Oxford English for
Computing

Keith Boeckner
P. Charles Brown

Oxford University Press

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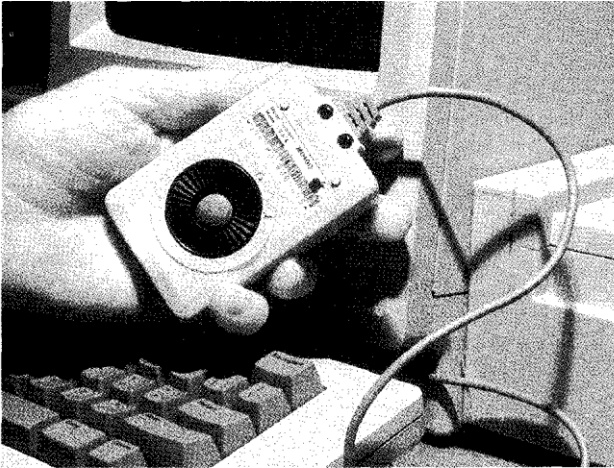
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Contents

Personal computing

Start-up

Task 1
a

Name these devices. What are they used for?

b

d
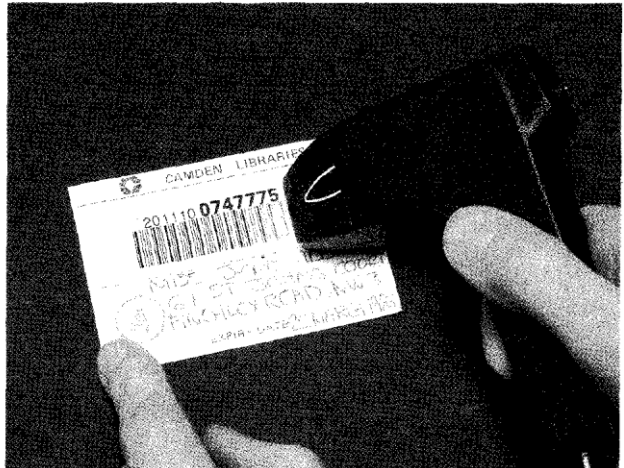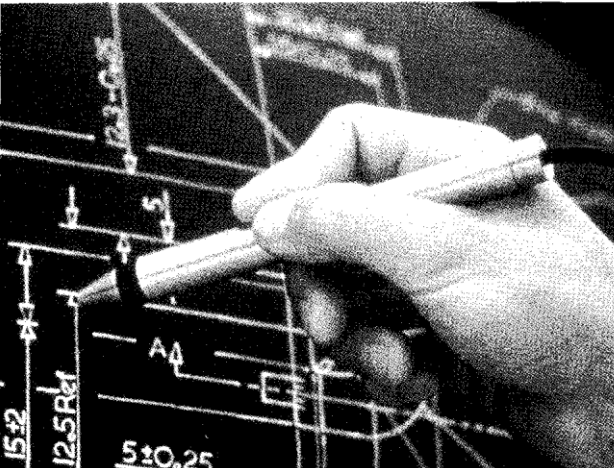

Listening

Task 2

You will hear two interviews between a market researcher and visitors to a computer exhibition. As you listen, fill in the missing information in the table opposite.

	Interview 1	Interview 2
Name:		
Occupation:		
Type of PC used:		
Reasons for choice: **1**		
2		
3		

Task 3 ⌨

Read this extract from Interview 2 and fill in the gaps. To help you, the first letter of each missing word is given.

INTERVIEWER: Do you own a PC?

ENRIQUE: Yes, I have an Apple Macintosh.

INTERVIEWER: Why did you c__choose__^{1} a Mac as opposed to an IBM or an

IBM c_____^{2}?

ENRIQUE: I think Macs are e_____^{3} to use than IBM PCs. I use the

m_____^{4} feature a lot, which is s_____^{5} on all Macs. Then

there's the graphical user interface and the windows.

INTERVIEWER: Graphical user interface? Could you explain that?

ENRIQUE: Well, put simply, it means that you click on i_____^{6} instead of

typing in c_____^{7}.

INTERVIEWER: I see. You mentioned windows. Doesn't IBM also use windows?

ENRIQUE: Yes, but I think their windows are harder to s_____^{8}

u_____^{9}. In any case, I'm u_____^{10} t_____^{11} the Mac.

