**10 )Write a program to Matrix Multiplication.**

import java.util.Scanner;

public class MatrixMultiplication {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.print("Enter the number of rows and columns of the first matrix: ");

int rows1 = sc.nextInt();

int cols1 = sc.nextInt();

int[][] matrix1 = new int[rows1][cols1];

System.out.println("Enter the elements of the first matrix:");

for (int i = 0; i < rows1; i++) {

for (int j = 0; j < cols1; j++) {

matrix1[i][j] = sc.nextInt();

}

}

System.out.print("Enter the number of rows and columns of the second matrix: ");

int rows2 = sc.nextInt();

int cols2 = sc.nextInt();

if (cols1 != rows2) {

System.out.println("Matrix multiplication is not possible.");

return;

}

int[][] matrix2 = new int[rows2][cols2];

System.out.println("Enter the elements of the second matrix:");

for (int i = 0; i < rows2; i++) {

for (int j = 0; j < cols2; j++) {

matrix2[i][j] = sc.nextInt();

}

}

int[][] result = new int[rows1][cols2];

// Matrix multiplication

for (int i = 0; i < rows1; i++) {

for (int j = 0; j < cols2; j++) {

for (int k = 0; k < cols1; k++) {

result[i][j] += matrix1[i][k] \* matrix2[k][j];

}

}

}

System.out.println("Resultant matrix:");

for (int i = 0; i < rows1; i++) {

for (int j = 0; j < cols2; j++) {

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

}

System.out.println();

}

}

}