

Assignment No: 01

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Class: SY-1

Batch: C

PRN: B25CE2010

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.

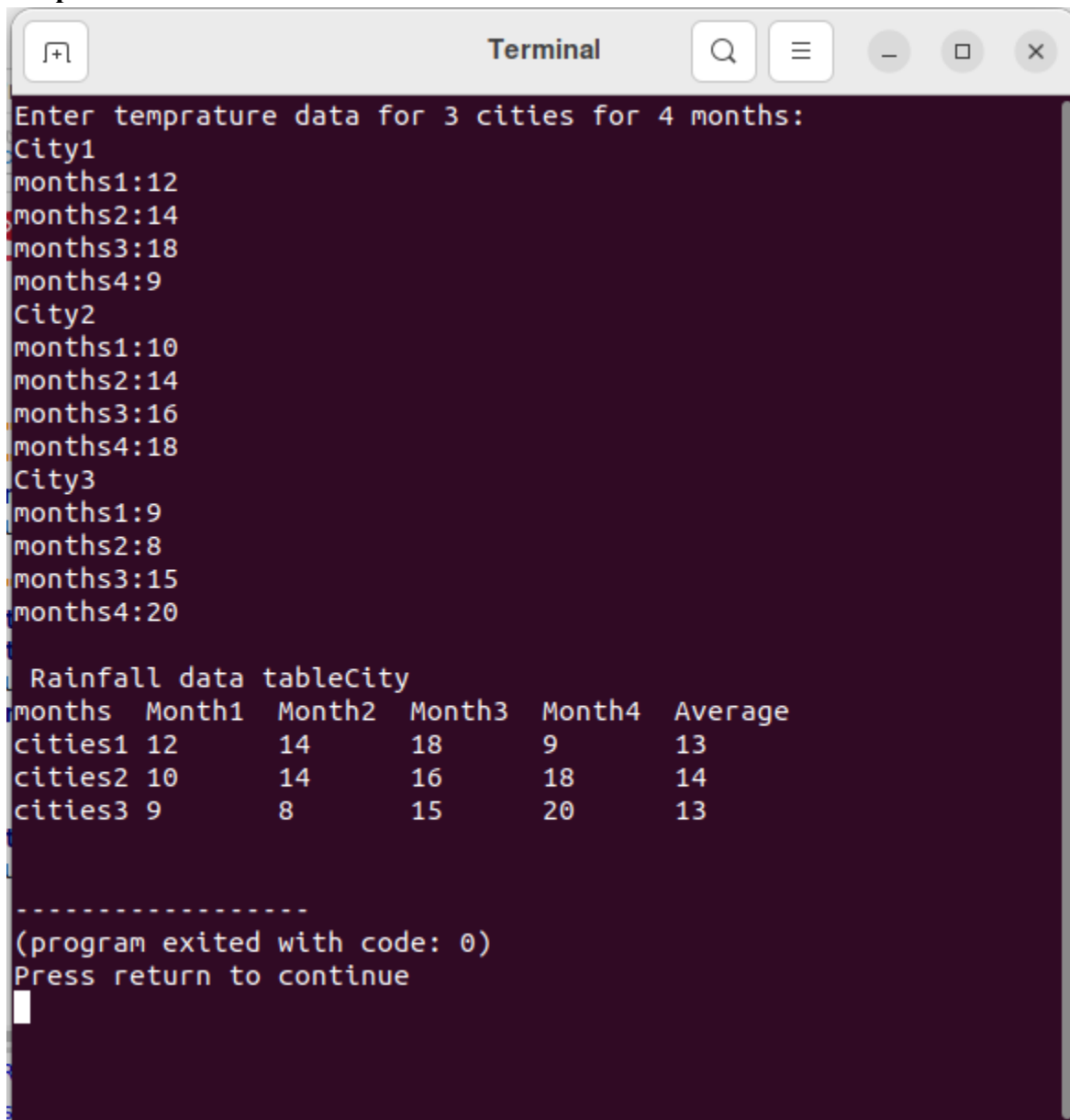
Program:

```
#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:

A terminal window titled "Terminal" with standard macOS window controls (zoom, search, menu, zoom out, close). The terminal shows the execution of a C++ program. It prompts for temperature data for 3 cities over 4 months. The input is as follows:
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
The program then displays a table of rainfall data. The table has 6 columns: months, Month1, Month2, Month3, Month4, and Average. The data is as follows:
cities1 12 14 18 9 13
cities2 10 14 16 18 14
cities3 9 8 15 20 13
After the table, there is a dashed line separator, followed by the message "(program exited with code: 0)" and "Press return to continue". A cursor is visible on the line following "Press return to continue".

```
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:

```
#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
```