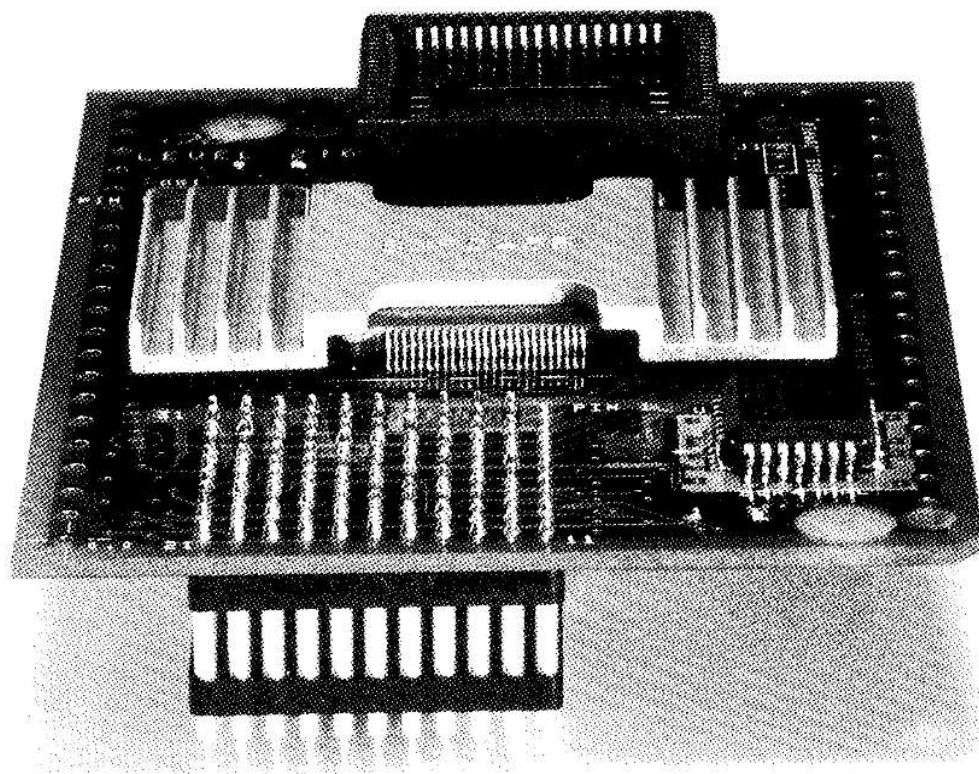


The processor



Reading

Task 11

Read this passage about the structure of the processor and fill in the gaps using the words below.

Structure of the processor

The processor consists of a ¹ _____, which is a circuit board on which are mounted ² _____ chips, memory chips, and other components linked together by ³ _____ lines or channels in the form of control, address, and data ⁴ _____. In addition, a processor has ⁵ _____, which are electronic circuits providing specialized functions such as graphics, or which connect a system board to ⁶ _____. The system board also consists of electronic devices, such as an electronic ⁷ _____ for controlling the speed of operation; ⁸ _____, which store numeric data during the course of processing; and various ⁹ _____, including sequence control register, address register, and function register.

