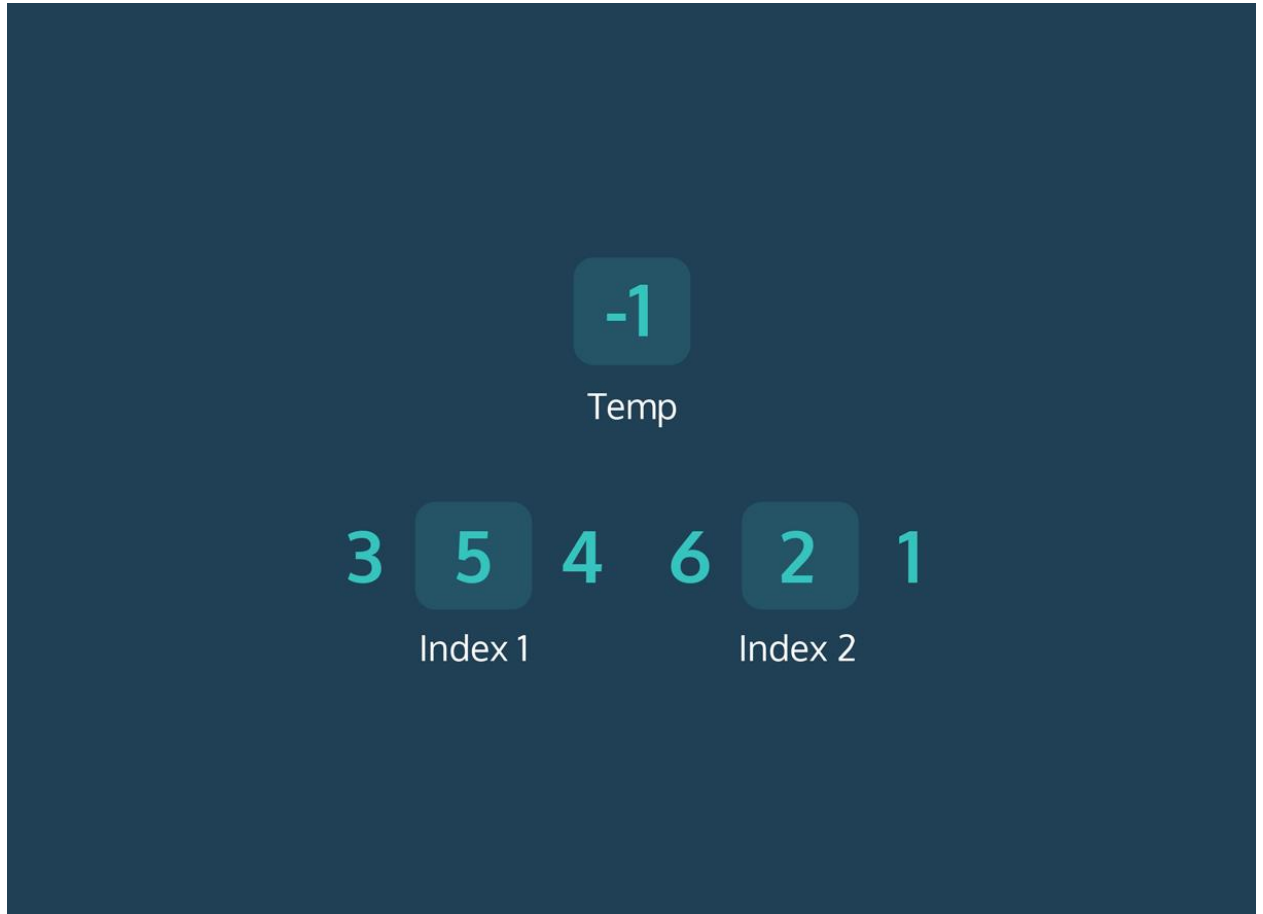**Swap**

3 min

An essential part of bubble sort is the "swapping" of pairs of unsorted elements. This animation illustrates how the swap() function of the bubble sort algorithm should work:

To swap pairs of elements, we'll need to store one of the values at either index in a temporary variable so we can use it later. For example, doing something like this:

currentValue = nextValue;
nextValue = currentValue;

would not work because we'd "lose" one of the values. The original value of currentValue would be overwritten and there would be no reference to it. Using the temporary variable strategy seen in the GIF above avoids the loss of any of the values whose position we need to exchange.

We'll employ this strategy to finish building out swap().

Instructions

1. Checkpoint 1 Passed

1.

Take a moment to look at the helper function in **swap.js**. Notice that swap() takes 3 arguments: the input array, the index of the current element, and finally, the index of the next element in the input array.

Create a constant called temp and store the value of the element at the indexTwo position in the input array so it can be referenced later.

2. Checkpoint 2 Passed

2.

Change the element at indexTwo of the input array to the value of the element at indexOne.

Hint

We can use bracket notation to access an element at a specific position in an array.

3. Checkpoint 3 Passed

3.

Change the element at indexOne of the input array to the original value of the element at indexTwo.

Hint

Remember that we changed the value at the indexTwo position of the array. Use the variable we created earlier in the function to assign the element at indexOne the correct value.

bubbleSort.js

```
const swap = require('./swap');


const bubbleSort = input => {
  let swapping = true;


  while (swapping) {
    swapping = false;
    for (let i = 0; i < input.length - 1; i++) {


    }
  }
  return input;
```

```
};
```

```
module.exports = bubbleSort;
```

swap.js

```js
const swap = (arr, indexOne, indexTwo) => {
  const temp = arr[indexTwo];
  arr[indexTwo] = arr[indexOne];
  arr[indexOne] = temp;
}

module.exports = swap;
```