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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 3_Q4

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Sesha is developing a weather monitoring system for a region with multiple weather stations. Each weather station collects temperature data hourly and stores it in a 2D array.

Write a program that can add the temperature data from two different weather stations to create a combined temperature record for the region.

Input Format

The first line of input consists of two space-separated integers N and M, representing the number of rows and columns of the matrices, respectively.

The next N lines consist of M space-separated integers, representing the values of the first matrix.

The following N lines consist of M space-separated integers, representing the values of the second matrix.

Output Format

The output prints the addition of the two matrices in N rows and M columns, representing the combined temperature record.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 3 3
1 2 3
4 5 6
7 8 9
1 1 1
2 2 2
3 3 3

Output: 2 3 4
6 7 8
10 11 12

Answer

```
import java.util.*;

 class TemperatureMatrixAddition {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        // Read dimensions of the matrices
        int N = sc.nextInt();
        int M = sc.nextInt();

        int[][] station1 = new int[N][M];
        int[][] station2 = new int[N][M];
        int[][] combined = new int[N][M];

        // Read first matrix
        for (int i = 0; i < N; i++) {
            for (int j = 0; j < M; j++) {
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            station1[i][j] = sc.nextInt();
        }
    }

    // Read second matrix
    for (int i = 0; i < N; i++) {
        for (int j = 0; j < M; j++) {
            station2[i][j] = sc.nextInt();
        }
    }

    // Add matrices
    for (int i = 0; i < N; i++) {
        for (int j = 0; j < M; j++) {
            combined[i][j] = station1[i][j] + station2[i][j];
        }
    }

    // Print combined matrix
    for (int i = 0; i < N; i++) {
        for (int j = 0; j < M; j++) {
            System.out.print(combined[i][j] + " ");
        }
        System.out.println();
    }
  }
}
```

Status : Correct **Marks : 10/10**