IT in Construction

Part I

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МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ

КАЗАНСКИЙ ГОСУДАРСТВЕННЫЙ АРХИТЕКТУРНО СТРОИТЕЛЬНЫЙ УНИВЕРСИТЕТ

Н.Ф. Хасанова

IT IN CONSTRUCTION

Part I

Учебное пособие

Казань
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Печатается по решению Редакционно-издательского совета Казанского государственного архитектурно-строительного университета.

Пособие предназначено для студентов очной формы обучения по направлению подготовки «Информационные системы и технологии». Основная цель учебного пособия – развитие навыков профессионально-ориентированного речевого общения, формирование умений и навыков перевода специализированной литературы.

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Introduction

Учебное пособие «ИТ в строительстве» предназначено для студентов технических вузов, обучающихся по направлению подготовки 09.03.02 «Информационные системы и технологии» по профилю «Информационные системы и технологии в строительстве». Основной целью является развитие навыков профессионально-ориентированного речевого общения, формирование умений и навыков перевода специализированной литературы. Учебное пособие посвящено, изучению языку вычислительной техники и Интернета и рассчитано для студентов бакалавриата среднего и продвинутого уровней, владеющих морфологическими и синтаксическими структурами английского языка.

Языком компьютеров и Интернета, является английский язык и многим профессионалам, например, инженерам приходиться сталкиваться с технической документацией на английском языке.

Пособие также нацелено на обогащение и расширение активного и пассивного лексического словаря студентов за счет новой терминологии. Содержит своеобразный словарный запас, синтаксис и дискурс функции, которые могут быть полезны для развития лингвистической компетенции обучающихся. Мы надеемся, что это пособие будет способствовать взаимодействию обучающихся с компьютерами и помочь общаться более эффективно в этом цифровом мире.

Предлагаемое пособие состоит из трёх разделов, и одиннадцати подразделов. В каждом из которых дается аутентичный адаптированный текст для ознакомительного, изучающего чтения с грамматическими пояснениями и рядом упражнений, направленных на закрепление новых терминов и выражений. Тексты сопровождаются подробным словарем, а также большим количеством иллюстраций, что привлекает внимание студентов и облегчает понимание представленного материала. Задания предусмотрены для индивидуальных, парных и групповых работ, в которых студенты создают и участвуют в коммуникативных ситуациях профессиональной направленности, что способствует преодолению языкового барьера при реальном общении с носителями языка. В каждом подразделе также содержится материал на аудирование и письмо.

Работа с этим пособием позволит студентам тренировать устно и письменно современные английские клише и выражения, наиболее употребляемые в современном коммуникативном пространстве в сфере ИТ.

Пособие рассчитано на аудиторную и самостоятельную работу с проверкой в аудитории.

Part I Computers today

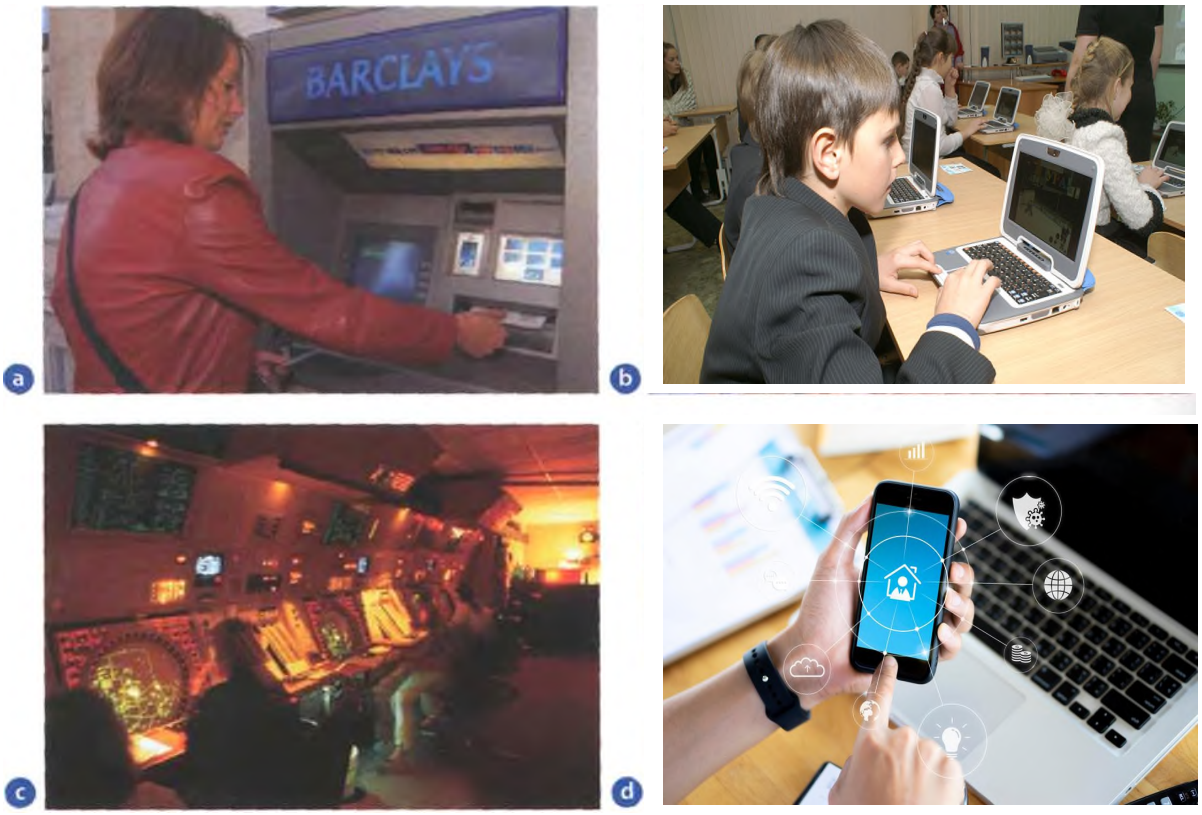
Unit 1 Living in digital age

Vocabulary

a character – символ
to convert– превращать, преобразовывать
to come to life– оживать
a console – игровая приставка, пульт оператора, клавиатура
a data ['deita] – данные
a decision – решение
a device – устройство
digital – дискретный, численный, цифровой
to enrol – регистрировать
to evaluate [i'væljueit] – получить результат, вычислять
a hardware – оборудование
an instruction – команда
an intelligence [in'telidʒəns] – разум
a monitor – видеомонитор, датчик, контролирующая программа
ф logos – эмблема, регистрационные данные, логотип
raw [rɔ:] – необработанный, сырой
to refer to – ссылаться на что-либо
to refine – детализировать, совершенствоваться
various – различный
via [vaɪə] – через, с помощью

1 The digital age

Exercise 1.1. Match the captions (1-4) with the pictures (a-d).
1. In education, computers can make all the difference
2. Using a cash point, or ATM _____
3. The Internet in your pocket _____
4. Controlling air traffic_____



Exercise 1.2. How are computers used in the situations above? In pairs, discuss your ideas.

Exercise 1.3. Read the text and check your answers to 1.2.

The digital age

We are now living in what some people call the digital age, meaning that computers have become an essential part of our lives. Young people who have grown up with PCs and mobile phones are s often called the digital generation. Computers help students to perform mathematical operations and improve their math skills. They are used to access the Internet, to do basic research and to communicate with other students around the world. Teachers use projectors and interactive whiteboards to give presentations and teach sciences, history or language courses. PCs are also used for administrative purposes - schools use word processors to write letters, and databases to keep records of students is and teachers. A school website allows teachers to publish exercises for students to complete online.

Students can also enrol for courses via the website and parents can download official reports.

Mobiles let you make voice calls, send texts, 20 email people and download logos, ringtones or games. With a built-in camera you can send pictures and make

video calls in face-to-face mode. New smartphones combine a telephone with web access, video, a games console, an MP3 player, a personal 25 digital assistant (PDA) and a GPS navigation system, all in one.

In banks, computers store information about the money held by each customer and enable staff to access large databases and to carry out financial transactions at high speed. They also control the cashpoints, or ATMs (automatic teller machines), which dispense money to customers by the use of a PIN-protected card. People use a Chip and PIN card to pay for goods and services. Instead of using a 35 signature to verify payments, customers are asked to enter a four-digit personal identification number (PIN), the same number used at cashpoints; this system makes transactions more secure. With online banking, clients can easily pay bills and transfer money from the comfort of their homes.

Airline pilots use computers to help them control the plane. For example, monitors display data about fuel consumption and weather conditions. In airport control towers, computers are used to manage radar systems and regulate air traffic. On the ground, airlines are connected to travel agencies by computer. Travel agents use computers to find out about the availability of flights, prices, times, stopovers and many other details.

Exercise 1.4. When you read a text, you will often see a new word that you don't recognize. If you can identify what type of word it is (noun, verb, adjective, etc.) it can help you guess the meaning.

Find the words (1 -10) in the text above. Can you guess the meaning from context? Are they nouns, verbs, adjectives or adverbs? Write *n, v, adj* or *adv* next to each word.

1 perform _____
2 word processor _____
3 online _____
4 download _____
6 built-in _____
5 digital _____
7 store _____
8 financial _____
9 monitor _____
10 data _____

Exercise 1.5. Match the words in exercise 4 (1 -10) with the correct meanings (a-j).

a. keep, save _____

b. execute, do _____
c. monetary_____
d. screen _____
e. integrated_____
f. connected to the Internet _____
g. collection of facts or figures _____
h. describes information that is recorded or broadcast using computers _____
i. program used for text manipulation _____
j. copy files from a server to your PC or mobile _____

Exercise 1.6. In pairs, discuss these questions.
1) How are/were computers used in your school/university?
2) How do you think computers will be used in school in the future?

Language work: **Collocations 1**

Verbs and nouns often go together in English to make set phrases, for example *access the Internet.* These word combinations are called **collocations**, and they are very common. Learning collocations instead of individual words can help you remember which verb to use with which noun.

Here are some examples from the text on pages 8-9: *perform operations, do research, make calls, send texts, display data, write letters, store information, complete exercises, carry out transactions.*

Exercise 2.1. Match the verbs (1-5) with the nouns (a-e) to make collocations from the text on pages 8-9.

1	give	a	money
2	keep	b	a PIN
3	access	c	databases
4	enter	d	presentations
5	transfer	e	records

Exercise 2.2. Use previous collocations to complete these sentences.

1. Thanks to Wi-Fi, it's now easy to _____ from cafes, hotels, parks and other public places.
2. Online banking lets you _____ between your accounts easily and securely.

3. Skype is a technology that enables users to _____ over the Internet for free.
4. In many universities, students are encouraged to _____ using PowerPoint in order to make their talks more visually attractive.
5. The Web has revolutionized the way people ____ - with sites such as Google and Wikipedia, you can find the information you need in seconds.
6. Cookies allow a website to _____ on a user's machine and later retrieve it; when you visit the website again, it remembers your preferences.
7. With the latest mobile phones, you can _____ with multimedia attachments – pictures, audio, even video.

3 Computers at work

Exercise 3.1. (T.1) Listen to four people talking about how they use computers at work. Write each speaker's job in the table.

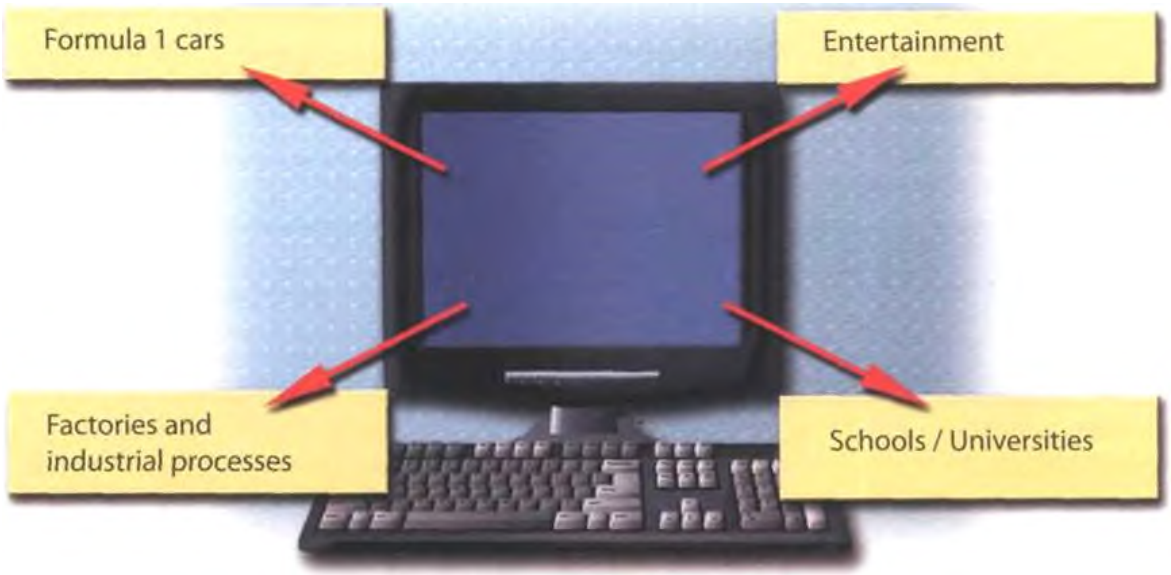
electrical engineer secretary librarian composer

Speaker	Job	What they use computers for
1		
2		
3		
4		

Exercise 3.2. (T.1) Listen again and write what each speaker uses their computer for.

4 Other applications

Exercise 4.1. In small groups, choose one of the areas in the diagram below and discuss what you can do with computers in that area. Look at the Useful language box below to help you.



Useful language

Formula 1 cars: design and build the car, test virtual models, control electronic components, monitor engine speed, store (vital) information, display data, analyse and communicate data

Entertainment: download music, burn CDs, play games, take photos, edit photos, make video clips, watch movies on a DVD player, watch TV on the computer, listen to MP3s, listen to the radio via the Web

Factories and industrial processes: design products, do calculations, control industrial robots, control assembly lines, keep record of stocks (materials and equipment)

School/University: access the Internet, enrol online, search the Web, prepare exams, write documents, complete exercises online, do research, prepare presentations

Computers are used to...

A PC can also be used for...

People use computers to...

Exercise 4.2. Write a short presentation summarizing your discussion. Then ask one person from your group to give a summary of the group's ideas to the rest of the class.

Unit 2 Computer essentials

Vocabulary

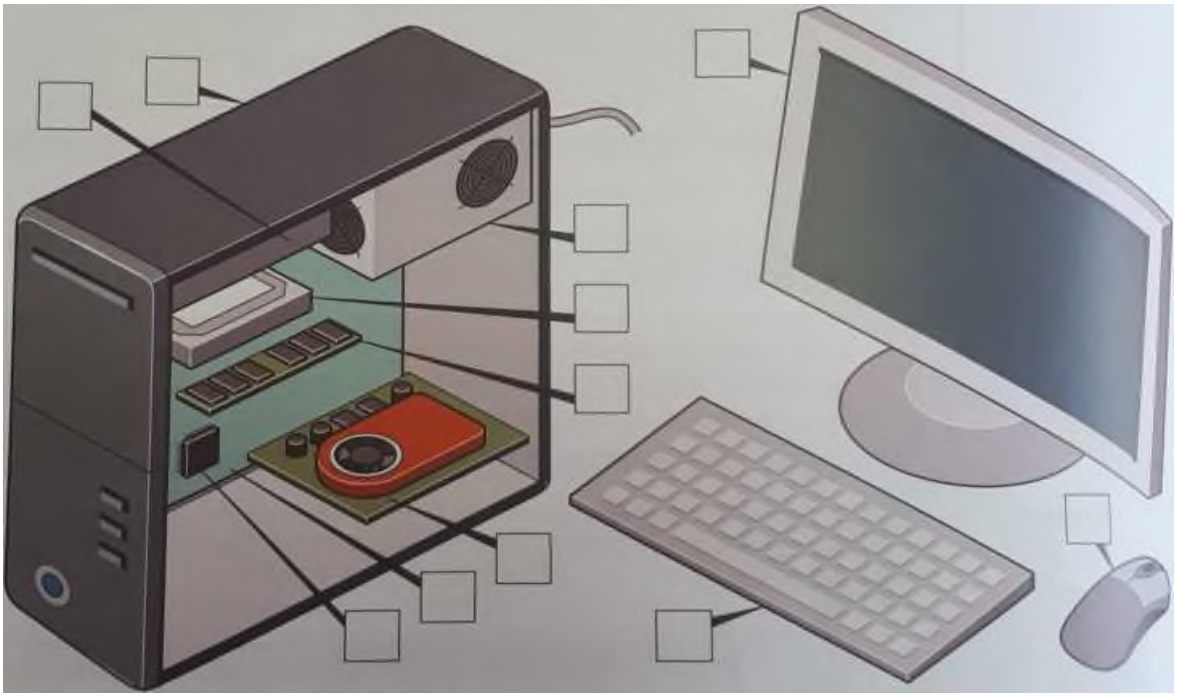
an amount – количество
a button – командная кнопка, экранная кнопка
CD-ROM – накопитель на компакт-дисках (CD)
CPU (Central Processing Unit) – центральный процессор
a desktop – панель экрана, рабочая область, экранная интерактивная среда
an expansion card – плата расширения
to execute – выполнять
hard disk drive – жесткий диск, «винчестер»
an input hardware – устройства ввода данных
a keyboard – клавиатура
main memory (RAM) – оперативная память
a modem – модем
a motherboard – материнская плата
a mouse – устройство для перемещения объектов на экране, «мышь»
a power supply unit – блок питания
a printer – принтер
to reach – достигать
to roll – катать, перекатывать
ROM – ПЗУ (постоянное запоминающее устройство)
volatile – летучий, переменчивый, изменяемый

1 Computer hardware

Exercise 1.1. In pairs, discuss these questions.
1. Have you got a computer at home, university or work? What kind is it?
2. How often do you use it? What do you use it for?
3. What are the main components and features of your computer system?

Exercise 1.2. Label the diagram with the correct items 1-11

1. monitor
2. case
3. motherboard
4. CPU (Central Processing Unit or Processor)
5. main memory (RAM)
6. expansion card (video, graphic)
7. power supply unit
8. optical disk drive
9. hard disk drive
10. keyboard
11. mouse



Exercise 1.3. (T.2) Listen to two colleagues and complete this dialogue.

Bob: What do you think? Which (1) _____ is better for the sales team?

Dasy: I'm not sure. This computer has a (2) _____ memory and I think ithas a (3) _____ processor.

Bob: And the other one?

Dasy: Well, it is (4) _____

Bob: And (5) _____

Dasy: Yes, you're right. Lighter and smaller.

