Assignment No: 01

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PRN: B25CE2012
Class: SY1
Batch: C

Title: Rainfall Tracking:
Write a program to track rainfall data for 3 cities over 4 months. Using a 2D array, we can store the data, calculate the average rainfall for each city, and display the rainfall data in a tabular format.
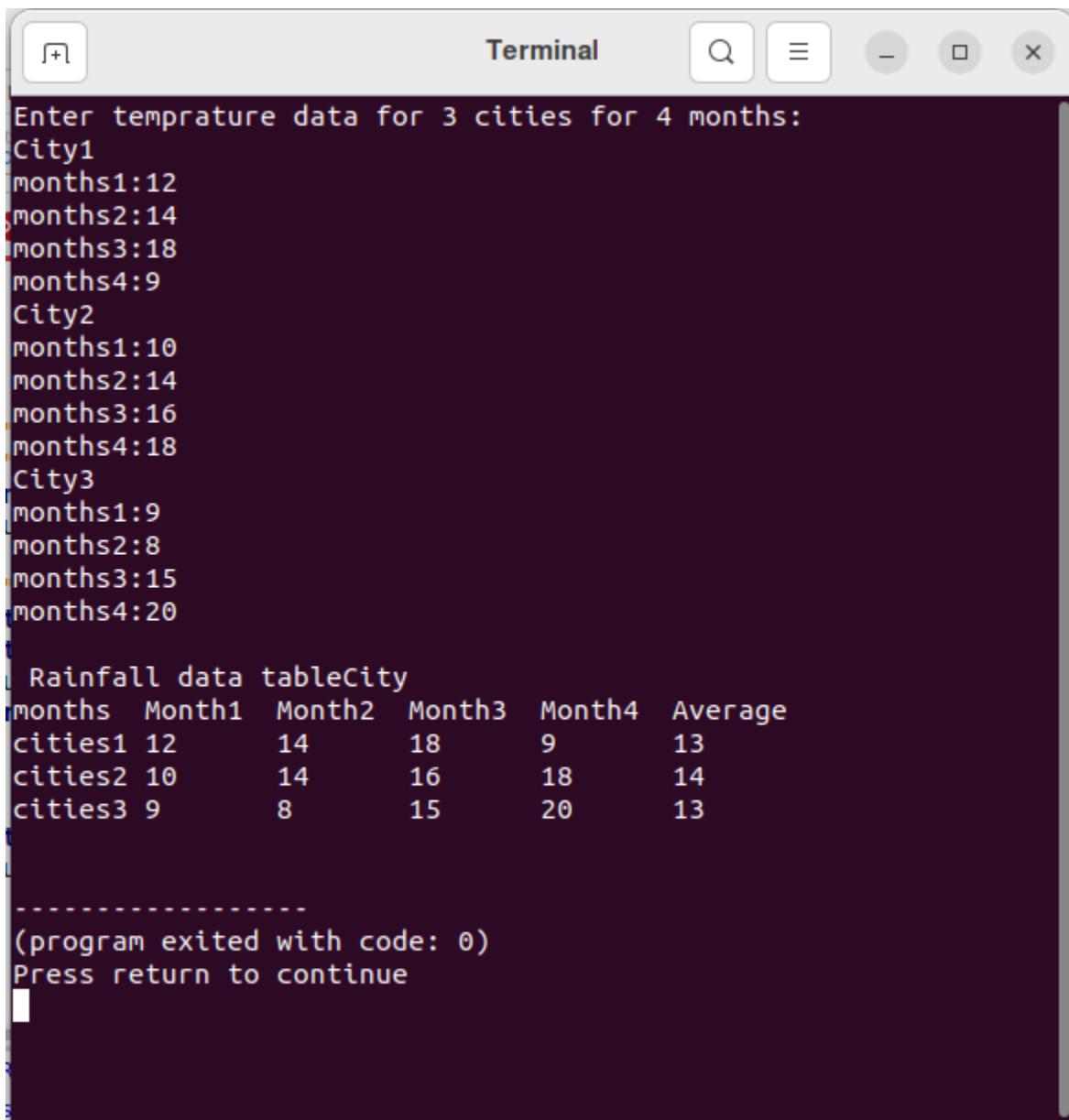
Program:
```cpp
#include <iostream>
using namespace std;
int main(){
    int cities=3;
    int months=4;
    int Rainfall [cities][months];

    cout<<"Enter temperature data for 3 cities for 4 months:\n";
    for (int i =0;i<3;i++){
                cout<<"City"<<i+1<<"\n";
                for(int j=0;j<4;j++){
                        cout<<"months"<<j+1<<":";
                        cin>>Rainfall[i][j];
                }
        }
  cout<<"\n Rainfall data table";
  cout<<"City\nmonths\t";
  for (int j=0;j<4;j++){
        cout<<"Month"<<j+1<<"\t";
        }
  cout<<"Average\n";
  for(int i=0;i<3;i++){
        int sum=0;
        cout<<"cities"<<i+1<<"\t";
        for(int j=0;j<4;j++){
                cout<<Rainfall[i][j]<<"\t";
                sum+=Rainfall[i][j];
        }
```

```
        int average=sum/months;
        cout<<average<<endl;
    }
    return 0;
}
```

