Printf(“Name:- Sumit Gupta”);
Output
Name:- Sumit Gupta

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

```c
//Write a program to check whether a given number is positive or non-positive.
#include<stdio.h>
int main()
{
    int i=0,n;
    printf("enter a any number ");
    scanf("%d", &n);

    if(i<=n)
    {
        printf("positive number");
    }
else if (i >= n )
    {
        printf("negitive number" );
    }
    return 0;
}
```

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

```c
//Write a program to check whether a given number is divisible by 5 or not
#include<stdio.h>
int main ()
{
    int n;
    printf("Enter a number");
    scanf("%d",&n);
   if(n%5==0)
    {
        printf("divisible number");
    }
    else
    {
        printf("Not-divisible number ");
    }
    return 0;
}
```

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

```c
/*Write a program to check whether a given number is an even number or an odd
```

```
number.*/
#include<stdio.h>
int main ()
{
    int n;
    printf("Enter any number:");
    scanf("%d",&n);
if(n%2==0)
{
    printf("Even number ");

}
else
{
    printf("odd number ");
}
return 0;
}
```

```
4/*Write a program to check whether a given number is an even
number or an odd
number without using % operator.*/
#include<stdio.h>
int main ()
{
    int n;
    printf("Enter a number");
    scanf("%d",&n);
      //if((n & 1)==0)
      if(n/2*2==n)

     {
        printf("the given number is  even number");
     }
else{
    printf("the given number is odd number");
}
return 0;
}
```

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

```
#include<stdio.h>
int main (){
    int n;
    printf("Enter a number");
    scanf("%d",&n);
    if(n>99 && n<1000)
    {
        printf("the given number is three-digit %d",n);
```

```
    }
    else
    {
        printf("not a three-digit number");
    }
    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 num1,num2;
    printf("Enter two number ");
    scanf("%d%d",&num1,&num2);
    if(num1>num2)
    {
        printf("gratest number is %d\n",num1);

    }
    else if(num2>num1)
    {
         printf("gratest number is %d",num2);
    }

else
{
    printf("both number are equal");
```

```
}
return 0;
}
/*Write a program to check whether roots of a given quadratic
equation are real &
distinct, real & equal or imaginary roots*/
#include<stdio.h>
#include<math.h>
int main ()
{
     int a,b,c;
     float x,y;
     printf("Enter a cofficient value X^2, x and constant
termn\n");
     scanf("%d %d %d",&a,&b,&c);
      int D;
      D=b*b-4*a*c;
      if(D==0)
```

```
      {
      printf("equal roots");
      }

       if(D>0)
      {
        printf("real number");
      }
       if(D<0)
      {
        printf("imaginary roots ");
      }
      x=-b+ sqrt(D)/(2*a);
       y=-b -sqrt(D)/(2*a);
       printf("\n roots are = %f %f",x ,y);
```

```
       return 0;
}
```

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

```
#include<stdio.h>
 int main ()
 {
    int yr;
    printf("enter a years");
    scanf("%d",&yr);
    if(yr%4==0 && yr%400==0)
    {
        printf("leap years %d",yr);

    }
    else if (yr%400==0 && yr%100==00)
    {
        printf("leap  years");
    }
    else
    {
        printf("not leap years");
    }
```

```
 }
```

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

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

```c
    int a,b,c;
    printf("Enter a number");
    scanf("%d%d%d",&a,&b,&c);
    if(a >=b && a >=c)
    {
        printf("greatest number %d",a);

    }
    else if(b >=a && b >=c)
    {
        printf("greatest number %d",b);

    }
     else if(c >=a && c >=b)
    {
        printf("greatest number %d",c);

    }
    return 0;
}
```

```c
10/*Write a program which takes the cost price and selling
price of a product from the
user. Now calculate and print profit or loss percentage.*/
#include<stdio.h>
int main ()
{
    float cp,sp,PL,LL;
    printf("Enter cost price");
    scanf("%f",&cp);
    printf("Enter selling price");
    scanf("%f",&sp);

if(sp>cp)
{
 PL=(sp-cp)*100/cp;
 printf("Profit Percentage is %f",PL);
}
else if (cp>sp)
{
    LL=(cp-sp)*100/cp;
    printf("loss Percentage is %f",LL);
}
return 0;
}
```

```c
11/*Write a program to take marks of 5 subjects from the user.
Assume marks are given
```

```c
out of 100 and passing marks is 33. Now display whether the
candidate passed the
examination or failed.*/
#include<stdio.h>
int main()
{
    //SCIENCE,MATHS,ENGLISH,COMPUTER,DSA
    int S,M,E,C,DSA;
    printf("enter the marks of the subject\n");
    scanf("%d%d%d%d%d",&S,&M,&E,&C,&DSA);

 if(S>33 || E>33 ||  M>33 ||  C>33 ||  DSA>33 )
 {
    printf("the candidate passed the exam");
 }
 else
 {
    printf("the candidate FAIL the exam");
 }
  if (S>100 || E>100||  M>100||  C>100||  DSA>100)
  {
  printf("wrong number");
  }
 return 0;
}
```