Bob: But the bigger one is (6) _____

Dasy: So what is our decision?

Bob: I'm not sure. Let's go for a coffee and discuss this again.

Exercise 1.4. In pairs, label the elements of this computer system.

Exercise 1.5. Read these advertising slogans and say which computer element each pair refers to.

1. a) Point and click here for power; b) Obeys every impulse as if it were an extension of your hand

2. a) Displays your ideas with perfect brilliance; b) See the difference - sharp images and a fantastic range of colours

3. a) It's quiet and fast b) ... it's easy to back up your data before it's too late.

4. a) Power and speed on the inside; b) Let your computer's brain do the work.

5. a) big impact on the production of text and graphics; b) Just what you need: a laser powerhouse.

Exercise 1.6. Find words in the slogans with the following meanings.

1. to press the mouse button ____
2. clear; easy to see ____
3 .to make an extra copy of something ____
4. selection _____
5. shows _____

2 What is a computer?

Exercise2.1. Read the text and then explain *Fig. 1* in your own words.

What is a computer?

A computer is an electronic machine which can accept data in a certain form, process the data, and give the results of the processing in a specified format as information.

First, data is fed into the computer's memory. Then, when the program is run, the computer performs a set of instructions and processes the data. Finally, we can see the results (the output) on the screen or in printed form (see Fig. 1 below).

A computer system consists of two parts: hardware and software. Hardware is any electronic or mechanical part you can see or touch. Software is a set of instructions, called a program, which tells the computer what to do. There are three basic hardware sections: the central processing unit (CPU), main memory and peripherals Perhaps the most influential component is the central processing unit. Its function is to execute program instructions and coordinate the activities of all the other units. In a way, it is the 'brain 'of the computer. The main memory (a collection of RAM chips) holds the instructions and data which are being processed by the CPU. Peripherals are the physical units attached to the computer. They include storage devices and input/ output devices.

Storage devices (hard drives, DVD drives or flash drives) provide a permanent storage of both data and programs. Disk drives are used to read and write data on disks. Input devices enable data to go into the computer's memory. The most common input devices are the mouse and the keyboard. Output devices enable us to extract the finished product from the system. For example, the computer shows the output on the monitor or prints the results onto paper by means of a printer

On the rear panel of the computer there are several ports into which we can plug a wide range of peripherals - a modem, a digital camera, a scanner, etc. They allow communication between the computer and the devices. Modern desktop PCs have USB ports and memory card readers on the front panel.

A USB port A USB connector

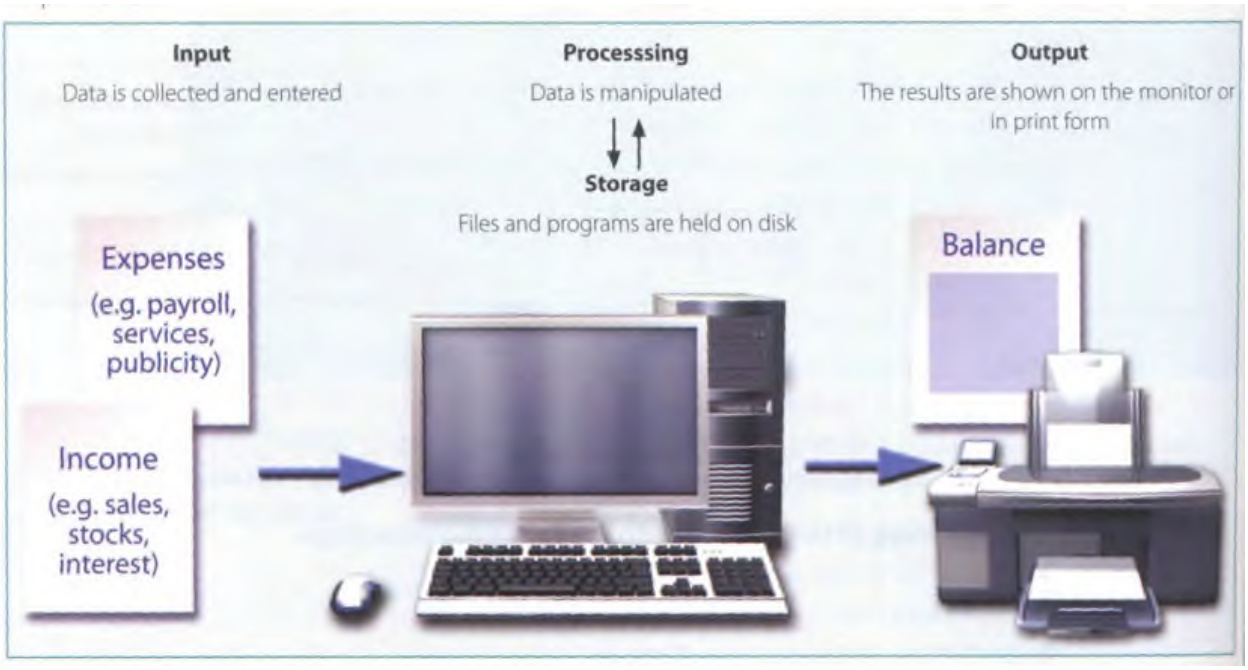


Fig.1

Exercise 2.2. Read the text once more on and then answer these questions.

1. What does the term "computer" describe?
2. Is computer intelligent?
3. What are two parts of computer system?
4. What is software? What is the difference between hardware and software?
5. What are three basic hardware sections?
6. What do storage devices provide?
7. What are the most common input devices?

Exercise 2.3. Match these words from the text (1-9) with the correct meanings (a-i).

1. software	a) the brain of the computer
2. peripherals	b) physical parts that make up a computer system
3. main memory	c) the information which is presented to the computer
4. hard drive	d) input devices attached to the CPU
5. hardware	e) section that holds programs and data while they are executed or processed
6. input	f) magnetic device used to store information
7. ports	g) sockets into which an external device may be connected
8. output	h) programs which can be used on a particular computer system
9.central processing unit (CPU)	i) results produced by a computer

3 Different types of computer

Exercise 3.1. (T.3) Listen to an extract from an ICT class. As you listen, label the pictures (a-e) with words from the box.

laptop	desktop PC	PDA	mainframe	tablet PC

Exercise 3.2. (T.3) Listen again and decide whether these sentences are true or false. Correct the false ones.

1 A mainframe computer is less powerful than a PC.

2 A mainframe is used by large organizations that need to process enormous amounts of data.

3 The most suitable computers for home use are desktop PCs.

4 A laptop is not portable.

5 Laptops are not as powerful as desktop PCs.

6 Using a stylus, you can write directly onto the screen of a tablet PC.

7 A Personal Digital Assistant is small enough to fit into the palm of your hand.

8 A PDA does not allow you to surf the Web.

4 Language work: **Classifying; Have** and **have got**

Classifying

Classifying means putting things into groups or classes. We can classify types of computers, parts of a PC, etc. Some typical expressions for classifying are:

- ... are classified into X types/categories
- ... are classified by ...
- ... can be divided into X types/categories

Digital computers can be divided into five main types: mainframes, desktop PCs, laptops, tablet PCs and handheld PDAs.

- ... include(s)...
- ... consist(s) of...

The basic configuration of a mainframe consists of a central system which processes immense amounts of data very quickly.

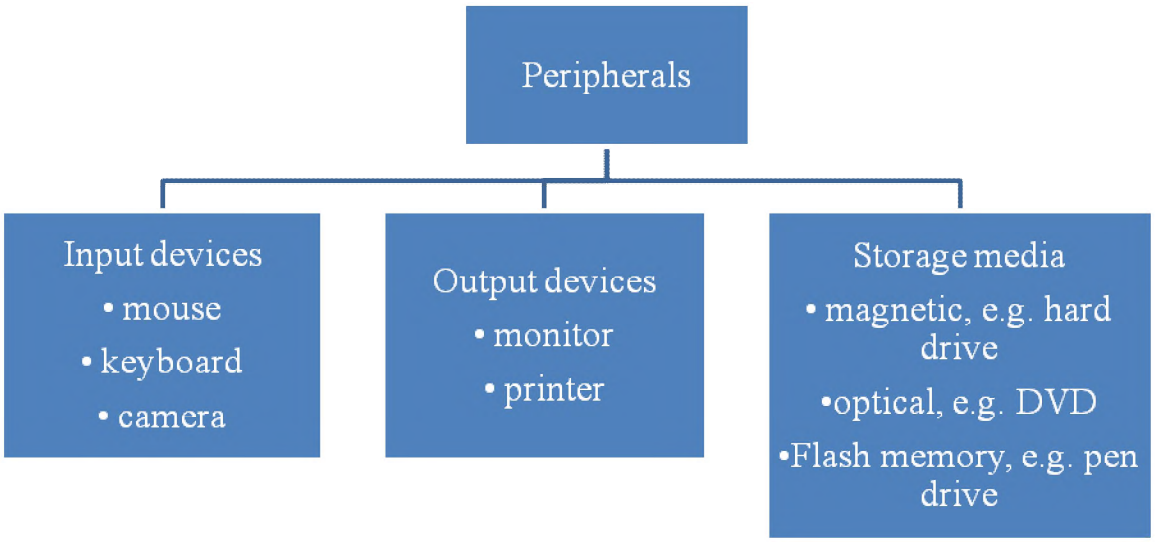
- There are X types/classes of...
- X is a type of...

A tablet PC is a type of notebook computer.

Exercise 4.1. Use suitable classifying expressions to complete these sentences.

1. A computer … hardware and software.
2. Peripherals … three types: input, output and storage devices.
3. A word processing program … software which lets the user create and edit text.
4. … of network architecture: peer-to-peer, where all computers have the same capabilities, and client-server (e.g. the Internet), where servers store and distribute data, and clients access this data.

Exercise 4.2. In pairs, describe this diagram, using classifying expressions. Make reference to your own devices.



Have and **have got**

You can use **have** or **have got**. There is no difference in meaning: *They **have** a new computer.* or *They'**ve got** a new computer; I **have** a headache.* or *I'**ve got** a headache.*

For the past we use **had** (without **got**): *Tom **had** problems with his previous computer.*

In questions and negative sentences there are three possible forms:

***Do** you **have** any questions? I **don't have** any questions.*
***Have** you **got** any questions? I **haven't got** any questions.*
***Have** you any questions? I **haven't** any questions.* (less usual)

In past questions and negative sentences we use **did/didn't**:

*I **didn't have** my phone, so I couldn't call you.*

We also use **have** (but not have got) for many actions and experiences (in questions and negative sentences we use **do/does/did**):

have	breakfast / dinner / a cup of tea / something to eat etc. a bath / a shower / a rest / a swim / a dream / a break / a party / a holiday / an accident / an experience / a dream a look (at something) a chat / a conversation / a discussion (with somebody) trouble / difficulty / fun / a good time etc. a baby (=give birth a baby)

Have got is not possible in the expressions in the box. Compare: sometimes *I **have** (= eat) a sandwich for my lunch (not I've got)* BUT *I'**ve got** / I **have** some sandwiches. Would you like one?*

Exercise 4.3. Complete the sentences with *to have*.

1 We … the best software two years ago.
2 … it the most reliable anti-virus software?
3 She … the cheapest computer last year.
4 They … the latest version.
5 … you the fastest processor in your new computer?
6 … it got Windows?
7 It … the biggest screen.

5 Benefits of laptops and tablet PCs

Your university is considering buying tablet PCs to use in the classroom. Write an email to your teacher explaining the benefits for the students and the university.

or

Your company is considering replacing all of the office PCs with laptops. Write an email to your boss explaining the benefits for the employees and the company.

Unit 3 Inside the system

Vocabulary

to affect – влиять
a bus – магистраль, информационный канал
a capacity – вместительность
a circuitry [′sə:kıtrı] – схема, цепь
to consume – потреблять
to convert – преобразовывать
to direct – управлять
a laptop – портативный компьютер, ноутбук
an optical disk drive – оптический дисковод
an output hardware – выходные устройства отображения информации
a processing – обработка данных
a scanner – сканер
sensitive – чувствительный
sophisticated – сложный
a storage – хранение данных
a system clock – генератор измерения и синхронизации потока данных
temporarily – временно
a tier – ярус

1 Technical specifications

Exercise 1.1. Read the advertisement and translate the technical specifications into your own language.

Dell Inspiron 9200

O Intel Core 2 Duo processor at 2.4GHz
O 2048MB RAM, expandable to 4GB
O 500GB hard drive
O Comes with Windows.Vista Home Premium

Exercise 1.2. In pairs, answer these questions. If necessary, look at the Glossary.

1. What is the main function of a computer's processor?
2. What unit of frequency is used to measure processor speed?
3. What does RAM stand for?

2 What is inside a PC system?

Exercise 2.1. Read the text.

What is inside a PC system?

Processing

The nerve centre of a PC is the **processor**, also called the **CPU**, or **central processing unit**. This is built into a single **chip** which executes program instructions and coordinates the activities that take place within 5 the computer system. The chip itself is a small piece of silicon with a complex electrical circuit called an **integrated circuit**.

The processor consists of three main parts:

- The **control unit** examines the instructions in the user's program, interprets each instruction and causes the circuits and the rest of the components - monitor, disk drives, etc. - to execute the functions specified.
- **The arithmetic logic unit (ALU)** performs mathematical calculations (+, –, etc.) and logical operations (AND, OR, NOT).
- The **registers** are high-speed units of memory used to store and control data. One of the registers (the program counter, or PC) keeps track of the next instruction to be performed in the main memory. The other (the instruction register, or IR) holds the instruction that is being executed (see *Fig. 1* on page 22).

The power and performance of a computer is partly determined by the speed of its processor. A **system clock** sends out signals at fixed intervals to measure and synchronize the flow of data. **Clock speed** is measured in **gigahertz (GHz)**. For example, a CPU running at 4GHz (four thousand million hertz, or cycles, per second) will enable your PC to handle the most demanding applications.

The Intel Core 2 Duo processor; other chip manufacturers are AMD and Motorola

RAM and ROM

The programs and data which pass through the processor must be loaded into the main memory in order to be processed. Therefore, when the user runs a program, the CPU looks for it on the hard disk and transfers a copy into the RAM chips. RAM (random access memory) is volatile - that is, its information is lost when the computer is turned off. However, **ROM (read only memory)** is non-volatile, containing instructions and routines for the basic operations of the CPU. The **BIOS (basic input/output system)** uses ROM to control communication with peripherals.

RAM capacity can be expanded by adding extra chips, usually contained in small circuit boards called dual in-line memory modules (**DIMMs**).

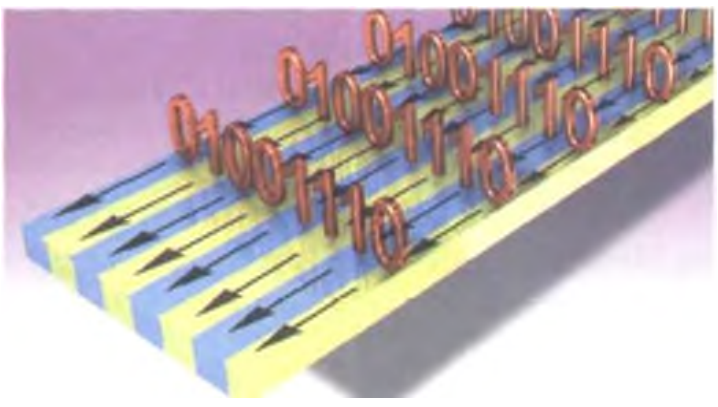
Buses and cards

The main circuit board inside your system is called the **motherboard** and contains the processor, the memory chips, expansions slots, and controllers for peripherals, connected by **buses** - electrical channels which allow devices inside the computer to communicate with each other. For example, the front side bus carries all data that passes from the CPU to other devices.

The size of a bus, called **bus width**, determines how much data can be transmitted. It can be compared to the number of lanes on a motorway - the larger the width, the more data can travel along the bus. For example, a 64-bit bus can transmit 64 bits of data.

Expansion slots allow users to install **expansion cards**, adding features like sound, memory and network capabilities.

A databus



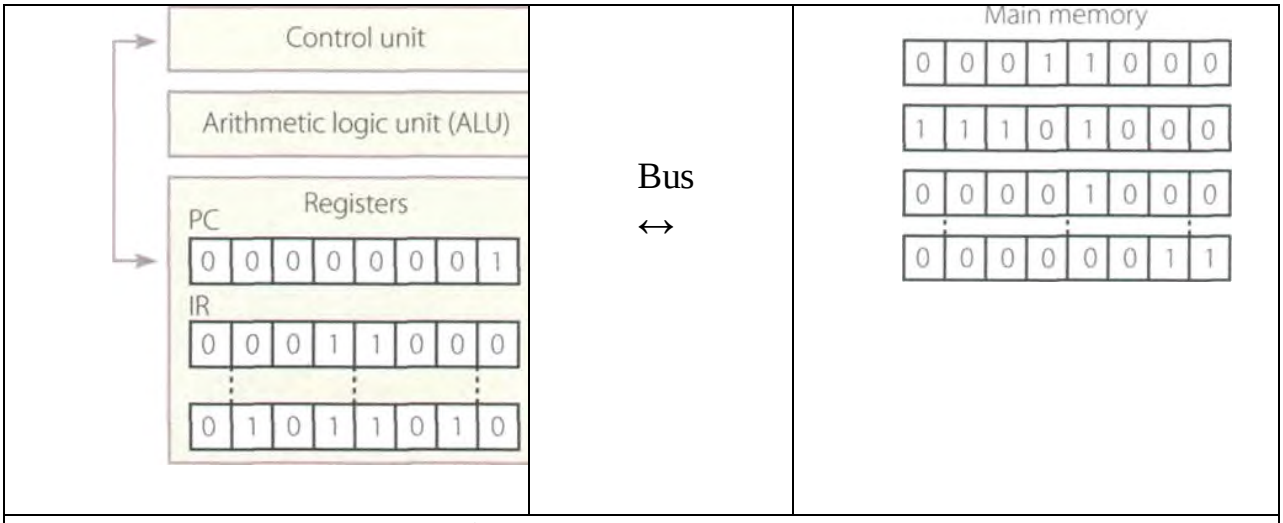


Fig. 1: *Organization of a simple computer; the CPU is built into a single microprocessor chip*

Exercise 2.2. Read the text on page 21 and then answer these questions.

1. What are the main parts of the CPU?
2. What does ALU stand for? What does it do?
3. What is the function of the system clock?
4. How much is one gigahertz?
5. What type of memory is temporary?
6. What type of memory is permanent and includes instructions needed by the CPU?
7. How can RAM be increased?
8. What term is used to refer to the main printed circuit board?
9. What is a bus?
10. What is the benefit of having expansion slots?

