

Unit 13 Algorithms



Sorting

Bubble Sort

Write a for loop that goes from 1 to $n-2$ ($j < a.length-1$)
and if $a[j] > a[j-1]$ swap the values

Print the results using

```
System.out.println(Arrays.toString(ar));
```

Selection Sort

Write a for loop that looks for the minimum value in an array.
Store both the index and the value.

Insertion Sort

1. Write a function where
 - a. Create an integer called tmp. Set it equal to ar[1].
 - b. If `tmp < ar[0]`, swap ar[1] with ar[0]
 - c. Print the result.
 - d. Now set tmp = ar[2]
 - e. If `tmp < ar[1]` Swap ar[1] and ar[2].
 - f. If `tmp < ar[0]`, swap ar[0] with ar[1]
 - g. Now print the results.
 - h. Now set tmp=ar[3]
 - i. If `tmp < ar[2]`, swap ar[2] and ar[3]
 - j. If `tmp < ar[1]` Swap ar[1] and ar[2].
 - k. If `tmp < ar[0]`, swap ar[0] with ar[1]
 - l. Now print the results.