IMPLEMENTATION OF BUBBLE SORT

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

PROGRAM:

```java
/**
 *
 * @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);
        }
    }
}
```

CS433P Programming Paradigm Lab

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OUTPUTS:

RESULTS:

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