ASSIGNMENT -3

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

Ans-#include<stdio.h>

int main(){

     int number;

     printf("Enter the number:");

     scanf("%d",&number);

     if(number>0)

        printf("Positive");

     else

         printf("Non-Positive");

    return 0;

}

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

Ans-#include<stdio.h>

int main(){

     int number;

     printf("Enter the number:");

     scanf("%d",&number);

     if(number % 5==0)

        printf("Divisible by 5");

     else

         printf("Not Divisible by 5");

    return 0;

}

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

Ans-#include<stdio.h>

int main(){

     int number;

     printf("Enter the number:");

     scanf("%d",&number);

     if(number % 2==0)

        printf("EVEN");

     else

         printf("ODD");

    return 0;

}

4. Write a program to check whether a given number is an even number or an odd number without using % operator.

Ans-#include<stdio.h>

int main(){

    int num;

    printf("Enter the Number:");

    scanf("%d",&num);

    if((num & 1)==0)

    printf("Number is Even");

    else

    printf("Number is ODD");

    return 0;

}

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

Ans-#include<stdio.h>

int main(){

     int number,count=0;

     printf("Enter the number:");

     scanf("%d",&number);

     while(number!=0){

        number=number/10;

        count++;

     }

     printf("%d",count);

    return 0;

}

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

Ans-#include<stdio.h>

int main(){

     int num1,num2;

     printf("Enter the numbers:");

     scanf("%d %d",&num1,&num2);

     if(num1>num2){

        printf("%d",num1);

     }

     else if (num1==num2)

     {

        printf("%d",num1);

     }

     else

        printf("%d",num2);

    return 0;

}

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

Ans-#include<stdio.h>

int main(){

     int a,b,c;

     float D;

     printf("Enter the values of a,b and c:");

     scanf("%d %d %d",&a,&b,&c);

     D=(b\*b)-(4\*a\*c);

     if(D > 0){

        printf("Real and Distinct Roots");

     }

     else if (D < 0)

     {

        printf("Imaginary Roots");

     }

     else

        printf("Real and Equal Roots");

     return 0;

}

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

Ans-#include<stdio.h>

int main(){

     int year;

     float D;

     printf("Enter the year");

     scanf("%d",&year);

     if(year % 4==0){

        printf("Year is Leap Year");

     }

     else

         printf("year is Not a 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.

Ans- #include<stdio.h>

int main(){

     int a,b,c;

     printf("Enter the numbers:");

     scanf("%d %d %d",&a,&b,&c);

     if(a>=b){

        if(a>=c)

            printf("%d",a);

        else

            printf("%d",c);

     }

     else

     {

        if (b>=c)

            printf("%d",b);

        else

            printf("%d",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.

Ans-#include<stdio.h>

int main(){

     float CP,SP,diff;

     printf("Enter the cost price and selling price:");

     scanf("%d %d",&CP,&SP);

     diff=SP-CP;

     if(diff>0)

     printf("The Profit Percentage is %f",diff/CP\*100);

     else

     printf("\nThe Loss Percentage is %f",(CP-SP)/CP\*100);

    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.

Ans-#include<stdio.h>

int main(){

     int marks[5],i,flag=0;

     for(i=0;i<5;i++){

     printf("Enter the marks of subject %d:",i+1);

     scanf("%d",&marks[i]);

     if(marks[i]<33)

     flag=1;

     }

     if(flag==1){

     printf("Failed");

     }

     else

     printf("Passed");

     return 0;

}

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

Ans-#include<stdio.h>

int main(){

    char c;

    printf("Enter the character:");

    scanf("%c",&c);

    if(c>='A' && c<='Z'){

     printf("UPPERCASE");

    }

    else if(c>='a' && c<='z'){

     printf("LOWERCASE");

    }

     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 number;

    printf("Enter the Number:");

    scanf("%D",&number);

    if(number%3==0 && number%2==0)

       printf("DIVISIBLE");

    else

       printf("NOT DIVISIBLE");

     return 0;

}

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

Ans-#include<stdio.h>

int main(){

    int number;

    printf("Enter the Number:");

    scanf("%d",&number);

    if(number%7==0)

       printf("DIVISIBLE BY 7");

    else if (number%3==0)

       printf("DIVISIBLE BY 3");

     return 0;

}

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

Ans-#include<stdio.h>

int main(){

     int number;

     printf("Enter the number:");

     scanf("%d",&number);

     if(number>0)

     printf("Positive");

     else if(number<0)

     printf("Negative");

     else

     printf("Zero");

     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.

Ans- #include<stdio.h>

int main(){

    char c;

    printf("Enter the character:");

    scanf("%c",&c);

    if(c>='A' && c<='Z'){

     printf("UPPERCASE");

    }

    else if(c>='a' && c<='z'){

     printf("LOWERCASE");

    }

    else if(c>=48 && c<=57){

     printf("DIGITS");

    }

    else

     printf("SPECIAL SYMBOL");

     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.

Ans-#include<stdio.h>

int main(){

   int l1,l2,l3;

   printf("Enter the length os sides:");

   scanf("%d %d %d",&l1,&l2,&l3);

   if((l1+l2)>l3 && (l1+l3)>l2 && (l2+l3)>l1){

    printf("VALID TRIANGLE");

   }

   else

     printf("NOT VALID TRIANGLE");

     return 0;

}

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

Ans-#include<stdio.h>

int main(){

   int n;

   printf("Enter the Month:");

   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");

    return 0;

}