**THE PAST PERFECT SIMPLE**

**1.Form: had + V3**

Example: the conjugation of the regular verb ’’to work’’

|  |  |  |  |
| --- | --- | --- | --- |
| Affirmative | Interrogative | Negative | Negative-Interrogative |
| I **had** work**ed**  you **had** work**ed**  he/she/it **had** work**ed**  we **had** work**ed**  you **had** work**ed**  they **had** work**ed** | **Had** I work**ed**?  **Had** you work**ed**?  **Had** he/she/it work**ed**?  **Had** we work**ed**?  **Had** you work**ed**?  **Had** they work**ed**? | I **had not** work**ed** (**hadn’t**)  You **had not** work**ed** (**hadn’t**)  He/She/It **had not** work**ed** (**hadn’t**)  We **had not** work**ed** (**hadn’t**)  You **had not** work**ed** (**hadn’t**)  They **had not** work**ed** (**hadn’t**) | **Had** I **not** work**ed**? (**Hadn’t** I work**ed**?)  **Had** you **not** work**ed**? (**Hadn’t** you work**ed**?)  **Had** he/she/it **not** work**ed**? (**Hadn’t** he/she/it work**ed**?)  **Had** we **not** work**ed**? (**Hadn’t** we work**ed**?)  **Had** you **not** work**ed**? (**Hadn’t** you work**ed**?)  **Had** they **not** work**ed**? (**Hadn’t** they work**ed**?) |

**2.Use:**

-to express an action that had begun and finished in the past, before another past action or another moment in the past:

e.g. I had printed the documents before he came back/ before 2 o’clock yesterday.

- to express actions finished in an unspecified past:

e.g. He had bought a new laptop.

**EXERCISES**

**Translate into English:**

1. Am apăsat pe buton înainte să îmi spună ea.

2. Michael cumpărase întâi calculatorul şi abia apoi a cumpărat şi pachetul Office.

3. A adus un modem şi apoi la cuplat la linia telefonică.

4. Întâi a decodificat datele şi apoi le-a interpretat.

5. Am învăţat lecţia despre inteligenţa artificială înainte să mi se predea la şcoală de către profesorul meu.

6. Întâi s-a acţionat pictograma My Computer de pe fundalul sistemului de operare şi abia apoi s-a acţionat în fereastra deschisă pictograma Dial-Up Networking.

**CATEGORIES OF COMPUTERS**

Industry experts typically classify computers in seven categories: personal computers, mobile computers and mobile devices, game consoles, servers, mainframes, supercomputers, and embedded computers. A computer’s size, speed, processing power, and price determine the category it best fits. Due to rapidly changing technology, however, the distinction among categories is not always clear-cut.

|  |  |  |  |
| --- | --- | --- | --- |
| Category | Physical Size | Number of Simultaneously Connected Users | General Price Range |
| Personal computers (desktop) | Fits on a desk | Usually one ( can be more if networked ) | Several hundred to several thousand dollars |
| Mobile computers and mobile devices | Fits on your lap or in your hand | Usually one | Less than a hundred dollars to several thousand dollars |
| Game consoles | Small box or handheld device | One to several | Several hundred dollars or less |
| Servers | Small cabinet | Two to thousands | Several hundred to a million dollars |
| Mainframes | Partial room to a full room of equipment | Hundreds to thousands | $300.000 to several million dollars |
| Supercomputers | Full room of equipment | Hundreds to thousands | $500.000 to several billion dollars |
| Embedded computers | Miniature | Usually one | Embedded in the price of the product |

**I. Personal computers (Desktop)**

Personal computer is a computer that can perform all of its input, processing, output, and storage activities by itself. A personal computer contains a processor, memory, and one or more input, output, and storage devices. They also often contain a communications device.

Two popular styles of personal computers are the PC and the Apple. These two types of computers use different operating systems. PC and PC-compatible computers usually use a Windows operating system. Apple computers usually use a Macintosh operating system (Mac OS X). The term, PC-compatible, refers to any personal computer based on the original IBM personal computer design. Companies such as Dell, Gateway, and Toshiba sell PC-compatible computers.

Two types of personal computers are desktop computers and notebook computers.

A desktop computer is designed so the system unit, input devices, output devices, and any other devices fit entirely on or under a desk or table. In some models, the monitor sits on top of the system unit, which is placed on the desk. The more popular style of system unit is the tall and narrow tower, which can sit on the floor vertically.

**II. Mobile Computers and Mobile Devices**

**A**. A **mobile computer** is a personal computer you can carry from place to place. Similarly, a mobile device is a computing device small enough to hold in your hand. The most popular type of mobile computer is the notebook computer.

A **notebook computer**, also called a laptop computer, is a portable, personal computer designed to fit on your lap. Notebook computers are thin and lightweight, yet can be as powerful as the average desktop computer. Notebook computers usually are more expensive than desktop computers with equal capabilities.

On a typical notebook computer, the keyboard is on top of the system unit, and the display attaches to the system unit with hinges. These computers weigh on average between 2.5 and 9 pounds, which allows users easily to transport the computers from place to place. Most notebook computers can operate on batteries or a power supply or both.

**Tablet PC**. Resembling a letter-sized slate, the Tablet PC is a special type of notebook computer that allows you to write or draw on the screen using a digital pen. For users who prefer typing instead of handwriting, you can attach a keyboard to Tablet PCs that do not include one already. Tablet PCs are useful especially for taking notes in locations where the standard notebook computer is not practical.

