ASSIGNMENT 1

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PRN :- B24CE1055
CLASS :- SE1 C BATCH
TOPIC :- IMPLEMENTATION OF 2D ARRAY

PROGRAM :-

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

class rainfall {
    int cities, months;
    float rainfall[100][100];

public:
    void input() {
        cout << "Enter the number of cities: ";
        cin >> cities;
        cout << "Enter the number of months: ";
        cin >> months;

        cout << "Enter rainfall data (in mm) for " << cities << " cities over
" << months << " months:\n";
        for (int i = 0; i < cities; i++) {
            cout << "City No " << i + 1 << ":\n";
            for (int j = 0; j < months; j++) {
                cout << "  Month " << j + 1 << ": ";
                cin >> rainfall[i][j];
```

```
            }
        }
    }

    void display() {
        cout << "\nRainfall Data (in mm):\n";
        cout << "City\\Month    ";
        for (int j = 0; j < months; j++)
            cout << "Month " << j + 1 << "    ";
        cout << "Average\n";

        for (int i = 0; i < cities; i++) {
            float sum = 0;
            cout << "City " << i + 1 << "      ";
            for (int j = 0; j < months; j++) {
                cout << rainfall[i][j] << "        ";
                sum += rainfall[i][j];
            }
            cout << sum / months << "\n";
        }
    }
};

int main() {
    rainfall rf;
    rf.input();
    rf.display();
    return 0;
}
```

OUTPUT :-

```
Enter the number of cities: 3
Enter the number of months: 4
Enter rainfall data (in mm) for 3 cities over 4 months:
City No 1:
  Month 1: 88
  Month 2: 80
  Month 3: 98
  Month 4: 97
City No 2:
  Month 1: 88
  Month 2: 80
  Month 3: 97
  Month 4: 80
City No 3:
  Month 1: 88
  Month 2: 87
  Month 3: 90
  Month 4: 95

Rainfall Data (in mm):
City\Month    Month 1    Month 2    Month 3    Month 4    Average
City 1        88         80         98         97         90.75
City 2        88         80         97         80         86.25
City 3        88         87         90         95         90


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(program exited with code: 0)
Press return to continue
```