

PUTTING THE 'FUN' IN FUNCTIONAL  
PROGRAMMING

# you have to learn computers

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## Arrays! And memory tricks for keeping shift and unshift straight

May 04, 2015

I just spent about an hour studying arrays. I thought I had a good handle on them, and I'm sure at one point I did, but there was PLENTY of material that I needed to re-study as a refresher. Studying the basics as part of my Hack Reactor precoursework has been very humbling, and I'm really happy that they make us do this!

One thing that I often get confused about is **shift()** and **unshift()**. Both of these methods do different things to an array and return non-obvious elements. How to keep them straight? I'll get into that in a moment.

### Definitions

The **shift()** method removes the first element of an array and returns it. It changes the length of the array. If the array has a length of 0, then **array.shift()** returns **undefined**.

The **unshift()** method adds one or more elements to the beginning of an array, and returns the new length of the array. Like **shift**, it changes the length of the array.

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### On the Twitter

#### Jennie Kim Eldon

If you want to learn #kotlin, we have a course for that <https://t.co/SXDZnuNDBR>

3 weeks ago

#### Jennie Kim Eldon

I just published “Five Non-Magical Tips to Becoming a Software Engineer”  
<https://t.co/YEE1PluQV>

7 months ago

#### Jennie Kim Eldon

RT @MsMargaretWhite: It feels like making the bereaved widows of servicemen so

```
var arr = [1, 2, 3];
console.log(arr.shift()); // 1
console.log(arr); // [ 2, 3 ]
console.log(arr.unshift(0)); // 3 <- new length of arr
console.log(arr); // [ 0, 2, 3 ]
```

## Memory tricks

Warning: These are silly! But they work for me.

- Lots of **F**'s: shiFt and unshiFt = the **F**ront of an array.
- Think of **shift** like a worker getting off their shift, using a first in [index 0], first out approach. So whoever is at the start of the line [index 0] gets off their shift, and is returned to you. The array actually changes as a result: You have one fewer worker, and all remaining workers are moved up towards the front of the line by one position.
- Think of the **Unshift Family** as an annoying family obsessed with how many people they have (like those people who are really into geneology, and keeping ancestry.com in business), so they're going to return the size of their family.
- **Unshift** is a fatter word than **shift**, so of course you're going to end up with a "fatter" array.

I love mnemonic devices (basically attaching a "sticky" mental association to new words so you remember their meanings better - I'm pretty sure that's NOT the scientific definition, btw). I've picked up multiple languages -- from Arabic to Albanian -- using mnemonic devices. The key is not to be embarrassed by the weird turns and graspings that your mind will take in order to attach meaning to a new word or concept. You only need the device while you're learning.

At some point, your reliance on the device falls away and you'll just know that **shift()** returns the first element of an array, or that "Faleminderit" means "thanks" in Albanian, and you'll even forget the mnemonic you used to get you there! Brains are awesome like that.

undone they sob to WaPo reporters is more disrespectful to our flag than kneeling.

7 months ago

### Jennie Kim Eldon

RT @thegymterdotnet: Such a fearless and important act. <https://t.co/0hSoHMiFOz>

7 months ago

### Jennie Kim Eldon

RT @anildash: Oh, I have an explanation.

<https://t.co/Jpg5nHGc8J>

8 months ago

### Jennie Kim Eldon

That was absolutely gruesome. Am shaking.

#prayers #nba #gordonhayward

8 months ago

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*When I grow up, I want to be a Marie Curie.*