Exercise 2.3. Look at these extracts from the text. What do the words in bold refer to?

1. **This** is built into a sing e chip.
2. ... **which** executes program instructions and coordinates...
3. ... **that** is being executed.
4. ... performance of a computer is partly determined by the speed of **its** processor.
5. ... the CPU looks for **it** on the hard disk ...
6. ... inside the computer to communicate with **each other**.

3 Language work: **Defining relative clauses**

Defining relative clauses

We can define people or things with a defining (restrictive) relative clause. We use the relative pronoun **who** to refer to a person; we can also use **that**.

*A blogger is a person **who/that** keeps a web log (blog) or publishes an online diary.*

We use the relative pronoun **which** (or **that**) to refer to a thing, not a person.

*This is built into a single chip **which/that** executes program instructions and coordinates the activities that take place within the computer system.*

Relative pronouns can be left out when they are the object of the relative clause.

*The main circuit board (**which/that**) you have inside your system is called the motherboard...*

Exercise 3.1. Complete the sentences below with suitable relative pronouns. Give alternative options if possible. Put brackets round the relative pronouns you can leave out.

1. That's the computer I'd like to buy.
2. Core 2 Duo is a new Intel processor contains about 291 million transistors.
3. A webmaster is a person designs, develops and maintains a website.
4. A bus is an electronic pathway carries signals between computer devices.
5. Here's the DVD you lent me!
6. Last night I met someone works for GM as a software engineer.

4 How memory is measured

Exercise 4.1. Read the text and then answer these questions.

1. How many digits does a binary system use?
2. What is a bit?
3. What is a collection of eight bits called?
4. What does ASCII stand for?
5. What is the purpose of ASCII?

Bits and bytes

Computers do all calculations using a code made of just two numbers – 0 and 1. This system is called **binary code**. The electronic circuits in a digital

computer detect the difference between two states: ON (the current passes through) or OFF (the current doesn't pass through) and represent these states as 1 or 0. Each 1 or 0 is called a **binary digit**, or **bit**.

Bits are grouped into eight-digit codes that typically represent characters (letters, numbers and symbols). Eight bits together are called a **byte**. Thus, each character on a keyboard has its own arrangement of eight bits. For example, 01000001 for the letter A, 01000010 for B, and 01000011 for C.

Computers use a standard code for the binary representation of characters. This is the American Standard Code for Information Interchange, or **ASCII** - pronounced /'æski/. In order to avoid complex calculations of bytes, we use bigger units such as kilobytes, megabytes and gigabytes.

We use these units to describe the RAM memory, the storage capacity of disks and the size of a program or document.

Note: bit is pronounced /bit/; **byte** is pronounced /bait/

One bit = 01000011

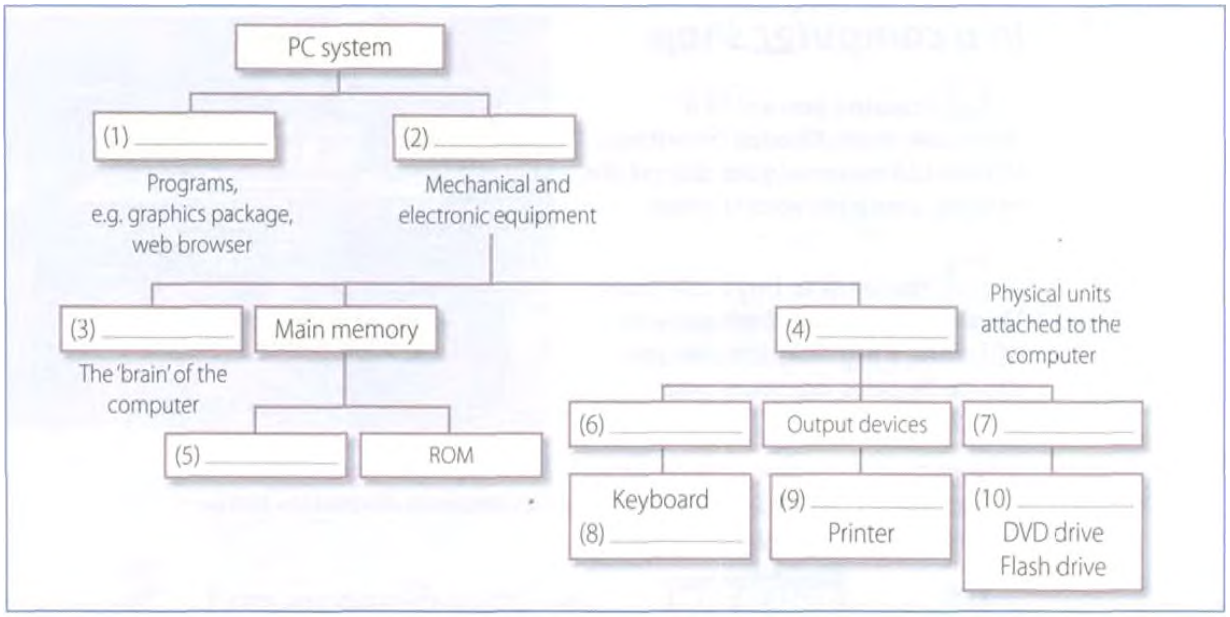
Unit of memory	**Abbreviation**	**Exact memory amount**
Binary digit	bit, b	1 or 0
Byte	B	8 bits
Kilobyte	KB or K	1,024 bytes (2^{10})
Megabyte	MB	1,024 KB, or 1,048,576 bytes (2^{20})
Gigabyte	GB	1,024 MB, or 1,073,741,824 bytes (2^{30})
Terabyte	TB	1,024 GB, or 1,099,511,627,776 bytes (2^{40})

Exercise 4.2. Complete these descriptions with the correct unit of memory.

1. A _____ is about one trillion bytes - about as much text as the books and magazines in a huge library.
2. A _____ is about one million bytes - about as much text as a 300-page novel.
3. A _____ is about one thousand bytes - equivalent to one sheet of A4.
4. A _____ is about one billion bytes - about as much text as 1,000 books.
5. A _____ can store a single character, such as the letter *h* or number 7

5 A PC system

Exercise 5.1. Complete this diagram of a PC system. Look at Units 1, 2 to help you.



Exercise 5.2. In pair, compare your answers

Exercise 5.3. (T.4) Listen to a teacher explaining the diagram to her class and check your answers.

6 Your ideal computer system

Exercise 6.1. Make notes about the features of the computer that you would most like to have. Think about the features in the box.

CPU Speed Optical disc drives Wireless connectivity Minimum/maximum RAM Monitor Ports and card memory slots Hard disk Software

Exercise 6.2. In pairs, describe your ideal computer system. Give reasons for your choices.

Useful language

It's got...; It's very fast. It runs at...; The standard RAM memory is... and it's expandable...; The hard disk can hold...; I need a large, flat LCD screen because...; As for the Internet, ...

Unit 4 Choosing the right computer

Vocabulary

an aid – инструмент, помощь
to attach – присоединять
an application – прикладная задача, приложение
to boot – загружать
to check – проверять
a control – управление
to complete – завершать, окончить
a description – описание
a developer – разработчик
an equipment – оборудование
a general-purpose – общее назначение
an internal – внутренний
to install – устанавливать
a memory capacity – вместимость памяти
peripheral – периферийный
to secure – обеспечивать безопасность
a specific – конкретный, определенный
a spidergram – диаграмма

1 In a computer shop

Exercise 1.1. Imagine you are in a computer shop. Choose five things that would improve your digital life. In pairs, compare your choices.

Exercise 1.2. You want to buy a computer. Think of three basic features that will make a big difference to your choice. In pairs, compare your choices.

Exercise 1.3. (T.5) Listen to two people making enquiries in a computer shop. Do they buy anything?

Exercise 1.4. (T.5) Listen again and complete the product descriptions.

MacBook Processor speed _____ RAM _____ Hard drive capacity _____ DVD drive included? _____ Operating system _____ Includes internet software Price £1,029	
iMac Processor speed 2.33GHz RAM ____ Hard drive capacity ___ DVD drive included? Yes Operating system ____ Includes internet software Price _____	

Exercise 1.5. (T.5) Listen again and complete the extract from the conversation.

Assistant: Do you need any (1) _____?

Paul: Um, yes, we're looking for a Mac computer. Have you got any fairly basic ones?

Assistant: Yes, sure. If you'd like to come over here.

Paul: What different (2) _____ are there?

Assistant: At the moment we've got these two models: the iMac, which is a desktop computer with an Intel Core 2 Duo processor (3) _____ at 2.33 gigahertz, and the portable MacBook, which has a processor (4) _____ at 2.0 gigahertz. Core Duo technology actually means two cores, or processors, built into a single chip, offering up to twice the speed of a traditional chip.

Sue: So they're both very (5) ____, then. And which one has more memory? I mean, which has more RAM?

Assistant: Well, the iMac has two gigabytes of RAM, which can be (6) ___ up to three gigabytes, and the MacBook has one gigabyte, expandable to two gigabytes. It all depends on your needs. The iMac is (7) _____ for home users and small offices. The MacBook is more (8) ____ if you travel a lot.

2 **Language functions** in a computer shop

Language functions useful to a sales assistant

- Greeting and offering help

Good morning. Do you need any help?

- Giving technical specifications (specs)

The MacBook has a processor running at 2.0 gigahertz.

The iMac has two gigabytes of RAM.

They feature a camera built into the display.

- Describing

Both computers are very fast and reliable.

- Comparing

The MacBook is more practical if you travel a lot.

PDAs are cheaper than laptops but laptops are more powerful.

Language functions useful to a customer

- Explaining what you are looking for

We're looking for a personal computer. Have you got any fairly basic ones?

- Asking for technical specs

What's the storage capacity of the hard drive?

Do they have a DVD drive?

• Asking the price

How much do they cost?

How much is it?

Exercise 2.1. Look at the language functions and then correct one mistake in each of these sentences. Decide which functions are being expressed in each sentence.

1 The Ulysses SD is a power, expandable computer that offers high-end graphics at a low price.

2 A laptop is likely to be more expensive than the equivalent desktop, but a laptop is less practical if you travel a lot.

3 Where's the storage capacity of the hard drive?

4 I'm looking a desktop PC that has good graphics for games.

5. Do you need the help?

6. And how many does the PDA cost?

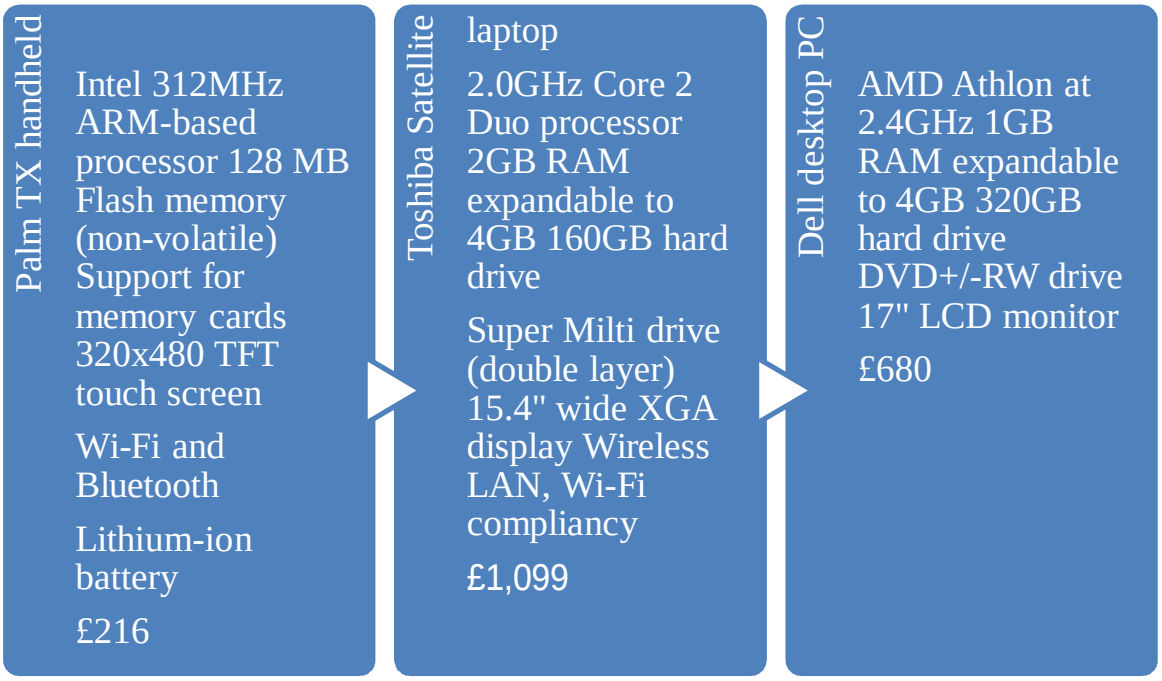
7 This workstation is a Pentium processor with dual-core technology, 1,024 gigabytes of RAM, and 1 terabyte of disk space.

3 Role play - buying a computer

Exercise 3.1. Work in pairs. One of you wants to buy a computer, the other is the shop assistant. Use the prompts and product descriptions below to role play the conversation.

Shop assistant: Greet the customer and offer help; Show the customer two possible models; Give technical specs (describe the processor, RAM and storage capacity). Compare the two different models; Give the information required. Compare the two models; Answer, and mention any final details that might persuade the customer to buy the computer.

Customer: Explain what you are looking for; Ask for some technical specs; Ask about any further technical specs (DVD drive, monitor, communications, etc.); Ask the price; Decide which computer to buy or leave the shop.



4 Choosing the right computer

Exercise 4.1. (T.6) Listen to four people talking about their computer needs and take notes. In pairs, read the descriptions from the computer shop website and choose the most suitable computer for each person. Give reasons for your choices.

Speaker 1_____Speaker 3_____
Speaker 2_____Speaker 4_____

	**Sun workstation** Two AMD Operation processors at 3.0GHz 4GB RAM; 32GB maximum 1 terabyte hard drive and dual DVD drive 19" Sun TFT flat-panel LCD Supports several graphics formats Allows you to handle your toughest technical, scientific, and business-critical applications Supports Solaris, Windows and Linux £3,249
	**Gateway C-120 convertible notebook** Intel Core 2 Duo ULV processor at 1.06GHz 12.1" WXGA TFT touch screen Gateway Executive stylus pen 1024MB DDR2SDRAM 80GB serial ATA hard drive DVD-ROM drive (optical DVD burner) Integrated modem and Bluetooth Windows Vista Home Premium Thin and lightweight (1.17”, 2.4 kg) **£805**
	**Dell Inspiron 531 desktop PC** AMD Athlon 64 X2 Dual Core Processor 3072MB DDR2 SDRAM Dell 22” Wide Flat Panel 256MB NVIDIA GeForce 8600GT video card 1.0TB Hard Drive 16x DVD+/- RW Drive Integrated 7.1 Channel High Definition Audio Windows Vista Home Premium Optional features: Windows Media Center, integrated TV Tuner, and a Blu-ray disc drive for high-definiton content **From £849**

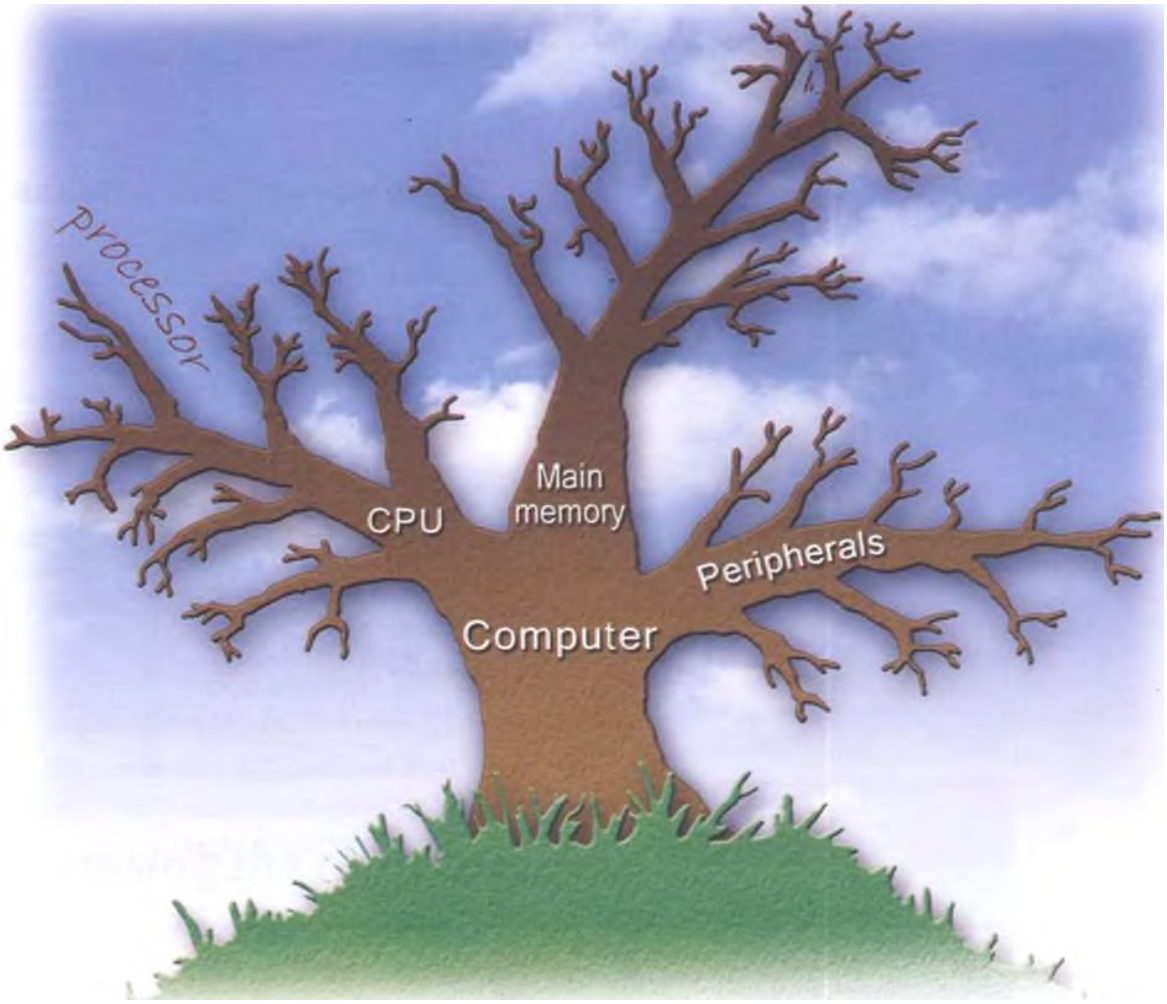
	**Sony Vaio AR laptop (VGN-AR51E)** Intel Core 2 Duo Processor at 2GHz 2GB DDR2 SDRAM 200GB hard drive DVD+/-RW optical drive 17" WXGA high-definition LCD screen Memory Stick slot Three USB 2.0 ports Integrated wireless LAN Built-in 'Motion Eye' digital camera Lithium-ion battery Windows Vista Ultimate **£899**

Exercise 4.2. Look at the notes you made about your ideal computer system in Unit 3 Exercise 6.1. What did you want? Look again at the descriptions of the computers above and choose the one that is closest to your ideal. In pairs, discuss your choices.

