# UNIT 1 COMPUTER BASICS



# **Connect to the topic**

- 1. Look at the photo.
  What computer components do you see?
- 2. Do you know other fundamental components of a computer?
- 3. How do they work together to process information?

# **WARM-UP VIDEO**

**WATCH AND SPECULATE.** Watch the video about the evolution of computers and discuss the questions below.

- 1. How has the history of computers changed the way we live and work today?
- 2. How important is it for IT professionals to have an understanding of the history of computers?
- 3. What aspect of this history do you find most intriguing?
- 4. How do early computers differ from today's smartphones in size and power?
- 5. What can we learn from history for future technological developments?
- 6. What potential innovations can you predict in the future of IT?



# UNIT 1.1 HARDWARE READING AND VOCABULARY

run better.

**Task 1. EXPLORE THE WORDS.** Look at the words and study their definitions. Fill in the gaps in the sentences using some of these words.

	Hardware Components
<b>Central Processing Unit</b>	the "brain" of the computer, responsible for executing instructions
(CPU)	and performing calculations.
motherboard	the main circuit board that connects and contains various
	components, including the CPU, RAM, and other peripherals.
Random Access Memory	temporary memory that stores data and instructions that the CPU is
(RAM)	currently using. It allows for quick access to data.
Read-only Memory	a type of non-volatile memory that is used to permanently store data.
(ROM)	
Hard Disk Drive (HDD)	a non-volatile storage device used for long-term data storage. It
,	stores data on spinning disks.
Solid-State Drive(SSD)	a faster and more durable alternative to HDD, using flash memory
,	for storage.
<b>Power Supply Unit (PSU)</b>	a unit that supplies electrical power to the components in a computer.
<b>Graphics Processing Unit</b>	a unit that handles rendering graphics and is essential for tasks like
(GPU)	gaming, video editing, and 3D modeling.
peripheral devices	input and output devices such as keyboards, mice, monitors, and
	printers.
<b>Basic Input / Output</b>	firmware that initializes hardware components during the boot
System (BIOS) / Unified	process (BIOS is an older system that has been in use for a long time,
<b>Extensible Firmware</b>	while UEFI is a more modern and advanced replacement for BIOS)
Interface (UEFI)	
expansion slots	slots on the motherboard for installing expansion cards and
	additional components.
expansion bays	slots within the computer case where additional storage drives or
	other devices can be installed.
<b>Network Interface Card</b>	allows a computer to connect to a network or the internet.
(NIC)	
power button	a switch used to turn the computer on and off.
heat sink	a component used to cool heat generated by the CPU or GPU.
CMOS chip	a type of integrated circuit that stores BIOS settings and system
(Complementary Metal-	configuration data.
Oxide-Semiconductor)	
system bus	a collection of wires that carry data between the CPU, RAM, and
	other components on the motherboard.
sound card	a component that processes audio data, allowing for audio output and
	input.
computer case	a box that contains and protects the internal components.
case fan	an additional fan in the case, helps with airflow and cooling.
<ol> <li>Data moved quickly to card for efficient vide</li> <li>The gamer added a property</li> </ol>	
2. The gamer added a p	to make games

3. The \_\_\_\_\_\_ efficiently processed complex mathematical calculations, allowing the computer to show 3D graphics in real-time.

4.	The computer technician used the available to meet the client's need
	for more data space.
5.	The musician relied on a high-quality to produce professional-grade audio
	recordings in the home studio.
6.	The company's IT department installed a in each computer to establish a
	stable and high-speed connection to the corporate network.
7.	With a single press of the, the computer came to life, ready for another day
	of work.
8.	As the user opened multiple applications at the same time, the available
	quickly filled up, causing the computer to slow down.
9.	The technician carefully examined the to identify and replace a faulty
	capacitor that was causing system instability.
10.	The large in the server was used to store a lot of databases and archive years
	of financial records.
11.	During the system boot-up, the chip provided the necessary
	instructions for the computer to start, including checking hardware condition.
12.	The PC enthusiast customized the with LED lighting and extra cooling
	fans to make the gaming computer look impressive.
13.	A sudden power surge damaged the computer's, resulting in a complete
	system shutdown.
14.	The stored critical system settings, such as the date and time, even
	when the computer was powered off.
15.	The high-end was important for realistic visual effects in the latest video
	game.

# Task 2. READ FOR DETAILS. Read the text and answer the questions about hardware components.

# **Building the Ultimate Gaming PC**

In his room, John, a passionate gamer, was finally assembling his dream game computer. He'd been saving up for a year, and now it was time to bring his vision to life. The centerpiece of his creation was the motherboard, onto which he carefully attached the CPU. This powerful CPU was going to let him play the latest and most demanding games without any lag.

With a gentle click, he put the two RAM modules into their slots. He felt thrilled. The high-speed RAM would guarantee him quick data access and perfect multitasking. His SSD and HDD were next and ready for installation, their specifications promised super-fast load times and plenty of space for his massive gaming library. John was particularly excited about the GPU. He was told in a shop that this graphics card came with a state-of-the-art cooling system. He loved how the multiple fans and massive heat sink would keep everything cool and quiet, even during intense gaming sessions.

Having connected the power supply unit to the motherboard and components, John took a moment to admire his cable management. It wasn't perfect, but it was his best work yet. The PSU was crucial, distributing power efficiently to the whole system, especially to the power-hungry GPU.

Once everything was in place, he closed the custom case, making sure the RGB lighting shone perfectly. His new computer looked like something out of a sci-fi movie. His peripherals – a mechanical keyboard, a gaming mouse, and a high-refresh-rate monitor – were all set up and ready to go. John booted up the computer by pushing a power button and for a moment held his breath as the BIOS was initializing the hardware. The system recognized the CPU, RAM, and storage devices quickly. Within moments, the familiar Windows desktop greeted him from his monitor.

Unable to wait longer, John launched his favorite game. The GPU sprang into action, and the game loaded in no time, thanks to the fast RAM and SSD. The visuals were stunning, and the audio, pumped through his high-end sound card, was crystal clear. Playing the first game on his new PC,

John couldn't help but smile. Every component, every cable, every decision had come together to create the ultimate gaming experience. All those hours of research, reading tutorials and saving had paid off, and he was ready for countless hours of gaming.

- 1. When John booted up his new gaming PC, which component quickly initialized the hardware?
- 2. What did John press to turn on the computer?
- 3. What did John attach to the motherboard to boost his gaming PC's power?
- 4. What helped John with quick access to game data and multitasking?
- 5. What provided all the storage space for John's massive gaming library?
- 6. What greeted him when the boot up was complete?
- 7. Which part of his PC had a cooling system?
- 8. What distributed power to all the different parts of the computer?
- 9. What looked cool with RGB lighting?
- 10. Without which components the setup wouldn't be complete?

Task 3. WORK WITH WORDS. Read the text and fill in the missing words.

# **Boot Failure Troubleshooting**

Ī	cable •	mothe	rboard	•	storage	•	case	•	power cord •
	modu	les •	slot	•	errors	•	CMOS	•	failure

Emily, a highly-skilled professional, had recently assembled a high-performance office PC for her work-related tasks, ensuring that the CPU, RAM, GPU, and other hardware components were correctly in place. She had successfully installed the necessary software for her work, including office applications and project management tools. However, when she pressed the power button, the PC did not respond.

did	not respond.
	Troubleshooting Steps
•	Emily initially verified that PSU was correctly connected to both the 1) and the power outlet. She ensured that the power switch on the PSU was in the "on" position.
•	She checked the power outlet and the 2) for any loose connections or visible damage. Emily also tested the outlet with another device to confirm its functionality.
•	Emily opened the 3) to inspect the hardware components. She ensured that all cables were correctly connected to the motherboard, GPU, RAM, and 4) drives.
•	To rule out potential RAM-related issues, Emily carefully removed and reseated the RAM 5) to guarantee they were securely in place.
•	Emily also attempted to reset the BIOS by clearing the 6), a step that can sometimes resolve boot issues caused by incorrect BIOS settings.
•	Emily reseated the GPU to ensure it was properly connected and securely seated in its 7)
•	The motherboard had diagnostic LEDs that indicated potential issues. Emily checked these LEDs and also listened for any beep codes from the motherboard to determine if there were specific hardware 8)
•	To rule out issues with the monitor, Emily connected her computer to another monitor using a different 9) .

Following a troubleshooting process, Emily identified that the issue was related to the GPU. It turned out that the GPU had a loose power connector, which was causing the boot 10)

\_\_\_\_\_. After reseating the power cable and ensuring it was securely connected, Emily successfully booted up her office PC.

Task 4. WORK WITH WORDS. Match the verbs used in previous tasks with their definitions.

