**Name:-Bindiya Chaudhari**

**Roll no:-30**

**Pratical no:- 1.7.1**

**Pratical Name:-Implementation of program based on polynomial Additional & Substraction using Array.**

#include<iostream>

using namespace std;

class Matrix

{

int A[3][3],B[3][3],C[3][3];

public:

void Get();

void Add();

void Sub();

void Mult();

};

void Matrix :: Get()

{

cout << "\n Enter matrix 1 elements:";

for(int i=1;i<=3;i++)

{

for(int j=1;j<=3;j++)

{

cin >> A[i][j];

}

}

cout << "\n Enter matrix 2 elements:";

for(int i=1;i<=3;i++)

{

for(int j=1;j<=3;j++)

{

cin >> B[i][j];

}

}

}

void Matrix :: Add()

{

cout << "\n Addition : \n";

for(int i=1;i<=3;i++)

{

for(int j=1;j<=3;j++)

{

C[i][j] = A[i][j] + B[i][j];

cout << C[i][j] << "\t";

}

cout << "\n";

}

}

void Matrix :: Sub()

{

cout << "\n Subtraction : \n";

for(int i=1;i<=3;i++)

{

for(int j=1;j<=3;j++)

{

C[i][j] = A[i][j] - B[i][j];

cout << C[i][j] << "\t";

}

cout << "\n";

}

}

void Matrix :: Mult()

{

cout << "\n Multiplication : \n";

for(int i=1;i<=3;i++)

{

for(int j=1;j<=3;j++)

{

C[i][j]=0;

for(int k=1;k<=3;k++)

{

C[i][j] = C[i][j] + A[i][k] \* B[k][j];

cout << C[i][j] << "\t";

}

cout << "\n";

}

}

}

void menu()

{

Matrix a;

int opt;

a.Get();

do

{

cout<<"============================\n";

cout<<"1 Addition: \n";

cout<<"2 Substraction :\n";

cout<<"3 Multiplication :\n";

cout<<"4 Exit :\n";

cout<<"============================\n";

cout<<"Enter choice: "<<endl;

cin>>opt;

switch(opt)

{

case 1:

a.Add();

break;

case 2:

a.Sub();

break;

case 3:

a.Mult();

break;

case 4:

cout<<"Exit"<<endl;

return;

default:

cout<<"Invalid Choice"<<endl;

}

}while(1);

}

int main()

{

menu();

return 0;

}