːvmənt/	samodoskonalenie
self-motivated	/sɛlf/-/ˈməʊtɪveɪtɪd/	z silną motywacją
self-replication	/sɛlf/-/ˌrɛplɪˈkeɪʃən/	samokopiujący się
semiconductor	/ˌsɛmɪkənˈdʌktə/	półprzewodnik
sense of	/sɛns/ /ɒv/	poczucie
sense of teamwork	/sɛns/ /əv/ /ˈtiːmwɜːk/	poczucie wspólnoty
sensitive	/ˈsɛnsɪtɪv/	wrażliwy
set oneself apart from sth	/sɛt/ /wʌnˈsɛlf/ /əˈpɑːt/ /frəm/	oderwać się od

shade	/ʃeɪd/	odcień
shadow	/ˈʃædəʊ/	naśladować
sharp	/ʃɑːp/	ostry, wyraźny
shield	/ʃiːld/	tarcza
shoulder	/ˈʃəʊldə/	bark
side	/saɪd/	bok (ciała)
sign of sth	/saɪn/ /əv/	znak czegoś
similarly	/ˈsɪmɪləli/	podobnie
since	/sɪns/	od
site	/saɪt/	strona internetowa
skill	/skɪl/	umiejętność
slide	/slaɪd/	przesuwać, ślizgać
slouch down into	/slaʊʧ/ /daʊn/ /ˈɪntuː/	garbić się
smile at sb	/smaɪl/ /ət/	uśmiechać się do kogoś
socket	/ˈsɒkɪt/	podłączyć do gniazdka
solution	/səˈluːʃən/	rozwiązanie
solve a puzzle	/sɒlv/ /ə/ /ˈpʌzl/	rozwiązać zagadkę
soon	/suːn/	wkrótce
sought-after	/ˈsɔːtˈɑːftə/	mający wzięcie
source	/sɔːs/	źródło
spam	/spæm/	niechciane wiadomości
specific	/spɪˈsɪfɪk/	konkretny
spine	/spaɪn/	kręgosłup
spreadsheet	/ˈsprɛdʃiːt/	arkusz kalkulacyjny
spyware	/spaɪ weə/	program szpiegujący
staff	/stɑːf/	pracownicy
stakeholder	/ˈsteɪkˌhəʊldə/	akcjonariusz
stand	/stænd/	podstawka, stojak
stand up	/stænd/ /ʌp/	wstać
stare	/steə/	wpatrywać się
stay up to date with sth	/steɪ/ /ʌp/ /tə/ /deɪt/ /wɪð/	być na bieżąco
steal	/stiːl/	kraść
steam	/stiːm/	para (wodna)
stick	/stɪk/	patyk
stiff	/stɪf/	sztywny
storage	/ˈstɔːrɪdʒ/	przechowywanie
store	/stɔː/	magazyn
straightforward	/streɪtˈfɔːwəd/	prosty
stranger	/ˈstreɪnʤə/	obcy
strength	/streŋθ/	siła
stress	/strɛs/	kłaść nacisk
stretch	/strɛʧ/	rozciągać się

strict	/strɪkt/	surowy, sztywny, dokładny
submit	/səbˈmɪt/	składać
subscriber	/səbˈskraɪbə/	abonent, prenumerator
substantial	/səbˈstænʃəl/	znaczny
suggest	/səˈʤɛst/	sugerować
suit	/sjuːt/	dopasować
suitable for	/ˈsjuːtəbl/ /fɔː/	odpowiedni dla
suite	/swiːt/	pakiet
summer job	/ˈsʌmə/ /ʤɒb/	sezonowa praca w lecie
supercede	/ˌs(j)uːpəˈsiːd/	wypierać, zastępować
superset	/ˌs(j)uːpəˈsɛt/	nadzbiór
supervise	/ˈsjuːpəvaɪz/	nadzorować
supervisor	/ˈsjuːpəvaɪzə/	przełożony
switch	/swɪʧ/	przełącznik, przełączać, przerzucać
syntax	/ˈsɪntæks/	składnia
system failure	/ˈsɪstɪm/ /ˈfeɪljə/	awaria systemu

