

Bubble Sort

1 min

As mentioned, the

Preview: Docs Loading link description

[bubble sort algorithm](#)

swaps elements if the element on the left is larger than the one on the right.

How does this algorithm swap these elements in practice?

Let's say we have the two values stored at the following indices `index_1` and `index_2`. How would we swap these two elements within the list?

It is tempting to write code like:

```
list[index_1] = list[index_2]
list[index_2] = list[index_1]
```

However, if we do this, we lose the original value at `index_1`. The element gets replaced by the value at `index_2`. Both indices end up with the value at `index_2`.

Programming languages have different ways of avoiding this issue. In some languages, we create a temporary variable which holds one element during the swap:

```
temp = list[index_1]
list[index_1] = list[index_2]
list[index_2] = temp
```

The GIF illustrates this code snippet.

Other languages provide multiple assignment which removes the need for a temporary variable.

```
list[index_1], list[index_2] = list[index_2], list[index_1]
```

Instructions

In the examples we've shown, does bubble sort modify the original list or produce a new array?

-1

Temp

3

5

4

6

2

1

Index 1

Index 2