#include <stdio.h>

#include <iostream>

#include <cstdlib>

#include <omp.h>

#include <vector>

using namespace std;

int main() {

    int r = 3, c = 2;

    int matrix[r][c], vector[c], out[r];

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

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

            matrix[row][col] = 1;

        }

    }

    cout << "Input matrix" << endl;

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

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

            cout << "\t" << matrix[row][col];

        }

        cout << endl;

    }

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

        vector[col] = 3;

    }

    cout << "Input col-vector" << endl;

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

        cout << vector[row] << endl;

    }

    #pragma omp parallel for

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

        out[row] = 0;

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

            out[row] += matrix[row][col] \* vector[col];

        }

    }

    cout << "Resultant col-vector" << endl;

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

        cout << "\nVector [" << row << "]: " << out[row] << endl;

    }

    return 0;

}

Output:

Input matrix

1 1

1 1

1 1

Input col-vector

3

3

Resultant col-vector

Vector [0]: 6

Vector [1]: 6

Vector [2]: 6