1. execute	a) to adapt something to individual preferences
2. contain	b) to display visual or audio output
3. render	c) to decide something through analysis or investigation
4. install	d) to guarantee that something will happen
5. remove	e) to confirm the accuracy, truth, or validity
6. <b>boot up</b>	f) to set up a software or hardware component on a device
7. customize	g) to prepare a device or system for operation
8. assemble	h) to take something away
9. <b>ensure</b>	i) to remove and then reinsert a component
10. <b>initialize</b>	j) to start a computer by loading the operating system
11. verify	k) to react to hardware events
12. reseat	l) to provide a place for components
13. determine	m) to identify, diagnose, and issues in technical contexts
14. respond	n) to perform a specific task
15. troubleshoot	o) to put together various parts or components

**Task 5. WORK WITH WORDS.** Read the sentences and fill in the verbs from Task 4. Sometimes you need to change the form of the verb to fit the sentence.

1.	The powerful graphics card can 3D models and high-definition videos with
	impressive clarity.
2.	The CPU complex instructions to perform calculations and run software
	applications.
3.	To clean the computer case, the side panel and dust out the components inside.
	During startup, the BIOS hardware components, ensuring they are ready for
	operation.
5.	When the laptop fails to connect to Wi-Fi, you should the issue by checking
	router settings and network configuration.
6.	To upgrade the computer's storage, I need to a new SSD and transfer the data
	from the old HDD.
7.	You can the keyboard's RGB lighting to match your preferred color scheme and create a unique gaming setup.
	and create a unique gaming setup.
	Proper cable management is essential to good airflow and prevent overheating
	inside the computer case.
9.	When you press the power button, the computer will, initializing the
	operating system and hardware.
10.	When the user pressed the power button, the computer's hardware quickly by
	initializing the boot sequence and displaying the manufacturer's logo on the screen.
11.	Building a gaming PC involves carefully components like the CPU, GPU,
	RAM, and motherboard.
12.	Before connecting the new printer,that you have the correct drivers
	installed to ensure proper functionality.
13.	The technician worked to the cause of the network connectivity issue,
	identifying a faulty cable as the problem.
14.	If the RAM is not functioning correctly, try to it by removing and then securely
	reinserting the modules.

15. To build a custom PC, you need to carefully \_\_\_\_\_\_ the motherboard, CPU, RAM, and other components in the case.

**Task 6. READ FOR DETAILS.** Read the dialogue between John, a person experiencing problems, and Lisa, IT support specialist; then answer the questions below.

# **Printer Malfunction**

documents. I really need these printed ASAP.  Lisa: Well, it happens. Can you tell me a bit more about what's happening? Any error messages or weird noises?  John: Well, there aren't any error messages, but it's just not printing. I've checked the paper, and there's plenty of it in the tray.  Lisa: Thanks for checking that. Let's try something simple first. Can you turn the printer off, wait a minute, and then turn it back on?  John: Sure, give me a sec Alright, it's back on now.  Lisa: Awesome, now try printing a test page. Just open a simple doc and hit "Print."  John: Just tried it, but still nothing.  Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?  John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."  Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?  John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't hesitate to give us a call. We're here to help.	John:	Hey, I'm having a bit of a problem with the office printer. It's not printing my important
messages or weird noises?  John: Well, there aren't any error messages, but it's just not printing. I've checked the paper, and there's plenty of it in the tray.  Lisa: Thanks for checking that. Let's try something simple first. Can you turn the printer off, wait a minute, and then turn it back on?  John: Sure, give me a sec Alright, it's back on now.  Lisa: Awesome, now try printing a test page. Just open a simple doc and hit "Print."  John: Just tried it, but still nothing.  Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?  John: Let me sec Oh, there are a couple with "Printing error — unable to connect to the printer."  Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?  John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  No problem, John. It was probably just a loose connection. If it acts up again, don't		documents. I really need these printed ASAP.
John: Well, there aren't any error messages, but it's just not printing. I've checked the paper, and there's plenty of it in the tray.  Lisa: Thanks for checking that. Let's try something simple first. Can you turn the printer off, wait a minute, and then turn it back on?  John: Sure, give me a sec Alright, it's back on now.  Lisa: Awesome, now try printing a test page. Just open a simple doc and hit "Print."  John: Just tried it, but still nothing.  Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?  John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."  Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?  John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  No problem, John. It was probably just a loose connection. If it acts up again, don't	Lisa:	Well, it happens. Can you tell me a bit more about what's happening? Any error
and there's plenty of it in the tray.  Lisa: Thanks for checking that. Let's try something simple first. Can you turn the printer off, wait a minute, and then turn it back on?  John: Sure, give me a sec Alright, it's back on now.  Lisa: Awesome, now try printing a test page. Just open a simple doc and hit "Print."  John: Just tried it, but still nothing.  Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?  John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."  Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?  John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't		messages or weird noises?
<ul> <li>Lisa: Thanks for checking that. Let's try something simple first. Can you turn the printer off, wait a minute, and then turn it back on?</li> <li>John: Sure, give me a sec Alright, it's back on now.</li> <li>Lisa: Awesome, now try printing a test page. Just open a simple doc and hit "Print."</li> <li>John: Just tried it, but still nothing.</li> <li>Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?</li> <li>John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."</li> <li>Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?</li> <li>John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.</li> <li>Lisa: Perfect. Let's try printing again and see if that fixed it.</li> <li>John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!</li> <li>Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't</li> </ul>	John:	Well, there aren't any error messages, but it's just not printing. I've checked the paper,
wait a minute, and then turn it back on?  John: Sure, give me a sec Alright, it's back on now.  Lisa: Awesome, now try printing a test page. Just open a simple doc and hit "Print."  John: Just tried it, but still nothing.  Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?  John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."  Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?  John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't		and there's plenty of it in the tray.
<ul> <li>John: Sure, give me a sec Alright, it's back on now.</li> <li>Lisa: Awesome, now try printing a test page. Just open a simple doc and hit "Print."</li> <li>John: Just tried it, but still nothing.</li> <li>Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?</li> <li>John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."</li> <li>Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?</li> <li>John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.</li> <li>Lisa: Perfect. Let's try printing again and see if that fixed it.</li> <li>John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!</li> <li>Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't</li> </ul>	Lisa:	Thanks for checking that. Let's try something simple first. Can you turn the printer off,
<ul> <li>Lisa: Awesome, now try printing a test page. Just open a simple doc and hit "Print."</li> <li>John: Just tried it, but still nothing.</li> <li>Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?</li> <li>John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."</li> <li>Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?</li> <li>John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.</li> <li>Lisa: Perfect. Let's try printing again and see if that fixed it.</li> <li>John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!</li> <li>Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't</li> </ul>		wait a minute, and then turn it back on?
<ul> <li>John: Just tried it, but still nothing.</li> <li>Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?</li> <li>John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."</li> <li>Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?</li> <li>John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.</li> <li>Lisa: Perfect. Let's try printing again and see if that fixed it.</li> <li>John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!</li> <li>Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't</li> </ul>	John:	Sure, give me a sec Alright, it's back on now.
<ul> <li>Lisa: Hmm, okay. Let's check the printer queue on your computer. Are there any documents stuck there?</li> <li>John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."</li> <li>Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?</li> <li>John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.</li> <li>Lisa: Perfect. Let's try printing again and see if that fixed it.</li> <li>John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!</li> <li>Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't</li> </ul>	Lisa:	Awesome, now try printing a test page. Just open a simple doc and hit "Print."
John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."  Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?  John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't	John:	Just tried it, but still nothing.
<ul> <li>John: Let me see Oh, there are a couple with "Printing error – unable to connect to the printer."</li> <li>Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?</li> <li>John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.</li> <li>Lisa: Perfect. Let's try printing again and see if that fixed it.</li> <li>John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!</li> <li>Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't</li> </ul>	Lisa:	Hmm, okay. Let's check the printer queue on your computer. Are there any documents
Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?  John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't		stuck there?
<ul> <li>Lisa: Got it, that helps. It might be a connection issue. Can you check if the printer is connected to the network and if it has the right IP address?</li> <li>John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.</li> <li>Lisa: Perfect. Let's try printing again and see if that fixed it.</li> <li>John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!</li> <li>Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't</li> </ul>	John:	Let me see Oh, there are a couple with "Printing error – unable to connect to the
connected to the network and if it has the right IP address?  John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't	-	1
John: Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't	Lisa:	Got it, that helps. It might be a connection issue. Can you check if the printer is
looks fine now.  Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't	-	connected to the network and if it has the right IP address?
Lisa: Perfect. Let's try printing again and see if that fixed it.  John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't	John:	Hold on Well, the Ethernet cable was a bit loose. I reconnected it, and the IP address
John: It's working! The documents are coming out of the printer. Thank you so much, Lisa!  Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't	-	
Lisa: No problem, John. It was probably just a loose connection. If it acts up again, don't	Lisa:	Perfect. Let's try printing again and see if that fixed it.
	John:	It's working! The documents are coming out of the printer. Thank you so much, Lisa!
hesitate to give us a call. We're here to help.	Lisa:	No problem, John. It was probably just a loose connection. If it acts up again, don't
		hesitate to give us a call. We're here to help.

