Step Into Java: Sorting Algorithms

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Java

Suppose we have an array of something and we want it sorted in order. How do we do it?

Get the biggest # to the left

57   95   88   14   25   ⑥

57   88   95   14   25   6

57   88   14   95   25   6

57   88   14   25   95   6

57   88   14   25   6   95

(1st pass)

Get the biggest # to the left

57 88 14 25 ⭕6 95
57 88 14 25 6 95
57 14 88 25 6 95
57 14 25 88 6 95
57 14 25 6 88 95

(2nd pass)

Get the biggest # to the left

57   14   25   (6)   88 95

14   57   25   6   88 95

14   25   57   6   88 95

14   25   6   57   88 95

(3rd pass)

Get the biggest # to the left

14   25 ⑥ 57 88 95

14   25 6 57 88 95

14 6 25 57 88 95

(4th pass)

Get the biggest # to the left

14 (6) 25 57 88 95

6 14 25 57 88 95

(5th pass)

Get the biggest # to the left

57 95 88 14 25 6
57 88 14 25 6 95
57 14 25 6 88 95
14 25 6 57 88 95
14 6 25 57 88 95
6 14 25 57 88 95

(summary)

```java
public static void sort(int[] list)
{
        for(int outer = 0; outer <list.length-1; outer++)
        {
                for(int inner =0; inner<list.length-outer-1; inner++)
                {
                        if(list[inner] > list[inner+1])
                        {
                                //swap list[inner] and list[inner+1]
                                int temp = list[inner];
                                list[inner] = list[inner+1];
                                list[inner+1] = temp;
                        }
                }
        }
}
```

Why is this a void method?

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                {
                        if(list[inner] > list[inner+1])
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                                //swap list[inner] and list[inner+1]
                                int temp = list[inner];
                                list[inner] = list[inner+1];
                                list[inner+1] = temp;
                        }
                }
        }
}
```

Get the biggest # to the left

outer	57	95	88	14	25	6
0	57	88	14	25	6	95
1	57	14	25	6	88	95
2	14	25	6	57	88	95
3	14	6	25	57	88	95
4	6	14	25	57	88	95

(summary)