

History OF COMPUTERS

The computer was invented by Charles Babbage in 1822. He was an English mathematician who built a calculating machine that was powered by steam. His computer was going to be as big as a room and was called the Difference Machine. Nonetheless, Babbage's machine was never built as it was too costly and difficult to build. Even though the Difference Machine was never built, it laid the foundation for constructing the computers that we see and know today.

One of the first modern computers was built by IBM in 1944. This computer was called the Mark 1. It was a massive machine that continuously operated for 15 years. The first 'computer bug' was found in the Mark 1. It was not exactly a bug when compared to the bugs that we have in modern computers now. It was a real bug! A moth had fallen into IBM's computer and stopped the computer from working properly.

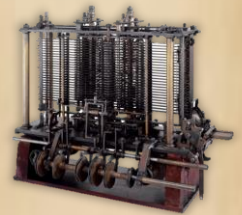
In the 1980's, the computer industry changed a lot. The first personal computers hit the market. Computers became faster, smaller and a lot cheaper. Today, nearly every household has a desktop or laptop computer. Many people cannot even imagine how life would be without computers.

Are the statements true or false? Write T or F.

- | | |
|---|---|
| 1) The first computer was built in 1822. | 5) The first computers were built to perform calculations. |
| 2) The Apple 1 was the first modern computer. | 6) The Difference Machine was built by IBM. |
| 3) The Mark 1 was a very popular computer in many households. | 7) The Acorn was the first computer with Microsoft Windows. |
| 4) Charles Babbage invented the first modern computer. | 8) Personal computers became popular in the 80s. |

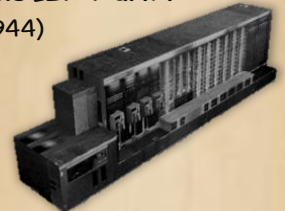
Can you imagine a life without computers? How would your life be different? Explain.

TIMELINE of Computer History



The Difference Machine
(1822)

The IBM Mark 1
(1944)



Apple 1
(1976)



The Commodore PET
(1977)



The Acorn
(1981)

The first IBM personal computer. It used Microsoft's MS DOS.

MacBook Air
(2008)



Hardware

COMPONENTS



Random Access Memory (RAM), or internal memory, is the 'working memory' of a computer. It processes information and commands given by the user. Computers with high RAM memory can perform a lot of tasks and run smoothly.

A modem is a small device that allows users to access the Internet. The device has two connections. One cable is connected to an outlet in a wall while the other is connected to a PC or router.



A sound card allows computers to send audio information to speakers or headphones. Without a sound card, computer users cannot listen to audio files.



A hard drive stores files on a computer. All software on a PC is stored on a hard disk drive. The capacity of a hard disk depends on the amount of gigabytes or terabytes.

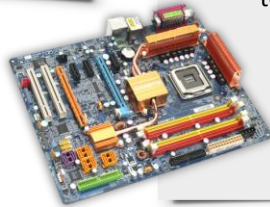


A processor, or CPU, interprets and executes the commands from the computer's hardware or software. A CPU is considered to be the 'brain' of the computer.



A router is a device that is connected to a modem. It receives the Internet signal from a modem and spreads it to several computers with a serial cable or with Wi-Fi.

A motherboard is a piece of hardware that connects all hardware components together. Memory, hard drives, video cards, CPU and all other hardware is linked to a motherboard. You think of the motherboard as the 'back bone' of the computer.



A video card is a piece of hardware that sends graphical information to the screen. It processes images that are showed on a display. Video cards are important when lots of images need to be generated, like a computer game. The better the video card, the higher the quality of the images.



Read the descriptions of the hardware components and answer the questions.

1) What is the difference between RAM and a hard disk?

2) What is the difference between a router and a modem?

3) Why is the CPU considered to be the 'brains' of the computer?

4) Which hardware component is important for playing demanding computer games?

The table below contains words that have been chopped in half. Find the pieces that fit together and write them in the answer area below.

