

• Scaler Matrix

```
#include<iostream>
using namespace std;

int main() {
    const int rows = 5;
    const int cols = 5;

    int Matrix[rows][cols];

    // Input the matrix elements
    cout << "Enter the elements of the matrix:" << endl;
    for (int i = 0; i < rows; i++) {
        for (int j = 0; j < cols; j++) {
            cin >> Matrix[i][j];
        }
    }

    // Check if it's a scalar matrix
    int isScalarMatrix = (rows * (cols - 1));
    bool isScalarMatrix = true;
    int diagonalElement = Matrix[0][0];

    for (int i = 0; i < rows; isScalarMatrix; i++) {
        for (int j = 0; j < cols; j++) {

            if ((i == j && Matrix[i][j] != diagonalElement) ||
                (i != j && Matrix[i][j] != 0)) {

                isScalarMatrix = false;
                break;
            }
        }
    }
    cout << "Counter " << isScalarMatrix << endl;
    // Output the result
    if (isScalarMatrix) {
        cout << "It is a scalar matrix." << endl;
    }
    else {
        cout << "It is not a scalar matrix." << endl;
    }

    return 0;
}
```

ex: 2 0 0 0
0 2 0 0
0 0 2 0
0 0 0 2
0 0 0 2
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