Output:

```
┌─────────────────────────────────────────────────────────────┐
│  [+]                    Terminal          Q   ≡   —   □   ×   │
├─────────────────────────────────────────────────────────────┤
│Enter temprature data for 3 cities for 4 months:             │
│City1                                                         │
│months1:12                                                    │
│months2:14                                                    │
│months3:18                                                    │
│months4:9                                                     │
│City2                                                         │
│months1:10                                                    │
│months2:14                                                    │
│months3:16                                                    │
│months4:18                                                    │
│City3                                                         │
│months1:9                                                     │
│months2:8                                                     │
│months3:15                                                    │
│months4:20                                                    │
│                                                              │
│ Rainfall data tableCity                                      │
│months  Month1  Month2  Month3  Month4  Average               │
│cities1 12      14      18      9       13                    │
│cities2 10      14      16      18      14                    │
│cities3 9       8       15      20      13                    │
│                                                              │
│                                                              │
│- - - - - - - - - - - - - - - -                               │
│(program exited with code: 0)                                 │
│Press return to continue                                      │
│█                                                             │
│                                                              │
└─────────────────────────────────────────────────────────────┘
```

Title: Temperature Tracker:

Write a program for Tracking daily temperatures of 3 cities for a week. The program calculates the average temperature for each day and for the week.

Program:

```cpp
#include <iostream>
using namespace std;
int main(){
    int cities=3;
    int days=7;
    int temperature [cities][days];

    cout<<"Enter temperature data for 3 cities for 4 months:\n";
    for (int i =0;i<3;i++){
                cout<<"City"<<i+1<<"\n";
                for(int j=0;j<7;j++){
                        cout<<"day"<<j+1<<":";
                        cin>>temperature[i][j];
                }
        }
    cout<<"\n Temperature data table";
    cout<<"City\ndays\t";
    for (int j=0;j< 7;j++){
            cout<<"Day"<<j+1<<"\t";
            }
    cout<<"Average\n";
    for(int i=0;i<3;i++){
            int sum=0;
            cout<<"cities"<<i+1<<"\t";
            for(int j=0;j<7;j++){
                    cout<<temperature[i][j]<<"\t";
                    sum+=temperature[i][j];
            }
            int average=sum/days;
            cout<<average<<endl;
    }
    return 0;
}
```

Output:

```
Terminal

Enter temprature data for 3 cities for 4 months:
City1
day1:10
day2:9
day3:8
day4:10
day5:11
day6:12
day7:10
City2
day1:9
day2:8
day3:10
day4:9
day5:8
day6:7
day7:6
City3
day1:10
day2:9
day3:11
day4:10
day5:12
day6:12
day7:10


 Temperature data tableCity
days    Day1    Day2    Day3    Day4    Day5    Day6    Day7    Average
cities1 10      9       8       10      11      12      10      10
cities2 9       8       10      9       8       7       6       8
cities3 10      9       11      10      12      12      10      10


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