Assignment - 3

1. Write a program to check whether a given number is positive or non-positive.

```
#include<stdio.h>
int main()
{
    int a;
    printf("Enter any number = ");
    scanf("%d",&a);
    if(a>0)
        printf("\nPositive Number");
    else
        printf("\nNon-Positive Number");
    return 0;
}
```

2. Write a program to check whether a given number is divisible by 5 or not

```
#include<stdio.h>
int main()
{
    int a;
    printf("Enter the number = ");
    scanf("%d",&a);
    if(a%5==0)
        printf("Divisible by 5 = %d",a);
    else
        printf("Not Divisible by 5 = %d",a);
    return 0;
}
```

3. Write a program to check whether a given number is an even number or an odd number.

```
#include<stdio.h>
int main()
{
   int a;
   printf("Enter any number = ");
   scanf("%d",&a);
   if(a%2==0)
      printf("Even Number = %d",a);
   else
      printf("Odd Number = %d",a);
   return 0;
}
```

5. Write a program to check whether a given number is a three-digit number or not.

```
#include<stdio.h>
int main()
{
   int a;
   printf("Enter any number = ");
   scanf("%d",&a);
   if(a>99&&a<1000)
      printf("Three digit Number = %d",a);
   else
      printf("Not Three digit Number = %d",a);
   return 0;

}
```

6. Write a program to print greater between two numbers. Print one number of both are the same.

```
#include<stdio.h>
int main()
{
   int a,b;
   printf("Enter value a = ");
   scanf("%d",&a);
   printf("Enter value b = ");
   scanf("%d",&b);
   if(a>=b)
      printf("Greater Number = %d",a);
   else
      printf("Greater Number = %d",b);
   return 0;
}
```

7. Write a program to check whether roots of a given quadratic equation are real & distinct, real & equal or imaginary roots

```
#include<stdio.h>
int main()
{
   int a,b,c;
   printf("Enter value a = ");
   scanf("%d",&a);
   printf("Enter value b = ");
   scanf("%d",&b);
   printf("Enter value b = ");
   scanf("%d",&c);

   int D = b*b - 4*a*c;
   if(D>0)
      printf("Real & Distinct = %d",D);
```

```
    else if(D==0)
        printf("Real & Equal = %d",D);
    else
        printf("Imaginary Roots = %d",D);
    return 0;

}
```

8. Write a program to check whether a given year is a leap year or not.

```
#include<stdio.h>
int main()
{
    int year;
    printf("Enter year = ");
    scanf("%d",&year);

    if(year%100==0)
    {
        if(year%400==0)
            printf("Leap Year = %d",year);
        else
            printf("Not Leap Year = %d",year);
    }
    else
    {
        if(year%4==0)
            printf("Leap Year = %d",year);
        else
            printf("Not Leap Year = %d",year);
    }
    return 0;
}
```

9. Write a program to find the greatest among three given numbers. Print number once if the greatest number appears two or three times.

```
#include<stdio.h>

int main()
{
   int a,b,c;
   printf("Enter the three value = ");
   scanf("%d %d %d",&a,&b,&c);

   if(a>=b && a>c)
      printf("%d",a);
   else
   {
      if(b>c)
         printf("%d",b);
      else
         printf("%d",c);
   }
return 0;
}
```

11. Write a program to take marks of 5 subjects from the user. Assume marks are given out of 100 and passing marks is 33. Now display whether the candidate passed the examination or failed.

```
#include<stdio.h>

int main()
{
   int SUB1, SUB2, SUB3, SUB4, SUB5, marks;
   printf("Enter the five Subject number = ");
   scanf("%d%d%d%d%d",&SUB1,&SUB2,&SUB3,&SUB4,&SUB5);
   marks = SUB1+SUB2+SUB3+SUB4+SUB5;
```

```
    if(marks<=100 && marks>33)
        printf("Passed");
    else
        printf("Failed");
    return 0;
}
```

12. Write a program to check whether a given alphabet is in uppercase or lowercase.

```
#include<stdio.h>

int main()
{
    char ch;
    printf("Enter the character = ");
    scanf("%c",&ch);

    if(ch>=65 && ch<=90)
        printf("UPPER CASE");
    else
        printf("LOWER CASE");
    return 0;
}
```

13. Write a program to check whether a given number is divisible by 3 and divisible by 2.

```
#include<stdio.h>

int main()
{
    int x;
    printf("Enter the number = ");
    scanf("%d",&x);
```

```
    if(x%2==0 && x%3==0)
        printf("Divisible by 2 and 3 = %d",x);
    else if(x%2==0)
        printf("divisible by 2 = %d",x);
    else if(x%3==0)
        printf("divisible by 3 = %d",x);
    else
        printf("Not divisible 2 and 3 = %d",x);
    return 0;
}
```

14. Write a program to check whether a given number is divisible by 7 or divisible by 3.

```
#include<stdio.h>

int main()
{
    int x;
    printf("Enter the number = ");
    scanf("%d",&x);

    if(x%3==0 || x%7==0)
    {
        {
            if(x%3==0)
                printf("DIvisible by 3 = %d\n",x);
            else if(x%7==0)
                printf("Divisible by 7 = %d",x);
        }
        printf("Divisible by 3 and 7");
    }
```

```
    else
        printf("Not divisible by 3 or 7");
    return 0;
}
```

15. Write a program to check whether a given number is positive, negative or zero.

```
#include<stdio.h>

int main()
{
    int x;
    printf("Enter the number = ");
    scanf("%d",&x);
    if(x>0)
        printf("POSITIVE NUMBER");
    else if(x==0)
        printf("ZERO NUMBER");
    else
        printf("NEGATIVE NUMBER");
    return 0;
}
```

16. Write a program to check whether a given character is an alphabet (uppercase), an alphabet (lower case), a digit or a special character

```
#include<stdio.h>

int main()
{
    char ch;
    printf("Enter the number = ");
    scanf("%c",&ch);
    if(ch>=65 && ch<=90)
```

```
        printf("UPPER CASE ALPHABET");
    else if(ch>=97 && ch<=122)
        printf("LOWER CASE ALPHABET");
    else if(ch>=48 && ch<=57)
        printf("DIGIT NUMBER");
    else
        printf("SPECIAL CHARACTER");

    return 0;
}
```

18. Write a program which takes the month number as an input and display number of days in that month

```
#include<stdio.h>

int main()
{
    int month;
    printf("Enter the number of month = ");
    scanf("%d",&month);
    if(month==1)
        printf("Number of Days = 31");
    else if(month==2)
        printf("Number of Days = 28 or 29");
    else if(month==3)
        printf("Number of Days = 31");
    else if(month==4)
        printf("Number of Days = 30");
    else if(month==5)
        printf("Number of Days = 31");
    else if(month==6)
        printf("Number of Days = 30");
    else if(month==7)
        printf("Number of Days = 31");
```

```
    else if(month==8)
        printf("Number of Days = 31");
    else if(month==9)
        printf("Number of Days = 30");
    else if(month==10)
        printf("Number of Days = 31");
    else if(month==11)
        printf("Number of Days = 30");
    else if(month==12)
        printf("Number of Days = 31");
    else
        printf("None");
    return 0;
}
```