Intro to Bubble Sort

2 min

Preparing for interviews will require you to become comfortable with implementing and discussing various algorithms. In particular, sorting algorithms, or algorithms that order elements in an

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array

in a particular way, can be a popular topic. One example of a sorting algorithm is *bubble sort*.

The

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bubble sort algorithm

takes an array of elements and reorders the elements of the input from smallest to largest. To achieve this, bubble sort works by comparing a pair of neighboring elements and swapping their positions in the array so that the larger of the two elements is always on the right. Doing this continuously results in the largest element "bubbling" up to the end of the array, giving this sort its name. The algorithm only stops when there are no more values that need to be swapped.

Below is a quick

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pseudocode

example of what we will create in this lesson:

```
while array is not sorted
  for each value in array
    if current value > next value
      swap current value and next value

return array
```

Bubble sort is not the most efficient sorting algorithm. Bubble sort's worst-case

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runtime

is O(n^2). This is because we have to compare the current element we are looking at, to each element in the array after it and repeat this check for every single element in the array. Its best-case runtime is O(n) for an already-sorted list.

Let’s get started!