

Step One: We define a function called bubbleSort with a parameter called arr:

```
function bubbleSort(arr) {  
    return arr;  
}  
  
bubbleSort([14, 33, 27, 35, 10, 56, 101]);
```

...it will return for us arr.

...the arr is an array of numbers.

Step Two: We add a statement to keep the loop constant. It will retrieve the array length:

```
function bubbleSort(arr) {  
  const loop = arr.length;  
  return arr;  
}  
  
bubbleSort([14, 33, 27, 35, 10, 56, 101]);
```

...this will tell us there are 7 items in this array.

Step Three: We add a for loop:

```
function bubbleSort(arr) {  
  //loop length  
  const loop = arr.length;  
  
  //loop for loop length  
  for(let i = 0; i < loop; i++) {  
      
  }  
  return arr;  
}  
  
bubbleSort([14, 33, 27, 35, 10, 56, 101]);
```

Step Four: We want to cycle through the array items:

So this will be another for loop:

```
function bubbleSort(arr) {  
  //loop length  
  const loop = arr.length;  
  
  //loop for loop length  
  for(let i = 0; i < loop; i++) {  
    //cycle through arr items  
    for(let j = 0; j < loop; j++) {  
        
    }  
  }  
  
  return arr;  
}  
  
bubbleSort([14, 33, 27, 35, 10, 56, 101]);
```

...the reason for this is we compare 2 items with each other.

Step Five: We compare the 2 items with each other:

```
function bubbleSort(arr) {  
  //loop length  
  const loop = arr.length;  
  
  //loop for loop length  
  for(let i = 0; i < loop; i++) {  
    //cycle through arr items  
    for(let j = 0; j < loop; j++) {  
      //compare adjacent items  
      if(arr[j] > arr[j+1]) {  
        let temp = arr[j];  
        arr[j] = arr[j+1];  
        arr[j+1] = temp;  
      }  
    }  
  }  
  
  return arr;  
}  
  
bubbleSort([14, 33, 27, 35, 10, 56, 101]);
```

...basically, it's saying, "if j is bigger than the item next to it (ie, j+1), let the temp be j."

For example, let's say:

```
33 = arr[j];  
27 = arr[j+1];  
33 = temp;
```

33 is j, 27 is j+1... therefore temp will be 33... simply put: we are SWAPPING the 2 items.

So far, this is what we have:

```
function bubbleSort(arr) {  
  //loop length  
  const loop = arr.length;  
  
  //loop for loop length  
  for(let i = 0; i < loop; i++) {  
    //cycle through arr items  
    for(let j = 0; j < loop; j++) {  
      //compare adjacent items  
      if(arr[j] > arr[j+1]) {  
        //swap  
        let temp = arr[j];  
        arr[j] = arr[j+1];  
        arr[j+1] = temp;  
      }  
    }  
  }  
  
  return arr;  
}  
  
bubbleSort([14, 33, 27, 35, 10, 56, 101]);
```

If we check our console log at this point:

```
function bubbleSort(arr) {  
  //loop length  
  const loop = arr.length;  
  //loop for loop length  
  for(let i = 0; i < loop; i++) {  
    //cycle through arr items  
    for(let j = 0; j < loop; j++) {  
      //compare adjacent items  
      if(arr[j] > arr[j+1]) {  
        //swap  
        let temp = arr[j];  
        arr[j] = arr[j+1];  
        arr[j+1] = temp;  
      }  
      console.log(arr)  
    }  
  }  
  return arr;  
}  
  
bubbleSort([14, 33, 27, 35, 10, 56, 101]);
```


...this is what we see... the array being sorted:

[illegible]

