

Chapter II: Types of computer systems

I/ Warm-up

Match the words from the box with the different types of computers

laptop desktop PC PDA mainframe tablet PC



a



b



c



d



e

II/ Reading

From mainframes to wearable computers



A **mainframe** is the most powerful type of computer. It can process and store large amounts of data. It supports multiple users at the same time and can support more simultaneous processes than a PC. The central system is a large server connected to hundreds of terminals over a network. Mainframes are used for large-scale computing purposes in banks, big companies and universities.



A **desktop PC** has its own processing unit (or CPU), monitor and keyboard. It is used as a personal computer in the home or as a workstation for group work. Typical examples are the IBM PC and the Apple Macintosh. It's designed to be placed on your desk. Some models have a vertical case called a tower.



A **laptop** (also called a **notebook PC**) is a lightweight computer that you can transport easily. It can work as fast as a desktop PC, with similar processors, memory capacity, and disk drives, but it is portable and has a smaller screen. Modern notebooks have a **TFT** (Thin Film Transistor) screen that produces very sharp images.

Instead of a mouse, they have a **touchpad** built into the keyboard – a sensitive pad that you can touch to move the pointer on the screen.

They offer a lot of connectivity options: **USB** (Universal Serial Bus) **ports** for connecting peripherals, slots for memory cards, etc.

They come with **battery packs**, which let you use the computer when there are no electrical outlets available.



A **tablet PC** looks like a book, with an LCD screen on which you can write using a special digital pen. You can fold and rotate the screen 180 degrees. Your handwriting can be recognized and converted into editable text. You can also type at the detached keyboard or use voice recognition. It's mobile and versatile.



A **personal digital assistant** or **PDA** is a tiny computer which can be held in one hand. The term PDA refers to a wide variety of **hand-held** devices, palmtops and pocket PCs.

For input, you type at a small keyboard or use a **stylus** – a special pen used with a **touch screen** to select items, draw pictures, etc. Some models incorporate **handwriting recognition**, which enables a PDA to recognize characters written by hand. Some PDAs recognize spoken words by using **voice recognition** software.

They can be used as mobile phones or as personal organizers for storing notes, reminders and addresses. They also let you access the Internet via **wireless technology**, without cables.



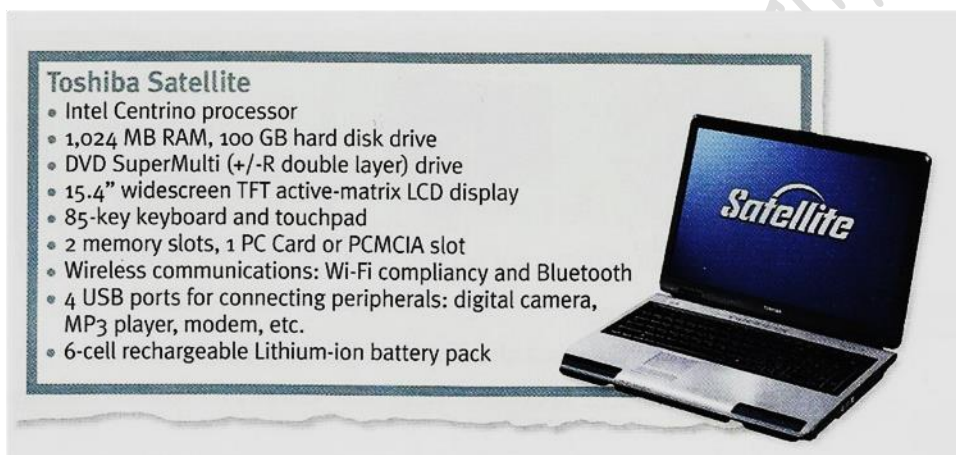
A **wearable computer** runs on batteries and is worn on the user's body, e.g. on a belt, backpack or vest; it is designed for mobile or hands-free operation. Some devices are equipped with a wireless modem, a small keyboard and a screen; others are voice-activated and can access email or voice mail.

A/ Read the text above and decide which type of computer these descriptions refer to.

