# EXPERIMENT - 6

# Aim: To add two 2-Dimensional matrices.

## Pseudo code

Input matrix sizes (m, n)

Initialize matrix A[m][n]

Input values for matrix A

Initialize matrix B[m][n]

Input values for matrix B

Initialize matrix sum[m][n]

Calculate sum of matrices

Output sum matrix

## Source code:

#include<iostream>

using namespace std;

int main(){

   int m,n;

   cout<<"Enter the elements of first matrix: ";

    cin>>m;

   cout<<"Enter the elements of second matrix: ";

    cin>>n;

   int a[m][n];

   for (int i=0;i<m;i++){

    for (int j=0;j<n;j++){

        cin>>a[i][j];

    }

   }

   int b[m][n];

   cout<<"Enter the elements of first matrix: ";

    cin>>m;

   cout<<"Enter the elements of second matrix: ";

    cin>>n;

   for (int i=0;i<m;i++){

    for (int j=0;j<n;j++){

        cin>>b[i][j];

    }

   }

   int sum[m][n];

   cout<<"Addition of matrix: "<<endl;

    for (int i=0;i<m;i++){

    for (int j=0;j<n;j++){

        sum[i][j]=a[i][j]+ b[i][j];

          cout<<sum[i][j]<<" ";

    }

    cout<<endl;

   }

}

## Output:

**Enter the elements of first matrix: 3**

**Enter the elements of second matrix: 3**

**1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**Enter the elements of first matrix: 3**

**Enter the elements of second matrix: 3**

**1**

**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**Addition of matrix:**

**2 4 6**

**8 10 12**

**14 16 18**

## Learning from experiment

* User input for matrix size.
* Addition of two matrices.