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

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

 if(i>=0)
  printf("Positive Number");
 else
  printf("Negative 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 i;
 scanf("%d",&i);

 if(i%5 == 0)
  printf("Divisible Number");
 else
  printf("Non Divisible Number");

 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 i;
 scanf("%d",&i);

 if(i%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 to check even or odd \n");
    scanf("%d", &n);
    if((n & 1)==0)
    printf("%d is even.", n);
    else
    printf("%d is odd.", n);

 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 n;
    printf("Enter a number to check even or odd \n");
    scanf("%d", &n);
    if(n>=100 && n<=999)
    printf("%d is Three Digit.", n);
    else
    printf("%d is Not a Three Digit", n);

 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;
scanf("%d %d",&num1,&num2);
if(num1 > num2)
{
printf("%d is greater",num1);
}
else
{
printf("%d is greater",num2);
}

 return 0;
}
```

---

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

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 a year: ");
   scanf("%d", &year);

   if (year % 400 == 0)
   {
      printf("%d is a leap year.", year);
   }
   else if (year % 100 == 0)
   {
      printf("%d is not a leap year.", year);
   }
   else if (year % 4 == 0)
   {
      printf("%d is a leap year.", year);
   }
   else
   {
      printf("%d is not a leap year.", year);
   }
   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 sum,sub1,sub2,sub3,sub4,sub5;
  printf("\n Enter the sub1 Marks");
  scanf("%d",&sub1);
  printf("\n Enter the sub2 Marks");
  scanf("%d",&sub2);
  printf("\n Enter the sub3 Marks");
  scanf("%d",&sub3);
  printf("\n Enter the sub4 Marks");
  scanf("%d",&sub4);
  printf("\n Enter the sub5 Marks");
  scanf("%d",&sub5);

  sum = ((sub1+sub2+sub3+sub4+sub5)/5);

  if(sub1 >=33 && sub2 >= 33 && sub3 >= 33 && sub4 >= 33 && sub5 >= 33)
  {
    if(sum>=35)
    {
      printf("\nCandidate Passed \n");
      printf("Total Percentage is = %d",sum);
    }
  }
  else
```

```
  {
    printf("\n Candidate Failed");
  }
}
```

---

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

```
#include<stdio.h>

int main() {
   char ch;

   printf("\nEnter The Character : ");
   scanf("%c", &ch);

   if (ch >= 'A' && ch <= 'Z')
      printf("Character is Upper Case Letters");
   else
      printf("Character is Not Upper Case Letters");

   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\n");
  scanf("%d",&n);
  if(n%3 == 0)
  {
    printf("%d is divisible by 3");
  }
  else if(n%2 == 0)
  {
    printf("%d is divisible by 2");
  }
  else
  {
    printf("Invalid Number");
  }
}
```

---

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

```
#include<stdio.h>
int main()
{
  int n;
  printf("Enter a  number\n");
  scanf("%d",&n);
  if(n%7 == 0)
  {
    printf("%d is divisible by 7");
  }
  else if(n%3 == 0)
```

```
  {
    printf("%d is divisible by 3");
  }
  else
  {
    printf("Invalid Number");
  }
}
```

---

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 zero");
  }
  else if(n>0)
  {
    printf("Positive Number");
  }
  else
  {
    printf("Negative Number");
  }
}
```

---

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("\nEnter a character\n");
  scanf("%c",&ch);
  printf("\nASCII Value is %d \n",ch);
  if(ch >= 97 && ch <= 122)
  {
    printf("LOWERCASE");
  }
  else if(ch >= 65 && ch <= 90)
  {
    printf("UPPERCASE");
  }
  else if(ch >= 48 && ch <= 57)
  {
    printf("DIGIT");
  }
  else
  {
    printf("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("\nEnter the length=");
  scanf("%d",&a);
  printf("\nEnter the Width=");
  scanf("%d",&b);
  printf("\nEnter the Height=");
  scanf("%d",&c);
  if (a + b <= c || a + c <= b || b + c <= a)
  {
    printf("Valid");
  }
  else
  {
    printf("In-Valid");
  }
}
```

---

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 N;
  printf("\nEnter the Month Number ");
  scanf("%d",&N);

   if (N == 1 || N == 3 || N == 5 || N == 7 || N == 8 || N == 10 || N == 12)
   {
      printf("31 Days.");
   }
   else if (N == 4 || N == 6 || N == 9 || N == 11)
   {
      printf("30 Days.");
   }
   else if (N == 2)
   {
      printf("28/29 Days.");
   }
   else
   {
      printf("Invalid Month.");
   }
}
```