- 1. What problem does John have with the office printer?
- 2. What is the first step that Lisa suggests to John?
- 3. What does John see when trying to print a test document?
- 4. What does John find when he checks the printer queue on his computer?
- 5. What was the issue that Lisa helped John with?
- 6. How did they fix the problem?

### **SPEAKING**

**Task 7. COMMUNICATE.** Role play the situations below.

### **Office PC Boot Failure**

**Student A:** You are an office worker. You're having trouble with your office PC. When you press the power button, nothing happens – no lights, no fans, nothing on the monitor. Explain the problem to the IT specialist.

**Student B:** You are an IT support specialist. Ask Student A about the problem. Check out the power supply, motherboard connections, and run some diagnostic tests to figure out what's wrong. You should talk about:

- What happens when you press the power button.
- Possible causes, like power supply problems or loose connections.
- Steps to troubleshoot like checking cables, looking at the power supply, running diagnostics.

# **Slow Laptop Performance**

**Student A:** You are a student. Your laptop is really slow - it takes forever to boot up and apps lag. Explain what's happening to the computer technician.

**Student B:** You are a computer technician. Ask Student A about the slow performance. Look at the laptop's task manager to find resource-heavy processes and suggest some hardware upgrades to speed things up.

You should talk about:

- What's making the laptop slow, like long boot times and app lag.
- Steps to troubleshoot like checking the task manager, finding resource-heavy processes, suggesting hardware upgrades.
- Possible hardware and software issues causing the slowdown.

**Task 8. COMMUNICATE.** Play a communication game. Choose one card and prepare questions to your groupmates to collect the necessary information. The object of the game is to prove or disprove the statements on the sheet. To do this, you must move around the class asking suitable questions until you have obtained enough information to prove or disprove the statements. Then share your findings with the class.

# Prove it!

### Card 1

- 1. Most people in the class use more than one operating system.
- 2. The average amount of time spent on a computer daily is 4 hours.
- 3. Most people have experience in coding; Python is the most popular programming language
- 4. Most people do not own a desktop computer.
- 5. People prefer using laptops over tablets.
- 6. Most people have a favorite tech-related YouTube channel.
- 7. Most people have more than one social media account.
- 8. Most people like customizing their computer desktops.

#### Card 4

- 1. Most people in the class have built their gaming PCs.
- 2. Everyone has experienced a computer virus.
- 3. At least half of the class has participated in an online coding competition.
- 4. Most people in the class own a smart watch or fitness tracker.
- 5. Everyone has tried using a virtual reality headset.
- 6. Most people enjoy working on IT-related projects.
- 7. There is no one in the class who has never used cloud storage.
- 8. At least half the class prefers mechanical keyboards over membrane keyboards.

# Card 2

- 1. There are at least three people who used to use Internet Explorer but have now switched to a different browser.
- 2. Someone in the class used to use a dial-up internet connection.
- 3. Several people in the class used to use floppy disks.
- 4. Everybody used to play Minesweeper.
- 5. Most people have a favorite tech podcast.
- 6. Most people prefer Android over iOS.
- 7. Everyone has used a computer mouse with more than two buttons.
- 8. No one in the class has ever created a fake

# Card 5

- 1. Only one person in the class has attended a major tech conference.
- 2. No one in the class has ever troubleshooted a computer issue.
- 3. Most people have taken an online course on IT or programming.
- 4. More than three people have built a website from scratch.
- 5. Someone in the class has interned at a tech company.
- 6. There is someone in the class who has developed a mobile app.
- 7. Nobody knows how to write a code in

social media account.

assembly language.

8. There is one person in the class with no experience of a Mac computer.

# Card 3

- 1. No one likes using Internet Explorer.
- 2. Everyone enjoys trying out new tech gadgets.
- 3. Most people prefer wireless over wired peripherals.
- 4. Most people prefer coding in a text editor over using an integrated development environment (IDE).
- 5. There is someone in the class who doesn't mind troubleshooting tech issues.
- 6. Most people have purchased something online in the last week.
- 7. More than three people have participated in online gaming tournaments.
- 8. There is someone in the class who has never shared a meme online.

# Card 6

- 1. There is someone in the class who always updates their software promptly.
- 2. There is someone in the class who always reads tech news before starting the day.
- 3. Most people use smartphones for more than four hours a day.
- 4. Most people attend tech meetups quite often.
- 5. More women than men have attended a coding bootcamp.
- 6. Most people watch tech-related YouTube channels more than three times a week.
- 7. No one here has ever been a victim of phishing scams.
- 8. Most people have used a voice assistant like Siri or Alexa.

#### WATCHING

**Task 9. WATCH FOR DETAILS.** Scan the QR code and watch the video called "Inside your Computer". Choose the correct answers to the questions below.

- 1. What is the role of the "basic input-output subsystem"?
  - A. It handles all CPU tasks.
  - B. It interacts with the computer's environment.
  - C. It translates programming languages.
  - D. It manages the mouse's hardware.
- 2. What is the function of the CPU?
  - A. To fetch instructions from memory and execute them.
  - B. To handle input-output subsystem tasks.
  - C. To manage the computer's multitasking abilities.
  - D. To translate human-readable programming languages.
- 3. How many instructions can CPU handle a minute?
  - A. thousands
  - B. gazillions
  - C. billions
  - D. millions
- 4. Programs are encoded and stored in memory as ...
  - A. electrons
  - B. HTML
  - C. 1's and 0's
  - D. raw text
- 5. What happens to human-readable programs before they are stored in memory?
  - A. They are executed by the CPU.
  - B. They are compiled and made smaller.
  - C. They are sent to the IOS subsystem.
  - D. They are stored as bits of ones and zeros.
- 6. What does the CPU do when it receives a mouse click instruction from the BIOS?



- A. It sends a request to the memory subsystem for instructions.
- B. It compiles the mouse program.
- C. It directly interacts with the peripherals.
- D. It displays the cursor on the screen.
- 7. What does the CPU do if the cursor was over a button on the screen when the mouse was clicked?
  - A. It requests the keyboard program.
  - B. It retrieves the address for the mouse program.
  - C. It looks up the address for the monitor program.
  - D. It interacts with the hard rubber ball.
- 8. What happens when you click your mouse?
  - A. Only visiting the memory subsystem.
  - B. Only fetching and executing instructions.
  - C. Visiting multiple components of the computer's architecture.
  - D. No specific action; it's done by gremlins.

# Task 10. COMMUNICATE. Work in groups. Discuss the questions below.

- 1. Have you ever thought about what happens inside your computer when you click your mouse? What did you originally think was going on?
- 2. The video says the CPU handles billions of instructions every second. How does that compare to how fast we can type or do multiple things at once?
- 3. Why do you think computers need to convert everything into bits of ones and zeros to work properly?
- 4. The video compares the CPU to the brain of a computer and the BIOS to its sensory organs. Do you think this analogy helps you understand how computers work better?
- 5. The video mentioned "gremlins" as a joke about how computers work. What are some funny or incorrect things people say about computers?
- 6. How do you think knowing more about computer hardware and how it all fits together can help in our tech-filled world today?
- 7. Have you ever tried to fix something on your computer or another device yourself? How did it go? Were you able to solve the problem?

#### WRITING

# Task 11. EXPLORE THE TOPIC. Study the information about formal letters.

# **Formal Letters**

Formal letters are normally sent to people in an official position or people you don't know well (e.g. Director of Studies, Personnel Manager, etc). They are written in a formal style with a polite, impersonal tone. You can write a formal letter to apply for a job/course, make a complaint, give/request official information, etc.

A formal letter should consist of:

- a format greeting (e.g. **Dear Sir/Madam** when you do not know the person's name; **Dear Ms Green** when you know the person's name);
- an introduction in which you write your opening remarks and mention your reason(s) for writing e.g. / am writing to apply for the position of ...;
- a main body in which you write about the main subject(s) of the letter in detail, starting a new paragraph for each topic;
- a conclusion in which you write your closing remarks e.g. / I look forward to hearing from you as soon as possible ...;
- a formal ending (Yours faithfully when you do not know the person 's name; Yours sincerely when you know the person 's name; + your full name).