1. A hand-held computer which can be used as a telephone, a web explorer and a personal organizer.
2. A typical computer found in many businesses and popular for home use.

3. A large computer used for intensive data processing and often linked to many terminals.
4. A small computer that fits into items of clothing.
5. A portable computer that can be closed up like a briefcase, but it can be as powerful as a desktop PC.
6. A full-function PC, though it only weighs 1.2 kg- you can go to a meeting and write your notes on it, like a paper notepad; its screen mode can be changed from portrait to landscape.

B/ Look at the computer advertisement and find the adequate information



1. What type of computer is advertised?
2. What kind of screen does it have?
3. Which pointing device replaces the mouse?
4. What type of ports does it have to connect cameras and music players?
5. What sort of power supply does it use?

C/ Read the text again and complete the following interview with Adam Hawkins, an IT manager, on the PDA.

Interviewer: What are the basic features of a PDA?

Adam: Well, a typical PDA is a 1.....device that runs on batteries and combines computing, phone and Net capabilities.

Interviewer: And how do you enter information?

Adam: For input, you use a 2.....or pen to write and make selections on a 3..... they also have buttons for launching programs. Some models have a small keyboard. They may have a 4.....
.....system that reacts to the user's voice.

Interviewer: Do they need special software?

Adam : Yes, most of them run on *Windows Mobile*. Palmtops supported by Palm Inc. use *Palm OS*. Pen-based systems include 5.....
..... so you write on the screen and the computer recognizes your handwriting and inserts the appropriate letters.

Interviewer: What sort of things can you do with a PDA?

Adam: You can store personal information, take notes, draw diagrams and make calculations. Many PDAs can access the Net via 6.....technology.

III/ Listening

Listen to an extract from an ICT class 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

IV/ Language Work: Collocations

HELP box

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 2–3: **perform operations, do research, make calls, send texts, display data, write letters, store information, complete exercises, carry out transactions.**

A/ Look at the HELP box and then match the verbs (1-5) with the nouns (a-e) to make collocations.

- | | |
|-------------|------------------|
| 1. Give | a. money |
| 2. Keep | b. a PIN |
| 3. Access | c. databases |
| 4. Enter | d. presentations |
| 5. Transfer | e. records |

B/ Use collocations from A and the HELP box to complete these sentences

- Thanks to Wi-Fi, it is now easy to.....from cafés, hotels, parks, and many other public places.
- Online banking lets you..... between your accounts easily and securely.
- Skype is a technology that enables users to.....over the Internet for free.
- In many universities students are encouraged to.....using PowerPoint in order to make their talks more visually attractive.
- The Web has revolutionized the way people.....with sites such as Google and Wikipedia, you can find the information you need in seconds.
- Cookies allow a website to.....on a user's machine and later retrieve it; when you visit the website again, it remembers your preferences.
- With the latest mobile phones you can.....with multimedia, attachments - pictures, audio, even video.

V/ Speaking

A/ Discuss in groups the following questions :

- How small do you think computers can usefully become?
- To what extent does the size of a computer influence what it can be used for?

Think of examples to illustrate your answer.

2. What are the limitations of portable computers?

B/ Work in pairs.

Student A: You are a sales representative trying to sell your company's notebook computer. You are presenting your product to the Sales Director of a manufacturing company which is thinking of buying 30 notebook computers for the sales staff. Decide on the specifications and complete the table below. Then try to persuade the Sales Director to buy your product.

Name
Type (size)
Processor type
Operating speed
Memory
Display
Power supply
Cost
Other features

***Useful expressions:** *It costs... It runs/operates on... It weighs...*

Student B: You are the Sales Director of a manufacturing company. You are considering buying 30 notebook computers for your sales staff. Find out about all the specifications of the model on offer. Decide whether it is suitable for your needs.

***Useful expressions:** *How much does it cost? What power source does it use? How big/heavy is it?*

VI/ Writing

1. Write down two benefits and two limitations of PDAs.
2. Explain in a paragraph how laptops can be beneficial to business people.
3. Write three examples of how tablet PC can be used in the classroom.