12.
```c
//12. Write a program to check whether a given alphabet is
in uppercase or lowercase.
#include<stdio.h>
int main ()
{
    char ch;
    printf("Enter a english letter\n");
    scanf("%c", &ch);

    if(ch >= 'A' && ch <='Z')
    {
        printf("uper case %c",ch);
    }
    else if (ch >= 'a'&& ch <= 'z' )
    {
        printf("lower case %c ", ch);
```

```c
    }
    else
    {
        printf(" not a english letter");
    }
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 n;
    printf("Enter a number ");
    scanf("%d",&n);
    if(n%2==0)
    {
        printf("the given number is divisible by 2 %d",n);
    }
   else if(n%3==0)
    {
        printf("the given number is divisible by 3 %d",n);
    }
    return 0;
}
```

```
//14Write a program to check whether a given number is
divisible by 7 or divisible by 3.
//13. Write a program to check whether a given number is
divisible by 3 and divisible by 2.
#include<stdio.h>
int main ()
{
    int n;
    printf("Enter a number ");
    scanf("%d",&n);
    if(n%7==0)
    {
        printf("the given number is divisible by 7 %d",n);
    }
   else if(n%3==0)
    {
        printf("the given number is divisible by 3 %d",n);
    }
    return 0;
}
```

```
//15. Write a program to check whether a given number is
positive, negative or zero.
#include<stdio.h>
int main ()
{
    int n;
```

```
    printf("Enter a number\n");
    scanf("%d",&n);
    if(n>0)
    {
        printf("the given number is positive number %d",n);
    }
    else if (n<0)
    {
        printf("the given number is negative number %d",n);
    }
    else if(n=0)
    {
     printf("the given number is zero %d",n);
    }
    return 0;
}
```

16.16. 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 a english letter\n");
    scanf("%c", &ch);

    if(ch >= 'A' && ch <='Z')
    {
        printf("uper case %c",ch);
    }
    else if (ch >= 'a'&& ch <= 'z' )
    {
        printf("lower case %c ", ch);
    }
    else
    {
        printf(" a digit or a special character.");
    }
return 0;
}
/*17. Write a program which takes the length of the sides of a triangle as an input. Display
whether the triangle is valid or not.*/
#include<stdio.h>
int main ()
{
    int a,b,c;
```

```
    printf("Enter a side of a number\n");
    scanf("%d%d%d",&a,&b,&c);
    if(a+b>c && b+c>a && a+c>b)
    {
        printf("the triangle is valid");
    }
    else
    {

        printf("the triangle is  not valid ");
    }
    return 0;
}
/*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;
```

```
    /* Input month number from user */
    printf("Enter month number (1-12): ");
    scanf("%d", &month);
```

```
    if(month == 1)
    {
        printf("31 days");
    }
    else if(month == 2)
    {
        printf("28 or 29 days");
    }
    else if(month == 3)
    {
        printf("31 days");
    }
    else if(month == 4)
    {
        printf("30 days");
    }
    else if(month == 5)
    {
        printf("31 days");
    }
    else if(month == 6)
    {
```

```
        printf("30 days");
    }
    else if(month == 7)
    {
        printf("31 days");
    }
    else if(month == 8)
    {
        printf("31 days");
    }
    else if(month == 9)
    {
        printf("30 days");
    }
    else if(month == 10)
    {
        printf("31 days");
    }
    else if(month == 11)
    {
        printf("30 days");
    }
    else if(month == 12)
    {
        printf("31 days");
    }
    else
    {
        printf("Invalid input! Please enter month number
between (1-12).");
    }

    return 0;
}
```