**Task 12. ANALYZE.** Alex Johnson is writing to Mr. Brown, a supplier, to inquire about high-performance graphics cards for his company's computer systems. Read his letter and label each paragraph with the correct heading from the list below. Then, identify the specific details Alex is requesting and discuss how clear and effective his inquiry is.

request for further discussion • details of current needs • opening remarks/reason(s) for writing • closing remarks • specific questions about hardware

Dear Mr. Brown, I am Alex Johnson, the IT Manager at OmegaTech Ltd. I am writing to inquire about high-performance graphics cards that we need for an	Para 1:	
upcoming project.		
Our company requires 500 graphics cards with the latest technology to support high-resolution video processing and 3D rendering tasks. These	Para 2:	
cards must be compatible with our current systems, which are running on		
Intel processors and Windows operating systems.		
Could you provide detailed specifications of the graphics cards you offer	Para 3:	
that meet our requirements? We are particularly interested in models that		
offer high memory bandwidth and efficient cooling systems.		
Additionally, we would like information on pricing for bulk orders,		
availability, and delivery schedules.  I would appreciate the opportunity to discuss our needs in more detail and	Dara 4.	
explore how your products can meet our requirements. Could we	raia 4.	
schedule a call or a meeting at your earliest convenience?		
Thank you for your attention to this matter. I look forward to your	Para 5:	
response and hope to establish a fruitful business relationship.		
Yours sincerely,		
Alex Johnson		
IT Manager		
OmegaTech Ltd.		

**Task 13. WRITE.** You are the IT Manager at MacCloud Innovations. Your company is planning to upgrade its computer hardware to support a new data analytics platform. Write a letter to Mr. Samuel White, the Sales Director at ProTech Supplies Ltd., to inquire about high-performance storage devices. You need detailed information about the devices' specifications, compatibility, bulk pricing, and delivery options.

### LANGUAGE FOCUS

Task 14. STUDY AND ANALYZE. Look at the rule about Present Simple and Present Continuous, study in what situations they are used.

# PRESENT SIMPLE

Use	Example
Current habits	Lisa always <b>checks</b> her emails first thing in the morning.
Repeated situations	The computer <b>crashes</b> occasionally during large file transfers.
Permanent situations	Michael specializes in data security for a cybersecurity firm.
States	Our company owns a wide range of software licenses.
General truths and facts	The internet <b>connects</b> people from all around the world.

# PRESENT CONTINUOUS

Use	Example					
Actions happening now	As we speak, the IT team is troubleshooting the network issue.					
Temporary series of actions	Tech support isn't answering the phone because of the ongoing					
	training session.					
Temporary situations	The team <b>is using</b> a rented server until the new one arrives.					
Changing and developing	Mobile apps <b>are</b> continually <b>evolving</b> to meet user demands.					
situations						
Annoying habits (with	The intern is always forgetting to save his work!					
always)						

### STATIVE VERBS

Stative verbs are not normally used in continuous tenses as they don't describe actions.

# I see what you mean.

# I am seeing what you mean.

Use	Example
Thinking	believe, imagine, know, mean, think, understand
Existence	be, exist
Emotions	hate, like, love, need, prefer, satisfy, want
The human senses	hear, see, smell, sound, taste
Appearance	appear, look, resemble, seem
Possession and relationship	belong to, consist of, have, include, involve, own
between things	

Some verbs (such as be, have, imagine, look, see, smell, taste, think) are stative with one meaning and non-stative with another meaning.

She **has** a new laptop with an impressive graphics card. (state: possession) She **is having** trouble with her laptop's connectivity. (action: experiencing)

**Task 15. PRACTICE.** Read information about the people and make sentences, as in example. **Example:** 

Student 1: Emily is a software developer. Student 2: She codes in Python and Java.



- Emily, software developer
- code in Python and Java
- start work at 10 a.m.
- collaborate with her team on a new project at the moment
- attend coding meet-ups in the evenings
- fly to a tech conference on Saturday



- Alex, cybersecurity analyst
- analyze system vulnerabilities
- work from 8 to 4
- implement new firewall measures at the moment
- grab a quick lunch during security audits
- attend a cybersecurity workshop next month

# **Task 16. PRACTICE.** Circle the correct word or phrase.

- 9. Mark often is upgrading /upgrades his graphics card for better gaming performance.
- 10. Does your computer have / Is your computer having enough memory to run that software?
- 11. Sarah is currently downloading / currently downloads a software update on her laptop.
- 12. The website **isn't loading / doesn't load** properly, possibly due to heavy traffic.
- 13. She is regularly updating / regularly updates her antivirus software to stay protected.
- 14. They stay /are staying in a temporary workspace while the main office is under construction.
- 15. Our office Wi-Fi signal frequently weakens / is frequently weakening in the afternoon.
- 16. The software suite **includes / is including** various productivity tools.
- 17. Cybersecurity measures are becoming / become increasingly sophisticated.
- 18. Susan is always forgetting / always forgets her password, and she needs frequent resets.
- 19. Operating systems act / are acting as an interface between users and computer hardware.
- 20. I'm sorry, I can't talk right now; I am updating / update my operating system.

<b>Task 17.</b>	PRACTICE.	Complete	using th	ne correct	form of	f the verb	in br	ackets.
-----------------	-----------	----------	----------	------------	---------	------------	-------	---------

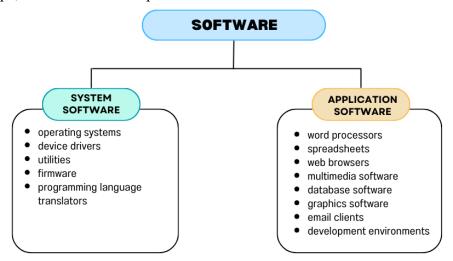
1.	Our IT team regul	arly (re	gularly / troubleshoot) software issues.
2.	Alex	(rarely /attend) the w	eekly team meetings.
3.	The company's I'	Γ infrastructure	(dynamically / adapt) to the increasing
	workload.		
4.	Programmers	(test) the nev	software because of some unexpected errors.
5.	The new monitor	(look) sle	ek and modern.
6.	My hard drive	(be) nearly fu	ll after years of storing files.
7.	We	(currently /debug) th	e application to fix the reported issues.
8.		(your computer /posses	s) adequate graphics capabilities for gaming?
9.	Jennifer's laptop_	(freeze) wh	en running resource-intensive applications.
			(log) into their computers.
11.	. John	(always / interrup	t) meetings with his phone notifications.
12.	. The keyboard's te	xture (tas	te) smooth to the fingers.

**Task 18. PRACTICE.** Complete using the correct form of the verb from the box.

		create	leave	reset	ope	erate	hold	becom	e	check	
		ma	lfunction	pro	vide	have	inst	all r	em	ain	
1.	Every r	norning, Ja	mes		the	e serve	r config	gurations	<b>.</b>		-
2.	Mike _		_ his wor	kstatio	n unlo	cked w	hen he	goes on	bre	eaks!	
3.	Becaus	e of a powe	er outage,	our sei	ver r	oom		on 1	oac]	kup genera	itors.
4.	Cybers	ecurity mea	asures		ir	ncreasii	ngly co	mplex to	со	unter new	threats.
5.	The pri	nter someti	mes		(	during	high-vo	olume pr	int	jobs.	
6.	Solid-s	tate drives			faster	data a	ccess th	nan tradi	tion	al hard dri	ves.
7.	The tea	ım often		the	code	for any	errors				
8.	Users s	ometimes _		logi	n issu	es on t	he web	site.			
9.	Our hea	adquarters		i1	n the l	neart of	f the tec	h distric	t.		
10.	The IT	department	t		_ regu	ılar trai	ning se	ssions.			
11.	The con	mputer tech	nnician								server right now.
12.	Our gra	aphic design	ner		aı	ı impre	ssive w	ebsite la	ıyoı	ut as we sp	eak.

# UNIT 1.2 SOFTWARE TYPES SPEAKING

**Task 19. COLLABORATE.** Look at the diagram describing types of software. Discuss with your partner each type, and then find examples on the Internet.



Task 20. COMMUNICATE. Work with a partner. Discuss the questions below.

- 1. Why is operating system so important for a computer?
- 2. How would you compare the features of Windows, MacOS, and Linux? What do you think are their main differences and similarities?
- 3. What happens if device drivers are missing or not working properly? How does that influence the hardware?
- 4. What is the role of firmware in devices like routers, printers, and smart TVs?
- 5. How have cloud-based applications like Google Docs and Sheets changed the way we collaborate and share documents?
- 6. What are your experiences with graphic design software for creating visual content?
- 7. What features make an email client user-friendly and efficient?

# READING AND VOCABULARY

Task 21. READ FOR DETAILS. Read the text and decide if the statements below are True or False.

# Windows OS

Windows operating system is a computer program that manages all the resources on your computer and provides services to applications that run on top of it. Developed by Microsoft, it was first released in 1985 as Windows 1.0. Since then, it has continued to evolve and become one of the most popular operating systems in the world. Windows can run on different types of hardware like desktops, laptops, servers, and mobile devices. It uses a graphical user interface (GUI) with icons, buttons, and visual menus, which makes it easier to use compared to text-based commands.