Now listen again to the interview and check your answers.

Reading

Task 4

Before reading the text on the following page, match each word with the correct definition:

the set of software that controls a computer system a very small piece of silicon carrying a complex electrical circuit

1	mainframe	**a**	a big computer system used for large-scale operations
2	mouse	**b**	the physical portion of a computer system
3	icon	**c**	a device moved by 'hand to indicate position on the screen
4	operating system	**d**	a visual symbol used in a menu instead of natural language
5	software	**e**	
6	hardware	**f**	data, programs, etc., not forming part of a computer, but used when operating it.
7	microchip	**g**	

5

Now read the text and decide on a suitable title for it.

In 1952, a major computing company took a decision to get out of the business of making mainframe computers. They
5 believed that there was only a market for four mainframes in the whole world. That company was IBM. The following year they reversed their decision.

10 In 1980, IBM decided that there was a market for 250,000 PCs, so they set up a special team to develop the first IBM PC. It went on sale in 1981 and set a world-wide
15 standard for IBM-compatibility which, over the next ten years, was only seriously challenged by one other company, Apple Computers. Since then, over seventy million
20 PCs made by IBM and other manufacturers have been sold. Over this period, PCs have become commodity items. Since IBM made the design non-proprietary, anyone
25 can make them.

The history of the multi-billion dollar PC industry has been one of mistakes. Xerox Corporation funded the initial research on
30 personal computers in their Palo Alto laboratory in California. However, the company failed to capitalize on this work, and the ideas that they put together went
35 into the operating system developed for Apple's computers. This was a graphical interface: using a mouse, the user clicks on icons which represent the function
40 to be performed.

The first IBM PC was developed using existing available electrical components. With IBM's badge on the box it became the standard
45 machine for large corporations to purchase. When IBM were looking for an operating system, they went initially to Digital Research, who were market leaders in command-
50 based operating systems (these are operating systems in which the users type in commands to perform a function). When the collaboration between IBM and Digital Research
55 failed, IBM turned to Bill Gates, then

25 years old, to write their operating system.

Bill Gates founded Microsoft on the basis of the development
60 of MS/DOS, the initial operating system for the IBM PC. Digital Research have continued to develop their operating system, DR/DOS, and it is considered by
65 many people to be a better product than Microsoft's. However, without an endorsement from IBM, it has become a minor player in the
70 market. Novell, the leaders in PC networking, now own Digital Research, so things may change.

The original IBM PC had a
75 minimum of 16K of memory, but this could be upgraded to 512K if necessary, and ran with a processor speed of 4.77MHz. Ten years later, in 1991, IBM were
80 making PCs with 16Mb of memory, expandable to 64Mb, running with a processor speed of 33MHz. The cost of buying the hardware has come down
85 considerably as the machines have become commodity items. Large companies are considering running major applications on PCs, something
90 which, ten years ago, no one would have believed possible of a PC. In contrast, many computers in people's homes are just used to play computer
95 games.

The widespread availability of computers has in all probability changed the world for ever. The microchip technology which
100 made the PC possible has put chips not only into computers, but also into washing-machines and cars. Some books may never be published in paper form, but
105 may only be made available as part of public databases. Networks of computers are already being used to make information available on a world-
110 wide scale.

Vocabulary

commodity items (1. 2 3) — items which can be produced and traded freely

non-proprietary (I. 24) — not belonging to any single company

capitalize on (I. 3 3) — profit from, turn to one's advantage

Task 6   When you read the text to decide on a title, which of the following did you do?

Did you:

read the text slowly and try to understand every word?

FI read quickly and try to understand the main theme?

underline or mark sentences that you thought were important?

make notes about important points?

Which of these reading strategies do you think is most appropriate for this kind of task? Which do you think is least appropriate?

Task 7   Answer these questions about the text.

1 How many mainframes did IBM think it was possible to sell in 1952?
2 How many PCs have now been sold?
3 Who paid for the initial research into PCs?
4 Which company later used the results of this research to develop their operating system?
5 What are command-based operating systems?
6 DR/DOS is an acronym. What does it stand for?
7 Since the invention of the IBM PC, many of its features have been improved. Which of the following features does the text *not* mention in this respect?
   a memory
   b speed
   c size
   d cost
8 *Give* three examples from the text of how the availability of computers has 'in all probability changed the world for ever'.

