Experiment-5

Aim: Write a program to print the transpose of a given matrix.

# Source Code:

#include<iostream> using namespace std;

class matrix{

int a[10][10],b[10][10];

int row,col; public:

void InputMatrix();

void TransposeMatrix(); void Display();

};

void matrix :: InputMatrix(){

cout<<"Enter the number of rows and columns: "<<endl; cin>>row>>col;

cout<<"Enter the elements of the matrix: "<<endl; for (int i=0; i<row; i++){

for (int j=0; j<col; j++){ cin>>a[i][j];

} }

}

void matrix :: TransposeMatrix(){

cout<<"The Transpose of the matrix is: "<<endl; for (int i=0; i<row; i++){

for (int j=0; j<col; j++){ b[j][i] = a[i][j];

} }

}

void matrix :: Display(){ for (int i=0; i<col; i++){

for (int j=0; j<row; j++){ cout<<b[i][j]<<" ";

}

cout<<endl;

}

}

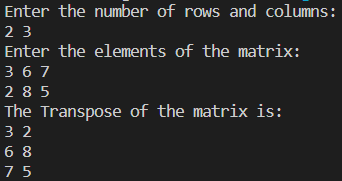
int main(){ matrix x;

x.InputMatrix(); x.TransposeMatrix(); x.Display();

return 0;

}

# OUTPUT:



Experiment -6

Aim: Write a program to print the Addition of a given matrix.

**Source Code:**

#include <iostream>

using namespace std;

class matrix{

public:

int a[10][10], b[10][10], R[10][10], r, c;

void input(){

cout<<"No. of rows: ";

cin>>r;

cout<<"No. of columns: ";

cin>>c;

cout<<"Matrix 1"<<endl;

for(int i=0; i<r; i++){

for(int j=0; j<c; j++){

cout<<"Enter the value for ["<<i<<"]["<<j<<"]= ";

cin>>a[i][j];

}

}

cout<<"Matrix 2"<<endl;

for(int i=0; i<r; i++){

for(int j=0; j<c; j++){

cout<<"Enter the value for ["<<i<<"]["<<j<<"]= ";

cin>>b[i][j];

}

}

}

void display(){

cout<<"Matrix 1:"<<endl;

for(int i=0; i<r; i++){

for(int j=0; j<c; j++){

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

}

cout<<endl;

}

cout<<"Matrix 2:"<<endl;

for(int i=0; i<r; i++){

for(int j=0; j<c; j++){

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

}

cout<<endl;

}

}

void addition(){

for(int i=0; i<r; i++){

for(int j=0; j<c; j++){

R[i][j] = a[i][j] + b[i][j];

}

}

}

void result(){

cout<<"Result is:"<<endl;

for(int i=0; i<r; i++){

for(int j=0; j<c; j++){

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

}

cout<<endl;

}

}

};

int main()

{

matrix obj;

obj.input();

obj.display();

obj.addition();

obj.result();

return 0;

}

**OUTPUT:**