Some cool features of Windows include multitasking capability, which lets you run several applications simultaneously, as well as ready-to-use feature that makes it easy to connect devices like printers, scanners, and cameras. The Start menu serves as a central hub, facilitating the launch of applications, access to settings, and file searches. File Explorer helps you manage and manipulate your files and folders seamlessly. For security, Windows has Windows Defender, an antivirus program, and a firewall to safeguard against malware and enhance system security.

The operating system adopts updates through Windows Update, which keeps your system upto-date with security patches, bug fixes, and new features. Task View enables you to use virtual desktops for better organization and multitasking.

One of the best things about Windows is its compatibility. It supports older software, so you can run your old programs on newer versions. The Microsoft Store is where you can find and install new apps.

However, being the most widely used operating system also makes Windows more vulnerable to viruses and malware, so users need to be cautious. Also, Windows has high hardware requirements, which can be a problem for older computers and laptops.

In conclusion, Windows OS has its pros and cons like any other operating system. But its wide compatibility and strong developer support make it the top choice for many users.

(adapted from <a href="https://it.telkomuniversity.ac.id/en/windows-operating-system/">https://it.telkomuniversity.ac.id/en/windows-operating-system/</a>)

1.	Windows uses a text-based interface for user interaction.	True / False
2.	Windows is compatible with desktops, laptops, servers, and mobile	True / False
	devices.	
3.	Windows is designed to run on various types of hardware.	True / False
4.	Multitasking capability allows only one application to run at a time.	True / False
5.	Plug-and-play capability makes it difficult for users to connect	True / False
	additional devices.	
6.	The Start menu primarily facilitates access to system setup.	True / False
7.	Windows Update ensures regular enhancements to security, bug	True / False
	fixes, and new features.	
8.	Windows requires high hardware requirements, making it difficult	True / False
	for users with older computers to use the latest version.	

**Task 22. WORK WITH WORDS.** Look at the **highlighted** words in the text and match them with their definitions.

1. evolve	a) to protect or ensure the safety and security of something.
2. graphical user	b) to make a task easier or more straightforward.
interface (GUI)	
3. capability	c) to give the power to perform a specific action.
4. simultaneously	d) a visual way to interact with a computer using icons and menus.
5. facilitate	e) to develop or change gradually over time
6. seamlessly	f) to improve the quality, performance, or features of something.
7. safeguard	g) sensitive to harm or attack
8. enhance	h) the ability of a system to perform tasks effectively.
9. adopt	i) the ability of different systems to work together without conflict.
10. enable	j) smoothly and continuously, without interruption.
11. compatibility	k) to accept and use a practice, method, or technology.
12. vulnerable	1) happening at the same time, or the ability to do multiple tasks at
	once.

Task 23. WORK WITH WORDS. Use the words from previous task to fill in the gaps.

Many companies choose to	this softwar	e for its	s intuiti	ve des	ign and rich
functionalities.					
The software uses a user-friendly	, all	owing u	users to	o navig	gate through
commands using visual elements like icons and	l menus.				
The latest update is designed to	the perform	ance of t	the soft	ware by	y introducing
new features.					_
The application allows users to run multiple tas	sks	, enh	hancing	produc	ctivity.
The software continues to	, using us	ser feed	dback	and 1	technological
advancements.					
Without regular updates, the software can become	me	to	security	threat	S.
	functionalities. The software uses a user-friendly_commands using visual elements like icons and The latest update is designed tonew features. The application allows users to run multiple tas The software continues toadvancements.	functionalities.  The software uses a user-friendly			

docui	ments.
8. The i	ntegration of cloud services allows users to switch between devices
	security features of the software include encryption and password protection to sensitive data from unauthorized access.
10. This	to handle large for data analysis and manipulation. oftware's advanced settings users to customize their preferences. software boasts with various operating systems, ensuring users can
11. The s	oftware's advanced settings users to customize their preferences.
12. The	software boasts with various operating systems, ensuring users can
transi	tion between different devices.
Task 24.	WORK WITH WORDS. Fill in the gaps with the words from the box below.
	Spreadsheets
	entry ● statistical ● input ● charts ● calculations ● tabular ●
	dependent ● enhance ● rows ● budgeting ● extracting ● monitor
and pressinclude M tasks range These distinct of columns numbers, users to perfect to complement to complement of the intermediate are extensive at the columns of the intermediate are extensive at the columns of the	adsheets are a category of application software that is important for organizing, analyzing, enting data in a 1) format. Notable examples of spreadsheet software dicrosoft Excel, Google Sheets, and Apache OpenOffice Cale, all widely used for various ging from straightforward data 2) to complicated financial analysis. The most eature of spreadsheets is that they are structured as a grid, with 3) and forming cells where users can 4) various types of data. Users can input text, or formulas into cells, facilitating the creation of tables and datasets. Spreadsheets enable that automatical and statistical analyses. Cells can reference one another, creating dynamic extraction of information. Tools for organizing data, such as sorting and filtering, 8) and graphs, helping in the ability to analyze and understand information. Rules can be set for data entry to curacy and consistency, minimizing errors.  Versatility of spreadsheet software is reflected in its common applications. Spreadsheets naively used for tasks like 9), financial planning, and accounting errors and analysts use spreadsheets to organize and analyze large datasets, 10) hrough calculations. Spreadsheets may also assist in project planning, task tracking, and management. Businesses use spreadsheets to 11) inventory levels, track vements, and manage orders. Researchers and scientists rely on spreadsheet software for calculations and data representation.
	<b>EXPLORE THE IDIOMS.</b> Study the meaning and examples of IT related idioms. Then in sentences.
	een of death – an error screen in Windows signaling a critical system error, can be used
	ically for any major failure or crash.
-	e server crashed during peak hours, it felt like a <b>blue screen of death</b> for the entire
company	
_	edge technology – the latest and most innovative technology available.
	up presented <b>cutting-edge technology</b> at the tech conference, impressing investors and
industry (	
	<b>elete button</b> – to completely remove or erase something, such as data on a computer.
	entally <b>hit the delete button</b> on his dissertation, and now it's gone forever.
Silver su	rfer –an elderly person who uses the Internet.

7. The software includes built-in templates to \_\_\_\_\_\_ the creation of professional-looking

Many companies promote computer education to elders to increase **silver surfers** amount in the country.

**Think outside the box** – to think creatively and innovatively.

To solve the coding problem, we need to **think outside the box** and consider alternative approaches.

On the same page – to understand about a particular topic or plan.

Before we start coding, let's have a meeting to make sure we're all **on the same page** about what the software needs to do.

**Smooth sailing** – progressing easily and without problems.

Once the internet connection was restored, browsing the web was **smooth sailing** again.

1.	<u> </u>	t allows for facial recognition and augmented
	reality.	
2.	. It's important for the development team and t	he design team to be to avoid
	conflicts.	
3.	. The appeared just as I was finishi	ng my project, causing me to lose all my
	unsaved work.	
4.	After we fixed the bugs in the software, the rest of	of the project was
5.	. My grandfather is quite the! He'	s always online, watching YouTube videos and
	keeping up with the latest news.	-
6.	. Whenever I think about that embarrassing mon	nent, I wish I could just in my
	brain and erase it forever.	
7.	. To stay ahead in the tech industry, companies mu	st encourage their employees to
	and innovate.	
•		
1 a	Task 26. COLLABORATE. Imagine a group of	triends who discover a mysterious device that

**Task 26. COLLABORATE.** Imagine a group of friends who discover a mysterious device that seems to be from the future. How do they react to its cutting-edge technology, and what adventures do they have with it? Discuss your ideas with a partner.

**Task 27. WRITE.** Write a story where a character discovers a mysterious button labeled "delete" that has the power to erase anything from existence. What do they choose to delete, and what are the consequences of their actions? Use the idioms above.

# LISTENING

**Task 28. COMMUNICATE.** You are going to listen to a dialogue about software installation issues. Before you start listening discuss the following questions with your partner.

- Have you ever had problems while installing new software on your computer?
- What are some common problems you might face during the software installation process?
- What role does user permission play in the installation process?

Task 29. EXPLORE THE WORDS. Discuss with your partner the meaning of the words and phrases that you will meet in the dialogue. If you experience problems, consult a dictionary. Then use them in the sentences below.

	corrupted ● elevated permissions ● destination folder ● checkbox ●			
	weird ● installation wizard ● default ● shortcut			
1		. ,.		
Ι.	Creating a desktop allows quick access to the software without na	vigating		
	nrough multiple folders.			
2.	Ouring the installation, the user can choose the where the software	will be		
	nstalled.			
3.	The antivirus program identified files that were infected with malw	vare.		

