

Assignment-02**

Q4. Sum and Average of Array

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.

```
Main.java
1- import java.util.*;
2
3- class Main {
4-     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter number of elements: ");
7         int n = sc.nextInt();
8         int[] arr = new int[n];
9         int sum = 0;
10
11         System.out.println("Enter " + n + " integers:");
12-         for (int i = 0; i < n; i++) {
13             arr[i] = sc.nextInt();
14             sum += arr[i];
15         }
16
17         double avg = (double) sum / n;
18         System.out.println("Sum = " + sum);
19         System.out.println("Average = " + avg);
20     }
21 }
22
```

Output:

```
Output
Enter number of elements: 5
Enter 5 integers:
5
8
6
9
5
Sum = 33
Average = 6.6

=== Code Execution Successful ===
```

Q5. Sorting an Array

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.

```
Main.java
1- import java.util.*;
2
3- class Main {
4-     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print("Enter number of elements: ");
7         int n = sc.nextInt();
8         int[] arr = new int[n];
9
10        System.out.println("Enter " + n + " integers:");
11-        for (int i = 0; i < n; i++) {
12            arr[i] = sc.nextInt();
13        }
14
15        Arrays.sort(arr); // built-in sorting
16
17        System.out.println("Sorted Array:");
18-        for (int x : arr) {
19            System.out.print(x + " ");
20        }
21    }
22 }
23
```

Output:

```
Output
Enter number of elements: 6
Enter 6 integers:
9
3
8
5
1
0
Sorted Array:
0 1 3 5 8 9
=== Code Execution Successful ===
```