ASSIGNMENT-3

1. Display multiple variables.

   Sample Variables:

   a + c, x + c, dx + x, a + x, s + b, ax + b, s + c, ax + c, ax + ux

   Declaration :

   int a = 125, b = 12345;

   long ax = 1234567890;

   short s = 4043;

   float x = 2.13459;

   double dx = 1.1415927;

   char c = 'W';

   unsigned long ux = 2541567890;

PROGRAM:

```
#include<stdio.h>
int main()
{
   int a = 125, b = 12345;
   long ax = 1234567890;
   short s = 4043;
   float x = 2.13459;
   double dx = 1.1415927;
   char c = 'W';
   unsigned long ux = 2541567890;
   printf("a + c = %d \n", a + c);
   printf("x + c = %g \n", x + c);
   printf("dx + x = %g \n", dx + x);
   printf("a + x = %g \n", a + x);
```

```
    printf("s + b = %d \n", s + b);
    printf("ax + b = %d \n", ax + b);
    printf("s + c = %d \n", s + c);
    printf("ax + c = %d \n", ax + c);
    printf("ax + ux = %ld \n", ax + ux);
    return 0;
}
```

OUTPUT:

```
a + c = 212
x + c = 89.1346
dx + x = 3.27618
a + x = 127.135
s + b = 16388
ax + b = 1234580235
s + c = 4130
ax + c = 1234567977
ax + ux = 3776135780
```

2. Convert specified days into years, weeks and days.

PROGRAM:

```
#include <stdio.h>
int main()
{
    int years, weeks, days;
    int given_days=1000;
    years = given_days/365;
    weeks = (given_days%365)/7;
```

```
days= given_days - ((years*365) + (weeks*7));
printf("Years are %d \n", years);
printf("Weeks are %d \n", weeks);
printf("Days are %d \n", days);
return 0;
}
```

OUTPUT:

Years are 2

Weeks are 38

Days are 4

4. Create enumerated data type for 7 days and display their values in integer constant.

PROGRAM:

```
#include<stdio.h>
int main()
{
   enum days{sun, mon, tue, wed, thu, fri, sat};
   printf("Sun=%d \n Mon=%d \n Tue=%d \n Wed=%d \n Thu=%d \n
            Fri=%d \n Sat=%d \n", sun, mon, tue, wed, thu, fri, sat);
   return 0;
}
```

OUTPUT:

Sun=0

Mon=1

Tue=2

Wed=3

Thu=4

Fri=5

Sat=6

5. Convert Centigrade to Fahrenheit.

PROGRAM:

```
#include <stdio.h>
int main()
{
   float celsius, fahrenheit;
   printf("Enter temperature in Celsius: ");
   scanf("%f", &celsius);
   fahrenheit = (celsius * 9 / 5) + 32;
   printf("Temperature In Fahrenheit is %g", fahrenheit);
   return 0;
}
```

OUTPUT:

```
Enter temperature in Celsius: 75.80
Temperature In Fahrenheit is 168.44
```

6. Takes minutes as input, and display the total number of hours and minutes.

PROGRAM:

```
#include <stdio.h>
int main()
{
  int hours, minutes;
  int given_minutes=100;
```

```
  hours = given_minutes/60;
  minutes = given_minutes%60;
  printf("Total no. of hours are %d \n", hours);
  printf("Total number of minutes are %d \n", minutes);
  return 0;
}
```

OUTPUT:

Total no. of hours are 1

Total number of minutes are 40

7. Prints the perimeter of a rectangle to take its height and width as input.

PROGRAM:

```
#include<stdio.h>
int main()
{
  int height=10, width=20, perimeter;
  perimeter = 2*(height + width);
  printf("The perimeter of the rectangle is %d \n", perimeter);
  return 0;
  }
```

OUTPUT:

The perimeter of the rectangle is 60

8. By using +, /, %=, >=, ! operators.

PROGRAM:

```
#include<stdio.h>
int main()
{
```

```
   int a = 12 , b = 6 ;
   printf(" a + b = %d \n", a + b);
   printf("a / b = %d \n", a / b);
   printf("a %= b = %d \n", a %= b);
   printf("a >= b = %d \n", a >= b);
   printf("a ! b = %d", a != b);
   return 0;
}
```

OUTPUT:

```
a + b = 18
a / b = 2
a %= b = 0
a >= b = 0
a ! b = 1
```

9. By using &, |, >>, ?:, || operators.

PROGRAM:

```
#include<stdio.h>
int main()
{
   int a = 12 , b = 6 ;
   printf("a & b = %d \n", a & b);
   printf("a | b = %d \n", a | b);
   printf("a >> b = %d \n", a >> b);
   printf("a ?: b = %d \n", a ?: b);
   printf("a || b = %d \n", a || b);
    return 0;
}
```

OUTPUT:

a & b = 4

a | b = 14

a >> b = 0

a ?: b = 12

a || b = 1

10. Find the Size of int, float, double and char.

PROGRAM:

```
#include<stdio.h>
int main()
{
  int a ;
  float b ;
  double c ;
  char d ;
  printf("size of int is %d bytes \n",sizeof(a));
  printf("size of float is %d bytes \n",sizeof(b));
  printf("size of double is %d bytes \n",sizeof(c));
  printf("size of char is %d bytes \n",sizeof(d));
  return 0;
}
```

OUTPUT:

size of int is 4 bytes

size of float is 4 bytes

size of double is 8 bytes

size of char is 1 bytes

3. Accepts two item’s weight (floating points' values) and number of purchase(floating points' values) and calculate the average value of the items.

PROGRAM:

```
#include <stdio.h>
int main()
{
  float w1, c1, w2, c2, average;
  printf("Weight of item1:");
  scanf("%f", &w1);
  printf("No.of item1:");
  scanf("%f", &c1);
  printf("Weight of item2:");
  scanf("%f", &w2);
  printf("No. of item2:");
  scanf("%f", &c2);
  average = ((w1 * c1) + (w2 * c2)) / c1 + c2;
  printf("Average value of items are %g \n", average);
  return 0;
}
```

OUTPUT:

```
Weight of item1:2.5
No.of item1:2
Weight of item2:3.5
No. of item2:4
Average value of items are 13.5
```