Write a program in Java to input an NxN matrix and display it row-wise and column-wise

CODE:

import java.util.Scanner;

public class MatrixDisplay {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

// Input the size of the matrix (N)

System.out.print("Enter the size of the matrix (N): ");

int N = scanner.nextInt();

// Input the matrix elements

int[][] matrix = new int[N][N];

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

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

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

matrix[i][j] = scanner.nextInt();

}

}

// Display the matrix row-wise

System.out.println("Matrix displayed row-wise:");

displayRowWise(matrix);

// Display the matrix column-wise

System.out.println("Matrix displayed column-wise:");

displayColumnWise(matrix);

scanner.close(); // Closing the scanner object

}

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

int N = matrix.length;

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

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

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

}

System.out.println();

}

}

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

int N = matrix.length;

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

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

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

}

System.out.println();

}

}

}

OUTPUT:

C:\javap>javac MatrixDisplay.java

C:\javap>java MatrixDisplay

Enter the size of the matrix (N): 3

Enter the elements of the matrix:

4 5 6 1 2 3 7 2 9

Matrix displayed row-wise:

4 5 6

1 2 3

7 2 9

Matrix displayed column-wise:

4 1 7

5 2 2

6 3 9

