**IMPLEMENTATION OF BUBBLE SORT**

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

**PROGRAM**:

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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) {

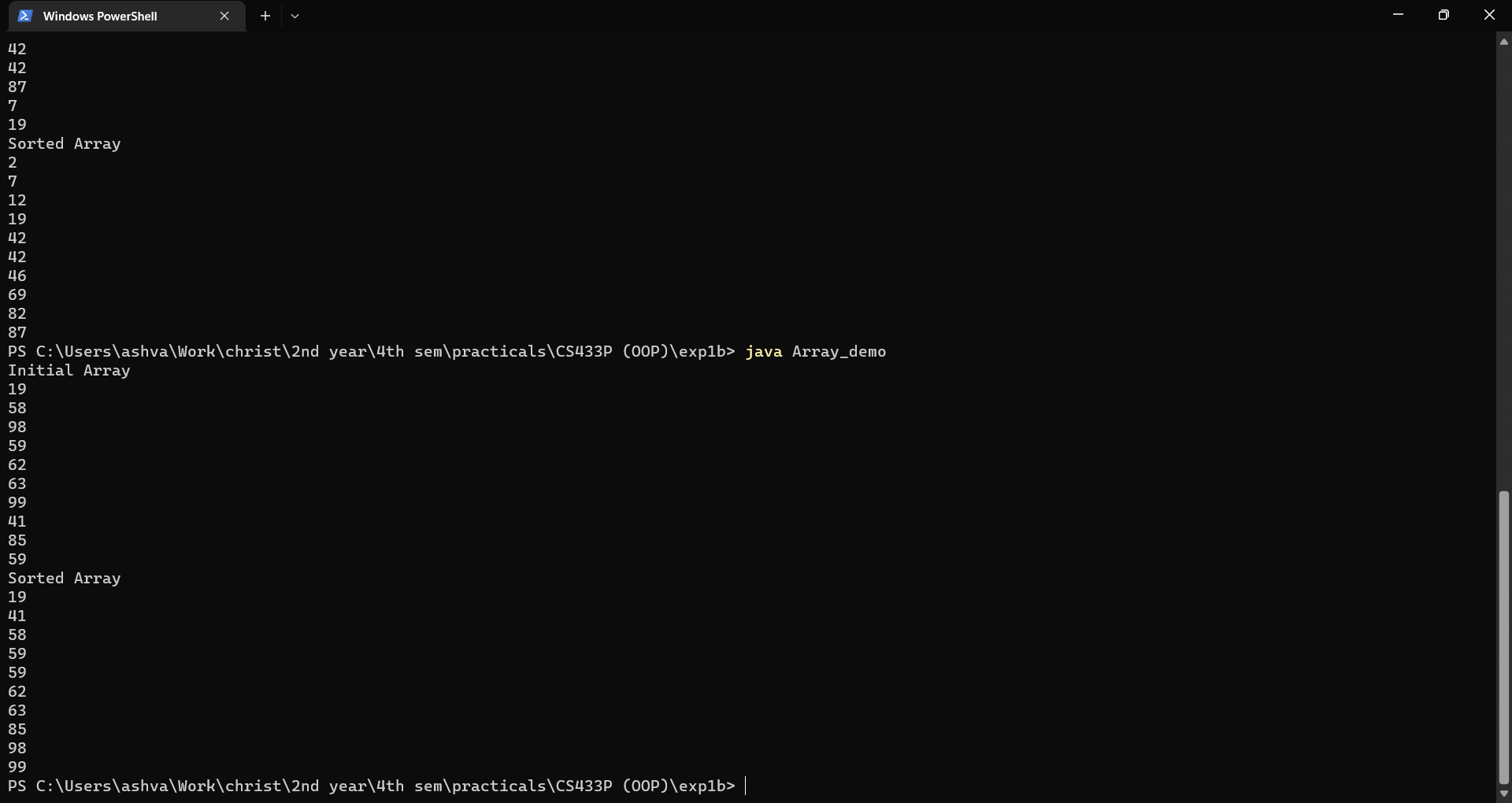
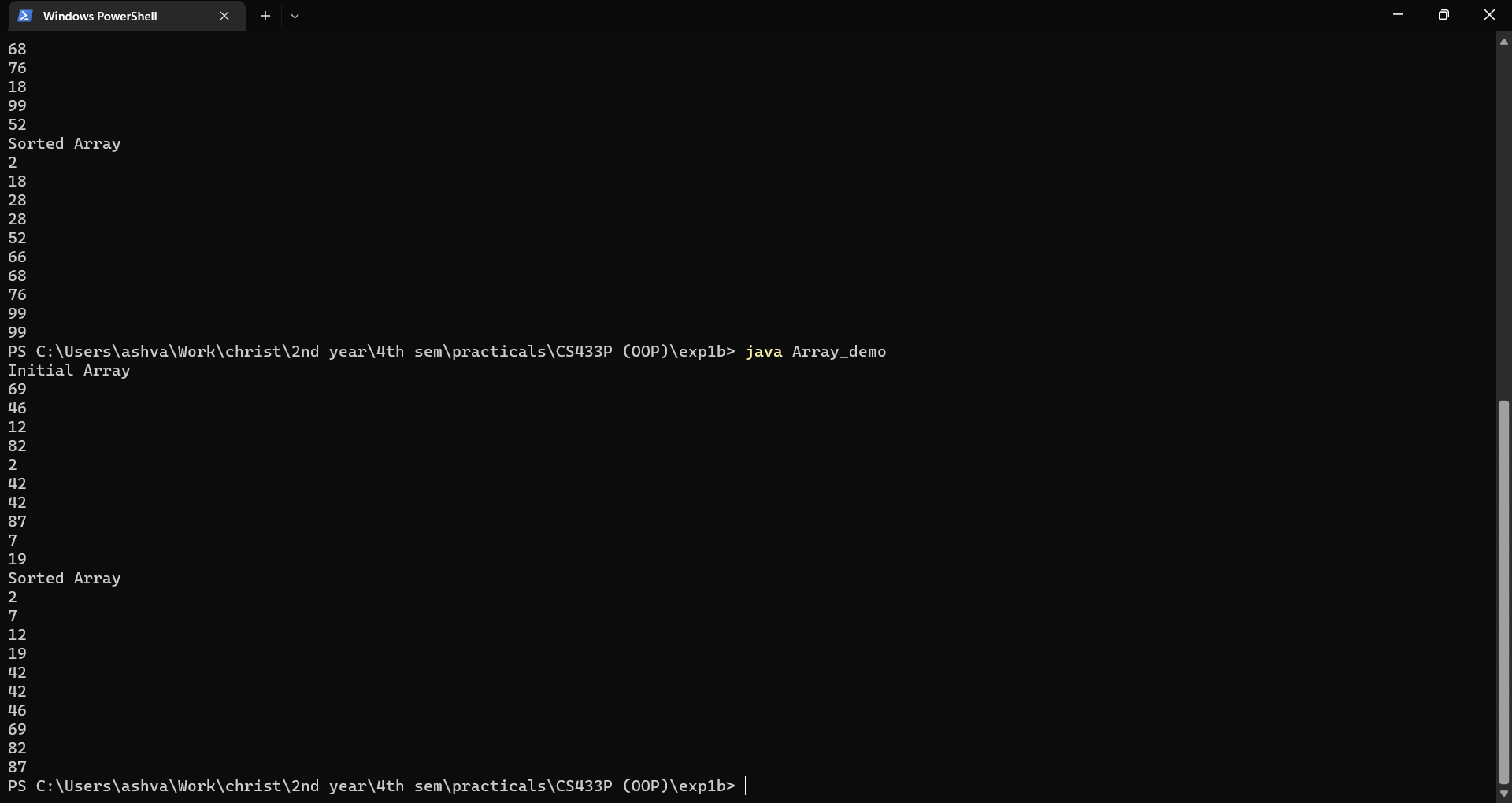
