1. Java Program to Insert and Delete an Element in an Array at a Specified Index Position

java

Import java.util.Scanner;

Public class ArrayOperations {

// Method to insert an element at a specific index

Public static int[] insertAt(int[] arr, int index, int value) {

Int[] newArr = new int[arr.length + 1];

For (int I = 0, j = 0; I < newArr.length; i++) {

If (I == index) {

newArr[i] = value;

} else {

newArr[i] = arr[j++];

}

}

Return newArr;

}

// Method to delete an element at a specific index

Public static int[] deleteAt(int[] arr, int index) {

If (index < 0 || index >= arr.length) {

System.out.println(“Index out of bounds”);

Return arr;

}

Int[] newArr = new int[arr.length – 1];

For (int I = 0, j = 0; I < arr.length; i++) {

If (I != index) {

newArr[j++] = arr[i];

}

}

Return newArr;

}

Public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

// Input array

Int[] arr = {1, 2, 3, 4, 5};

System.out.println(“Original Array:”);

For (int I : arr) {

System.out.print(I + “ “);

}

// Insertion

System.out.println(“\n\nEnter the index to insert element: “);

Int index = sc.nextInt();

System.out.println(“Enter the element to insert: “);

Int value = sc.nextInt();

Arr = insertAt(arr, index, value);

System.out.println(“Array after insertion:”);

For (int I : arr) {

System.out.print(I + “ “);

}

// Deletion

System.out.println(“\n\nEnter the index to delete element: “);

Index = sc.nextInt();

Arr = deleteAt(arr, index);

System.out.println(“Array after deletion:”);

For (int I : arr) {

System.out.print(I + “ “);

}

}

}

2. Java Program to Print the Max and Min Value from Each Row of a Matrix

java

Import java.util.Scanner;

Public class MatrixMaxMin {

Public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

// Input matrix size

System.out.println(“Enter the number of rows and columns:”);

Int rows = sc.nextInt();

Int cols = sc.nextInt();

// Input matrix elements

Int[][] matrix = new int[rows][cols];

System.out.println(“Enter the matrix elements:”);

For (int I = 0; I < rows; i++) {

For (int j = 0; j < cols; j++) {

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

}

}

// Find max and min in each row

For (int I = 0; I < rows; i++) {

Int max = matrix[i][0];

Int min = matrix[i][0];

For (int j = 1; j < cols; j++) {

If (matrix[i][j] > max) {

Max = matrix[i][j];

}

If (matrix[i][j] < min) {

Min = matrix[i][j];

}

}

System.out.println(“Row “ + (I + 1) + “: Max = “ + max + “, Min = “ + min);

}

}

}