Using the line references given, look back in the text and find words that have a similar meaning to:

1 international (lines 10-15)
2 contested (lines 15-20)
3 errors (lines 25-30)
Task 8   4 paid for (lines 25-30)
5 buy (lines 45-50)
6 first (lines 60-65)
7 recommendation (lines 65-70)
8 improved (lines 75-80)

Writing

Task 9

Translate the sixth paragraph (starting 'The original IBM PC...') into your own language. Look carefully at the tenses before you start.

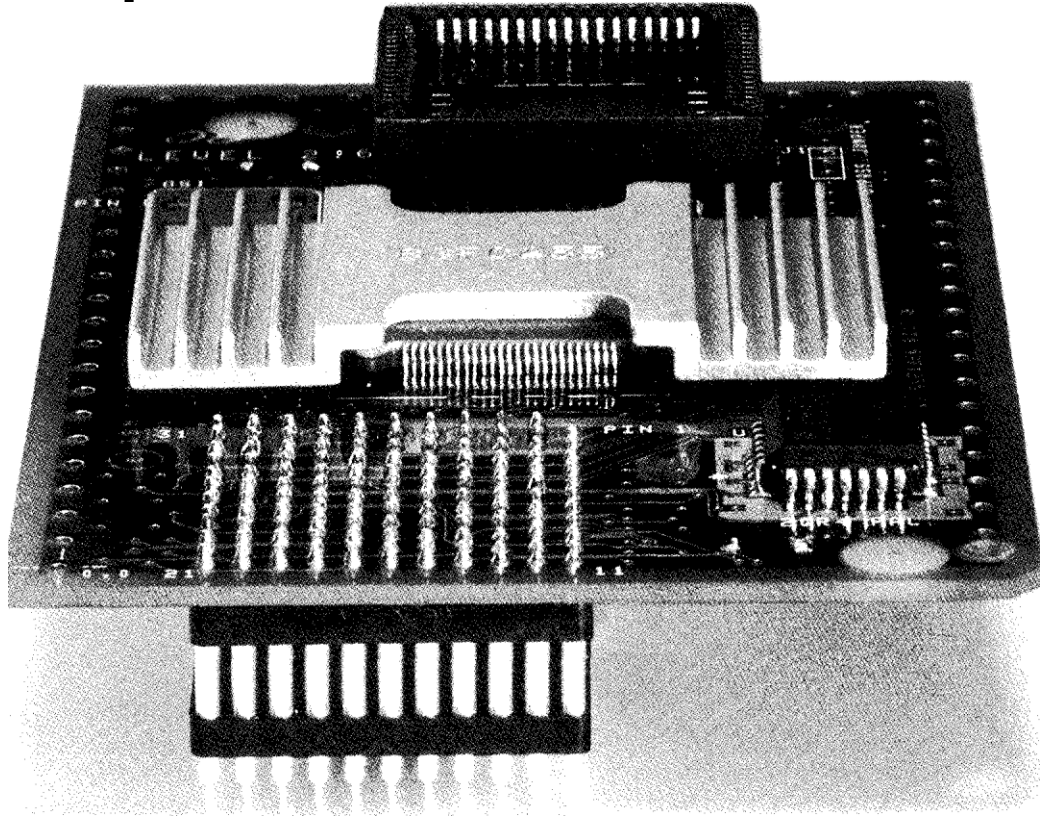## Speaking

Task 10   The article states that 'many computers in people's homes are just used to play computer games'.

Discuss the following questions:

1 In what other ways are computers used at home, or outside work?
2 If you already have a PC, how do you use it? (If not, how would you use one?)

The processor

Reading

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 a¹ _____, 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 _____, 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 _____ 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.