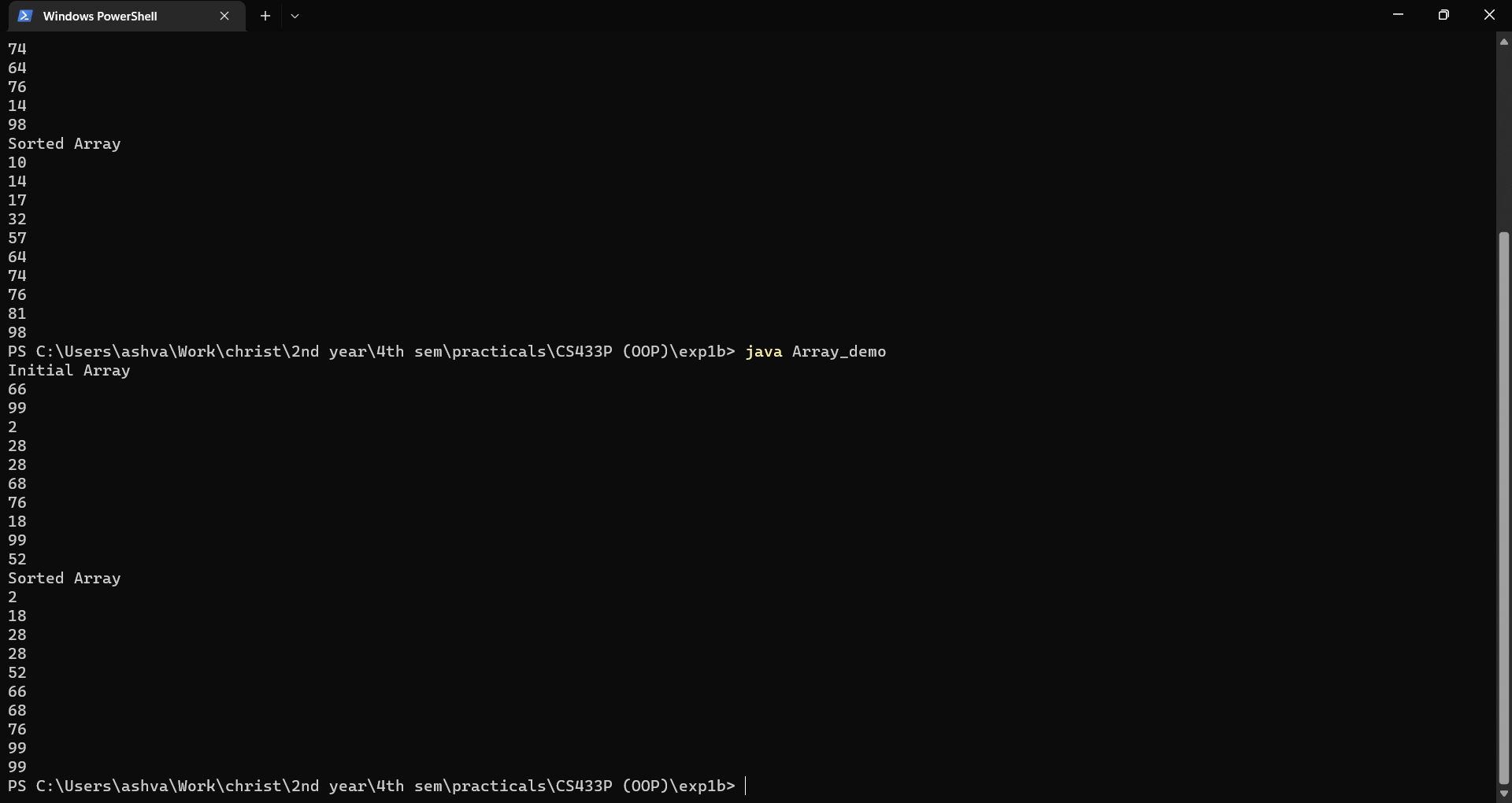
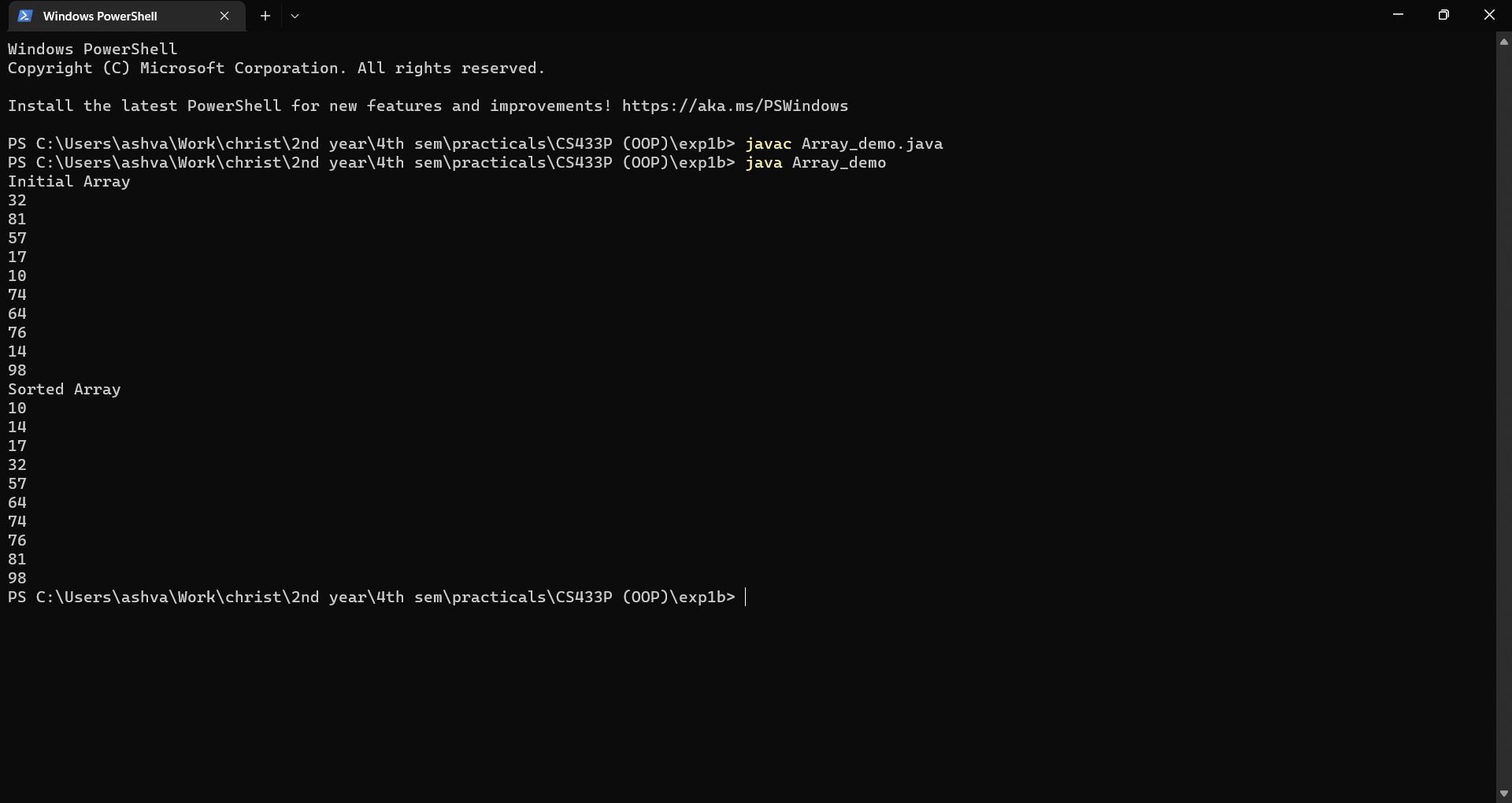
System.out.println(i);

}

}

}

**OUTPUTS**:



**RESULTS:**

The java program was successfully created to implement a single-dimensional array and sort it using bubble sort.