adaptor boards

registers

microprocessor

clock

conductive

buses

system board

accumulators

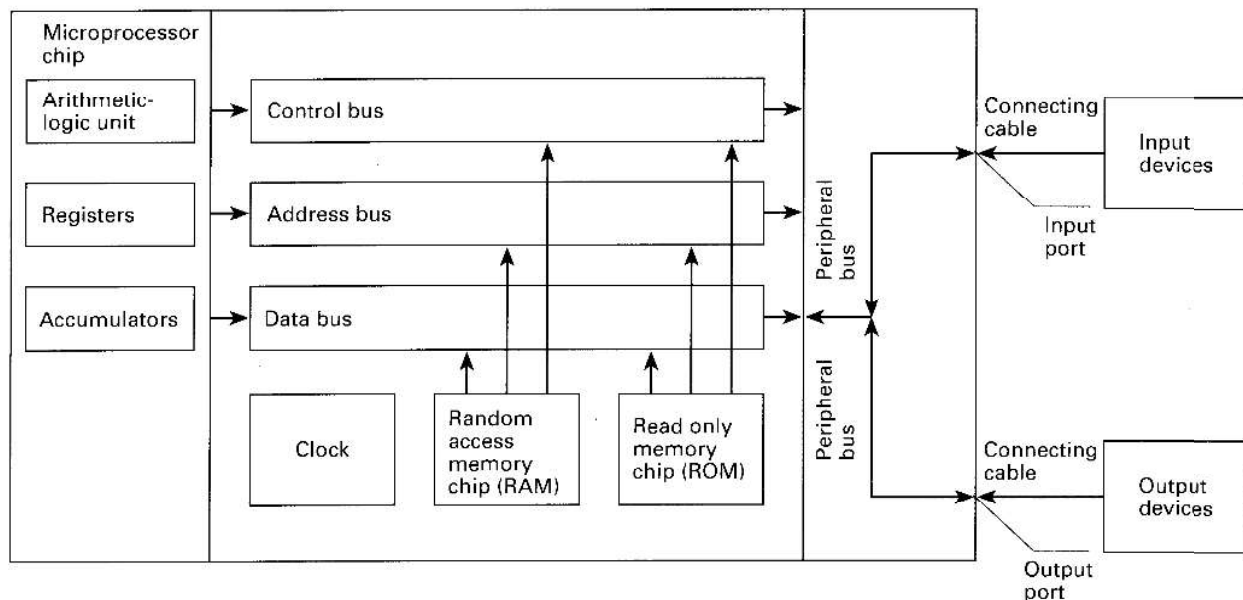
input or output devices

Reading

Task 12

Use the information in the reading passage and the diagram to help you match the terms below with the appropriate explanation or definition.

- A processor consists of many different electronic circuits and devices for performing control functions, arithmetic and logic operations, and data transfers. Data may be transferred from backing storage to the internal memory or from the internal memory to the arithmetic unit by means of
- 5 conductive channels known as buses. The part of the processor which controls data transfers between the various input and output devices is called the control unit.



- | | |
|-----------------------|--|
| 1 microprocessor chip | a used to send address details between the memory and the address register |
| 2 registers | b consists of an arithmetic-logic unit, one or more working registers to store data being processed, and accumulators for storing the results of calculations |
| 3 accumulators | c a group of signal lines used to transmit data in parallel from one element of a computer to another |
| 4 control bus | d groups of bistable devices used to store information in a computer system for high-speed access |
| 5 address bus | e an electronic circuit, usually a quartz crystal, that generates electronic pulses at fixed time intervals to control the timing of all operations in the processor |
| 6 data bus | f used for storing part of the operating system and application software known as 'firmware'; can only be read; cannot be written to or altered in any way |
| 7 clock | g used to store numeric data during processing |
| 8 RAM | h a group of signal lines dedicated to the passing of control signals |
| 9 ROM | i used for the temporary storage of application programs and data; can be written to and read from |

