**OBJECT ORIENTED PROGRAMMING (CT-260) LAB-1**

**TAQI HAIDER\_CSIT\_SECTION:B\_ROLL#92**

**Exercise:-**

**Q1:-**

#include<iostream>

#include<string>

using namespace std;

int main(){

    string rn;

    float sub1,sub2,sub3,sub4,sub5,total\_marks,percentage;

    cout<<"Enter your roll No and Total marks out of 100 "<<endl;

    cin>>rn>>sub1>>sub2>>sub3>>sub4>>sub5;

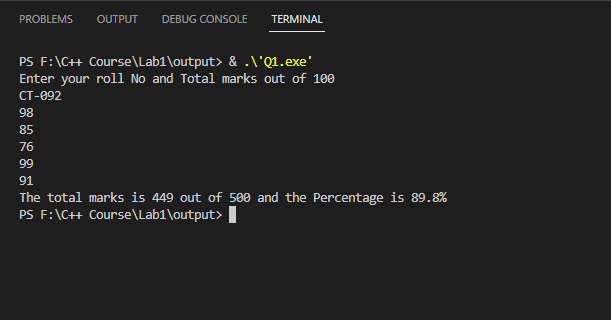
    total\_marks=sub1+sub2+sub3+sub4+sub5;

    percentage=(total\_marks/500)\*100;

    cout<<"The total marks is "<<total\_marks<<" out of 500 and the Percentage is "<<percentage<<"%"<<endl;

    return 0;

}



**Q2:-**

#include<iostream>

using namespace std;

int swaps(int \*a,int \*b,int \*c){

    int temp=\*a;

    \*a=\*b;

    \*b=\*c;

    \*c=temp;

    return 0;

}

int main(){

    int a,b,c;

    cout<<"Enter the value of a,b and c "<<endl;

    cin>>a>>b>>c;

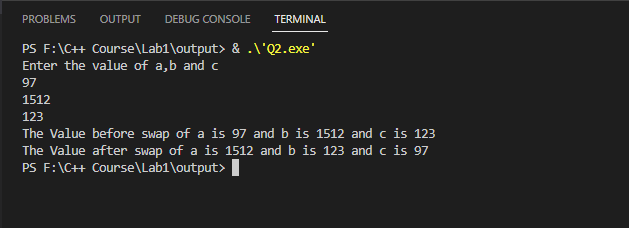
    cout<<"The Value before swap of a is "<<a<<" and b is "<<b<<" and c is "<<c<<endl;

    swaps(&a,&b,&c);

    cout<<"The Value after swap of a is "<<a<<" and b is "<<b<<" and c is "<<c<<endl;

    return 0;

}



**Q3:-**

#include<iostream>

using namespace std;

int main(){

    float fahrenheit,celsius;

    cout<<"Enter the value of fahrenheit "<<endl;

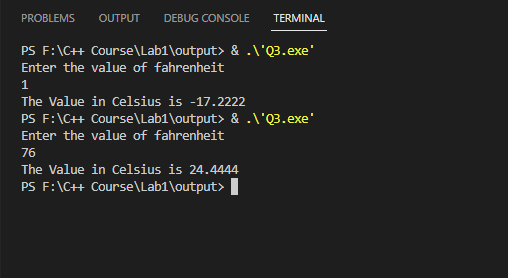
    cin>>fahrenheit;

    celsius=(fahrenheit-32)/1.8;

    cout<<"The Value in Celsius is "<<celsius<<endl;

    return 0;

}



**Q4:-**

#include<iostream>

using namespace std;

void print\_matrix(int matrix[3][3]){

    for (int i = 0; i < 3; i++)

    {

        for (int j = 0; j < 3; j++)

        {

            cout<<matrix[i][j]<<" ";

        }

        cout<<endl;

    }

}

void add\_matrix(int matrix1[3][3],int matrix2[3][3],int result[3][3]){

    cout<<"The sum of two matrix is "<<endl;

    for (int i = 0; i < 3; i++)

    {

        for (int j = 0; j < 3; j++)

        {

            result[i][j]=matrix1[i][j]+matrix2[i][j];

        }

    }

}

void mult\_matrix(int matrix1[3][3],int matrix2[3][3],int result[3][3]){

    cout<<"The product of two matrix is "<<endl;

    for (int i = 0; i < 3; i++)

    {

        for (int j = 0; j < 3; j++)

        {

            result[i][j]=0;

            for (int k = 0; k < 3; k++)

            {

                result[i][j]+=matrix1[i][k] \* matrix2[k][j];

            }

        }

    }

}

int main(){

    int matrix1[3][3],matrix2[3][3],sum[3][3],product[3][3];

    //Input first matrix

    cout<<"Enter the element of first matrix: "<<endl;

    for (int i = 0; i < 3; i++)

    {

        for (int j = 0; j < 3; j++)

        {

            cin>>matrix1[i][j];

        }

    }

    //Input Second matrix

    cout<<"Enter the element of second matrix: "<<endl;

    for (int i = 0; i <3; i++)

    {

        for (int j = 0; j <3; j++)

        {

            cin>>matrix2[i][j];

        }

    }

    cout<<"Matrix 1: "<<endl;

    print\_matrix(matrix1);

    cout<<"Matrix 2: "<<endl;

    print\_matrix(matrix2);

    add\_matrix(matrix1,matrix2,sum);

