

Day 45 coding Statement : Write Program to find smallest and largest element in an array

Description : Get an array as input from the user and then find the smallest and largest element in the array.

Input : Enter the size of array : 5

Enter the elements : 10 20 5 40 30

Output : Smallest Number : 5

Largest Number : 40

Program :

```
package com.talentbattle.codingchallenge;

import java.util.Scanner;

public class Element_Array {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the Array length : ");
        int n = scan.nextInt();
        int arr[] = new int[n];
        int swap =0;

        System.out.println("Enter the Array Elements : ");
        for(int i =0;i <= arr.length - 1; i++)
        {
            arr[i] = scan.nextInt();
        }

        for(int i = 0; i<arr.length - 1;i++)
        {
            for(int j = 0;j<arr.length -1 -i;j++)
            {
                if(arr[j] > arr[j+1])
                {
                    swap = arr[j+1];
                    arr[j+1] = arr[j];
                    arr[j]=swap;
                }
            }
        }

        System.out.println("Array Elements after Sorting : ");
        for(int i =0;i <= arr.length - 1; i++)
        {
```

```

        System.out.print(arr[i] + " ");
    }
    System.out.println();

    System.out.println("Smallest element is : " + arr[0]);
    System.out.println("Largest element is : " + arr[n-1]);

}

}

```

The screenshot displays the Eclipse IDE environment. The Project Explorer on the left shows a project named 'Sudeep' with a source folder 'src' containing various Java files. The main editor window shows the code for 'Element_Array.java'. The code implements a bubble sort algorithm to find the smallest and largest elements in an array. The console window on the right shows the output of the program, including the array length, the array elements, the sorted array, and the smallest and largest elements.

```

Java Programs - Sudeep/src/com/talentbattle/codingchallenge/Element_Array.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help

Project Explorer X
Sudeep
  JRE System Library [jdk-19]
  src
    (default package)
    com.kodnest.programs
    com.talentbattle.codingchallenge
      alphabet_or_not.java
      Anagram.java
      Areaofcircle.java
      Armstrong.java
      Array_even_or_odd.java
      Array_type.java
      ascii_output.java
      Brackets_remove.java
      Concatenate_string.java
      Count_in_strings.java
      day1_vowel_consonant.java
      days_in_a_month.java
      Double_number.java
      Element_Array.java
      Equal_arrays.java
      factor.java
      factorial.java
      First_last_letter_capital.java
      fraction.java
      Frequency_string.java
      Handshakes.java
      No_repeating_char.java
      Number_of_digits.java
      odd_or_even.java
      package-info.java
      Palindrome.java
      Perfect_Number.java
      positive_or_negative.java

Array_type.java
Array_even_or_odd.java
day1_vowel_consonant.java
Element_Array.java
main(String[]) : void

9 Scanner scan = new Scanner(System.in);
10 System.out.println("Enter the Array length : ");
11 int n = scan.nextInt();
12 int arr[] = new int[n];
13 int swap = 0;
14
15 System.out.println("Enter the Array Elements : ");
16 for(int i = 0; i <= arr.length - 1; i++)
17 {
18     arr[i] = scan.nextInt();
19 }
20
21 for(int i = 0; i < arr.length - 1; i++)
22 {
23     for(int j = 0; j < arr.length - 1 - i; j++)
24     {
25         if(arr[j] > arr[j+1])
26         {
27             swap = arr[j+1];
28             arr[j+1] = arr[j];
29             arr[j] = swap;
30         }
31     }
32 }
33
34 System.out.println("Array Elements after Sorting : ");
35 for(int i = 0; i <= arr.length - 1; i++)
36 {
37     System.out.print(arr[i] + " ");
38 }
39 System.out.println();
40
41 System.out.println("Smallest element is : " + arr[0]);
42 System.out.println("Largest element is : " + arr[n-1]);
43
44 }
45
46

Console X
<terminated> Element_Array [Java Application] C:\Program Files\Java\jdk-19\bin\java.exe
Enter the Array length :
5
Enter the Array Elements :
10
20
40
30
Array Elements after Sorting :
5 10 20 30 40
Smallest element is : 5
Largest element is : 40

```