Speaking

Task 13

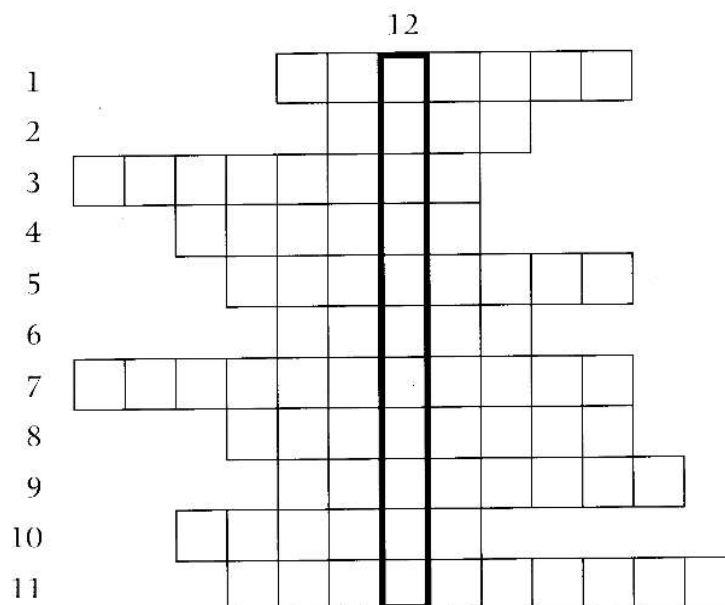
Work in pairs. Write down the list of terms (1–9) in Task 12 on a piece of paper. Without referring to your book, take turns to ask and answer questions about their functions.

- Useful expressions
What is/are ...?
What does/do ... do?

Word-play

Complete the puzzle and find the key word in 12 down.

Task 14



Across

- 1 A conductive line such as a data bus. (7)
- 2 A visual symbol used in a menu to represent a file or program. (4)
- 3 An input device used in computer games. (7)
- 4 An _____ device converts the electrical signals inside a computer into a form that can exist outside the computer. (6)
- 5 The name given to system software that is held in ROM. (8)
- 6 A device with one or more buttons used to point at locations on a computer screen. (5)
- 7 The part of the CPU that transmits co-ordinating control signals and commands to the computer. (7,4)
- 8 1,048,576 bytes. (8)
- 9 A large store of computerized data. (8)
- 10 The _____ system was first used commercially on the Apple Macintosh computer, but is now widely used on IBM machines. (7)
- 11 A signal route dedicated to sending information about locations within a computer. (7,3)

Down

- 12 A register containing the results of an operation performed by the arithmetic-logic unit. (11)

Language focus A

Contextual reference

Transitional markers are words used to link ideas together so that the text is easier to read. When pronouns such as *it, they, them, I, he, she, which, who, whose, that, such, one*, and demonstrative adjectives such as *this, that, these and those*, are used as transitional markers, they refer to a word, or words, mentioned earlier in the sentence or paragraph. Their function is to take your thoughts back to something that has already been mentioned. Other words which are often used to refer backwards are *the former, the latter, the first, second, etc., the last*.

Sample paragraph:

A computer, like any other machine, is used because it does certain jobs better and more efficiently than humans. It can receive more information and process it faster than any human. The speed at which a computer works means it can replace weeks or even months of pencil-and-paper work. Therefore, computers are used when the time saved offsets their cost, which is one of the many reasons they are used so much in business, industry, and research.

Exercise 1

Using the sample paragraph as a model, draw a rectangle around the word, or words, that the circled words refer to. Then join the ○ and the □ with arrows.

Modern accounting firms use spreadsheet software to do complicated calculations. They can provide their clients with an up-to-date report whenever it is needed. This software has many functions and can be integrated with other software. The spreadsheet's basic component is a cell. This may contain a formula which performs a mathematical operation. It could also contain a label or data. The former describes the information on the worksheet. The latter is the information itself.

The worksheet is the basic work area of a spreadsheet program. It is made up of cells arranged in rows and columns. The number of these varies depending on the software you are using. You can change the width and format of cells. Such parameters are usually quite easy to change with just a few keystrokes.

Exercise 2

Using the line reference given, look back at the reading passage in Unit 1, page 6, and find the reference for the words in *italics*.

- 1 anyone can make *them* (line 25)
- 2 the ideas that *they* put (line 34)
- 3 *This* was a graphical interface (line 37)
- 4 *it* became the standard machine (line 44)
- 5 *these* are operating systems (line 50)
- 6 *it* has become a minor player (line 68)
- 7 *this* could be upgraded (line 76)