Assignments – Operators in C

1. **W.A.P. to show addition, subtraction, difference and modulus operation by taking 2 numbers from the user.**
2. **W.A.P. to show increment and decrement operation. Take 2 integers (a,b) and 2 float (c,d) numbers from the user. (Increment a and c, decrement b and d).**
3. **W.A.P. to show assignment operators (+=,-=,*=,/=,%=) by taking an input from the user.**
4. **W.A.P. to show relational operators (=,>,<,!,>=,<=) by taking inputs from the user.**
5. **W.A.P. to show logical operators by taking inputs from the user.**
6. **W.A.P. to show BITWISE Operators by taking 2 inputs from the user.**
7. **W.A.P. to show SHIFT Operators.**

Example 1: Arithmetic Operators

```
// Working of arithmetic operators

#include <stdio.h>
int main()
{
 int a = 9,b = 4, c;
 c = a+b;
 printf("a+b = %d \n",c);
 c = a-b;
 printf("a-b = %d \n",c);
 c = a*b;
 printf("a*b = %d \n",c);
 c = a/b;
 printf("a/b = %d \n",c);
 c = a%b;
 printf("Remainder when a divided by b = %d \n",c);
 return 0;
}
```

Example 2: Increment and Decrement Operators

```
// Working of increment and decrement operators
```

```
#include <stdio.h>
int main()
{
 int a = 10, b = 100;
 float c = 10.5, d = 100.5;
 printf("++a = %d \n", ++a);
 printf("--b = %d \n", --b);
 printf("++c = %f \n", ++c);
 printf("--d = %f \n", --d);
 return 0;
}
```

Example 3: Assignment Operators

```
// Working of assignment operators

#include <stdio.h>
int main()
{
 int a = 5, c;
 c = a; // c is 5
 printf("c = %d\n", c);
 c += a; // c is 10
 printf("c = %d\n", c);
 c -= a; // c is 5
 printf("c = %d\n", c);
 c *= a; // c is 25
 printf("c = %d\n", c);
 c /= a; // c is 5
 printf("c = %d\n", c);
 c %= a; // c = 0
 printf("c = %d\n", c);
 return 0;
}
```

Example 4: Relational Operators

```
// Working of relational operators
#include <stdio.h>
int main()
{
 int a = 5, b = 5, c = 10;
 printf("%d == %d is %d \n", a, b, a == b);
 printf("%d == %d is %d \n", a, c, a == c);
 printf("%d > %d is %d \n", a, b, a > b);
 printf("%d > %d is %d \n", a, c, a > c);
 printf("%d < %d is %d \n", a, b, a < b);
 printf("%d < %d is %d \n", a, c, a < c);
 printf("%d != %d is %d \n", a, b, a != b);
 printf("%d != %d is %d \n", a, c, a != c);
 printf("%d >= %d is %d \n", a, b, a >= b);
 printf("%d >= %d is %d \n", a, c, a >= c);
 printf("%d <= %d is %d \n", a, b, a <= b);
 printf("%d <= %d is %d \n", a, c, a <= c);
 return 0;
}
```

Example 5: Logical Operators

```
// Working of logical operators
```

```
#include <stdio.h>
int main()
{
 int a = 5, b = 5, c = 10, result;
 result = (a == b) && (c > b);
 printf("(a == b) && (c > b) is %d \n", result);
 result = (a == b) && (c < b);
 printf("(a == b) && (c < b) is %d \n", result);
 result = (a == b) || (c < b);
 printf("(a == b) || (c < b) is %d \n", result);
 result = (a != b) || (c < b);
 printf("(a != b) || (c < b) is %d \n", result);
 result = !(a != b);
 printf("!(a != b) is %d \n", result);
 result = !(a == b);
 printf("!(a == b) is %d \n", result);
 return 0;
}
```

Example 6: Bitwise AND

```
#include <stdio.h>
```

```
int main()
{
 int a = 12, b = 25;
 printf("Output = %d", a&b);
 return 0;
}
```

Example 7: Bitwise OR

```
#include <stdio.h>
int main()
{
 int a = 12, b = 25;
 printf("Output = %d", a|b);
 return 0;
}
```

Example 8: Bitwise XOR

```
#include <stdio.h>
int main()
{
 int a = 12, b = 25;
 printf("Output = %d", a^b);
 return 0;
}
```

Example 9: Bitwise Complement

```
#include <stdio.h>
```

```
int main()
{
 printf("Output = %d\n",~35);
 printf("Output = %d\n",~-12);
 return 0;
}
```

Example 10: Shift Operators

```
#include <stdio.h>
int main()
{
 int num=212, i;
 for (i=0; i<=2; ++i)
 printf("Right shift by %d: %d\n", i, num>>i);
 printf("\n");
 for (i=0; i<=2; ++i)
 printf("Left shift by %d: %d\n", i, num<<i);
 return 0;
}
```

_____END_____