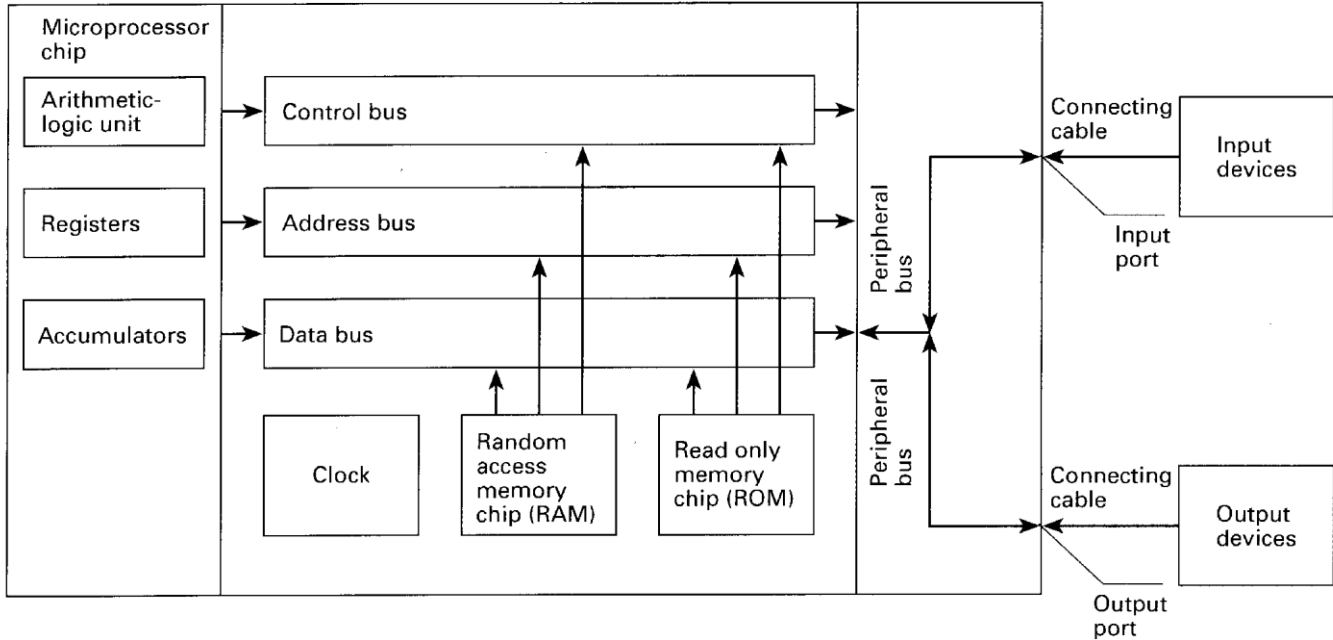|		
adaptor boards	*registers*	*microprocessor*
clock	*conductive*	*buses*
system board	*accumulators*	*input or output devices*

Reading

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 a group of signal lines dedicated to the passing of control signals
8	RAM	**h**	
9	ROM	**i**	used for the temporary storage of application programs and data; can be written to and read from

Speaking

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.
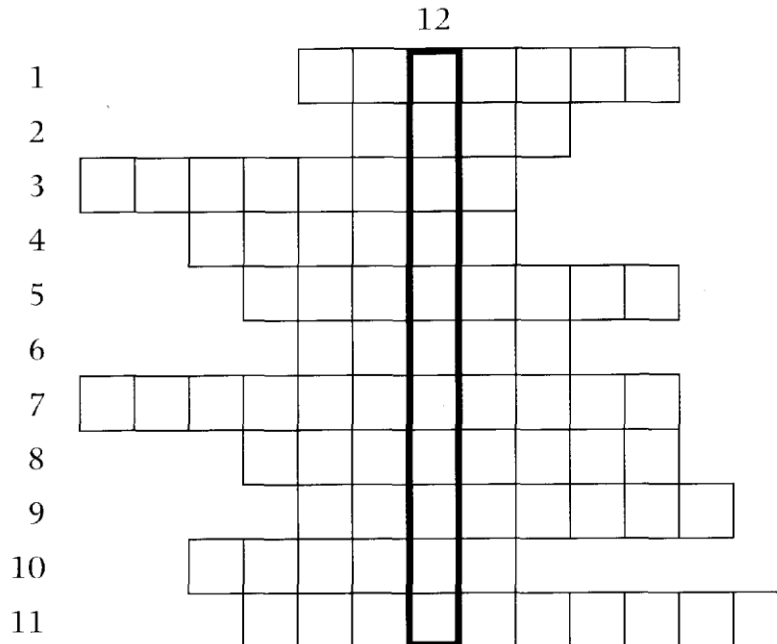
1⁰ Useful expressions
What is/are . . .?
What does/do . . . do%

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)
S 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)

10