5 Vocabulary tree

Designing word trees and spidergrams can help you build up your own mental 'maps' of vocabulary areas. Look at the list of terms in the box and put each one in an appropriate place on the word tree below. The first one has been done for you.

processor; ROM; expandable memory; ALU; DIMMs; RAM; computer brain; byte; DVD; system clock; mouse; gigahertz; printer; megabyte; webcam; hard drive; keyboard; registers.



6 Recommending a computer

A friend has asked you to recommend a computer that suits his needs. He needs to be able to access the Internet, play games and work with graphics, music and video files. Write an email describing its technical features and saying why you recommend it.

Part II Basic software

Unit 5 The operating system (OS)

Vocabulary

an access ['ækses] – доступ
to back up – копировать
a backup – резервное копирование
a drop-down menu – опции, выпадающее меню
complex – сложный
a decade – декада, десятилетие
to enhance [in´ha:ns] – увеличивать, расширять
an icon – символ
an interface – канал, интерфейс
a manufacturer - производитель
the pointer – курсор мыши
to reduce – уменьшить, сократить
a scroll bar – линейка, полоса прокрутки
smart – умный
a software – программное обеспечение
a version [və:ʃn] – версия

1 Warm-up

Exercise 1.1 What is the function of the operating system?

Exercise 1.2 Read the text below and complete it with the phrases in the box.

applications software	operating system	software	system software

Information provided by programs and data is known as (1) _____ . programs are set of instructions that make the computer execute operations and tasks. There are two main types of software:

- The (2) _____ refers to all the programs which control the basic functions of a computer. They include operating systems, system utilities (e.g. an anti-virus program, a backup utility) and language translators (e.g. a computer – the software that translates instructions into machine code).
- The (3) _____ refers to all those applications – such as word processors and spreadsheets – which are used for specific purposes. Applications are usually stored on desks loaded into the RAM memory when activated by the user.

The (4) _____ is the most important type of system software. It is usually supplied by the manufacturer and comprises a set of programs and files and that control the hardware and software recourse of a computer system. It controls all the elements that the user sees, and it communicates directly with the computer. In most configurations, the OS is automatically loaded into the RAM section when the computer is started up.

2 A user-friendly interface

Exercise 2.1. The picture below illustrates a user interface based on graphics.

The interface elements of the Macintosh

Useful language:

- **window:** a viewing area less than or equal to the screen size. By using different windows you can work on several documents or applications simultaneously.
- **pull-down menu:** a menu that the user 'pulls down' from a name in the menu bar at the top of the screen by selecting the name with the mouse.
- **the pointer:** an arrow, controlled by the mouse, that allows you to move around the screen.
- **toolbar buttons:** found at the top of a window, they take you to the Home folder and others.
- **icons:** graphic images (or intuitive symbols) used to represent an object or task.
- **folders:** containers for documents and applications.
- **dock:** set of icons at the bottom of the screen that give you instant access to the things you use most.

Exercise 2.2 Read the definitions in the *Useful language* and then find the following interface elements in the picture:

1) window; 2) scroll bar; 3) menu bar; 4) pull-down menu; 5) pointer; 6) toolbar buttons; 7) disk icons; 8) folders; 9) program icons; 10) document icons; 11) printer icon; 12) dock icons.

Exercise 2.3. Read the article below and decide which of the expressions in the box best describe a graphical user interface (GUI)

user-friendly	slow	attractive	text-based	complex	graphic-based

GUI operating systems.

The term user interface refers to the standard procedures that the user follows in order to interact with a computer. In the late 1970s and early 80s, the way users accessed computer systems was very complex. They had to memorize and type a lot of commands just to see the contents of a disk, to copy files or to respond to a single prompt. In fact, it was only experts who used computers, so there was no need for a user-friendly interface.

In 1984, Apple produced the Macintosh, the first computer with a mouse and a graphical user interface (GUI) Macs were designed with one clear aim: to

facilitate interaction with the computer. A few years later, Microsoft launched Windows, another operating system based on graphics and intuitive tools. Nowadays, computers are used by all kinds of people, and as a result there is a growing emphasis on accessibility and user-friendly systems.

A GUI makes use of a WIMP environment: windows, icons, menus and pointer. The background of the screen is called the desktop, which contains labelled pictures called icons. These icons represent files or folders. Double-clicking a folder opens a window which contains programs, documents, or more nested folders. When you are in a folder, you can launch a program or document by double-clicking the icon, or you can drag it to another location. When you run a program, your PC opens a window that lets you work with different tools. All the programs have a high level of consistency, with similar toolbars, menu bars, buttons and dialog boxes. A modern OS also provides access to networks and allows multitasking, which means you can run several programs - and do various tasks - at the same time.

The most popular operating systems are:

- The Windows family - designed by Microsoft and used on most PCs. The most recent version is Windows Vista.
- Mac OS - created by Apple and used on Macintosh computers.
- Unix - a multi-user system, found on mainframes and workstations in corporate installations.
- Linux - open-source software developed under the GNU General Public License. This means anybody can copy its source code, change it and distribute it. It is used in computers, appliances and small devices.
- Windows Mobile - used on most PDAs and smartphones (PDAs incorporating mobile phones).
- Palm OS - used on Palm handheld devices.
- RIM - used on BlackBerry communication devices. Developed by Research in Motion.
- The Symbian OS - used by some phone makers, including Nokia and Siemens.

These computer platforms differ in areas such as device installation, network connectivity or compatibility with application software.

Exercise 2.4. Translate these terms and expressions into your own language. Use a dictionary or the Internet to help you.

1. user interface _____
2. procedures _____ ___
3. commands _____ ___

4. tools _____
5. desktop _____
6. nested folders _____ __
7. launch a program _____
8. source code _____ ____

Exercise 2.5. Find answers to these questions.

1. What does the abbreviation ‘GUI’ stand for?
2. What is the combination of Macintosh computers to the development of graphic environments?
3. What does the acronym ‘WIMP’ mean?
4. What computing environments based on graphics are mentioned in the text?
5. How do you run a program on a computer with a graphical interface?
6. Can you give two reasons for the importance of user-friendly interface?

Exercise 2.6. Label the interface features (a-j) on the screenshot of Apple's Mac OS X operating system with words in bold from this list*: desktop, window, icon, folder, menu bar, drop-down (pull-down) menu, scroll bar, dock.*

Exercise 2.7. Compare the Mac OS X user interface with a Windows or Linux interface. What are the similarities and differences? Which features do you prefer from each interface?

3 Windows Vista

Exercise 3.1. (T.7) Listen to a podcast interview with Bill Thompson, a program developer, and answer these questions.

1 Why is Windows so popular? Give two reasons.

2 Which Windows Vista edition is aimed at high-end PC users, gamers and multimedia professionals?

Exercise 3.2. Listen again and complete this fact file.

Windows Vista editions	Other features	Internet and security	Windows programs
(1) ____ is designed for users with basic needs, such as email and internet access. Home Premium is for advanced home computing and (2) ____ The Business edition is ideal for (3) ____ The Ultimate edition is the most complete.	The user interface has been redesigned with new icons and a new (4) ____ . It offers support for the latest technologies, from DVD creation to (5) ____ .	Internet Explorer is more reliable and secure. The Security Centre includes an (6) ____ program called Windows Defender, and a firewall that protects your computer from (7) ____ .	The most popular is still (8) ____, a suite that includes the (9) ____, Word; an email program; the Excel spreadsheet program; and the (10) ____ program, PowerPoint.

4 Language work: D**egrees of comparison of adjectives**

We use comparative and superlative adjectives to compare two people or things

For short adjectives we add +**er** or **the +est**.	big	bigger	biggest	The new monitor was the biggest in the room
	fast	faster	fastest	Your version of software is the fastest
	easy	easier	easiest	It's easier to use.
For long adjectives we use **more /less** or **the most/the least**.	difficult	more/less difficult	the most/least difficult	The version is the most difficult to use
	expensive	more / less expensive	the most/least expensive	His computer is the least expensive
	reliable	more / less reliable	the most/least reliable	I think you should buy that. It is the most reliable
Some comparatives and superlatives are irregular.	bad	worse	the worst	That is the worst software I've ever used!
	good	better	the best	I really like website. It's the best I've seen.

Exercise 4.3. Make the comparative and the superlative forms of these adjectives.

1. light
2. efficient
3. wide
4. heavy
5. fast
6. dark
7. soft
8. hard
9. durable

Exercise 4.4. Read these products descriptions and make sentences using comparatives and superlatives.

Example: *The Corsair is longer than the Imation but slimmer.*

	8GB Read at 34MB/s Write at 28MB/S 3.25” x 0.75” Aluminum 256-bit AES SW encryption. Ten-year warranty. *Price £25*		4GB Read at 15MB/s Write at 9MB/s 2.95” x 1.14" Plastic No data encryption. Five-year warranty. *Price £10*

Exercise 4.5. Work in pairs. Write an email to a colleague comparing the two products in 4.4.

Exercise 4.6. Work in small groups. Talk about the software you and your non-IT colleagues use. Answer these questions.

1 What are the differences between the IT and non-IT software you have listed?
2 Which is the cheapest?
3 Which is the most expensive?
4 Which is the most/least reliable?
5 Which is the most difficult/easiest to use?
6 Which is the best/worst?
7 Which is the most/least user-friendly?

Exercise 4.7. (T.8) Listen to two colleagues discussing software and complete this dialogue.

Tim: What do you think about these three photo imaging packages?
Simone: It’s a difficult choice. All three are very good but they have different strengths.
Tim: I agree.
Simone: Serif Image Plus has (1)____ image (2)_____
Tim: OK.
Simone: But Magic Extreme has the (3)_____ processing of images.
Tim: You’re right. Also, Serif has (4)_____special (5)_____But what about Snap Pro?

Simone: Well, it has the (6)_____ dubbing options.
Tim: And Snap Pro is the best for (7)_____ photos.
Simone: I'm not sure. Serif has (8)_____ efficient (9)_____
Tim: Which is the most expensive?
Simone: Oh, Serif Image Plus.
Tim: And the cheapest?
Simone: Snap Pro.
Tim: Let's get Snap Pro then.
Simone: I'm still not sure

5 Writing a summary

Summarize the text on page 34-35 in 90-100 words. Follow these steps:

1. Read the text again.
2. Underline the relevant information in each paragraph.
3. Make notes about the main points. Leave out details such as examples.
4. Make sentences from the notes and link the sentences with connectors (and, bat, because, therefore, etc.).
5. Write your first draft.
6. Improve your first draft by reducing sentences.

For example:

• Cut out unnecessary phrases

Macs were designed *with one clear aim*: to facilitate interaction with the computer.

• Omit qualifying words (adjectives or modifying adverbs) *very* complex

• Transform relative clauses into *-ing* participle clauses

Double-clicking a folder opens a window which contains programs, documents or...

Double-clicking a folder opens a window containing programs, documents or...

7. Write the final version of your summary. Don't forget to check the spelling and grammar.

Unit 6 Word processing (WP)

Vocabulary

to accomplish – выполнять, совершать
to adjust – подгонять, выравнивать (масштаб, формат)
an advancement – прогресс, продвижение
to allow – позволять
attempt – попытка, проба
a command – команда
compatible – совместимый, сочетаемый
to crash – ломаться, давать сбои
an insertion – вставка, врезка
an instruction – инструкция
necessity – необходимость
obvious – явный, очевидный, наглядный
to plug in – подключать
a recycle bin – корзина
simultaneously [sɪməl′teɪnɪəslɪ] – одновременно
Spell checkers – подпрограмма проверки орфографии
thesaurus – тезаурус, толковый словарь
a tool – инструмент

1 Word processing features

Exercise 1.1. In pairs, discuss these questions.

1. What is a word processor?
2. What kind of tasks do people use word processors for?
3. How many different word processing programs can you name? Which do you think is the most popular?

Exercise 1.2. Look at this screenshot from Microsoft Word and translate the labeled features and functions into your own language.

Exercise 1.3. Complete these sentences with the correct features and functions above.

1. The Standard ____ lists the icons to save or print a document, spell check, etc. The ____ Toolbar is the area for changing font, alignment, indentation, etc.

2. A font consists of three elements: ____ type style and type size. For example, Palatino bold at 10 points.

3. Type style refers to a visual characteristic of a typeface, for example *B* for ____, *I* for ____ and *U* for underlined.

4. If you need to change indentation - the space between the page margin and where the text aligns - you can click the Increase or Decrease ____ buttons.

5. The ____ and ____ commands allow you to specify customized texts at the top and bottom of every page.

2 Word Sudoku

In pairs, read the instructions and complete the puzzle.

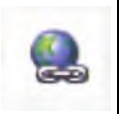
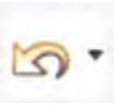
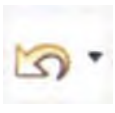
Instructions:

This Word Sudoku is a variation on the normal Sudoku. Instead of using the numbers 1 to 9, we are using words and icons. There are nine WP functions and their equivalent icons, so we are playing with nine pairs. In order to complete the

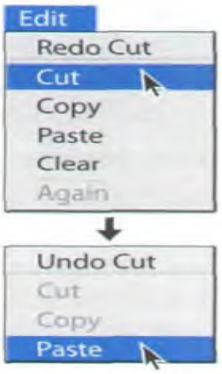
grid, you can use each function or the equivalent icon only once in each row, each column, and in each of the 3x3 boxes. The icons can only be used in the coloured boxes.

Word processing functions and icons:

	Align Left		Insert Hyperlink
	Print Preview		Columns
	Insert Table		Undo
	Drawing		Open
	Bullets		

	Drawing	Columns	Bullets					
Align Left			Insert Table					
		Undo			Print Preview			
	Print Preview					Insert Hyperlink		
								Columns
Undo	Insert Hyperlink	Open						Drawing
						Open	Bullets	
			Columns					Insert Hyperlink
				Insert Table	Insert Hyperlink	Drawing		

3 The Cut and Paste technique



Exercise 3.1. (T.9) Listen to two friends, Anna and Ben, talking about how to move text in Word. How many steps are involved in carrying out the Cut and Paste task?

Exercise 3.2. (T.9) Listen again and complete the dialogue.

Anna: Ben, do you know how I can move this paragraph? I want to put it at the end of this page.

Ben: Er... I think so. (1) ____, use the mouse to select the text you want to move. (2) ____ choose the Cut command from the Edit menu.

Anna: (3) ____ ?

Ben: Yes. The selected text disappears and goes onto the clipboard. (4) ____ you find where you want the text to appear and you click to position the insertion point there.

Anna: Mm, OK Is that (5) ____ ?

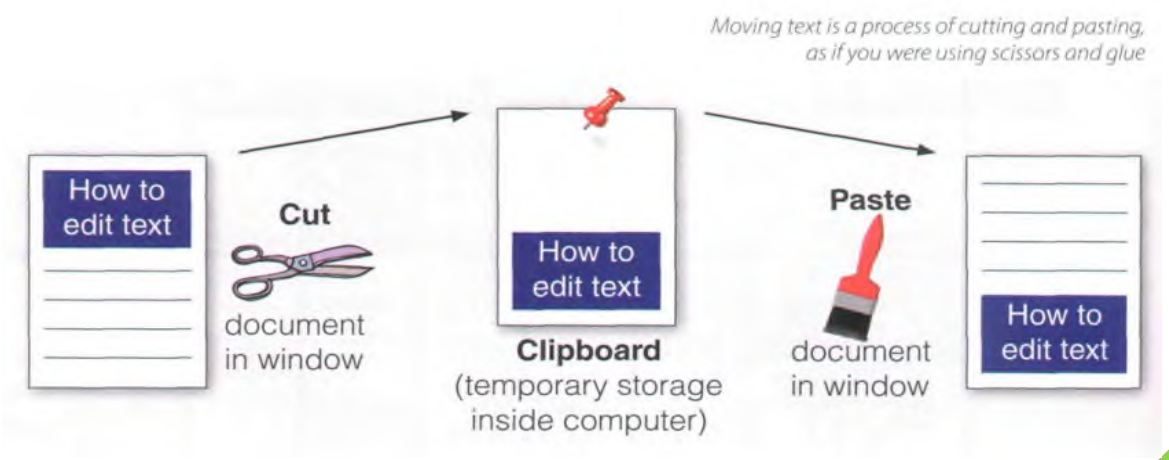
Ben: Yes, if that's where you want it. (6) ____ , choose Paste from the Edit menu, or hold down Ctrl and press V. (7) ____ , check that the text has appeared in the right place.

Anna: OK, I've (8) ____ . Is that (9) _____ ?

Ben: Yes, that's it. If you make a mistake, you can choose Undo from the Edit menu, which will reverse your last editing command.

Anna: Brilliant! Thanks a lot.

Ben: That's OK, it’s my pleasure.



4 Language work: **Giving and following instructions**

Giving instructions

- To give instructions, we use the imperative form of the verb and sequence words such as **first, next, then, after that, finally**, etc.

First, use the mouse to select the text.

Then choose the Cut command from the Edit menu.

Next, choose Paste from the Edit menu.

Finally, check that the text has appeared in the right place.

We can also use the present simple with you.

Now you find where you want the text to appear and you dick to position the insertion point.

Following instructions

- If you want to check that you have understood instructions, you can use expressions like: *Like this? Is that right?*
- If you want to signal that you are ready to move on to the next step, you can use expressions like: *OK, I've done that now. What's next?*
- If you want to ask if the process is completed, you can use expressions like: *Is that everything? Anything else?*

Exercise 4.1. Correct six mistakes in this dialogue.

A: I need a photo for my curriculum vitae. How do I insert one into this Word document?

B: Well, now choose Insert on the Menu bar.

A: As this?

B: Yes. From the Insert menu, select Picture. As you can see, this displays a drop-down menu with different options: Clip Art, From File, From Scanner, Chart, etc. Select from File and you'll get a dialog box.

A: OK. I've done that now. What last?

B: OK. Now I navigate your hard drive's contents and find the picture that you want to insert.

A: Right. I'd like to include this one.

