What is IC in computer?

An **integrated circuit**, or **IC**, is small chip that can **function** as an amplifier, oscillator, timer, microprocessor, or even computer memory. An **IC** is a small wafer, usually made of silicon, that can hold anywhere from hundreds to millions of transistors, resistors, and capacitors.

Integrated circuit (IC), also called **microelectronic circuit**, **microchip**, or **chip**, an assembly of electronic components, fabricated as a single unit, in which miniaturized active devices (e.g., transistors and diodes) and passive devices (e.g., capacitors and resistors) and their interconnections are built up on a thin substrate of semiconductor material (typically silicon). The resulting circuit is thus a small monolithic "chip," which may be as small as a few square centimetres or only a few square millimetres. The individual circuit components are generally microscopic in size.

Integrated circuits have their origin in the invention of the transistor in 1947 by William B. Shockley and his team at the American Telephone and Telegraph Company's Bell Laboratories. Shockley's team (including John Bardeen and Walter H. Brattain) found that, under the right circumstances, electrons would form a barrier at the surface of certain crystals, and they learned to control the flow of electricity through the crystal by manipulating this barrier.

This technology was invented in the year of 1950 the by **Jack Kilby** of Texas Instruments USA and **Robert Noyce** of

Fairchild Semiconductor USA. The first costumer to this new invention was the US Air Force. In the year 2000 **Jack Kilby** won the Nobel Prize in Physics for miniaturized electronic circuits.

Types of ICS

i)	Small Scale Integration (SSI) where the number of transistors incorporated in a single IC chip is up to 100.
ii)	Medium Scale Integration (MSI) where the number of transistors incorporated in a single IC chip is from 100 to 1000.
iii)	Large Scale Integration (LSI) where the number of transistors incorporated in a single IC chip is from 1000 to 20,000.
iv)	Very Large Scale Integration (VLSI) where the number of transistors incorporated in a single IC chip is from 20,000 to 10,00,000.
v)	Ultra Large Scale Integration (ULSI) where the number of transistors incorporated in a single IC chip is from 10,00,000 to 1,00,00,000.