**Experiment No. 5 : Add Matrices**

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Subject : FJP

Roll No. : 1

import java.util.Scanner;

public class AddMatrices {

    public static int[][] getMatrix(int row, int column) {

        int[][] matrix = new int[row][column];

        for (int i = 0; i < matrix.length; i++) {

            for (int j = 0; j < matrix[0].length; j++) {

                matrix[i][j] = (int)(Math.random()\*10);

            }

        }

        return matrix;

    }

    public static int[][] addMatrices(int[][] matrix1, int[][] matrix2) {

        int m = matrix1.length;

        int n = matrix1[0].length;

        int[][] matrix = new int[m][n];

        for (int i = 0; i < m; i++) {

            for (int j = 0; j < n; j++) {

                matrix[i][j] = matrix1[i][j] + matrix2[i][j];

            }

        }

        return matrix;

    }

    public static void displayMatrix(int[][] matrix) {

        for (int i = 0; i < matrix.length; i++) {

            for (int j = 0; j < matrix[0].length; j++) {

                System.out.print(matrix[i][j] + "  ");

            }

            System.out.println();

        }

    }

    public static void main(String[] args) {

        Scanner scn = new Scanner(System.in);

        System.out.println("----Enter Dimensions of Both The Matrices----");

        System.out.print("Enter Size of the row: ");

        int rowSize = scn.nextInt();

        System.out.print("Enter Size of the Column: ");

        int columnSize = scn.nextInt();

        int[][] matrix1 = getMatrix(rowSize, columnSize);

        int[][] matrix2 = getMatrix(rowSize, columnSize);

        int[][] addedMatrix = addMatrices(matrix1, matrix2);

        System.out.println("\nThe Matrix1 is : ");

        displayMatrix(matrix1);

        System.out.println("\nThe Matrix2 is : ");

        displayMatrix(matrix2);

        System.out.println("\nThe Added Matrix is : ");

        displayMatrix(addedMatrix);

    }

}

Output =>

----Enter Dimensions of Both The Matrices----

Enter Size of the row: 3

Enter Size of the Column: 3

The Matrix1 is :

7 6 7

5 8 0

7 0 1

The Matrix2 is :

2 3 9

1 9 5

2 6 7

The Added Matrix is :

9 9 16

6 17 5

9 6 8