B: OK, good. Now click Insert and the photograph will be inserted into your document.

A: Here it is. Is that write?

B: Yes. First, right-click with the mouse and select Format Picture to adjust the size and other properties.

A: Brilliant, thanks!

Exercise 4.2. Complete these instructions for how to Copy and Paste in Word with verbs from the box.

click (x2)	select	position	right-click	drag

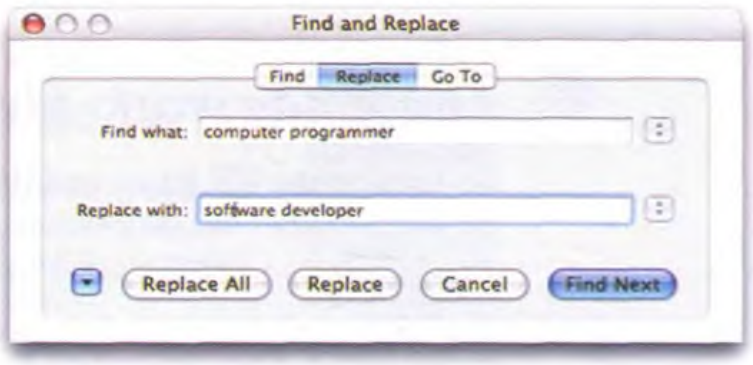
1. First, … the text you wish to copy. To select text, … the mouse over the portion of the text that you want to copy. This part should then be highlighted.

2. Then … on the Copy icon on the Standard Toolbar. This copies the selected text to an invisible clipboard.

3. Next, … the .....cursor where you want the text to appear.

4. Finally, … the Paste icon. This inserts the content of the clipboard at the insertion point. As well as the icons on the toolbar, you can use the keys Ctrl+ C for Copy, and Ctrl+V for Paste. These options also come up if you … the selected text.

Exercise 4.3. Write instructions for using Find and Replace based on this dialog box.



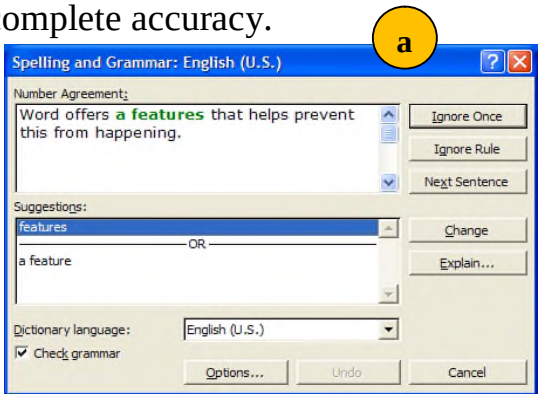
Exercise 4.4. Work in pairs. Student A: Give your partner instructions on Creating a document and saving it on disk. Student B: Give your partner instructions on How to insert a picture from the Web into a Word document. Use words and expressions from the Help box

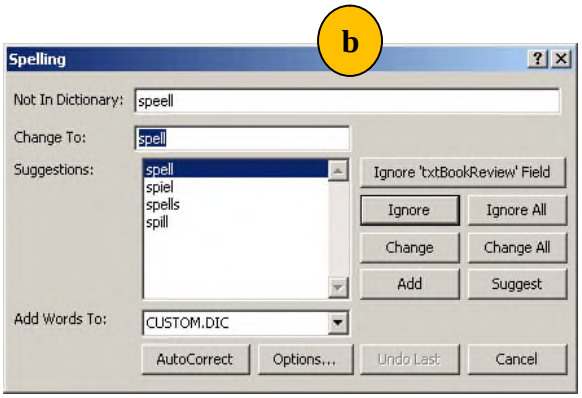
5 WP tools

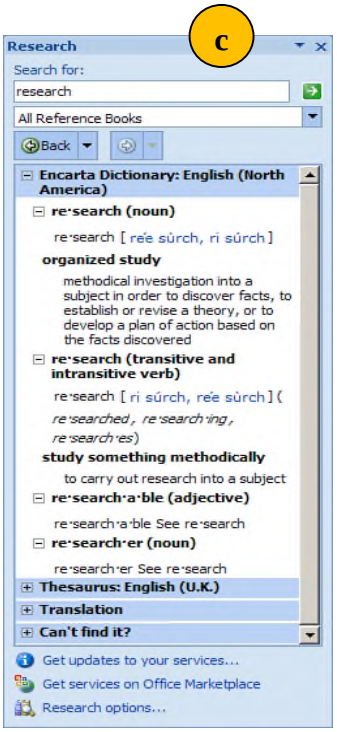
Exercise 5.1. Scan the descriptions of three WP tools (1-3) - a spell checker, an online thesaurus and a grammar checker - and match them with the dialog boxes (a-c).

1. Spell checkers can be used to compare words in the program's dictionary to those used in the user's document. The spell checker points out any words it cannot match, notifies the user, and allows them to make any changes; it even suggests possible correct spellings. Like a conventional thesaurus, this database of words contains definitions and suggestions of words with similar and opposite

meanings. A word may be spelled correctly but still be wrong (too instead of two, for instance). This is a good first step at proofing a document because it can find many common errors, but users will still need to proofread documents to ensure complete accuracy.







2. Many word processors include an online thesaurus with which users can look up different words to use in similar instances. Their power comes not from knowing every grammatical rule, but from questioning the writer about certain parts of the text. Some even include information about pronunciation and the history of a word.

3. Grammar checkers are applications that attempt to check more than just Q spelling. They count words in sentences to flag possible run-on sentences. They look for words that show possible conflicts between verbs and subjects, and they offer advice about corrections. Grammar checkers are a step beyond spell checkers, but they are still not a substitute for a human editor. However, this does not mean that all the words in the document are spelled correctly. They give the writer another chance to think about what he or she has written. The computer can alert writers to problems that wouldn't be obvious to them otherwise.

Exercise 5.2. Read the descriptions more carefully. Find three sentences that have been printed in the wrong text and decide where they should go.

Exercise 5.3. Correct the three mistakes in this sentence and decide if they would be found by the spell checker or the grammar checker.

Mail merge combine a form letter with a database file to create customized copies of the letter.

Unit 7 Spreadsheets and databases

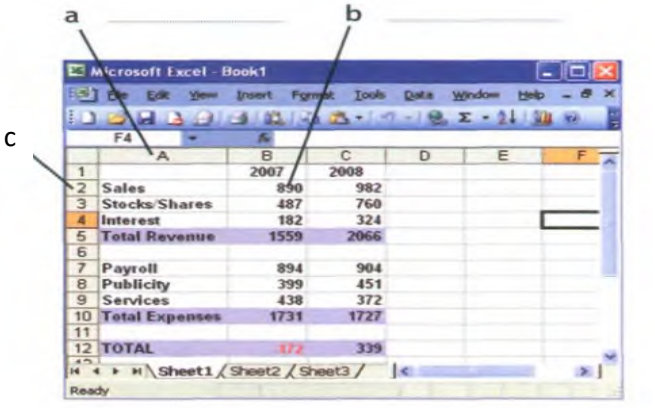
Vocabulary

an adaptability – приспособляемость, применимость
to accomplish – выполнять, достигать
a card index – картотека
an embedding – встраивание, закладка, внедрение an error – ошибка
frequently – с высокой периодичностью, часто
a message – сообщение, передаваемый блок информации
a network – сеть
a password – пароль
proprietary – собственнический, патентованный
relational – родственный (о данных)
to release – выпуск, издание, версия, разблокировка, редакция (ОС)
a robustness – ошибкоустойчивость, выносливость к нарушениям исходных предпосылок
a spreadsheet – электронная таблица, сводная таблица
Web-browser – «браузер» (программа, позволяющая пользователю искать и считывать информацию из глобальной электронной сети Internet)
a worksheet – рабочий лист, бланк

1 Spreadsheet programs

Exercise 1.1. In pairs, discuss these questions.

1 What is a spreadsheet?
2 What are spreadsheets used for?



Exercise 1.2. Look at the worksheet and label *a*, *b* and *c* with column, row and cell. Then answer these questions.

1. What types of data can be keyed into a cell?

2. What happens if you change the value of a cell?

This worksheet shows the income and expenses of a company. Amounts are given in Smillions. The terms worksheet and spreadsheet are often used interchangeably. However, technically, a worksheet is a collection of cells grouped on a single layer of the file. A spreadsheet refers to both the computer program that displays data in rows and columns, and to the table which displays numbers in rows and columns.

Exercise 1.3. (T.10) Listen to Lucy Boyd giving a training course on basic Excel and check your answers to A and B.

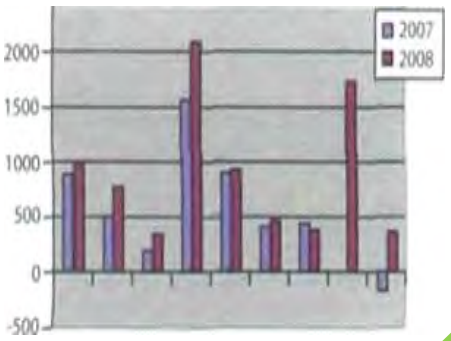
Exercise 1.4. (T.10) Listen again and decide whether these sentences are true or false. Correct the false ones.

1. A spreadsheet displays information in the form of a table with a lot of columns and rows.
2. In a spreadsheet you can only enter numbers and formulae.
3. You cannot change the width of columns.
4. Spreadsheet programs can generate a variety of charts and graphs.
5. Spreadsheets cannot be used as databases.

Exercise 1.5. Look at the worksheet above and decide whether these sentences are true or false. Correct the false ones.

1 The value of the cell C12 is the result of applying the formula C5-C10.
2 The value of cell B5 is the result of adding the value in cells B2 and B3.
3 If you type the value 800 in C3, the value in cells C5 and C12 will be recalculated.

Exercise 1.6. In pairs, discuss the advantages and disadvantages of showing the information above as a graph, rather than as a worksheet.



Graphic representation of the worksheet above

2 An invoice, a business letter and a fax

Exercise 2.1. Spreadsheets are also used to generate invoices. Complete the invoice below with words from the box. If you have a spreadsheet program, try to produce a similar invoice.

Quantity, Description, Price, VAT (value added tax), Product, Grand total, Company

Name: Ruth Atkinson
Address: 38 High Street, Galway
Telephone: 5 742 9165
Date: 16 May 2008

(1) _____
Media Market
Fax: 1 662 2367

(2) _____	(3) _____	(4) _____	(5) _____	
Ulysses Classic	2GB of RAM, 1TB HD	4	850€	3,400€
Flat LCD screen	Colour 19"	4	170€	680€
Portable Ulysses	2GB of RAM, 250GB HD	2	975€	1,950€
D5 database	DBMS, relational database	1	245€	245€
Antidote JP	Anti-virus, anti-spyware	6	60€	360€
Laser printer CQ	2,400 dpi, PostScript	1	230€	230€
			Sub-total	**6,865€**
		(6) _____	(21%)	**1,441€**
		(7) _____		**8,306€**

Exercise 2.2. Look at this letter which accompanies the invoice. Complete the letter with phrases from the box.

Yours sincerely,
I am writing to,
Dear Ms Atkinson,
We would be grateful if you could,
I am enclosing,
Please contact us

16 May 2008

Ruth Atkinson
38 High Street
Galway

(1) _____ ,

(2) _____ confirm that we have sent you four desktop PCs plus screens, two laptops and a laser printer, along with a D5 database, and an anti-virus program for each of the computers. Please allow two weeks for delivery.

(3) _____ two copies of your invoice.

(4) _____ make your payment by cheque or directly to our bank account through the Internet.

We are also delighted to inform you that we are offering our clients an online course called *A paperless office*, free of charge. (5) _____ if you require any further information.

(6) _____ ,

Ian Pegg

Exercise 2.3. Imagine you are Ruth Atkinson. When you try to use the laser printer, it gives continuous error messages. You are also having problems installing the database. Write a fax to Media Market to complain. Ask for a new printer and an upgraded version of the database. Look at the Useful language box to help you.

FAX MESSAGE
To: Media Market
Fax: 1 662 2367
From: Ruth Atkinson
Subject: Faulty products
Dear Mr. Pegg,

_____

_____

_____

Number of pages: 1
Please call if you experience any transmission problems.

Useful language

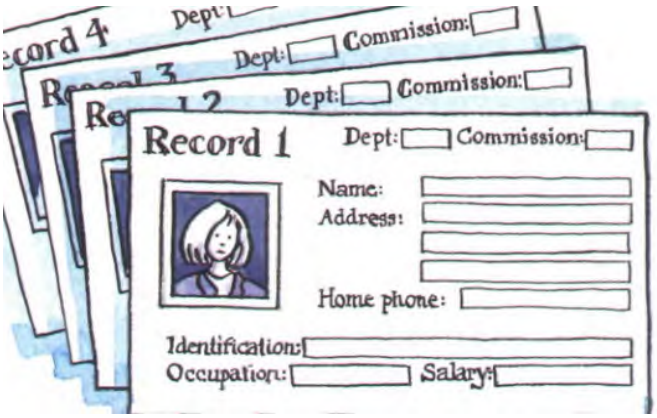
I am writing to complain about …;
… doesn't work;
I am unable to...

3 Databases

Exercise 3.1. In groups, make a list of as many possible applications for databases as you can think of.

Example: Companies use databases to store information about customers, suppliers and their own personnel.

Exercise 3.2. Look at the illustration, which represents a database file. Can you identify a record and a field?



A representation of a database file

Exercise 3.3. Read the text and check your answers.

Databases

A **database** is a collection of related data, and the software used in databases to store, organize and retrieve the data is called the **database management system**, or **DBMS**. However, we often use the word database to cover both meanings. A database can manage any type of data, including text, numbers, images, sound, video and hyperlinks (links to websites).

Information is entered into the database via **fields**. Each field holds a separate piece of information, and the fields are grouped together in **records**. Therefore, a record about an employee might consist of several fields which give their name, address, phone number, date of birth, salary and length of employment with the company.

Records are grouped together into **files** which hold large amounts of information. Files can easily be **updated** - you can always change fields, add new records or delete old ones. An electronic database is much faster to consult and update than a card index system and occupies a lot less space. With the right software, you can keep track of stock, sales, market trends, orders and other information that can help your company stay successful

A database program lets you create an **index** - a list of records ordered according to the content of certain fields. This helps you to **search** the database and **sort** records into numerical or alphabetical order very quickly. Modern databases are **relational** - that is, they are made up of related files: customers and

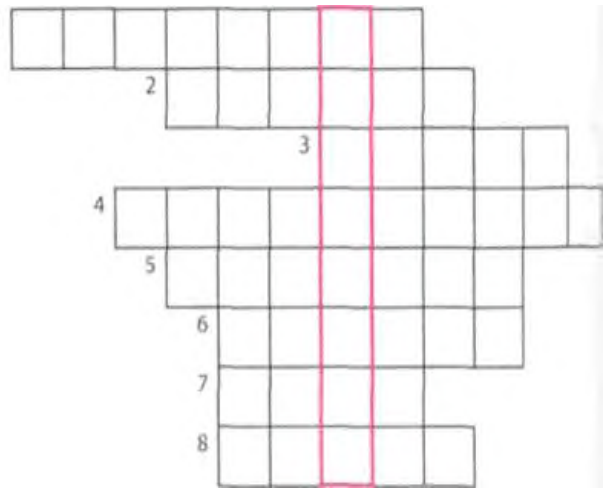
orders, vendors and purchases, students and tutors, etc. Two database files can be related as long as they have a common field. A file of students, for example, could include a field called Tutor ID and another file with details of the tutors could include the same field. This key field can be used to relate the two files. Databases like Oracle, DB2 and MySQL can manage these relationships.

A database query function allows you to extract information according to certain conditions or criteria. For example, if a managing director wanted to know all the customers that spend more than €8,000 per month, the program would search on the name field and the money field simultaneously.

The best database packages also include **network** facilities, which can make businesses more productive. For example, managers of different departments can have direct access to a common database. Most aspects of the program can be protected by user-defined passwords and other security devices. For example, if you wanted to share an employee's personal details but not their commission, you could protect the commission field.

Exercise 3.4. Solve the clues and complete the puzzle.

1. A collection of data stored in a PC in a systematic way.
2. A unit of a database file made up of related fields.
3. A single piece of information in a record.
4. A ____ database maintains separate, related files, but combines data elements from the files for queries and reports.
5. Some companies have several computers sharing a database over a ____ .
6. To look for specific information, for example the name of an employee.
7. To classify records into numerical or alphabetical order.
8. A tool that allows you to extract information that meets certain criteria.



Exercise 3.5. Complete these statements about databases using information from the text.

1. A database management system is used to ____
2. Information is entered into a database via ____
3. Each field holds ____

4. Updating a file means ____

5. Some advantages of a database program over a manual filing system are: ____

6. Access to a common database over a network can be protected by using ____

Exercise 3.6. In pairs, discuss what fields you would include in a database for your music collection.

4 Language work: **Countable and uncountable nouns**

- Countable nouns are people or things that we can count. They have a singular and a plural form (e.g. **file, program, system, application**).
- Uncountable nouns are things that we can't count. They have no plural form (e.g. **software, music, robotics, multimedia, networking, storage**).

*A lot of **software** these days is open-source.*

Not: *A lot of ~~**softwares**~~ these days ~~**are**~~ open-source.*

- Some words are countable in many languages but uncountable in English, and are used with a singular verb (e.g. **advice, damage, equipment, furniture, research, news, progress, homework**).

*The **advice** he gave me **was** very useful.*

- Countable nouns must have a determiner (**a, the, my, this**, etc.) in the singular, although this is not necessary in the plural.

*I deleted **the file** yesterday.*

*I lost more than 300 **files** when my computer crashed.*

We use **a** before a consonant sound and **an** before a vowel. The definite article **the** means *you know which one/ones I mean. **An icon** is a small graphic.*

***The icons** on the toolbar are used to...*

· We don't use **a/an** with uncountable nouns. **Not**: ~~***a robotics***~~

We don't use **the** in generalizations with uncountable nouns or plural countable nouns. *I like **music**.* **Not**: *I like ~~**the**~~ music.*

***Computer programs** are expensive.*

Not*: ~~**The**~~ **computer programs** are expensive.*

· Countable and uncountable nouns take different determiners.

Many, few, a few only go with countable nouns. *There are **many versions** of Windows Vista.*

Much, little, a little, a great deal of only go with uncountable nouns.

*I have **a little time** free this afternoon if you want to meet.*

Exercise 4.1. Decide if these nouns from the fact file in 3.2. are countable, uncountable or either, depending on the context. Write C, U, or C and U.

User ____; email ____; computing ____; edition ____; entertainment ____; interface ____; icon ____; technology ____; security ____; spyware ____.

