# The usage of propositional logic in computer science and programming

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Modern day computers are used on every step of our life. From banking and production to objects of everyday use like phones or laptops, each device is based on main principles of computing. These principles were derived and described by mathematicians and philosophers of the past, when even mechanical calculating devices did not exist. Other principles were devised during the first-generation computer era separately by von Neumann in the USA and Lebedev in the USSR. But they are describing the way modern-day computers are built and communicate with memory and peripherals.

The main process that occurs during any operation in computer is a sequence of logical operation which is done by composition of logic gates. These gates define a Boolean function, like AND(), OR() and other. Using such gates, we can describe any operations such as addition and multiplication.