HARD	MEM	WI	AU
ORY	PHIC	MOTHER	WARE
BOARD	FI	GRA	DIO

- 1) _____ 2) _____
- 3) _____ 4) _____
- 5) _____ 6) _____

Viruses

INFECTING COMPUTERS



Complete the text with the words below.

programmers quarantine duplicating frequently unaware
downloads corrupted innocent damage operating

A virus is a computer file that is created to _____ someone's computer. Viruses spread by _____ and attaching itself to other files. There are thousands of viruses, some of which are _____ while others can cause serious damage to a computer.

Viruses are created by _____ who want to cause problems for people who own a computer. Most computers become infected by viruses through email attachments or _____ from the Internet. A virus scanner can detect when such a situation occurs and issues a warning to the user of the computer. But if an anti-virus software is not installed, the user will be _____ that his/her computer is infected.

The following things can be done by computer users to prevent the computer from getting infected by a virus.

- Downloading anti-virus software and keeping it up-to-date.
- Updating the _____ system (Windows, Linux, OS X).
- Avoid opening email attachments from unknown email addresses.
- Avoid downloading files from 'questionable' websites.

Anti-virus programs search for files and email attachments that are _____. In case something is found, it will immediately _____ or delete the file. Some viruses may cause damage to a user's data, so it is always a good practice to _____ make backups.

FUN FACTS

70% of the programmers of viruses work for organized crime syndicates.

Every month, more than 6,000 new viruses are created.

Struxnet is a powerful virus that is sophisticated enough to take down a nuclear power plant.

'Brain' is the name of the world's first computer virus and was designed in Pakistan.

Answer the questions about computer viruses. Circle the correct answer.

1) A computer virus ..

- a. is designed by programmers b. copies itself
c. attaches itself to other files d. all of above

2) Stuxnet is a famous virus that..

- a. was created to disable nuclear facilities
b. is so powerful that it can take down important facilities
c. was created by a crime syndicate
d. is designed to damage ordinary people's computers.

3) In order to prevent your computer from being infected, you should ..

- a. make frequent backups b. install a virus scanner
c. not download questionable files d. all of above

4) How many different viruses exist?

- a. 70 million b. 6,000 c. 1 d. not given

5) Which statement about viruses is not true?

- a. Computer viruses can spread through emails.
b. A virus cannot infect a computer with a virus scanner.
c. Some people download a virus without realizing it.
d. It is important to frequently update a virus scanner.

6) Some viruses do not cause any inconvenience for computer users.

- a. true b. false

7) An e-mail address can be infected with a virus.

- a. true b. false

Cyber Crime

ONLINE CRIME



Cyber-crime is one of the fastest growing crimes in the world. Frequent users of the internet buy things from online shopping platforms, perform online banking and store their files on a 'cloud'. These events provide endless opportunities for cyber criminals who take advantage of the weaknesses of others.

More than 70% of all Americans have experienced some form of cyber-crime in their lives. Most of these illegal online activities are hard to detect and solve. In many cases, victims of cyber-crime do not even realize that something illegal or illegitimate has taken place.

Basically, there are three types of cyber-crime.

- Harassment – Some people use the Internet anonymously and are engaged in illegal activities like stalking, harassment and bullying.
- Hacking – Hackers break into online networks and try to corrupt or download all kinds of sensitive or valuable information.
- Phishing – Phishing is the activity of sending emails to people trying to trick them. The purpose of phishing is to obtain money from the recipients of these emails. Usually, the elderly, who are not very computer savvy are the most vulnerable groups for this kind of crime.

Are the statements below true or false? Write T or F.

Read the passage and answer the questions.

1) Cyber-crime is the most common crime in the world.

2) Online bullying is a cyber-crime.

3) More than half of the American population has been affected by cyber-crime.

4) Cyber-crimes are hard to detect and solve.

5) Inexperienced Internet users are more vulnerable to cyber-crime.

6) Hackers try to trick people and harass people online.

7) More than 70% of all Americans are bullied on the Internet.

8) Phishing is an attempt of trying to acquire sensitive information.

1) Why do you think it is so difficult to catch and prosecute cyber criminals?

2) Have you ever been a victim of an online crime? If so, can you please describe the situation in detail?

3) Have you ever done something that is not allowed on the web? If yes, what is it and why did you do so?

4) Which cyber-crime do you think is the most dangerous? Give reasons to justify your answer.