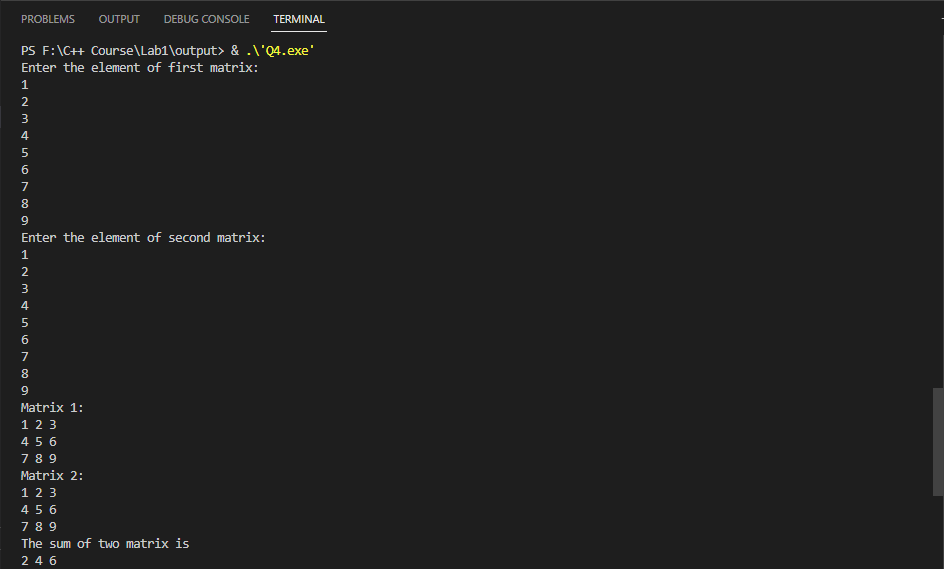
    print\_matrix(sum);

    mult\_matrix(matrix1,matrix2,product);

    print\_matrix(product);

    return 0;

}

****

****

**Q5:-**

#include<iostream>

using namespace std;

void surface\_area\_of\_sphere(int r1,float area){

    area=4\*3.142\*r1\*r1;

    cout<<"The Surface Area of sphere is "<<area<<endl;

}

void volume\_of\_sphere(int r2,float volume){

    volume=4/3\*3.142\*r2\*r2\*r2;

    cout<<"The Volume of sphere is "<<volume<<endl;

}

int main(){

    int Area\_sphere,Volume\_sphere,r1,r2;

    cout<<"Enter the radius of Surface Area of sphere "<<endl;

    cin>>r1;

    cout<<"Enter the radius of Volume of sphere "<<endl;

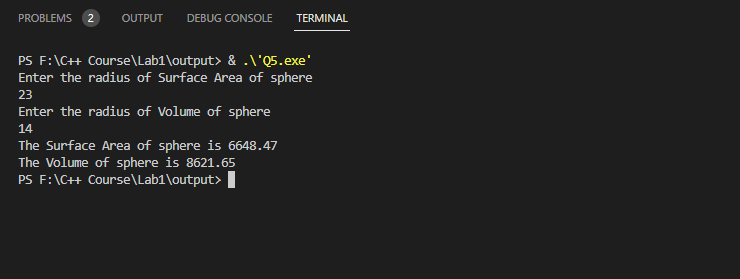
    cin>>r2;

    surface\_area\_of\_sphere(r1,Area\_sphere);

    volume\_of\_sphere(r2,Volume\_sphere);

    return 0;

}



**Q6:-**

#include<iostream>

#include <stdio.h>

using namespace std;

int main(){

    float i,j,total\_amt=200000,withdraw;

    char code,choice;

    char account\_number[10];

    float tax;

    cout<<"Enter Account type"<<endl<<"1) \"S\" for saving"<<endl<<"2) \"C\" for Current"<<endl;

    cin>>choice;

    if(choice=='S' || choice== 's'){

        cout<<"Enter Account Number: ";

        cin>>account\_number;

        while(1){

            cout<<endl;

            cout<<"enter Code: ";

            cin>>code;

            cout<<endl;

            if(code=='S' || code=='s' ){

                cout<<"ENTER amount to withdraw: ";

                cin>>withdraw;

                if(withdraw>50000 && withdraw<=100000){

                    tax = withdraw \* 0.05;

                    total\_amt=total\_amt-withdraw-tax;

                    break;

                }

                else if(withdraw<=50000){

                    tax = withdraw\* 0.02;

                    cout<<"tax"<<tax<<endl;

                    total\_amt=total\_amt-withdraw;

//                  cout<<"before TAX "<<total\_amt<<endl;

                    total\_amt=total\_amt-tax;

//                  cout<<"AF TAX "<<total\_amt<<endl;

                    break;

                }

                else{

                    cout<<"Can\'t Withdraw more than 100000";

                }

            }

        }

    }

    if(choice=='c' || choice== 'C'){

        cout<<endl;

        cout<<"Enter Account Number: ";

        cin>>account\_number;

        while(1){

            cout<<endl;

            cout<<"enter Code: ";

            cin>>code;

            cout<<endl;

            if(code=='C' || code=='c' ){

                cout<<"ENTER amount to withdraw: ";

                cin>>withdraw;

                if(withdraw>50000 && withdraw<=100000){

                    tax += withdraw\*0.05;

                    total\_amt=total\_amt-withdraw-tax-100;

                    break;

                }

                else if(withdraw<=50000){

                    total\_amt =total\_amt-withdraw-100;

                    break;

                }

                else{

                    cout<<"Can\'t Withdraw more than 100000";

                }

            }

        }

    }

//  system("cls");

    cout<<"Withdraw Amount: "<<withdraw<<endl;

    cout<<"Total Amount: "<<total\_amt<<endl;

    cout<<"Tax Paid: "<<tax;

}

****