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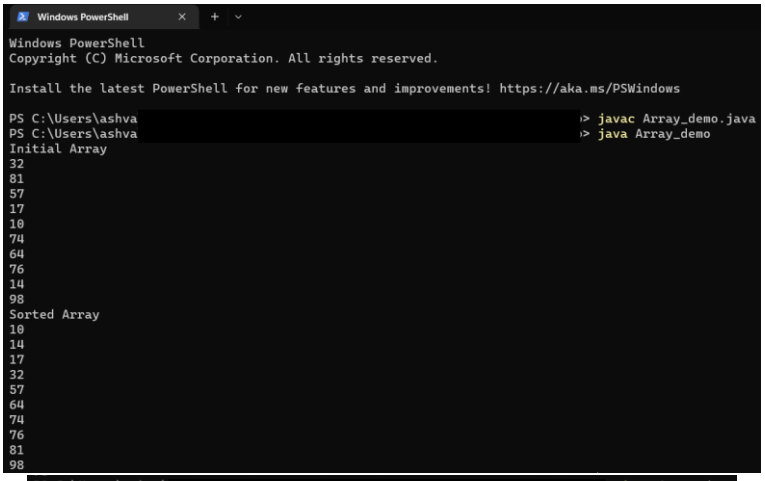
Lab Experiment – 1.b

Aim: Write a java program to implement a single-dimensional array and sort using bubble sort.

Code:

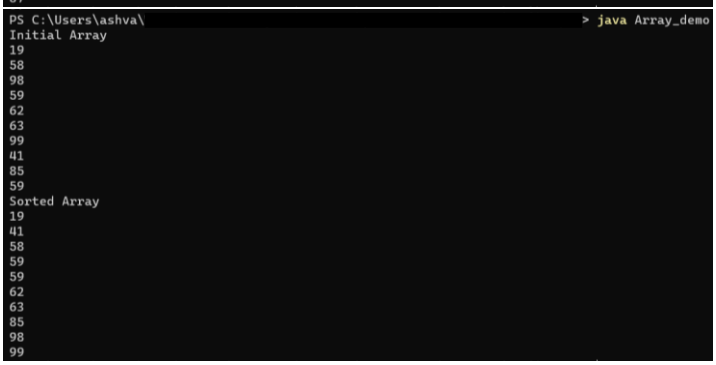
```
/**
 *
 * @author 2162014
 */
import java.util.Random;

public class Array_demo {

    public static void main(String[] args) {
        int arr[] = new int[10];
        Random rn = new Random();
        for (int i = 0; i < 10; i++) {
            arr[i] = rn.nextInt(100);
        }
        System.out.println("Initial Array");
        for (int i : arr) //for each loop
        {
            System.out.println(i);
        }
        //sort the array
        int n = arr.length;
        int temp;
        for (int i = 0; i < n - 1; i++) {
            for (int j = 0; j < n - i - 1; j++) {
                if (arr[j] > arr[j + 1]) {
                    temp = arr[j];
                    arr[j] = arr[j + 1];
                    arr[j + 1] = temp;
                }
            }
        }
        System.out.println("Sorted Array");
        for (int i : arr) {
            System.out.println(i);
        }
    }
}
```

Output(s):


Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\Users\ashva > javac Array_demo.java
PS C:\Users\ashva > java Array_demo
Initial Array
32
81
57
17
10
74
64
76
14
98
Sorted Array
10
14
17
32
57
64
74
76
81
98


PS C:\Users\ashva\ > java Array_demo
Initial Array
66
99
2
28
28
68
76
18
99
52
Sorted Array
2
18
28
28
52
66
68
76
99
99


PS C:\Users\ashva\ > java Array_demo
Initial Array
69
46
12
82
2
42
42
87
7
19
Sorted Array
2
7
12
19
42
42
46
69
82
87


PS C:\Users\ashva\ > java Array_demo
Initial Array
19
58
98
59
62
63
99
41
85
59
Sorted Array
19
41
58
59
59
62
63
85
98
99