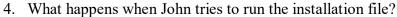
4.	Jane noticed a/an	issue where her mouse cursor moved on its c	own, without
	any input from her.		
5.	The	guided the user through each step of setting up the new	software on
	the computer.		
6.	Some system settings i	require to make changes for security rea	sons.
7.	If you're unsure where	e to save the document, the software usually suggests a _	
	location.		
8.	In the survey, participa	ants can express their preferences by clicking the	next

**Task 30. LISTEN FOR DETAILS.** Scan the QR code and listen to the dialogue "Software installation", then answer the questions below.

1. What problem is John facing with his computer?

to the options they find most appealing.

- 2. What did John do after downloading the installation file for the first time?
- 3. Why does Sarah suggest checking if the file downloaded completely?



- 5. What troubleshooting step does Sarah recommend regarding the installation file?
- 6. What does the installation wizard prompt John to choose, and what is his question about it?
- 7. What is the purpose of the checkbox that John asks about, and what is Sarah's advice on it?

## **SPEAKING**

**Task 31. COMMUNICATE.** Role play the situations below. Change roles.

# **Access Permission Request**

**Student A:** You are an employee. Explain to the IT support that you need access to a folder containing confidential files for an urgent task.

**Student B:** You are an IT support specialist. Ask about the problem and specific files needed. Find out why access is required.

You should talk about:

- how to verify that only authorized personnel get access.
- what details are needed for verification, like project or task information.
- steps to grant access and how to use the access control settings.
- why following security protocols is crucial and how to keep confidential info secure.

# **Data Recovery Emergency**

**Student A:** You are an employee. Explain to the IT support that you accidentally deleted a crucial file and need immediate assistance. You are in panic.

**Student B:** You are an IT support specialist. Ask about the problem. Assure that data recovery is possible if certain steps are followed.

You should talk about:

- how to share their screen or describe the file in detail
- the backup system and how it helps with data recovery.
- steps to retrieve the deleted file from the backup.
- the importance of regular backups to prevent data loss
- tips for better data management.

**Task 32. COLLABORATE.** Divide into two teams to have a debate about two types of software. During the debate, focus on the issues, avoid personal attacks, and maintain a respectful tone.

# **Open-source vs. Proprietary Software**

Team A advocates for open-source	Team B advocates for proprietary		
software	software		
1. principles of freedom and	1. software companies invest heavily in		
customization	research and development		
2.	2.		

# LANGUAGE FOCUS

Task 33. STUDY AND ANALYZE. Look at the rule about Past Simple, study in what situations it is used.

#### **PAST SIMPLE**

Use	Example	
Single completed actions	Last night, I downloaded a new software update for my	
	operating system.	
Habits in the past	Many early computer enthusiasts <b>programmed</b> on their home	
	computers daily.	
Permanent situations in the	Steve Jobs worked in a garage before he co-founded Apple.	
past		
General truths and facts	Personal computers didn't have graphical interfaces until the	
about the past	1980s.	
The main events in a story	During the launch event, the CEO <b>presented</b> the new	
	software, and it received a standing ovation.	

Watch out! Some verbs have irregular past simple forms. See the table of irregular verbs at the end of the coursebook.

Task 34. PRACTICE. Complete the sentences using correct past simple form of the verbs in

racke	ts. You may have to use some ne	egative forms.	
1.	In the past, floppy disks	(store) data for personal c	computers.
	They (discover) th		
3.	In the history of computing	, Charles Babbage	(design) the first
	mechanical computer, the Analy	ytical Engine.	
4.	My old computer	_ (crash), and I (le	ose) all my important files.
	Dial-up internet connections		
	The team (tes		
	Steve Wozniak and Steve Jobs		
	1976.		
8.	When the software bug	(occur), the entire syste	m (shut ) down.
	Unfortunately, the software		
10.	They (repair	) the damaged hard drive and	l (retrieve) the
	data.		

Task 35. PRACTICE. Complete the sentences using correct forms of irregular verbs.

7.	He	(wear) out several keyboards during his coding sessions.
8.	The engineers	(choose) the best algorithm for data processing.
9.	The developers	(fly) to the conference to showcase their new software.
10.	She	(find) a creative solution to the programming challenge.
11.	The company	(overtake) competitors with its cutting-edge technology
12.	We	_ (draw) up detailed plans for the software architecture.
13.	The team	(sing) praises for the software's user-friendly interface.
14.	He	_ (break) the record for the fastest debugging.
15.	The software team	(build) an innovative app.

# **Task 36. PRACTICE.** Make sentences using the prompts below as in the example.

# **Example:**

The software is up to date. (update it / last week)

# He updated the software last week.

- 1. Her computer is running smoothly now. (repair it / yesterday)
- 2. All the files have been backed up. (do it / last night)
- 3. The printer is working perfectly. (fix it / a while ago)
- 4. The internet connection is stable. (configure it / earlier today)
- 5. The hard drive has enough storage space. (delete files / last week)
- 6. The monitor displays images correctly. (adjust the settings / a month ago)
- 7. The antivirus is protecting the system. (renew the subscription / a while back)
- 8. The password is secure. (change it / last afternoon)

**Task 37. PRACTICE.** Divide into two teams. In turns ask questions based on the sentences given. Each correct question gets 1 point. The team with the most points is the winner.

# **Example:**

Sentence: Mike developed a new software application.

Team 1: Who developed a new software application?

*Team 2: What was the purpose of the software application?* 

*Team 1: When did he release the software application?* 

Team 2: How much money did he get for it? etc.

#### Sentences:

Sarah fixed a critical bug in the code.

The server crashed during peak hours.

Mike conducted a penetration test on the company's website.

The team developed a new algorithm for data encryption.

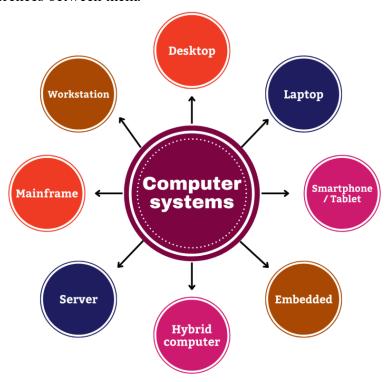
A hacker gained unauthorized access to the email server.

They detected a security breach in the company's database.

# **UNIT 1.3 COMPUTER SYSTEMS**

### **SPEAKING**

**Task 38. COLLABORATE.** Work with a partner. Study the diagram with main computer systems and discuss the differences between them.



- What are the primary functions of these computers?
- How does a workstation differ from a regular desktop computer?
- In what situations might a desktop computer be the preferred choice over other systems?
- What are the key features that distinguish smartphones and tablets from traditional computers?
- Where are hybrid computers commonly used?
- How can you compare processing power and capabilities of mainframe computers to other types of computers?
- What are the specialized functions of servers in a networked environment?
- Can you define the concept of embedded systems and provide examples of devices that use this technology?
- Which type of computer system do you personally prefer, and why?

# LISTENING

**Task 39. LISTEN FOR DETAILS.** Scan the QR code and listen to people talking about their laptops. Complete the table.



	Alice	Ben	Carla
1. What do they use their laptop for?			
2. What do they like about their			
laptop?			
3. What do they find challenging			

about their laptop?			
4. What type of laptop do	they use?		
5. What's one unique fea	ture of their		
laptop?			

Work in pairs. Answer the same questions about your laptops.

### WATCHING

Task 40. EXPLORE THE WORDS. Study the words and phrases that will appear in the video. dedicated (adj) — exclusively set up for a particular service.

retrieve (v) — to obtain data, such as accessing a website, data, or email from a server. shared folder (phr) — a directory or storage space accessible by multiple.

workload (n) — the amount of work placed on a system.

inferior (adj) — of lower quality or performance.

concurrent (adj) — happening at the same time.

jeopardize (v) — to put something at risk or in danger.

reliable (adj) — able to perform a required function without failure or errors.

robust (adj) — strong and resilient, can withstand heavy use or demanding conditions.

downtime (n) — the period during which a system or service is unavailable.

redundant (adj) — having backup to ensure continued operation in case of failure.

query (n) – a request for information from a database, often using SQL to retrieve specific data.

#### Now use them in the sentences below.

No	w use them in the sentences below:
1.	A server failure could the entire online presence of the business.
	The company set up a server specifically for hosting their e-commerce
	website.
3.	The powerful server can handle a heavy, processing multiple tasks
	simultaneously.
4.	The server efficiently manages connections, allowing multiple users to
	access data simultaneously.
5.	The team collaborates by placing project documents in a accessible to all
	members.
6.	The database administrator executed a complex SQL to get specific customer
	information.
7.	Users can their files from the shared folder on the network.
8.	While desktops are great for personal use, they are often considered to servers
	in a business environment.
9.	The data center uses servers to ensure continuous operation without unexpected
	interruptions.
10.	A backup system is essential to prevent data loss in case of hardware failures.
	The company aims to minimize by investing in high-availability server
	solutions.
	Critical servers have power supplies to avoid disruptions due to a single
	point of failure.

