**OPERATORS**

An operator is a symbol that tells the compiler to perform specific mathematical or logical manipulations.

TYPES OF OPERATORS

1. **ARITHMETIC OPERATORS**

The **arithmetic operators** perform addition, subtraction, multiplication, division, exponentiation, and modulus operations.

They have the signs

|  |  |  |  |
| --- | --- | --- | --- |
| **Sign** | **Name** | **Operation** | **Example** |
| + | plus | addition | =A1+B1 |
| – | minus | substraction or negation | =A1-B1 or -A1 |
| \* | asterisk | multiplication | =A1\*B1 |
| / | slash | division | =A1/B1 |
| % | percent | division by 100 | =A1% |
| ^ | circumflex | exponentiation | =A1^B1 |

**2.RELATIONAL OPERATORS.**

A relational operator is a programming language operator that tests or defines some kind of relation between two entities

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| **Relational Operators** | **Meaning** |
| > | Greater than |
| < | Less than |
| >= | Greater than or equal to |
| <= | Less than or equal to |
| == | Equal to |
| != | Not equal to |
|  |  |

**3.LGICAL OPERATORS**

A logical operator is a symbol or word used to connect two or more expressions such that the value of the compound expression produced depends only on that of the original expressions

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| **Operator** | **Description** | **Example** |
| && | Called Logical AND operator. If both the operands are non-zero, then the condition becomes true. | (A && B) is false |
| || | Called Logical OR Operator. If any of the two operands is non-zero, then the condition becomes true. | (A || B) is true. |
| ! | Called Logical NOT Operator. It is used to reverse the logical state of its operand. If a condition is true, then Logical NOT operator will make it false. | !(A && B) is true. |

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| **Operator** | **Description** | **Example** |
| && | Called Logical AND operator. If both the operands are non-zero, then the condition becomes true. | (A && B) is false. |
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| ! | Called Logical NOT Operator. It is used to reverse the logical state of its operand. If a condition is true, then Logical NOT operator will make it false. | !(A && B) is true. |
|  |  |  |

**4.BITWISE OPERATORS**

In computer programming, a bitwise operation operates on a bit string, a bit array or a binary numeral at the level of its individual bits.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **P** | **q** | **p & q** | **p | q** | **p ^ q** |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 | 1 |

**5.MISC OPERATORS**

Is conditional **operator** which has 3 operands

They include;

|  |  |  |
| --- | --- | --- |
| **Operator** | **Description** | |
| sizeof() | Returns the size of an variable. | |
| & | Returns the address of an variable. | |
| \* | Pointer to a variable. | |
| ? : | | Conditional Expression | |
|  | |  | |

**6. ASSIGNMENT OPERATORS**

The assignment operator is used to assign values to a variable called an ‘operand’

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