4.Writing a program in Java implementing the selection sort algorithm

```
package OnlinePractice4;

public class SelectionSort

{

    public static void selectionSort(int[] arr){

        for (int i = 0; i < arr.length - 1; i++)

        {

            int index = i;

            for (int j = i + 1; j < arr.length; j++){

                if (arr[j] < arr[index]){

                    index = j;//searching for lowest index

                }

            }

            int smallerNumber = arr[index];

            arr[index] = arr[i];

            arr[i] = smallerNumber;

        }

    }


    public static void main(String a[]){

        int[] arr1 = {9,14,3,2,43,11,58,22};

        System.out.println("Before Selection Sort");

        for(int i:arr1){

            System.out.print(i+" ");

        }

        System.out.println();
```

```
        selectionSort(arr1);


        System.out.println("After Selection Sort");
        for(int i:arr1){
            System.out.print(i+" ");
        }
    }
}
```

output-

```
Before Selection Sort
9 14 3 2 43 11 58 22
After Selection Sort
2 3 9 11 14 22 43 58
```