Exercise 4.2. Complete this text with *a*, *an*, *the* or *nothing*.

Linux is (1) … operating system and it was initially created as (2) … hobby by a young student, Linus Torvalds, at the University of Helsinki in Finland. Version 1.0 of the Linux Kernel* was released in 1994. (3) … Kernel, at the heart of all Linux systems, is developed and released under GNU General Public License, and its source code is freely available to everyone.

Apart from the fact that it's freely distributed, (4) … Linux's functionality, adaptability and robustness has made it the main alternative for proprietary Unix and Microsoft operating systems. IBM, Hewlett-Packard and other giants of the computing world have embraced Linux and support its ongoing development. More than (5) … decade after its initial release, Linux is being adopted worldwide, primarily as (6) … server platform. Its use as a home and office desktop operating system is also on the rise. The operating system can also be incorporated directly into (7) … microchips in a process called (8) … embedding, and it is increasingly being used this way in appliances and devices.

*The Kernel provides a way for software and other parts of the OS to communicate with hardware.

5 Software at home and at work

In pairs, find out as much as you can about the software your partner uses at home or at work. Ask about spreadsheet programs, databases, word processors, videoconferencing, business accounting, email, and web browsers. Look at the *Useful language* to help you.

Useful language

What kind of spreadsheet program do you use?
What do you use it for?
Do you use it at home or at work?
What's your favourite...?
What features do you like most about it?
How do you...?

Part III Faces of the Internet

Unit 8 The Internet and email

Vocabulary

to account – рассчитать
an advancement – рост, прогресс, продвижение
a broadband – широкий диапазон частот
to distribute – размещать, хранить
to compete – соревноваться
hyperlink ['haɪpəlɪŋk] – гиперссылка, гиперсвязь
a connection – логическое соединение, канал связи, соединительный узел
an exchange – обмен, коммутатор каналов
to interact – взаимодействовать
to invent – придумать, создать
a satellite – искусственный спутник
a signature – подпись, идентификатор
a retrieve – выборка, поиск, возврат
a thread – поток, цепочка выполняемых задач, порожденный процесс
variety – разнообразие, спектр

1 Internet basics

Exercise 1.1. In pairs, discuss how you would define the Internet.

Exercise 1.2. Make a list of all the things you can use the Internet for.

Exercise 1.3. (T.11) Listen to a conversation between a customer buying a PC and a sales assistant. Why do you think the sales assistant has to explain so much about the Internet?

Exercise 1.4. (T.11) Listen again and complete the customer's notes.

To connect to the Internet from home, I need: (1) a _____ and (2) a _____ .

Also, I need an account with an (3) _____ (a company that offers connection for a monthly fee).

If you want to connect lots of computers without using cables, you can use a (4) _____ router.

Wi-Fi uses (5) _____ waves to send data over medium-range distances.

Things you can do on the Internet:

(6) _____

'Web' or 'Internet'? The Web: huge collection of (7) _____ stored on computers all over the world. The Internet: the network which connects all the computers.

2 Internet FAQs

Exercise 2.1. Read Part I of the Internet FAQs and choose the correct answers.

1. The Internet was

a) invented in the mid-90s. b) popular in the 1960s. c) probably created in the USA.

2. Which term describes any fast, high-bandwidth connection?

a) broadband b) dial-up connection c) Wi-Fi connection

3. The power-line Internet provides broadband access through

a) telephone lines. b) satellites. c) electrical power lines.

4. Which device converts computer data into a form that can be transmitted over phone lines?

a) ADSL b) a mobile phone c) a modem

5. The standard protocol that allows computers to communicate over the Internet is called

a) an IP address. b) TCP/IP. c) HTTP.

6. The geographical region covered by one or several access points is called

a) a wireless access point,

b) hotspot,

c) wireless network device.

Internet FAQs: Part I

How old is the Internet (the Net)? When was it created?

It's hard to say exactly. The research that led to what we now know as the Internet was begun in the 1960s.

Who created the Internet?

Again, it's hard to say exactly who created it. The initial research was carried out by the Advanced Research Projects Agency in America, funded by the US government.

Did the Internet become popular quickly?

It took many years for the Internet to become popular around the world. It's only really since the mid-90s that the Internet has been a part of our daily lives.

How do you get online?

To get connected, you need a computer, the right connection software and a modem connected to the phone line. You also need an account with an Internet Service Provider (ISP), which acts as a gateway between your PC and the rest of the Net.

How fast are today's internet connections?

Today, ISPs offer a broadband, high-speed connection. The most common types are cable - offered by local cable TV companies - and ADSL (Asymmetric Digital Subscriber Line), which works through phone lines. They are both faster than the traditional dial-up telephone connection. Broadband access is also offered by some electricity networks. This competing technology, known as power-line Internet, provides low-cost access via the power plug, but is still in development.

How long has broadband existed?

Since the late 1990s.

How much does broadband access cost?

It depends on which company you choose. Nowadays, some companies even offer free broadband.

Why do you need a modem?

A modem (modulator/demodulator) converts digital signals into analogue signals so that data can be transmitted across the phone or cable network.

What does TCP/IP mean?

The language used for data transfer on the Internet is known as TCP/IP (transmission control protocol/ Internet protocol). This is like the internet operating system. Every computer connected to the Net is identified by a unique IP address.

Are there other ways of accessing the Internet?

Other methods of internet access include Wi-Fi, satellite, mobile phones and TV sets equipped with a modem. Wi-Fi-enabled laptops or PDAs allow you to connect to the Net if you are near a wireless access point, in locations called

hotspots (for example, a Wi-Fi cafe, park or campus). Satellite services are used in places where terrestrial access is not available (for example, on ships at sea). High-end mobile phones provide access through the phone network.

Exercise 2.2. In pairs, discuss which of the internet systems (1-6) you would use to do the tasks (a-f). Then read Part II of the FAQs and check your answers.

1. Email	a) transfer files from the Internet to your hard drive
2. The Web	b) send a message to another person via the Internet
3.Newsgroups	c) have a live conversation (usually typed) online
4. Chat and IM	d) connect to a remote computer by entering instructions, and run a program on it
5. FTP	e) take part in public discussion areas devoted to specific topics
6. Telnet	f) download and view documents published on the Internet

Internet FAQs: Part II

Email

Email lets you exchange messages with people all over the world. Optional attached files can include text, pictures and even audio and animation. A mailing list uses email to communicate messages to all its subscribers - that is, everyone that belongs to the list.

Which email program is the best?

Outlook Express is a popular program, but many users use web-based email accounts such as Hotmail.

The Web

The Web consists of billions of documents living on web servers that use the HTTP protocol. You navigate through the Web using a program called a web browser, which lets you search, view and print web pages.

How often are web pages updated?

It depends entirely on the page. Some are updated thousands of times a day.

Chat and Instant Messaging (IM)

Chat and Instant Messaging technologies allow you to have real-time conversations online, by typing messages at the keyboard.

FTP

FTP, or file transfer protocol, is used to transfer files over a TCP/IP network. Nowadays, this feature is built into Web browsers. You can download programs, games and music files from a remote computer to your hard drive.

Telnet

Telnet is a protocol and a program used to log onto remote computer systems. It enables you to enter commands that will be executed as if you were entering them directly on the remote server.

Newsgroups

Newsgroups are the public discussion areas which make up a system called Usenet. The contents are contributed by people who post articles or respond to articles, creating chains of related postings called message threads. You need a newsreader to subscribe to newsgroups and to read and post messages. The newsreader may be a stand-alone program or part of a web browser.

How many newsgroups are there?

There are approximately 30,000 active newsgroups.

Where can you find newsgroups?

Your newsreader may allow you to download the newsgroup addresses that your ISP has included on its news server. An alternative to using a newsreader is to visit web forums instead, which perform the same function but without the additional software.

Exercise 2.3. Find words and phrases in Part II with the following meanings.

1. a system used to distribute email to many different subscribers at once (in Email paragraph)
2. a program used for displaying web pages (in The Web paragraph)
3. to connect to a computer by typing your username and password (in Telnet paragraph)
4. a series of interrelated messages on a given topic (in Newsgroups paragraph)
5. a program for reading Usenet newsgroups (in Newsgroups paragraph)

Language work: **Questions**

Exercise 3.1. I in pairs, make questions using these prompts. Then practise asking and answering the questions.

Example: *When / first / use the Internet When did you first use the Internet?*

1. What type of internet connection / have at home?
2. How fast / your internet connection?
3. How much / pay for broadband access?
4. How often / access the Internet?
5. Which email program / use?
6. Who/send email to?
7. Do / use your mobile phone to access the Internet?
8. Do / use the Internet in public spaces using Wi-Fi?
9. Do/play games online?
10. How many newsgroups / subscribe to?

Email features

Exercise 4.1. Read the text and find the following.

1. the place where your ISP stores your emails
2. the type of program used to read and send email from a computer
3. the part of an email address that identifies the user of the service
4. the line that describes the content of an email
5. the computer file which is sent along with an email message
6. facial symbols used to indicate an emotion or attitude
7. the name given to junk mail

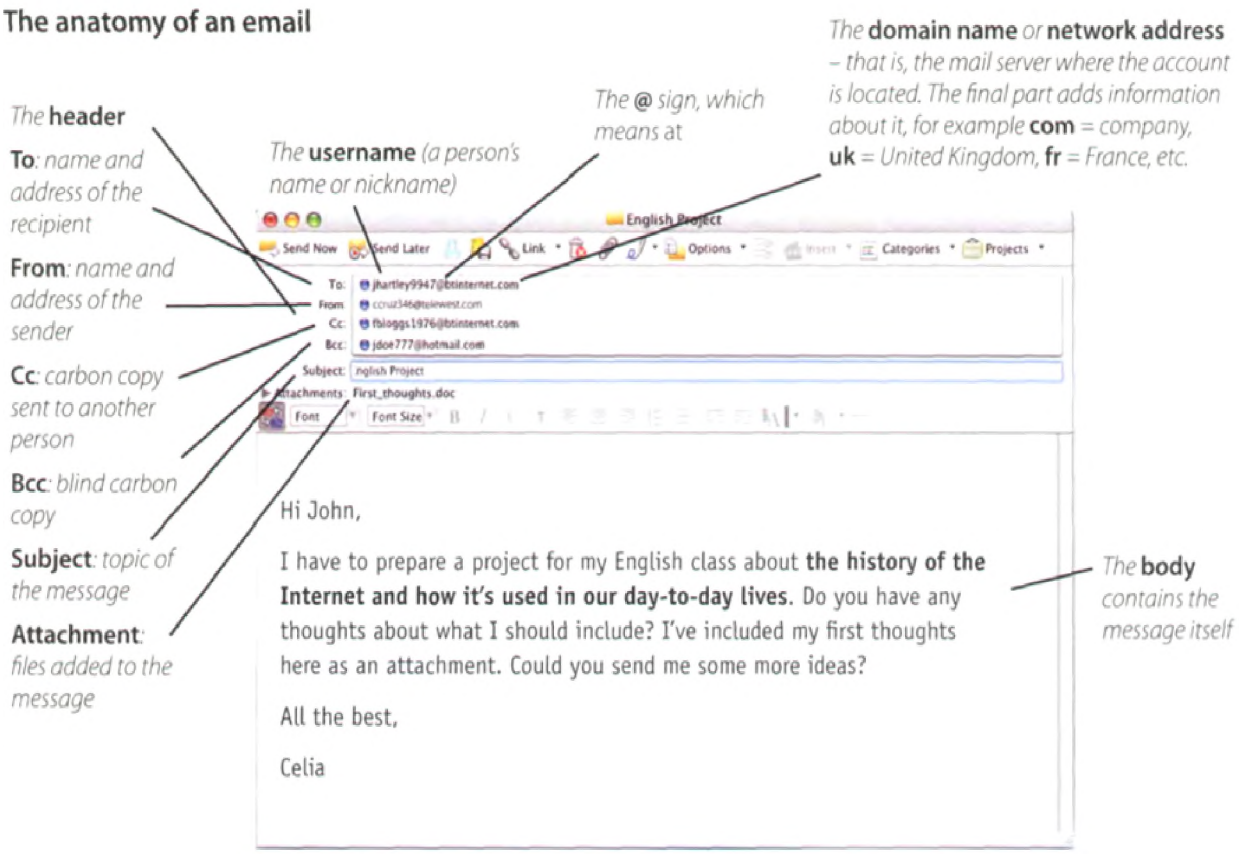
Email features

When you set up an account with an Internet Service. Provider, you are given an **emailaddress** and a **password**. The mail you receive is stored on the **mailserver** of your ISP - in a simulated mailbox - until you next connect and download it to your hard drive.

There are two ways to get email over the Internet. One is by using a **mail program** (known as an **email client**) installed on your computer, for example Eudora or Outlook Express. The other way is to use **web-based email**, accessible from any web browser. Hotmail and Gmail are good examples.

You can make the message more expressive by including **emoticons**, also called **smileys**.

For example, ;-) for wink, :-) for happy, :-o for surprised, :-D for laughing, etc. You may also like to add a signature file, a pre-written text file appended to the end of the message. The name given to unsolicited email messages is spam.



Exercise 4.2. Write a reply to Celia's email.

Unit 9 The Web

Vocabulary

to collaborate – сотрудничать
to browse – рассматривать, разглядывать
a cyberspace – киберпространство
to distribute – размещать, распределять, хранить
to encourage – способствовать, вовлекать
an engine – сервер, подсистема, механизм illegally – противозаконно
a judgement – обоснование, решение
to upload – пересылка, загрузка в главную систему
occasionally – периодически, изредка
a postcard – открытка
to refresh – обновить, переформатировать, актуализировать
virtual – виртуальный, ненастоящий, воображаемый
a username – логин, имя пользователя
a web page – интернет страница
world **w**ide **w**eb – 'Всемирная Паутина', глобальная гипертекстовая система Интернет

1 A typical web page

Exercise 1.1. Look at the screenshot of a typical web page. How many of the features (a-k) can you say in English?

A screenshot from Internet Explorer 7, a leading web browser.

Exercise 1.2. Read the text and label the features on the screenshot with the terms in bold.

A typical web page

At the top of the page is the **URL address**. URL means **U**niform **R**esource **L**ocator - the address of a file on the Internet. A typical URL looks like this: http://www.bbc.co.uk/radio/.

In this URL, *http//*means **H**ypertext **T**ransfer **P**rotocol and tells the program to look for a web page, *www* means **w**orld **w**ide **w**eb. *bbc.co.uk* is the domain name of the server that hosts the website - a company based in the UK; other top-level domains are *.com* (commercial site), *.edu* (education), *.org* (organization) or *.net* (network); radio is the directory path where the web page is located. The parts of the URL are separated by . (dot), / (slash) and : (colon). Some sites begin *ftp://* a **f**ile **t**ransfer **p**rotocol used to copy files from one computer to another.

The toolbar shows all the navigation icons, which let you **go back one page** or **go forward one page**. You can also **go to the home page** or **stop the current transfer** when the circuits are busy.

Tab buttons let you view different sites at the same time, and the built-in **search box** helps you look for information. If the **feed button** lights up, it means the site offers RSS feeds, so you can automatically receive updates. When a web page won't load, you can **refresh the current page**, meaning the page reloads (downloads again). If you want to mark a website address so that you can easily revisit the page at a later time, you can add it to your *favourites* (*favorites* in American English), or bookmark it. When you want to visit it again you simply click **show favourites**.

On the web page itself, most sites feature **clickableimage links** and **clickable hypertextlinks**. Together, these are known as *hyperlinks* and take you to other web pages when clicked.

Exercise 1.3. (T.12) Listen to three internet addresses and write them down.

1. _____
2. _____
3. _____

2 The collectives of cyberspace

Exercise 2.1. Read the article and find websites for the following tasks.

1. to search for information on the Web

2. to buy books and DVDs
3. to participate in political campaigns
4. to view and exchange video clips
5. to manage and share personal photos using tags
6. to buy and sell personal items in online auctions
7. to download music and movies, sometimes illegally

Tour the Collectives of Cyberspace

The Internet isn't just about email or the Web anymore. Increasingly, people online are taking the power of the Internet back into their own hands. They're posting opinions on online journals - weblogs, or blogs; they're organizing political rallies on **MoveOn.org**: they're trading songs on illegal file-sharing networks; they're volunteering articles for the online encyclopedia **Wikipedia**; and they're collaborating with other programmers around the world. It's the emergence of the 'Power of Us'. Thanks to new technologies such as blog software, peer-to-peer networks, open-source software, and wikis, people are getting together to take collective action like never before.

eBay, for instance, wouldn't exist without the 61 million active members who list, sell, and buy millions of items a week. But less obvious is that the whole marketplace runs on the trust created by eBay's unique feedback system, by which buyers and sellers rate each other on how well they carried out their half of each transaction. Pioneer e-tailer**Amazon** encourages all kinds of customer participation in the site - including the ability to sell items alongside its own books, CDs, DVDs and electronic goods. MySpace and Facebook are the latest phenomena in social networking, attracting millions of unique visitors a month. Many are music fans, who can blog, email friends, upload photos, and generally socialize. There's even a 3-D virtual world entirely built and owned by its residents, called **Second Life**, where real companies have opened shops, and pop stars such as U2 have performed concerts.

Some sites are much more specialized, such as the photo-sharing site **Flickr**. There, people not only share photos but also take the time to attach *tags* to their pictures, which help everyone else find photos of. for example, Florence, Italy.

Another successful example of a site based on user-generated content is **YouTube**, which allows users to upload, view and share movie clips and music videos, as well as amateur videoblogs. Another example of the collective power of the Internet is the **Google** search engine. Its mathematical formulas surf the combined judgements of millions of people whose websites link to other sites. When you type *Justin Timberlak*e into Google's search box and go to the star's official website, the site is listed first because more people are telling you it's the most relevant Justin Timberlake site – which it probably is.

Skype on the surface looks like software that lets you make free phone calls over the Internet - which it does. But the way it works is extremely clever By using Skype, you're automatically contributing some of your PC's computing power and Internet connection to route other people's calls. It's an extension of the peer-to-peer network software such as **BitTorrent** that allow you to swap songs - at your own risk if those songs are under copyright. BitTorrent is a protocol for transferring music, films, games and podcasts. A podcast is an audio 'ecording posted online. Podcasting derives from the words *iPod* and *broadcasting*.You can find podcasts about almost any topic - sports, music, politics, etc. They are distributed through RSS (Really Simple Syndication) feeds which allow you to receive up-to-date information without having to check the site for updates. Bit Torrent breaks the files into small pieces, known as chunks, and distributes them among a large number of users; when /OU download a torrent, you are also uploading it to another user

Adapted from BusinessWeek online

Exercise 2.2. Read the article again and match the sentence beginning (1-5) with the correct endings (a-e).

