

```

#include <iostream>
using namespace std;

float **createMatrix(const int R, const int C)
{
    float **M = new float*[R];
    for (int i = 0; i < R; i++)
    {
        M[i] = new float[C];
    }
    return M;
}

void populateMatrix(float **M, const int R, const int C)
{
    //Populate the elements of the matrices with random integers [1, 6]
    for (int i = 0; i < R; i++)
    {
        for (int j = 0; j < C; j++)
        {
            M[i][j] = rand() % 6 + 1;
        }
    }
}

void printMatrix(float **M, const int R, const int C)
{
    for (int i = 0; i < R; i++)
    {
        for (int j = 0; j < C; j++)
        {
            cout << M[i][j] << "\t";
        }
        cout << endl;
    }
}

float **getMatrixSum(float **A, float **B, const int R, const int C)
{
    float **S = createMatrix(R, C);
    //Now add A and B into S
    for (int i = 0; i < R; i++)
    {
        for (int j = 0; j < C; j++)
        {
            S[i][j] = A[i][j] + B[i][j];
        }
    }
    return S;
}

void deleteMatrix(float **M, const int row)
{
    for (int i = 0; i < row; i++)
        delete [] M[i];
    delete [] M;
}

```

```
int main()
{
    //Ask matrix dimensions
    int R, C;
    cout << "Enter matrix row and column sizes ";
    cin >> R >> C;

    float **A = createMatrix(R, C);
    float **B = createMatrix(R, C);

    populateMatrix(A, R, C);
    populateMatrix(B, R, C);

    cout << "Matrix A is " << endl;
    printMatrix(A, R, C);

    cout << "Matrix B is " << endl;
    printMatrix(B, R, C);

    float **S = getMatrixSum(A, B, R, C);

    cout << "Matrix S is " << endl;
    printMatrix(S, R, C);

    deleteMatrix(A, R);
    deleteMatrix(B, R);
    deleteMatrix(S, R);

    system("Pause");
    return 0;
}
```