**B. Mobile devices**, which are small enough to carry in a pocket, usually store programs and data permanently on memory inside the system unit or on small storage media such as memory cards. You often can connect a mobile device to a personal computer to exchange information. Some mobile devices are Internet-enabled, meaning they can connect to the Internet wirelessly.

Three popular types of mobile devices are handheld computers, PDAs, and smart phones.

A **handheld computer**, sometimes referred to as an ultra personal computer (uPC), or an Ultra-Mobile PC (UMPC), or a handtop computer, is a computer small enough to fit in one hand. Because of their reduced size, the screens on handheld computers are small. Industry-specific handheld computers serve mobile employees, such as parcel delivery people, whose jobs require them to move from place to place.

A **PDA** (personal digital assistant) provides personal organizer functions such as a calendar, an appointment book, an address book, a calculator, and a notepad. Most PDAs also offer a variety of other application software such as word processing, spreadsheet, personal finance, and games. Many PDAs are Internet-enabled so users can check e-mail and access the Web. Some also provide camera and telephone capabilities. The primary input device of a PDA is the stylus, which looks like a small ballpoint pen, but uses pressure instead of ink to write and draw.

Offering the convenience of one-handed operation, a **smart phone** is an Internet-enabled telephone that usually also provides PDA capabilities. In addition to basic telephone capabilities, a smart phone allows you to send and receive e-mail messages, access the Web, listen to music, and share photographs or videos.

As smart phones and PDAs continue a trend of offering similar functions, it is becoming increasingly difficult to differentiate between the two devices. This trend, known as convergence, has led manufacturers to refer to PDAs and smart phones simply as handhelds. Some factors that affect a consumer’s purchasing decision include the devices size, screen size, and capabilities of available software.

**C. Game Consoles**

A **game console** is a mobile computing device designed for single-player or multiplayer video games. Standard game consoles use a handheld controller(s) as an input device(s); a television screen as an output device; and hard disks, CDs, DVDs, and/or memory cards for storage. The compact size and light weight of game consoles make them easy to use at home, in the car, in a hotel, or any location that has an electrical outlet. Three popular models are Microsoft’s Xbox 360, Nintendo’s Wii, and Sony’s PlayStation 3.

A handheld game console is small enough to fit in one hand. With the handheld game console, the controls, screen, and speakers are built into the device. Some models use cartridges to store games; other use a miniature type of CD or DVD. Many handheld games consoles can communicate wirelessly with other similar consoles for multiplayer gaming. Two popular models are Nintendo DS Lite and Sony’s PlayStation Portable (PSP).

In addition to gaming, many console models allow users to listen to music, watch movies, and connect to the Internet.

**D. Servers**

A **server** controls access to the hardware, software, and other resources on a network and provides a centralized storage area for programs, data, and information. Servers support from two to several thousand connected computers at the same time.

People use personal computers or terminals to access data, information, and programs on a server. A terminal is a device with a monitor, keyboard and memory.

**E. Mainframes**

A **mainframe** is a large, expensive, powerful computer that can handle hundreds or thousands of connected users simultaneously. Mainframes store huge amounts of data, instructions, and information. Most major corporations use mainframes for business activities. With mainframes, large businesses are able to bill millions of customers, prepare payroll for thousands of employees, and manage thousands of items in inventory. One study reported that mainframes process more than 83 percent of transactions around the world.

Servers and other mainframes can access data and information from a mainframe. People also can access programs on the mainframe using terminals or personal computers.

**F. Supercomputers**

A **supercomputer** is the fastest, most powerful computer – and the most expensive. The fastest supercomputers are capable of processing more than 135 trillion instructions in a single second.

Applications requiring complex, sophisticated mathematical calculations use supercomputers. Large scale simulations and applications in medicine, aerospace, automotive design, online banking, weather forecasting, nuclear energy research, and petroleum exploration use a supercomputer.

**G. Embedded computers**

An **embedded computer** is a special-purpose computer that functions as a component in a larger product. A variety of everyday products contain embedded computers:

* consumer electronics
* home automation devices
* automobiles
* process controllers and robotics
* computer devices and office machines

Because embedded computers are components in larger products, they usually are small and have limited hardware. Embedded computers perform various functions, depending on the requirements of the product in which they reside. Embedded computers in printers, for example, monitor the amount of paper in the tray, check the ink or toner level, signal if a paper jam has occurred, and so on.

**I. Answer the following questions:**

1. What are the main categories of computers?
2. What are the elements that are taken into account when determining the category in which a computer fits?
3. Define the personal computer.
4. What does a personal computer contain?
5. Give examples of personal computers.
6. How many types of personal computers are there?
7. Make the distinction between mobile computers and mobile devices.
8. What is a notebook computer?
9. What is a Tablet PC?
10. What is a handheld computer?
11. What is a PDA?
12. Define game consoles.
13. What do game consoles use as input/ output/ storage devices?
14. Name some popular models of game consoles.
15. Define servers.
16. Define mainframes.
17. In what field of activity are mainframes used?
18. Define supercomputers.
19. In what field of activity are supercomputers used?
20. Define embedded computers.
21. Give examples of products that contain embedded computers.

**II. Say whether the following statements are true (T) or false (F):**

1. Embedded computers are huge.
2. Game consoles are heavy.
3. Mainframes are cheap.
4. A PDA does not have the spreadsheet application software.
5. Notebooks are usually more expensive than desktop computers with the same capabilities.
6. A notebook computer is small enough to fit in one hand.
7. Computers can be classified in seven categories.
8. The field of computers is rather stable.
9. The tower is the less popular style of system unit.
10. The distinction among different types of computers is clear cut.