1. A weblog, or blog, is an electronic journal	a. web pages on a particular subject.
2. A peer-to-peer system allows	b. for downloading files over the Internet.
3. You can use a search engine to find	c. users to share files on their computers.
4. BitTorrent is a peer-to-peer protocol used	d. about fresh, new content on your favourite websites.
5. RSS keeps you constantly informed	e. that displays in chronological order the postings of one or more people.

Exercise 2.3. Find words in the article with the following meanings.

1. open-source, editable web pages;
2. the same as electronic retailer, or online store;
3. a blog that includes video;
4. a program that allows you to make voice and video calls from a computer;
5. an audio broadcast distributed over the Internet.

Exercise 2.4. Write a short article (80-120 words) for your school/university/work newsletter about the latest internet phenomena (MySpace, eBay, etc.).

Talk about any other sites you think are important or will be important in the future.

3 Language work: **Collocations 2**

A collocation is a pair or group of words that are often used together. For example, we say make phone calls, not do phone calls.

Here are some common types of collocation:

- verb + noun (see Unit 1)

surf the Web download music

- verb + particle

hack into o computer log onto a bank account

- adverb + adjective

highly sensitive information

freely available on the Web

- adjective + noun

mathematical formulas up-to-date information

The word online often collocates with other words and can function as adjective or adverb.

Adjective: They post opinions on online journals.

Adverb: A podcast is an audio recording posted online.

Exercise 3.1. Match the words on the left (1-6) with the words on the right (a-f) to make collocations.

There may be more than one possible answer.

1	online	a	friends
2	take	b	photos
3	email	c	action
4	upload	d	website
5	portable	e	encyclopedia
6	official	f	player

Exercise 2.2. In pairs, make sentences using the collocations above.

Exercise 2.3. Find the collocations in these sentences and say what type they are.

1. Once you are online, you can browse the Web, visit chat rooms or send and receive emails.
2. Instant messaging can be a great way to communicate with friends.
3. This software may not be fully compatible with older operating systems.
4. Most webcams plug into a USB port.
5. This highly addictive game will keep you playing for hours.
6. Companies are starting to use virtual reality on their websites.

4 E-commerce and online banking

Exercise 4.1. (T.13) Listen to two extracts from a monthly podcast called Money Matters. What is each speaker talking about?

Exercise 4.2. (T.13) Listen again and make notes under these headings.

Speaker 1:
Things people buy online _____
Steps for buying online _____
Precautions _____

Speaker 2:
Things you can do with online banking _____
Biggest issue with online banking _____
Precautions _____

Exercise 4.3. Complete the extracts with words from the box.

authorization	fake	internet auction	shopping cart	browse	log in	steal

1. Occasionally I also buy things on _____ sites such as eBay, where people offer and sell things to the highest bidder.
2. First you enter a site dedicated to e-commerce and _____ their products.
3. Then you put the items you want to buy into a virtual _____ - a program that lets you select the products and buy with a credit card.
4. You may have to _____ with a username and a password ...
5. ... for some transactions, you will be required to use a TAN, a transaction _____ number.
6. Be aware of phishing - you may receive _____ emails claiming to be from your bank and asking for personal information or account details in an attempt to _____ your identity.

Exercise 4.4. (T.13) Listen again and check your answers.

Language work: the prefixes **e-** and **cyber-**

The prefixes **e-** and **cyber-**

- The **e-** prefix means *electronic*, and we add it to activities that take place on computers or online, for example **e-business/e-commerce** - business conducted over the Internet. Other examples include: **e-card, e-learning, e-zine, e-voting, e-signature, e-assessment, e-cash, e-book** and **e-pal**

There are often spelling variations, with or without a hyphen, so always check your dictionary.

- The **cyber-** prefix comes from *cybernetics*, and we use it to describe things related to computer networks, for example **cybercafe** - an internet cafe. Other examples include: **cybercrime, cyberculture, cyberslacker** and **cyberspace**

Exercise 5.1. Complete these sentences.

1. A _____ is an employee who uses his company's internet connection during work hours to chat with friends, play games, etc.
2. An _____ is a postcard sent via the Internet.

3. An _____ is a small magazine or newsletter published online.

4. In a _____ you can use computers with internet access for a fee.

5. Examples of _____ include internet fraud, digital piracy, theft of confidential information, etc.

6. In the future, all elections will be carried out using _____ .

7. You can now sign legal documents online using an _____ .

8. _____ will revolutionise the way we take exams.

9. _____ can be used on some websites instead of real money to make purchases. It reduces the risk of fraud.

10. An _____ is like the paper version, but in digital form.

6 What do you use the Web for?

Exercise 6.1. In pairs, discuss these questions. Give reasons for your answers.

1. What is your favourite search engine to find information on the Web? Why?

2. Do you download music or video clips from the Web? Do you pay for them?

3. Do you buy things online? Is it better to buy online or go to a shop?

4. Have you ever listened to the radio or watched TV online?

5. Do you use the Web to do school/university assignments or projects? How?

Unit 10 Chat and conferencing

Vocabulary

an abbreviation – сокращение

bulletin – бюллетень, сводка, доска объявлений

chat conferencing – диалоговое взаимодействие с кем-либо в режиме реального времени (по интернету)

cheap – дешёвый, плохой

a conversation – диалог, разговор, канал, сеанс

to desire – желать

to eliminate – устранять, сокращать, отменять, удалять

Thanks in advance. – Заранее спасибо.

immediately – немедленно, тотчас

a netiquette – сетевой этикет (сетикет, нетикет) – правила поведения, общения в Сети, традиции и культура интернет-сообщества, которых придерживается большинство

a participant – участник, пользователь

a recommendation – рекомендации, указания

to support – обеспечение, служба поддержки, справочная информация

1 Online chatting

Exercise 1.1. In pairs, discuss these questions.

1. What is your favourite way to chat on the Internet?
2. How much time do you spend chatting?
3. Do you give out personal details in chat rooms? Why should you be careful about this?

2 Virtual meetings

Exercise 2.1. Read the text and match the headings (1-5) with the gaps at the start of each paragraph (a-e).

1. Cheap calls over the Internet

2. Virtual worlds and online communities
3. Chat rooms on the Web: join the crowd!
4. Real-time videoconferencing
5. Private chats with IM services

Virtual meetings

a _____

Imagine you want to assemble a group of people from around the world for a brainstorming session. Conferencing programs such as NetMeeting or CU- SeeMe allow virtual workgroups to communicate via the Internet. To videoconference, you'll need a webcam. Participants see each other's faces in small windows on their monitors and hear each other's voices on the computer speakers. You can use just audio, video and audio simultaneously, or the screen-sharing capability to collaborate on documents without audio or video.

b _____

Internet telephony, also known as VoIP (Voice over Internet Protocol), almost eliminates long-distance phone charges, allowing you to call nearly anywhere in the world for the price of a local call. If you have flat-rate internet access, you can't beat the price - it's practically free.

With internet telephony, you can make a voice call from your computer to another person's computer, landline, or mobile phone. You can download telephony software such as Skype or Net2Phone from the Net, and it’s even free!

c _____

People also use more traditional chat conferencing or bulletin board systems (BBSs) to communicate online. Note that during chat sessions, participants type messages to each other rather than communicate by voice. Chat software can be used on the Web with your browser to conduct online chat sessions with other users and can accommodate between 50 and 1,000 users simultaneously. Some companies even use chat conferencing on their websites to facilitate communication with customers.

d _____

Chat rooms can be good venues to meet people and discuss topics of mutual interest. But what if you want to chat privately with a friend, family member or business colleague? Then Instant Messaging, or IM, is the way to go. Many IM services now offer audio and video capabilities, so if you have a microphone and a webcam, you can chat and see who you're talking to. The four most popular IM services are ICQ and AIM (from AOL), Windows Live Messenger, and Yahoo! Messenger. They all work similarly. First, you enrol in the service by creating a username - which is also your screen name - and a password. Next, you build what

is known as a buddy list - a list of people that you want to communicate with. When any of the contacts on your list is online, you can start a private chat with that person.

How do you know who's online? When you launch your IM software, it connects with the service's IM server and logs you on. The server checks your buddy list to see if any of your contacts are also logged on. Your list updates to show who is currently online. By clicking on a name you can send text-based messages to that person. After you type your note and click on the Send button, the message travels to the IM server, then immediately forwards to your buddy's computer. This all happens in real time - instantly.

e _____

You can also chat in incredible 3-D worlds that are built by other users, for example Second Life. In these virtual reality environments you can play 3-D games and interact with other users via avatar identities. Avatars are 3-D graphical representations of the participants.

Exercise 2.2. Read the text again and answer these questions.

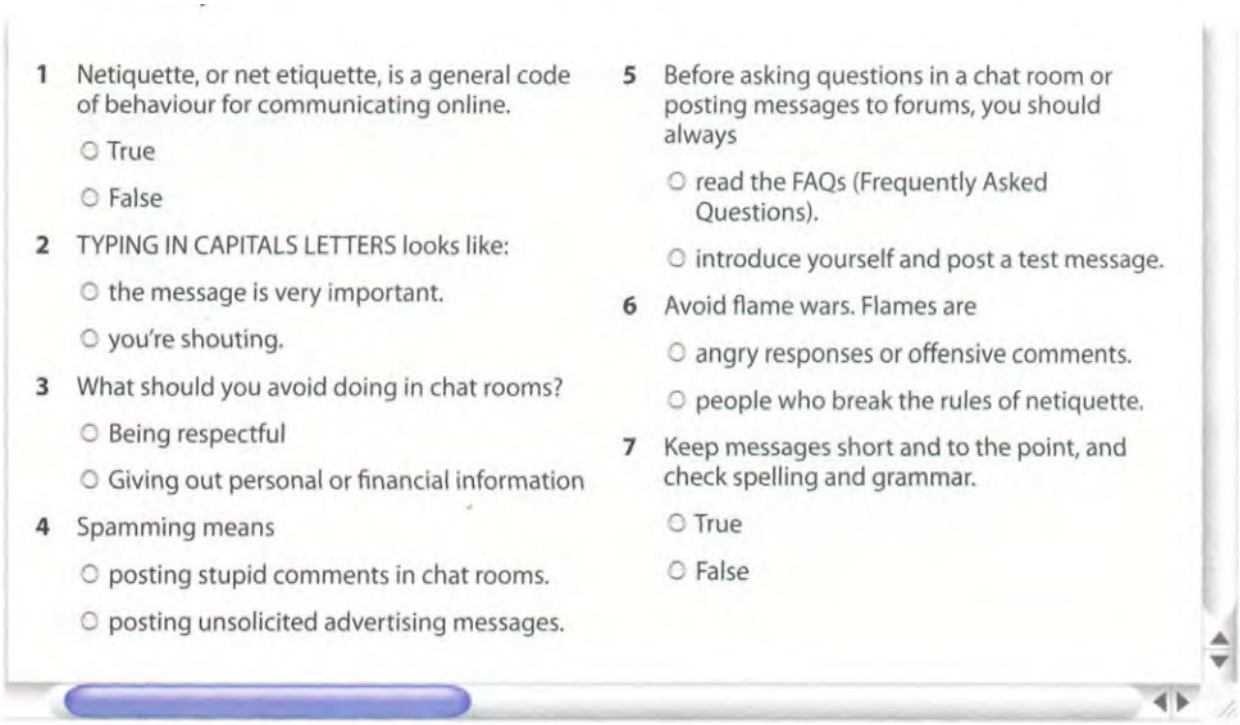
1. Why is videoconferencing so useful for virtual workgroups?
2. What special hardware and software do you need to videoconference?
3. Which technology enables people to make phone calls over the Internet?
4. What is the difference between web chat rooms and Instant Messaging?
5. How do you log on to an IM server?

Exercise 2.3. Find terms in the text with the following meanings.

1. at a fixed price
2. a central system that provides information about whether users are online and passes instant messages between them
3. a friend list or contact list
4. happening immediately and without delay
5. artificial reality; a 3-D space generated by the computer
6. characters used when interacting with people online

3 Netiquette

Exercise 3.1. In pairs, do this netiquette quiz. Read about netiquette rules on the Web if necessary.



1 Netiquette, or net etiquette, is a general code of behaviour for communicating online.
- ○ True
- ○ False

2 TYPING IN CAPITALS LETTERS looks like:
- ○ the message is very important.
- ○ you're shouting.

3 What should you avoid doing in chat rooms?
- ○ Being respectful
- ○ Giving out personal or financial information

4 Spamming means
- ○ posting stupid comments in chat rooms.
- ○ posting unsolicited advertising messages.

5 Before asking questions in a chat room or posting messages to forums, you should always
- ○ read the FAQs (Frequently Asked Questions).
- ○ introduce yourself and post a test message.

6 Avoid flame wars. Flames are
- ○ angry responses or offensive comments.
- ○ people who break the rules of netiquette.

7 Keep messages short and to the point, and check spelling and grammar.
- ○ True
- ○ False

Exercise 3.2. Have you ever experienced bad netiquette? Tell your partner what happened.

4 R u free 4 a chat?

Exercise 4.1. Rewrite this IM chat, using full forms instead of abbreviations. Then look at the 'Chat abbreviations' to check your answers.

Abby: BTW, where r u going for ur holiday?
By the way, where are you going for your holiday?
Sue: Girona. Have u been?
Abby: Yes. I went 2 Girona last summer.
Sue: Did u have a good time?
Abby: It's great, IMO. How ru going 2 travel?
Sue: We're flying.
Abby: Where r u staying?
Sue: In a youth hostel.
Abby: IC. IOW, the cheapest place possible!
Sue: LOL! Yes. BTW, any recommendations?
Abby: Let me think. I'll send u a msg ASAP.
Sue: TIA!
Abby: Got 2 go. BFN!

Chat abbreviations

We often use abbreviations in online chats and Instant Messaging. Some common examples are:

ASAP As soon as possible
BBS Be back soon
BFN Bye for now
BTW By the way
F2F Face to face
GL Good luck
H&K Hug and kiss
IC I see
ILU I love you
IMO In my opinion
IOW In other words
LOL Laughing out loud
TIA Thanks in advance
msg Message
ur your/you're
2 to
4 for
b be
c see
r are
u you

It's OK to use chat abbreviations, but try not to rely on them too much - they can make a conversation difficult to follow. They are also very informal.

Exercise 4.2. Rewrite this IM chat using abbreviations.

Paulo: By the way, are you free on Saturday?
Emma: Sure – it would be good to meet face to face. Shall we go for a coffee?
Paulo: Good plan. Cafe Moka makes the best coffee, in my opinion
Emma: It's the closest to your house in other words!
Paulo: Laughing out loud! Yes, you're right! But the coffee really is good.
Emma: See you at 4?
Paulo: Great. Bye for now.

Exercise 4.3. In pairs, practice having an online conversation. Write a short note and give it to your partner. Use abbreviations as necessary. Your partner will write a short response and give it back to you. Continue the conversation and try not to talk. Choose one of these topics.

- Your plans for the weekend
- What you did last night
- Your holiday plans
- What happened at school/work today
- Music/TV/The Web

Exercise 4.4. In pairs, discuss these questions. Give reasons for your answers.

1. Which program do you use to chat with friends?
2. Do you use abbreviations when you chat online or when you send text messages?
3. Do you use voice or video while chatting? How?
4. Have you ever used the Internet to make cheap calls?
5. Does Instant Messaging distract you from work?
6. Do you use your real name or a nickname in chat rooms?
7. Do you talk to strangers during web chats? Why shouldn't you?
8. Would you ever go on a date with somebody you'd met on the Net?

Computer Dating www.CartoonStock.com

5 Customer service

Exercise 5.1. (T.14) Listen to a phone call to a company IT help desk. Choose the correct answer a, b or c, to the questions.

1. What is Tuka's problem?

a) can't print out

b) has lost files

c) is not connected to the network

2. How does Tuka sound?
a) worried
b) angry
c) tired

3. What is the possible cause of the problem?
a) a hardware upgrade
b) a server problem
c) a software upgrade

4. What is the help desk technician's first suggestion?
a) go to a folder on the server
b) go a folder on the desktop
c) go to a folder on the C drive

5. What is the help desk technician's second suggestion?
a) Ye will call back in five minutes.
b) He will come down to Tuka's office.
c) He will get help from someone else.

Exercise 5.2. Listen again and complete the technician's sentences.

1. How can I _____you?
2. I _____ .
3. I'm _____ we can find your file.
4. _____ go to the search box … .
5. Good _____ .

Exercise 5.3. Work in pairs.

Write a short dialogue between an IT help desk technician and a colleague about a software or hardware problem.

Unit 11 Internet security

Vocabulary

a certificate – сертификат, удостоверение
to corrupt – разрушать, повреждать, искажать данные
a cybercrime – компьютерное, преступление, мошенничество
an encryption – зашифрование, кодирование, шифрование
indecent – неподобающий, неприличный
to infect – влиять, заражать
to infiltrate – проникать, пропускать
a freeware – бесплатное, свободно распространяемое программное обеспечение
a malware – вредоносные программные средства
an alert – оповещение, предупреждение о возможной ошибке
padlock – замок, блокировать
a permission – разрешение, права доступа, полномочия
a spyware – шпионское ПО
a privacy – конфиденциальность, приватность
a plagiarism – плагиат, заимствование
a transaction – операция, проводка, входное сообщение
a technique – умение, средство, технологическая основа

1 On alert

Exercise 1.1. In pairs, discuss these questions.

1 What is a hacker?

2 How easy do you think it is to infiltrate the Internet and steal sensitive information?

3 How can you protect your computer from viruses and spyware?

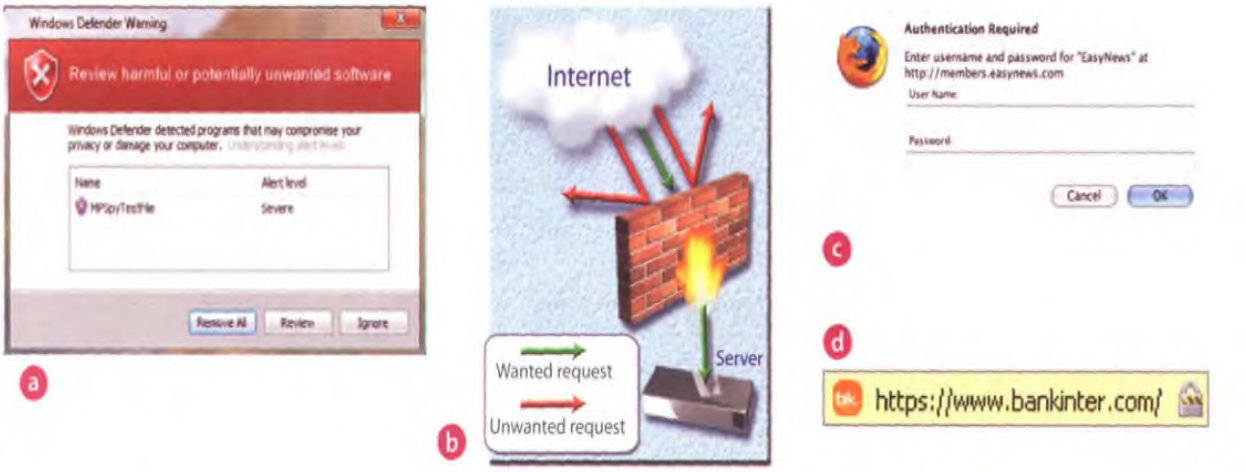
Exercise 1.2. Match the captions (1-4) with the pictures (a-d).

