Background of Boolean logic

Boolean logic is a logical calculus, which has only two values, 'true' or 'false'. It was conceived by mathematician, George Boole. During the time when Boole was defining this system, Charles Babbage was developing his 'analytical engine' - today's computer. So, this system has been in use with the ancestor of the digital computer. It is still an important tool used in search engines and databases for modern-day operation. To know all about the history and origin of Boolean logic, read the paragraphs below.

History of the Boolean logic

In the year 1847, English mathematician George Boole (1815 - 1864) published, 'The Mathematical Analysis of Logic'. This book of his showed how using a specific set of logic can help one to wade through piles of data to find the required information. The importance of Boole's work was his way of approach towards logic. By incorporating it into mathematics, Boole was able to determine what formed the base of Boolean algebra. It was the analogy which algebraic symbols had with those that represented logical forms.

This basic analogy gave birth to what is known as the Boolean Algebra. As we know that working of computers are based on the binary number system (1 or 0), where 1 means 'ON' and 0 signifies 'OFF'. These two states are represented by a difference in voltage. Now, the application of this system to the computer's binary number system was incorporated by an MIT grade student Claud Shannon. This was how the Boolean search came into place.

The Symbols

Precisely, this system is defined as a logical system of operators - 'AND', 'OR', and 'NOT', and is a way of comparing individual bits. These connectors or operators are now used in computer construction, switching circuits, etc.

The AND, OR, and NOT operators are also known as logic gates, and are used in logical operation. Their schematic diagram can be viewed from any book based on Boolean Algebra. The following paragraphs describe the symbols and the operation.