T

table	/ˈteɪbl/	tabela
tabulate	/ˈtæbjʊleɪt/	ujmować w tabelę
tackle	/ˈtækl/	stawiać czoło
take instruction	/teɪk/ /ɪnˈstrʌkʃən/	przyjmować wskazówki
take over	/teɪk/ /ˈəʊvə/	przejmować
take sth seriously	/teɪk/ /ˈsɪərɪəsli/	brać coś poważnie
take sth/sb to do sth	/teɪk/ /tə/ /dʊ/	wymagać, żeby zrobić
take the next step	/teɪk/ /ðə/ /nɛkst/ /stɛp/	zrobić następny krok
target	/ˈtɑːgɪt/	cel
task	/tɑːsk/	zadanie
tax	/tæks/	podatek
team up	/tiːm/ /ʌp/	działać w drużynie
tech-savvy	/tɛk/-/ˈsævi/	obeznany z techniką
telly	/ˈtɛli/	telewizor
temporary	/ˈtɛmpərəri/	tymczasowy
tension	/ˈtɛnʃən/	napięcie
tertiary	/ˈtɜːʃəri/	trzeciorzędowy
thigh	/θaɪ/	udo
though	/ðəʊ/	chociaż
thunder	/ˈθʌndə/	grzmot
tide	/taɪd/	pływ morski
tiltable	/ˈtɪltəbl/	taki, który da się pochylić
tip	/tɪp/	wskazówka

tiptoe	/ˈtɪptəʊ/	na palcach
to appeal to	/tʊ/ /əˈpiːl/ /tʊ/	pociągać, podobać się
to have a grip on sth	/tə/ /həv/ /ə/ /grɪp/ /ɒn/	mieć kontrolę nad czymś
too	/tuː/	zbyt, za
tool	/tuːl/	narzędzie
touch	/tʌʧ/	podejście
tract	/trækt/	ścieżka, szlak
trade	/treɪd/	handel
traffic	/ˈtræfɪk/	ruch uliczny
trailing wires	/ˈtreɪlɪŋ/ /ˈwaɪəz/	plączące się po podłodze kable
transfer	/ˈtrænsfə(ː)/	przekazać
transition into sth	/trænˈsɪʒən/ /ˈɪntə/	zmieniać się w
treat	/triːt/	traktować
tremendous	/trɪˈmɛndəs/	ogromny
trillion	/ˈtrɪljən/	bilion
trojan horse	/ˈtrəʊʤən/ /hɔːs/	koń trojański
troubleshoot	/ˈtrʌbəl ˌʃʊt/	usuwać usterki
tuition	/tjuː)ˈɪʃən/	czesne
twist	/twɪst/	obracać się
type	/taɪp/	pisać na klawiaturze
typography	/taɪˈpɒgrəfi/	układ graficzny

U

ultimate	/ˈʌltɪmɪt/	najlepszy
unbeatable	/ˌʌnˈbiːtəbl/	nie do pobicia
underneath	/ˌʌndəˈniːθ/	pod spodem
unforgivable	/ˌʌnfəˈgɪvəbl/	niewybaczalny
unique	/juːˈniːk/	wyjątkowy
until	/ənˈtɪl/	dopóki
upper case letters	/ˈʌpə/ /keɪs/ /ˈlɛtəz/	wielkie litery
upright	/ˈʌpraɪt/	wyprostowany
upwards	/ˈʌpwədz/	do góry
usability	/ˌjuːzəˈbɪlɪti/	użyteczność
useful	/ˈjuːsfʊl/	użyteczny
useless	/ˈjuːslɪs/	bezużyteczny
user-friendly	/ˈjuːzə/-/ˈfrɛndli/	przyjazny dla użytkownika

V

vacuum tube	/ˈvækjʊəm/ /tjuːb/	lampa elektronowa/ próżniowa
value	/ˈvælju:/	wartość

variety of	/vəˈraɪəti/ /ɒv/	różnorodność
varying	/ˈveərɪŋ/	zmieniający się
vast	/vɑːst/	rozległy, nieprzebrany
verbal	/ˈvɜːbəl/	ustny
vertical	/ˈvɜːtɪkəl/	pionowy
via	/ˈvaɪə/	przez, za pomocą
vibrant	/ˈvaɪbrənt/	żywy
vital	/ˈvaɪtl/	istotny
vulnerability	/ˌvʌlnərəˈbɪlɪti/	słaby punkt

W

weave	/wiːv/	splot
welcome	/ˈwɛlkəm/	mile widziane
well	/wɛl/	dobrze
well-paying	/wɛl/-/ˈpeɪɪŋ/	dobrze płatny
willingness to do sth	/ˈwɪlɪŋnɪs/ /tə/ /dʊ/	chęć do robienia
wire	/ˈwaɪə/	kabel
within	/wɪˈðɪn/	wewnątrz
work remotely	/wɜːk/ /rɪˈməʊtli/	pracować zdalnie
work-from-home	/wɜːk/-/frɒm/-/həʊm/	pracować z domu
wrist	/rɪst/	nadgarstek

Y

yield	/jiːld/	przynosić rezultat

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