# Assignment-1

1. Write a Java program that takes an array of integers as input from the user and then calculates the sum and average of the elements in the array. The program should output the sum and average.

Program:

```java
import java.util.Scanner;
public class SumAndAverage {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        // Get input from the user for the size of the array
        System.out.print("Enter the number of elements in the array: ");
        int size = scanner.nextInt();

        // Create an array of integers
        int[] numbers = new int[size];

        // Get input from the user for the array elements
        System.out.println("Enter " + size + " integers:");
        for (int i = 0; i < size; i++) {
            numbers[i] = scanner.nextInt();
        }

        // Calculate the average of array elements
        int sum = 0;
        for (int num : numbers) {
            sum += num;
```

```java
        }

        double average = (double) sum / size;

        // Output the sum and average
        System.out.println("Sum of elements: " + sum);
        System.out.println("Average of elements: " + average);

        // Close the scanner
        scanner.close();
    }
}
```

**Output:**

```
Enter the number of elements in the array: 2
Enter 2 integers:
56
45
Sum of elements: 101
Average of elements: 50.5
```

2. Write a Java program that takes an array of integers as input and sorts it in ascending order using any sorting algorithm of your choice. Print the sorted array.

## Program:

```java
import java.util.Arrays;

import java.util.Scanner;

public class SortArray {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);


        // Get input from the user for the size of the array

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

        int size = scanner.nextInt();


        // Create an array of integers

        int[] numbers = new int[size];


        // Get input from the user for the array elements

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

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

            numbers[i] = scanner.nextInt();

        }


        // Sort the array using Arrays.sort() method

        Arrays.sort(numbers);
```

```java
        // Print the sorted array

        System.out.println("Sorted array in ascending order:");

        for (int number : numbers) {

            System.out.print(number + " ");

        }


        scanner.close();

    }

}
```
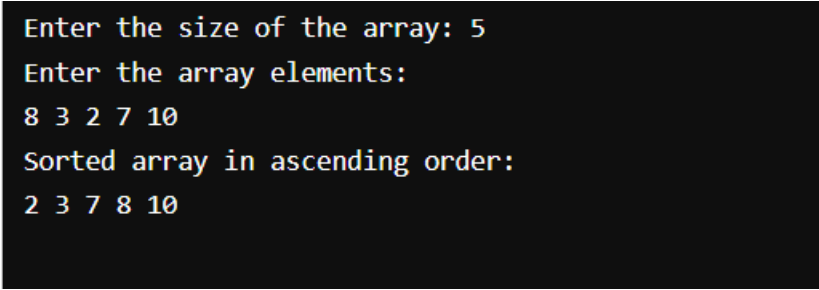
## Output:

```
Enter the size of the array: 5
Enter the array elements:
8 3 2 7 10
Sorted array in ascending order:
2 3 7 8 10
```