**Task 41. WATCH FOR DETAILS.** Scan the QR code and watch the video "What is a server?" Choose the correct answers to the questions below.

- 1. In larger organizations, how are servers often set up to handle services?
  - A. One server for all services
  - B. A separate server for each service
  - C. Only one server for emails
- 2. What is emphasized about a server role?
  - A. Physical size
  - B. Location
  - C. Functionality
- 3. Why are desktop computers limited in handling large workloads?
  - A. Lack of software
  - B. Inferior hardware and software
  - C. Concurrent connections
- 4. What type of processor is commonly used in servers?
  - A. Intel Core series
  - B. AMD Ryzen
  - C. Intel Xeon
- 5. What feature distinguishes Xeon processors from desktop processors?
  - A. Multi-processing support
  - B. Single-task processing
  - C. Gaming capabilities
- 6. Why should a server have redundant power supplies?
  - A. To save energy
  - B. To handle a large workload
  - C. To prevent downtime in case of a power supply failure
- 7. Which operating systems are suitable for servers?
  - A. Any operating system
  - B. Desktop operating systems
  - C. Server operating systems
- 8. What is the purpose of a database server?
  - A. Host websites
  - B. Facilitate email communication
  - C. Store and retrieve data on the back end

# READING AND VOCABULARY

**Task 42. WORK WITH WORDS.** Read the text below about workstations. Circle the correct word in each pair of options. Each pair has one word that fits best in the context of the sentence.

### Workstations

Workstations are powerful 1) **computer's** / **computers** designed for technical or scientific applications. Unlike regular desktop computers, workstations offer high performance and 2) **advancements** / **advanced** capabilities, making them suitable for tasks that require significant 3) **processing** / **process** power. They are commonly used in fields such as 4) **engineering** / **engineer**, graphics design, and data analysis.

Workstations typically come with 5) **most** / **more** powerful processors, larger amounts of memory, and 6) **enhanced** / **enhancing** graphics capabilities compared to standard PCs. This makes them ideal for running 7) **demand** / **demanding** software applications that require extensive computational resources. For example, engineers use workstations for Computer-Aided Design (CAD) to create detailed models and simulations.



In addition to hardware 8) **specialties** / **specifications**, workstations also offer 9) **reliability** / **reliable**. Many workstations include 10) **features** / **features**' such as error-correcting code memory, which helps prevent data corruption, and multiple 11) **expansion** / **expandable** slots for adding extra components like graphics cards or additional storage.

Workstations are also known for their quality and durability, which is crucial for environments that require 12) **continually / continuous** operation. They are often used in settings where 13) **downtime / down times** can be expensive, such as financial trading or scientific research. Because of their specialized nature, workstations 14) **tend / tending** to be more expensive than regular PCs.

Another important aspect of workstations is their 15) **operating / operation** systems. They often run on professional-grade operating systems that support the advanced hardware and provide better stability and performance for specialized software. This ensures that workstations can handle intensive 16) **tasks / tasking** without problems.

# **SPEAKING**

**Task 43. COLLABORATE.** Divide into teams. Make a quick research on the internet about one of the examples of hybrid computers. Tell about your findings to the group.

# Follow the plan:

- explain in detail how hybrid computers are used in the chosen field.
- tell how the hybrid system improves efficiency or provides unique functionalities.
- highlight the advantages of using hybrid computers in that application.
- discuss potential advancements or future developments in this field.

# **Examples of Hybrid Computers**

•	fuel vending	•	ECG machines	•	crime forensics	•	aircraft flight
	machines						control
•	patient	•	nuclear reactor	•	electrical power	•	traffic
	monitoring		modeling		grid		management
	systems						system

**Task 44. COLLABORATE**. Work in pairs. Make a quick research on the internet in order to understand the difference between hybrid and embedded computers. Then fill in the table below.

Feature	Hybrid Computers	<b>Embedded Computers</b>
Definition		
Processing		
capability		
Applications		
Integration		
Examples		

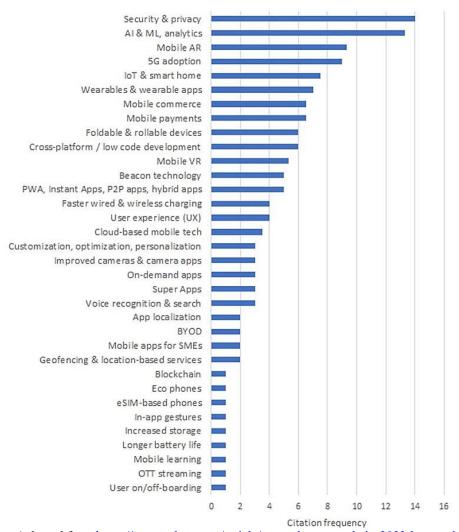
**Task 45. COLLABORATE.** Divide into 2 teams. Take turns answering the questions of the trivia. One correct answer gives 1 point to a team. The team with more points wins.

#### Tech Trivia Tournament

- 1. What does CPU stand for?
- 2. What does BIOS stand for?
- 3. Which type of computer memory is non-volatile and retains data even when the power is turned off?

- 4. Which software is designed to detect, prevent, and remove malicious software (malware)?
- 5. What type of software allows users to create and edit documents, spreadsheets, and presentations?
- 6. What was the first commercially successful personal computer released in 1977?
- 7. Who is often referred to as the "father of the computer" for his work on the analytical engine?
- 8. In what year was the World Wide Web (WWW) introduced to the public?
- 9. Which company introduced the first graphical web browser, Mosaic, in 1993?
- 10. What does the acronym VPN stand for?
- 11. Which component of a computer system is responsible for managing power and providing real-time clock functions?
- 12. Which programming language is known for its use in developing mobile applications?
- 13. Which popular web browser was developed by Mozilla?
- 14. In the context of databases, what does SQL stand for?
- 15. What is the standard file format for executable programs in Windows?
- 16. Which protocol is commonly used for secure communication over a computer network (especially on the web)?
- 17. What connects and facilitates communication between various hardware components?
- 18. Which computer port is commonly used for connecting external hard drives and other peripherals?
- 19. What manages hardware and software resources and provide a user interface?
- 20. What does dissipate heat generated by electronic components, especially the CPU?
- 21. What type of hardware processes and renders videos and images?
- 22. Which type of software allows users to view and navigate web pages?
- 23. Which component is responsible for converting digital signals from a computer into analog signals for a phone line?
- 24. What is the name of the digital distribution platform for mobile apps on Android devices?
- 25. What converts electrical power from an outlet into usable power for the computer's components?
- 26. Which company is known for producing powerful workstations under the brand name ThinkStation?
- 27. What provides a built-in pointing device for cursor control on a laptop?
- 28. What is a lightweight and slim laptop with a focus on portability and performance?
- 29. Can you name a device that blurs the line between embedded and hybrid systems, often found in consumer electronics?
- 30. Which event marked a significant advancement in the use of embedded systems in consumer electronics?

**Task 46. COLLABORATE**. Work in pairs. Study the predictions about mobile trends and discuss with your partner how you understand them.



(adapted from <a href="https://www.zdnet.com/article/smartphone-trends-in-2023-heres-whats-coming-next/">https://www.zdnet.com/article/smartphone-trends-in-2023-heres-whats-coming-next/</a>)

**Task 47. COLLABORATE**. Work in groups. Develop and deliver a persuasive sales pitch for one of the futuristic smartphones (Aura, Lumina, Prisma) described in the adverts. Follow the plan below.

# Pitch Plan

- 1. Briefly introduce yourself and the phone model you are presenting.
- 2. Highlight the key features of the phone. Explain how these features benefit the user.
- 3. Identify what makes this phone stand out from other models.
- 4. Specify the ideal users for this phone (e.g., gamers, business professionals, tech enthusiasts).
- 5. Summarize why your audience should choose this phone and include a strong call to action.







### **WRITING**

Task 48. EXPLORE THE TOPIC. Study the information about the letters of complaint.

# LETTERS OF COMPLAINT

In a formal letter making a complaint, you may use a mild tone, for complaints about minor problems, or a strong tone, for complaints about more serious matters, especially when you are extremely upset or annoyed. However, the language you use should never be rude or insulting. In the opening remarks, you should state your complaint, including details of what has happened and where/when the incident took place.

e.g. (Mild)

- I am writing in connection with .../ to complain about .. the terrible behaviour/attitude/rudeness of ....
- I am writing to draw your attention to ... which ...

e.g. (Strong)

- I wish to bring to your attention a problem which arose due to your staff/inefficiency ...
- I am writing to express my strong dissatisfaction at ...
- I wish to express my dissatisfaction/unhappiness with the product/treatment I received from ... on ...

