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>=1)

    {

        printf("Postive number");

    }

    else

    {

        printf("non-positive 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 a,b;

    printf("enter any two numbers=");

    scanf("%d%d",&a,&b);

    if(a>b)

    {

        printf("Greatest number is:%d",a);

    }

    else

    {

        printf("Greatest number is:%d",b);

    }

    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 any number=");

    scanf("%d",&a);

    if(a%5==0)

    {

        printf("%d is divisible by 5",a);

    }

    else

    {

        printf("%d is not divisible by 5",a);

    }

}

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");

    }

    else

    {

        printf("Odd number");

    }

    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,r,c=0;

    printf("Enter any number=");

    scanf("%d",&a);

    while(a!=0)

    {

        a=a/10;

        c++;

    }

    if(c==3)

    {

        printf("The three digit number");

    }

    else

    {

        printf("Not a three digit 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==1)

    {

        printf("Odd number");

    }

    else

    {

        printf("Even number");

    }

    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,d;

    printf("Enter the value for a,b and c respectively for the quadratic equation which is in the form of ax^2+bx+c=0\n");

    scanf("%d%d%d",&a,&b,&c);

    d=(b\*b)-(4\*a\*c);

    if(d>0)

    {

        printf("Roots are real and distinct");

    }

    if(d<0)

    {

        printf("Roots are imaginary");

    }

    if(d==0)

    {

        printf("Roots are real and equal");

    }

    return 0;

}

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

#include<stdio.h>

int main()

{

    int a;

    printf("Enter any year:");

    scanf("%d",&a);

    if(a%100==0)

    {

        if(a%400==0)

        {

            printf("leap year");

        }

        else

        {

            printf("not leap year");

        }

    }

    else if(a%4==0)

    {

        printf("leap year");

    }

    else

    {

        printf("not leap 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 any three number:\n");

    scanf("%d%d%d",&a,&b,&c);

    if(a>b && a>c)

    {

        printf("%d is greatest",a);

    }

    else

    {

        if(b>c)

        {

            printf("%d is greatest",b);

        }

        else{

            printf("%d is greatest",c);

        }

    }

    return 0;

}

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 sp,cp,profit,loss;

    printf("enter cost price:");

    scanf("%f",&cp);

    printf("enter selling price:");

    scanf("%f",&sp);

    if(sp>=cp)

    {

        profit=((sp-cp)/cp)\*100;

        printf("profit percentage=%f",profit);

    }

    else

    {

        loss=((cp-sp)/cp)\*100;

        printf("loss percentage=%f",loss);

    }

    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 m1,m2,m3,m4,m5,c=0,d=0;

    printf("enter marks of five subjects:\n");

    scanf("%d%d%d%d%d",&m1,&m2,&m3,&m4,&m5);

    if(m1<33 || m2<33 || m3<33 || m4<33 || m5<33 )

    {

        printf("failed");

    }

    else

    {

        printf("Passed");

    }

    return 0;

}

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

#include<stdio.h>

int main()

{

    char c;

    printf("Enter a character:");

    scanf("%c",&c);

    if (c>=97 && c<=122)

    {

        printf("%c is in lower case",c);

    }

    else if(c>=65 && c<=90)

    {

        printf("%c is in upper case",c);

    }

    else

    {

        printf("Not a character");

    }

    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 && n%3==0)

    {

        printf("Number is divisible by 2 and 3 both");

    }

    else if(n%2==0 && n%3!=0)

    {

        printf("Number is divisible by 2 only");

    }

    else if(n%2!=0 && n%3==0)

    {

        printf("Number is divisible by 3 only");

    }

    else

    {

        printf("Number is not divisible by 2 and 3");

    }

    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 n;

    printf("Enter a number:");

    scanf("%d",&n);

    if(n%7==0 && n%3==0)

    {

        printf("Number is divisible by 7 and 3 both");

    }

    else if(n%7==0 && n%3!=0)

    {

        printf("Number is divisible by 7 only");

    }

    else if(n%7!=0 && n%3==0)

    {

        printf("Number is divisible by 3 only");

    }

    else

    {

        printf("Number is not divisible by 7 and 3");

    }

    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 any number:");

    scanf("%d",&n);

    if(n>0)

    {

        printf("positive number");

    }

    else if(n<0)

    {

        printf("Negative number");

    }

    else

    {

        printf("It is Zero");

    }

    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,s;

    printf("Enter length of sides of triangle:\n");

    scanf("%d%d%d",&a,&b,&c);

    if(a>b && a>c)

    {

        s=b+c;

        if(a<s)

        {

            printf("valid traingle");

        }

        else

        {

            printf("Not a valid triangle");

        }

    }

    else if(b>c)

    {

        s=a+c;

        if(b<s)

        {

            printf("Valid traingle");

        }

        else

        {

            printf("not a valid triangle");

        }

    }

    else

    {

        s=b+a;

        if(c<s)

        {

            printf("valid triangle");

        }

        else

        {

            printf("not a valid triangle");

        }

        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 a;

    printf("Enter month number=");

    scanf("%d", &a);

    if (a <= 12)

    {

        if (a == 1 || a == 3 || a == 5 || a == 7 || a == 8 || a == 10 || a == 12)

        {

            printf("THIS PARTICULAR MONTH HAVE 31 days");

        }

        else if (a == 2)

        {

            printf("THIS PARTICULAR MONTH HAVE 28 OR 29 DAYS");

        }

        else

        {

            printf("THIS PARTICULAR MONTH HAVE 30 DAYS");

        }

    }

    else

    {

        printf("Enter valid month");

    }

    return 0;

}