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Assignment-1

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Operators:

Special symbols perform special operations.

Types:

Arithmetic operators
Assignment operators
comparison operators
Logical operators
Bitwise operators
Increment/Decrement operators

Arithmetic operators:

operator	Name	Example
+	Addition	x+y
-	Subtraction	x-y
*	Multiplication	x*y
/	Division	x/y
%	Modulus	x%y

Assignment operators:

operator	Example	
=	x = 5	x = 5
+ =	x + = 3	x = x + 3
- =	x - = 3	x = x - 3

*=	x*=5	x = x * 5
|=	x|=5	x = x | 5
%=	x%=5	x = x % 5
&=	x&=3	x = x & 3
!=	x!=3	x = x ! 3
^=	x^=3	x = x ^ 3
>>=	x>>=5	x = x >> 5
<<=	x<<=5	x = x << 5

Comparison Operators:

Operator	Name	Example
==	Equal to	x == 5
!=	not equal to	x != y
>	Greater than	x > y
<	Less than	x < y
>=	Greater than or equal to	x >= y
<=	Less than or equal to	x <= y

Logical operators:

operator	Name	Example
&&	Logical and	x<5 && x<10
||	Logical or	x<5 || x<4
!	Logical not	!(x<5 && x<10)

Bitwise operators:

operators	Name	Example
&	Bitwise AND	x & y
^	Bitwise exclusive OR	x ^ y
|	Bitwise inclusive OR	x | y
~	complement	~x
<<	Left shift	x << y
>>	Right shift	x >> y

Control statements:

Executed according to the order Smooth flow of program.

Types:

Decision Making statements:

* If statement
* switch statements

Looping statements:

* do while
* while
* for Loop

Jump statements:

* Break statement
* Continue statement

Decision Making statements:

If statements:

1. Evaluate a condition
2. Diverted specific condition
3. Condition either true (or) false

Types:

1. Simple If statement
2. If - else statement
3. If - else - If - Ladder
4. Nested If statement

Simple If statement:

Expression evaluates to true syntax

```
If (condition)
  {
    statement;
  }
```

If-else statement:

```
If (condition)
    {
      statement 1;
    }
  else
      {
        statement 2;
      }
```

Nested If statement:

```
If (condition1) {
    statement 1; }
If (condition 2); {
   statement 2 }
else
    {
      statement 3;
    }
```

Switch statement:

Multiple blocks of code in a single case

```
switch (Expression)
 {
    case value1 ;
    Statement1;
    break ;
 }
 case value 11 ;
  stament 2;
  break;
  default;
}
```

Looping statement:

Excess code repeatedly

Execution Instruction.

Jump statement:

Transfer - control specific statement

execute other part of the program.

Types:

* Break: → stop the current flow of program
* continue: → st specific part

Applications:

* Mathematical calculation
* Searching
* Sorting.