Boolean laws

Boolean Algebra is used to analyze and simplify the digital (logic) circuits. It uses only the binary numbers i.e. 0 and 1. It is also called as Binary Algebra or logical Algebra. Boolean algebra was invented by George Boole in 1854

Boolean Algebra Operations

There are various operations that are used in Boolean algebra but the basic operations that form the base of Boolean Algebra are,

* Negation or NOT Operation
* Conjunction or AND Operation
* Disjunction or OR Operation

Negation or NOT Operation

Using the NOT operation reverse the value of the Boolean variable from 0 to 1 or vice-versa. This can be understood as:

* If A = 1, then using NOT operation we have A = 0



* If A = 0, then using the NOT operation we have A = 1



Laws for Boolean Algebra

The basic laws of the Boolean Algebra are

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| **Law** |
| **Identity Law** |
| **Idempotent Law** |
| **Commutative Law** |
| **Associative Law** |
| **Distributive Law** |
| **Inversion Law** |
| **De Morgan’s Law** |

Application of the laws see table below

