ASSIGNMENT OPERATORS

1Q)

1)BITWISE OPERATORS:

1. & - Bitwise AND:

* The output of bitwise AND is 1 if the corresponding bits of two operands is 1.
* If either bit of an operand is 0, the result of corresponding bit is evaluated to 0.
* It is denoted by &

2) |-BITWISE OR:

* The output of bitwise OR is 1 if at least one corresponding bit of two operands is 1.
* In C Programming, bitwise OR operator is denoted by |.

3) ^-BITWISE EXOR OR(EXCLUSIVE OR):

* The result of bitwise XOR operator is 1 if the corresponding bits of two operands are opposite.
* It is denoted by ^.

4)~ - BITWISE COMPLIMENT OPERATOR:

* Bitwise compliment operator is an unary operator (works on only one operand).
* It changes 1 to 0 and 0 to 1.
* It is denoted by ~.
* Bitwise compliment of any number n is - (n+1)

5) >>- RIGHT SHIFT OPERATOR:

* Right shift operator shifts all bits towards right by certain number of specified bits.
* It is denoted by >>.

6)<<-LEFT SHIFT OPERATOR:

* Left shift operator shifts all bits towards left by certain number of specified bits.
* It is denoted by <<

EXAMPLE:

#include<stdio.h>

int main()

{

int a =60;

int b=13;

int c=0;

c = a & b;

printf(“Line 1 - value of c is %d\n”,c);

c = a|b;

printf(“Line 2 - value of c is %d\n”,c);

c = a^b;

printf(“Line 3-value of c is %d\n ”,c);

c = ~a;

printf(“Line 4-value of c is %d\n”,c);

c =a >>2;

printf(“Line 5-value of c is %d\n”,c);

c = a<<2;

printf(“Line 6-value of c is %d\n”,c);

}

**OUTPUT:**

Line 1 - value of c is 12

Line 2 - value of c is 61

Line 3-value of c is 49

Line 4-value of c is -61

Line 5-value of c is 3

Line 6-value of c is 960

2)**TERNARY OPERATORS**:

* The ternary operator is used to execute code based on the result of a binary condition.
* It takes in a binary condition as input, which makes it similar to an 'if-else' control flow block. It also, however, returns a value, behaving similar to a function.

Syntax:

* result = binaryCondition ? valueReturnedIfTrue : valueReturnedIfFalse;

EXAMPLE:

#include<stdio.h>

int main()

{

int a =10,b=20,max;

max= (a>b)?printf("a is greater"):printf("b is greater");

}

Output:

b is greater

**2)CALCULATOR PROGRAM**

#include<stdio.h>

int main()

{

int a,b,c;

printf("Enter a value\n");

printf("Enter b value\n");

scanf("%d%d",&a,&b);

c=a+b;

printf("Sum of %d and %d is %d\n",a,b,c);

c=a-b;

printf("Difference of %d and %d is %d\n",a,b,c);

c=a/b;

printf("Division of %d and %d is %d\n",a,b,c);

c=a\*b;

printf("Multiplication of %d and %d is %d\n",a,b,c);

c=a%b;

printf("Modulus of %d and %d is %d\n",a,b,c);

return 0;

}