1. A secure website can be recognized in two ways: the address bar shows the letters https and a closed padlock or key is displayed at the bottom of the screen.

2. You have to type your username and password to access a locked computer system.

3. This program displays a message when it detects spyware and other unwanted software that may compromise your privacy or damage your computer.

4. Private networks use a software and/or hardware mechanism called a firewall to block unauthorized traffic from the Internet.



2 Security and privacy on the Internet

Exercise 2.1. Read the text quickly and see how many of your ideas from Ex.1.1. questions are mentioned.

Exercise 2.2. Read the text more carefully and answer these questions.

1. Why is security so important on the Internet?
2. What security features are offered by Mozilla Firefox?
3. What security protocol is used by banks to make online transactions secure?
4. How can we protect our email and keep it private?
5. What methods are used by companies to make internal networks secure?
6. In what ways can a virus enter a computer system?
7. How does a worm spread itself?

Security and privacy on the Internet

There are many benefits from an open system like the Internet, but one of the risks is that we are often exposed to **hackers**, who break into computer systems

just for fun, to steal information, or to spread viruses (see note below). So how do we go about making our online transactions secure?

Security on the Web

Security is crucial when you send confidential information online. Consider, for example, the process of buying a book on the Web. You have to type your credit card number into an order form which passes from computer to computer on its way to the online bookstore. If one of the intermediary computers is infiltrated by hackers, your data can be copied.

To avoid risks, you should set all security alerts to high on your web browser. Mozilla Firefox displays a lock when the website is secure and allows you to disable or delete **cookies** - small files placed on your hard drive by web servers so that they can recognize your PC when you return to their site.

If you use online banking services, make sure they use **digital certificates** - files that are like digital identification cards and that identify users and web servers. Also be sure to use a browser that is compliant with **SSL** (Secure Sockets Layer), a protocol which provides secure transactions.

Email privacy

Similarly, as your email travels across the Net, it is copied temporarily onto many computers in between. This means that it can be read by people who illegally enter computer systems.

The only way to protect a message is to put it in a sort of virtual envelope - that is, to encode it with some form of **encryption**. A system designed to send email privately is Pretty Good Privacy, a **freeware** program written by Phil Zimmerman.

Network security

Private networks can be attacked by intruders who attempt to obtain information such as Social Security numbers, bank accounts or research and business reports. To protect crucial data, companies hire security consultants who analyse the risks and provide solutions. The most common methods of protection are **passwords** for access control, **firewalls**, and **encryption** and **decryption** systems. Encryption changes data into a secret code so that only someone with a key can read it. Decryption converts encrypted data back into its original form.

Malware protection

Malware (malicious software) are programs designed to infiltrate or damage your computer, for example **viruses**, **worms, Trojans** and **spyware**. A virus can enter a PC via a disc drive - if you insert an infected disc - or via the Internet. A worm is a self-copying program that spreads through email attachments; it replicates itself and sends a copy to everyone in an address book. A Trojan horse is disguised as a useful program; it may affect data security. Spyware collects

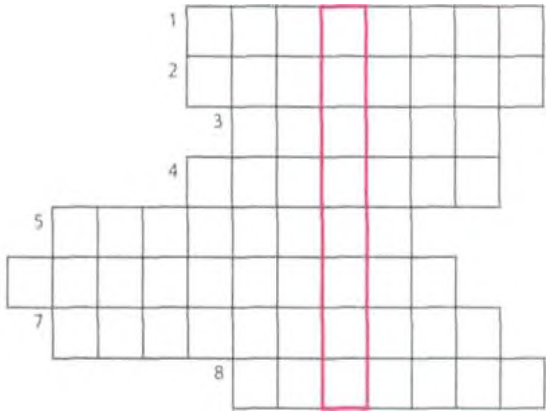
information from your PC without your consent. Most spyware and adware (software that allows pop-ups - that is, advertisements that suddenly appear on your screen) is included with 'free' downloads.

If you want to protect your PC, don't open email attachments from strangers and take care when downloading files from the Web. Remember to update your **anti-virus software** as often as possible, since new viruses are being created all the time.

Note: Originally, all computer enthusiasts and skilled programmers were known as **hackers**, but during the 1990s, the term hacker became synonymous with **cracker** - a person who uses technology for criminal aims. Nowadays, people often use the word hacker to mean both things. In the computer industry, hackers are known as white hats and crackers are called black hats or darkside hackers.

Exercise 2.3. Solve the clues and complete the puzzle.

1. Users have to enter a _____ to gain access to a network.
2. A _____ protects a company intranet from outside attacks.
3. A _____ is a person who uses their computer skills to enter computers and networks illegally.
4. _____ can infect your files and corrupt your hard drive.
5. You can download _____ from the Net; this type of software is available free of charge but protected by copyright.
6. Encoding data so that unauthorized users can't read it is known as _____.
7. This company uses _____ techniques to decode (or decipher) secret data.
8. Most _____ is designed to obtain personal information without the user's permission.



3 Safety online for children

Exercise 3.1. (T.15) Listen to an interview with Diana Wilson, a member of the Internet Safety Foundation. Which answers (a or b) best describe what she says?

1. Parents should make children aware of
a) the benefits and risks of the Internet.
b) the risks of the Internet.

2. A web filter program can be used to

a) prevent access to sites with inappropriate content.

b) rate web content with labels (similar to the way movies are rated).

3. If kids spend too much time online or suffer from internet addiction, parents should

a) stop them using the Internet.

b) look for help from specialists.

Exercise 3.2. (T.15) Listen again and complete the interviewer's notes.

Risks:

Manipulation of children

Invasions of (l) _____

Distribution of indecent or (2) _____ material

Violence and racist (3) _____

Solutions:

There are websites (4) _____ at children.

Internet (5) _____ programs let parents block objectionable websites.

Websites should (6) _____ their content with a label, from child-friendly to over 18 only.

4 The history of hacking

Exercise 4.1. Read Part I of the text and answer these questions.

1. Which hacking case inspired the film War Games?
2. When did Captain Zap hack into the Pentagon?
3. Why was Nicholas Whitely arrested in 1988?
4. How old was the hacker that broke into the US defence computer in 1989?

The history of hacking - Part I

1971 - John Draper discovered that a whistle offered in boxes of Cap'n Crunch breakfast cereal perfectly generated the 2,600Hz signal used by the AT&T phone company. He started to make free calls. He was arrested in 1972 but wasn't sent to prison.

1974 - Kevin Mitnick, a legend among hackers, began hacking into banking networks and altering the credit reports of his enemies. He didn't expect that his most famous exploit - hacking into the North American Defense Command in Colorado Springs - would inspire the film War Games in 1983.

1981 - Ian Murphy, a 23-year-old known as Captain Zap on the networks, hacked into the White House and the Pentagon.

1987 -The IBM international network was paralysed by a hacker's Christmas message.

1988 - The Union Bank of Switzerland almost lost £32 million to hackers. Nicholas Whitely was arrested in connection with virus spreading.

1989 - A fifteen-year-old hacker cracked the US defence computer.

1991 - Kevin Poulsen, known as Dark Dante on the networks, was accused of stealing military files.

Exercise 4.2. In pairs, discuss which of the cases in Part I you had heard of. Which do you think is the most important?

Exercise 4.3. Complete Part II of the text with the past simple form of the verbs in the box.

show spread steal launch attempt overwrite be infect affect

The history of hacking - Part II

1992 - David L Smith (1) ____ prosecuted for writing the Melissa virus, which was passed inWord files sent via email.

1997 - The German Chaos Computer Club (2) ____ on TV how to obtain money frombank accounts.

2000 - A Russian hacker (3) ____ to extort $100,000 from online music retailer CD Universe.A Canadian hacker (4) ____ a massive *denial of service* attack against websites likeYahoo! and Amazon.

The *ILoveYou* virus, cleverly disguised as a love letter, (5) ____ so quickly that emailhad to be shut down in many companies. The worm (6) ____ image and sound fileswith a copy of itself.

2001 - The Code Red worm (7) ____ tens of thousands of machines.

2006 - Hackers (8) ____ the credit card details of almost 20,000 AT&T online customers.However, subscribers to its service (9) (not) ____ .

Exercise 4.4. Read these landmarks in the history of the Internet and prepare at least five questions in the past simple.

Example: What happened in 1969? What did Ray Tomlinson do in 1971?

1969– The US Defense Department establishes ARPANET, a network connecting research centres.

1971 – Ray Tomlinson of BBN invents an email program to send messages across a network. The @ sign is chosen for its at meaning.

1981- IBM sells the first IBM PC. BITNET provides email and file transfers to universities.

1982 - TCP/IP is adopted as the standard language of the Internet.

1988 - Jarkko Oikarinen develops the system known as Internet Relay Chat (IRC).

1991 - CERN *(*Conseil Europeen pour la Recherche Nudeaire) creates the World Wide Web.

1998 - The Internet 2 network is born. It can handle data and video at high speed but is not a public network.

1999 -Online banking, e-commerce and MP3 music become popular.

2001 - Napster, whose software allows users to share downloaded music, maintains that it does not perpetrate or encourage music piracy. However, a judge rules that Napster's technology is an infringement of music copyright.

2004 - Network Solutions begins offering 100-year domain registration.

2006 - Americans spend over S100 billion shopping online.

Exercise 4.5. In pairs, ask and answer your questions.

Internet issues

Cybercrimes

- **Piracy** - the illegal copy and distribution of copyrighted software, games or music files
- **Plagiarism** and **theft of intellectual property** pretending that someone else's work is your own
- **Spreading of malicious software**
- **Phishing** (**p**assword **h**arvesting f**ishing)** - getting passwords for online bank accounts or credit card numbers by using emails that look like they are from real organizations, but are in fact fake; people believe the message is from their bank and send their security details
- **IP spoofing** - making one computer look like another in order to gain unauthorized access
- **Cyberstalking** - online harassment or abuse, mainly in chat rooms or newsgroups
- **Distribution of indecent or offensive material**

Exercise 5.1. In small groups, look at the list of cybercrimes and discuss these questions.

1. Which crimes are the most dangerous?
2. Is it fair or unfair to pay for the songs, videos, books or articles that you download? Should copyright infringement be allowed online?
3. What measures can be taken by governments to stop cybercrime?
4. Do you think governments have the right to censor material on the Internet?
5. Personal information such as our address, salary, and civil and criminal records is held in databases by marketing companies. Is our privacy in danger?

Exercise 5.2. Write a summary of your discussion on PowerPoint and present it to the rest of the class

Irregular verbs

These are the most important irregular verbs. They can be divided into the following groups (A-E):

A All three forms the same

Base	Past simple	Past participle
bet	bet	bet
cost	cost	cost
cut	cut	cut
hit	hit	hit
hurt	hurt	hurt
set	set	set
let	let	let
put	put	put
shut	shut	shut
spread	spread	spread
read	read /red/	read /red/

B Base= Past simple

Base	Past simple	Past participle
beat	beat	beaten

C Past simple = Past participle

Base	Past simple	Past participle
bend	bent	bent
bleed	bled	bled
bring	brought	brought
build	built	built
buy	bought	bought
catch	caught	caught
deal	dealt	dealt
feed	fed	fed
feel	felt	felt
fight	fought	fought
find	found	found
get	got	got
hang	hung	hung
have	had	had

C Past simple = Past participle cont.

Base	Past simple	Past participle
hear	heard	heard
hold	held	held
keep	kept	kept
lay	laid	laid
lead	led	led
learn	learnt	learnt
leave	left	left
lend	lent	lent
light	lit	lit
lose	lost	lost
make	made	made
mean	meant	meant
meet	met	met
pay	paid	paid
say	said	said
sell	sold	sold
send	sent	sent
shine	shone	shone
shoot	shot	shot
sit	sat	sat
sleep	slept	slept
spend	spent	spent
stand	stood	stood
stick	stuck	stuck
strike	struck	struck
sweep	swept	swept
teach	taught	taught
tell	told	told
think	thought	thought
understand	understood	understood
win	won	won

Acronyms and abbreviations

ADSL Asymmetric Digital Subscriber Line
Al Artificial Intelligence
AIM AOL Instant Messenger
ALU Arithmetic Logic Unit
AMD Advanced Micro Devices
ASCII American Standard Code for Information Interchange
AT&T American Telephone & Telegraph company
ATA Analogue Telephone Adaptor
ATM Automated Teller Machine
AVI Audio Video Interface
BASIC Beginner's All-purpose Symbolic Instruction Code
BBS Bulletin Board System Bcc: Blind carbon (or courtesy) copy
BIOS Basic Input/Output System
bit binary digit
bps bits per second
CAD Computer-Aided Design
Cc: Carbon (or courtesy) copy
CCD Charge-Coupled Devices
CD Compact Disc **c**
d/m2 Candela per square meter
CD-R Compact Disc-Recordable
CD-ROM Compact Disc-Read Only Memory
CD-RW Compact Disc-Rewritable
COBOL COmmon Business- Oriented Language
CPU Central Processing Unit
CRT Cathode Ray Tube
CSS Cascading Style Sheets
CTP Computer to Plate
CU Control Unit
DAB Digital Audio Broadcasting
DAW Digital Audio Workstation
DBMS Database Management System
DDR Double Data Rate (RAM)
DIMM Dual In-line Memory Module
DLP Digital-Light processing
DMB Digital Multimedia Broadcasting
DNS Domain Name System
dpi dots per inch
DTP Desktop Publishing
DTTV Digital Terrestrial television
DVB-H Digital Video Broadcast- Handheld
DVD-/+RW Digital Versatile Disc- Rewritable
DVD Digital Versatile Disc or Digital Video Disc

DVD-R Digital Versatile Disc Recordable
DVD-ROM Digital Versatile Disc-Read Only Memory
DVI Digital Video Interface
EEPROM Electrically Erasable Programmable ROM
EPS Encapsulated PostScript
FAQ frequently Asked Questions
FORTRAN FORmula TRANslation
FTP File Transfer Protocol
GB Gigabyte (1,024 megabytes)
GHz Gigahertz
GIF Graphic Interchange Format
GIS Geographic Information System
GNU Gnu's Not UNIX
GPS Global Positioning System
GSM Global System for Mobile communication
GUI Graphical User Interface
HDD Hard Disk Drive
HD-DVD High Definition-Digital Versatile Disk
HDTV High-definition 'Television
HP Hewlett-Packard
HTML Hypertext Markup Language
HTTP Hypertext Transfer Protocol
Hz Hertz
I/O Input/Output
IBM International Business Machines
ICQ I Seek You
ICT Information and Communications Technologies
IM Instant Messaging
IP Internet Protocol
IR Instruction Register
IrDA Infrared Data Association
ISP Internet Service Provider
IT Information technology
JPG (or JPEG) Joint Photographic Experts Group
κ 1 kilo, used to denote a thousand; 2 1,024 bytes
KB kilobyte (1,024 bytes)
LAN Local Area Network
Laser Light Amplification by Stimulated Emission of Radiation
LCD Liquid-Crystal Display
LISP LISt Processing
.mov QuickTime movie
Mac Macintosh computer
MAN Metropolitan Area Network
MB Megabyte (1,024 kilobytes)
MHz Megahertz

MIDI Musical Instrument Digital Interface
MIPS Million Instructions Per Second
MMS Multimedia messages
Modem MOdulator/DEModulator MP3 MPEG-1 Layer-3 Audio
MPEG Moving Pictures Experts Group
ms millisecond
NIC Network Interface Card
NUI Network User Identifier
OCR Optical Character Recognition
OLE Microsoft's Object Linking and Embedding standard
OLED Organic Light-Emitting Diodes (display)
OOP Object Oriented Programming
OS Operating System
. pdf portable document format
PAN Personal Area Network
PC I Personal Computer; 2 Program Counter
PCL Printer Control Language
PDA Personal Digital Assistant
PDL Page Description Language
PGP Pretty Good Privacy
PIN Personal Identification Number
pixel picture element
png portable network graphic
ppm pages per minute
PPP Point to Point Protocol
.ra RealAudio file
RAM Random Access Memory
RGB Red, Green, Blue
RFID Radio-Frequency identification
RIM Research In Motion
RIP Raster Image Processor
RISC Reduced Instruction Set Computer
ROM Read Only Memory
rpm revolutions per minute
RSI repetitive strain injury
RSS Really Simple Syndicati Rich Site Summary
SDRAM Synchronous Dyn, Random Access Memory
SIM (card) Subscriber Idenl Module
SMS Short Message Service
SMTP Simple Mail Transfer Protocol
SQL Structured Query Language
SSL Secure Sockets Layer
SXGA Super XGA (Extendec Graphics Array)
TAN Transaction Authorizat Number
TB Terabyte (1,024 gigabytes)

TCP/IP Transmission Control Protocol / Internet Protocol
TFT Thin Film Transistor
TIFF Tagged Image File Format
UMTS Universal Mobile Telecommunications Systen
URL Uniform Resource Locator
USB Universal Serial Bus
VAT Value Added Tax
VCR Videocassette Recorder
VDU Visual Display Unit
VGA Video Graphics Array
VoiceXML Voice Extensible Language
VoIP Voice over Internet Prc
VRML Virtual Reality Modelling Markup) Language
.wav Windows wave audio f
W3 See **Web** in Glossary
WAI Web Accessibility Initiation
WAN Wide Area Network
WAP 1 wireless access point 2 Wireless Application Protocol
Wi-Fi Wireless Fidelity
WiMAX Worldwide Interope for Microwave Access
WIMP Window, Icon, Menu (mouse) and Pointer
WP Word Processing
WWW World Wide Web
WYSIWYG What You See Is V You Get
XGA Extended Graphics Array
XML Extensible Markup Lane
WXGA Wide XGA (Extended Graphics Array)

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