THE COMPUTER SYSTEM

The Computer is an Electronic Device which accepts the input data processing according to their Instruction and it gives output result.

An INPUT consists of data or commands that are entered into the computer usually via an input device such as keyboard, mouse, scanner e.t.c. The role of an input is to provide data for further processing.

Processing is the stage where the input data is manipulated to produce meaningful information. Processing can include a number of stages, sorting, searching, calculating, graphing e.t.c The result obtained is called output.

An OUTPUT is the stage where information received via processing is presented to the user in suitable format. Most outputs involve converting digital data to a physical effect which a person can see or hear. You might be able to see your output via a print out or a display and also hear via music, voice training instructions.

● First Generation Computers (1946-1959)

The computers produced during the period 1946-1959 with the them technology are regarded as the first generation computer. These computers were manufactured with the vacuum tubes. These tubes were used in the arithmetic and logical operations.

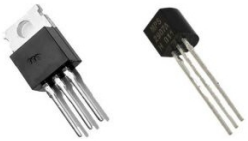
Advantages:

1. They were capable of making arithmetic and logical operations.
2. They used the electronic values in place of the key punch machines or the unit record machines.

Disadvantages:

1. They were too big in size, very slow, low level of accuracy and reliability.
2. They consumed lot of electricity, generated a lot of heat and break down frequently.

● Second Generation Computers (1959-1965)



The computer produced during the period 1959-65 with technology is known as second generation computers. These computers used transistors in place of vacuum tubes as their basic elements to perform all computational and logical works.

Advantages:

1. They required very small space, were very fast and reliable and dependable.
2. They used less power and dissipated less heat and had large storage capacity.
3. They used better peripheral devices like card readers and printer etc.

Disadvantages:

1. They did not have any operating system and used assembly languages.
2. They lacked in intelligence and decision making and needed constant upkeep and maintenance.

● **Third Generation Computers (1965-1970)**

The computers developed during the period 1965-70 are branded as the third generation computers. The significant features of these computers was that they were built with monolithic integrated circuits, (IC) each of which consisted of thousands of transistors and other electronic components on a single crystal.

Advantages:

1. The size was very small in comparison less costly and built with thousands of transistor which were very cheap.
2. They used faster better device for storage, called auxiliary backing or secondary storage.
3. They used operating system for better resource management and used the concept of time sharing and multiple programming.

Disadvantages:

1. They created lot of problems to the manufacturers at their initial stages.
2. They lacked thinking power and decision making capability.
3. They could not provide any insight into their internal working.

● **Fourth Generation Computers:**

The computer that came to the scene with improved technology during the period 1970-1985 is marked as the fourth generation computers. They used large scale integrated circuits and very large integrated circuits in the form of microprocessor in their memory. These computers unlaced millions of transistors and other electronic components on a single silicon chip. A microprocessor is a single chip which itself can perform the controlling, arithmetic and logical functions of a computer that too at a fast speed.

Advantages:

1. They were very small in size, and cost of operation was very less.
2. They were very compact faster and reliable as they used very large scale integrated circuits.
3. They were capable of facilitating the interactive on line remote programming by which one sitting at the distant place can get his programs executed by centrally located computer.

Disadvantages:

1. They are less powerful and had less speed than the main frame computers.
2. They lacked thinking power and decision making ability.
3. They had less storage capacity and needed further improvement.

● **Fifth Generation Computers:**

The computers that are emerging after 1985 with further improved technology are considered as the fifth generation computers. These machines are designed to incorporate "Artificial Intelligence" and use stored reservoirs of knowledge to make expert judgement and decision like human beings. They are also designed to process non numerical information like pictures and graphs using the very large scale integrated circuits.

Advantages:

1. They are oriented towards integrated data base development to provide decision models.
2. They faster very cheap and have the highest possible storage capacity.
3. They have thinking power and decision making capability and thereby they will be able to aid the executives in the management.

Disadvantages:

1. They need very low level languages; they may replace the human force and cause grievous unemployment problems.
2. They may make the human brains dull and doomed.