In the main body paragraphs, you present each of the specific points you are complaining about. You start a new paragraph foreach point and justify these points by giving examples/reasons.

e.g. • Although you advertise "top quality", I felt that the product I purchased was well below the standard I expected.

In the closing remarks, you should explain what you expect to happen (e.g. to be given a refund /replacement / apology/etc).

e.g. (Mild)

- I hope you will replace ...
- I feel/believe that I am entitled to a replacement/refund ...
- I hope that this matter can be resolved/dealt with promptly.

e.g. (Strong)

- I insist on /I demand a full refund/an immediate replacement/etc. or I shall be forced to take a legal action/the matter further.
- I hope that I will not be forced to take further action.

**Task 49. ANALYZE.** Caroline Adams is writing to complain about an unsatisfactory experience she had with a hardware purchase at Stimpson's Electronics. Read her letter, fill in the gaps with suitable words/phrases from the list, and label the paragraphs with the provided headings.

Words and phrases:
but also ● furthermore e● not only ● however ● in addition to ● firstly ● to make
matters worse

# Headings:

1st complaint & examples/reasons • 3rd complaint & examples/reasons • opening remarks/reason(s) for writing• closing remarks• 2nd complaint & examples/reasons

Dear Sir/Madam,	
I am writing to express my strong dissatisfaction at the disgraceful	Para 1:
treatment I received at the Walford branch of Stimpson's Electronics	
yesterday afternoon.	
1), the product I was given was not the model I had	Para 2:
asked for. The new X-40 I graphics card was demonstrated to me by the	
sales assistant, and I agreed to buy it. 2), on unpacking my	
purchase, I saw that I had been given the smaller X-20 I model instead.	
3), this graphics card was much cheaper than the	Para 3:
model I requested and paid for. It didn't have many of the features I	
needed and was much more basic than the one I was shown to begin with.	
4), I was deeply offended by the behavior of the sales	Para 4:
assistant when I went back to the shop to complain. He was 5)	
impolite, 6) unhelpful. He refused to	
contact the manager when I asked to speak to him about the incident.	
As you can imagine, I am extremely upset. I must insist on a full refund,	Para 5:
7), a written apology from the local manager, or else I	
shall be forced to take further action. I expect to hear from you as soon as	
possible.	
Yours faithfully,	
Caroline Adams	

**Task 50. COMMUNICATE.** Work with your partner. Answer the questions below.

- 1. Why is Mrs. Adams complaining?
- 2. What are her specific complaints?
- 3. Does she justify her complaints? If so, how does she justify them?

- 4. What is Mrs. Adams expecting?
  - A replacement
  - A full refund
  - The graphics card to be repaired
  - An apology
- 5. What will Mrs. Adams do if she is not satisfied?
- 6. Has Mrs. Adams used a mild or a strong tone? Underline the words/phrases that justify your answer.

**Task 51. PRACTICE.** Join each complaint below with its corresponding example or reason using one of the linking words/phrases from the list provided.

even though ● however ● in spite of the fact ● resulting in ● although ● but

- 1. The software crashed multiple times. The software was advertised as stable. e.g. The software crashed multiple times; however, it was advertised as stable.
- 2. The interface of the software was not user-friendly. Many features were hidden in complex menus.
- 3. The software did not support file formats as advertised. I couldn't open important documents.
- 4. The software had frequent updates that disrupted workflow. Updates often required lengthy download times.
- 5. The software had multiple security vulnerabilities. The company claimed to have strong security measures.
- 6. The software frequently froze during use. It met the minimum system requirements.

**Task 52. WRITE.** Imagine you purchased a new smartphone from a reputable manufacturer, but you have encountered several problems shortly after using it (hardware malfunction, battery issues, etc.). Write a letter to the Customer Service Manager of the smartphone manufacturer, describing the issues you have faced and requesting prompt resolution.

### **LANGUAGE FOCUS**

**Task 53. STUDY AND ANALYZE.** Look at the rule about prepositions of time and place, study in what situations they are used.

# PREPOSITIONS OF TIME AND PLACE IN

Time	Example	Place	Example
months	Many tech conferences take	towns and cities	There's a tech expo in
	place in June.		Las Vegas next month.
years	My interest in programming	countries and	Many hardware
	began back in 2005.	continents	components are
			manufactured in China.
seasons	The company usually launches	areas and	Living in a tech hub can
	its new product line in the	regions	be exciting.
	spring.		
parts of the day	We have a team meeting in the	inside an object	The data you need is
	morning to discuss project		stored in the database.
	updates.		
in the following	The download will be	inside a	The server room is <b>in</b>
phrases:	completed in a minute.	room/building	the basement.

in a minute/an hour
in the middle of
in the future

# $\mathbf{ON}$

Time	Example	Place	Example
days	The software update was	islands	Our data center is
	released on Monday.		located on the Solomon
			islands.
dates	The tech expo is on April 15th	pages	The diagram explaining
	this year.		the network setup is <b>on</b>
			page 56.
in the following	We'll deploy the new server	on the top of the	I left my external hard
phrase:	configuration on Monday	object	drive on the desk.
on my birthday,	morning.		
on Monday			
morning,			
on Tuesday			
evening			
		on surface	The desktop background
			image is displayed on
			the screen.
		in the following	The power button is <b>on</b>
		phrase:	the left side of the
		on the left/right	monitor.

# $\mathbf{AT}$

Time	Example	Place	Example
clock times	We have a team meeting at	exact places	The software company's
	three o'clock this afternoon.		headquarters is situated
			at the heart of Silicon
			Valley.
holiday periods	Our office will be closed at	addresses	You can reach our
	Christmas, but our customer		customer support team
	support team will be available.		at 123 Garu Street.
in the following	At the moment, our	buildings when	Tom spends most of his
phrases:	developers are working on	we are talking	evenings at the tech
at the moment	debugging the software.	about the	incubator, working on
at night		activities that	his startup.
		happen there	
		activities	Could you tell me where
			Jane is? She's at the
			software seminar.
		in the following	I saw a new laptop at the
		phrases:	window, and it looked
		at the top/bottom	quite impressive.
		at the	
		door/window	

Task 54. PRACTICE. Write the correct preposition on, in or at in each gap.

- The IT department is located \_\_\_\_\_\_ the far end of the office.
   We often have software updates \_\_\_\_\_ Tuesdays.

	<ul><li>3. You'll find the troubleshooting guide</li><li>4. You can find our tech store</li></ul>	page 23 of the	e manual.	
	4. You can find our tech store	789 Software Street		
	5. I'm attending a cybersecurity workshop	Wednesday	afternoon.	
	6. She works the tech hub, manage	ging innovative proj	ects.	
	7. The software demo is scheduled for later	the afterno	on.	
	5. I'm attending a cybersecurity workshop  6. She works the tech hub, management of the software demo is scheduled for later  8. You'll find the headphone jack the software demo is scheduled for later	ne right of the compu	ıter.	
	9. I often find him the computer 10. The best programming schools are often	lab, conducting exp	eriments.	
	10. The best programming schools are often	major cit	ies.	
	11. We'll have the data analysis results  12. The error message popped up  13. The cooling fans are mounted  the data analysis results  the data analysis results  the data analysis results	a moment.		
	12. The error message popped upth	ne middle of the soft	ware installation.	
	13. The cooling fans are mountedt	the top of the server	racks.	
	14. Our company's main data center is	a remote island	in the Arctic.	
	14. Our company's main data center is  15. Security scans and updates are performed	night to	o minimize user disruption.	
<b>Task 55. PRACTICE.</b> If the word in bold in each sentence is correct, put a tick (v). If it is wrong, write the correct word.				
1.	The Wi-Fi router is positioned at the center of the	e room for better		
	coverage.			
2.	The first personal computers appeared on the man 1970s.	rket at the late		
	Sarah is currently <b>on</b> the software workshop, lear techniques.			
4.	The company's server farm is <b>on</b> an island in the	Pacific.		
5.	The team is now <b>at</b> a coding bootcamp to enhanc programming skills.	e their		
6.	The company logo is displayed at the surface of t	the laptop.		
7.	The new version of the app is launching on Dece	mber 10th.		
8.	I have a software demo presentation in Tuesday e	evening.		
	You can find a detailed explanation of the softwa			
	page 42.			
10.	Connectivity issues may arise in remote areas.			
11.	. The cybersecurity training will take place at Wed	lnesday.		
	Back at 2000, using dial-up internet was common			