



## Function vs Method

*In the video above at 1:44, the dialogue mistakenly calls `init` a function rather than a method. Why is `init` not a function?*

A function and a method look very similar. They both use the `def` keyword. They also have inputs and return outputs. The difference is that a method is inside of a class whereas a function is outside of a class.

## What is self?

If you instantiate two objects, how does Python differentiate between these two objects?

```
shirt_one = Shirt('red', 'S', 'short-sleeve', 15)
short_two = Shirt('yellow', 'M', 'long-sleeve', 20)
```

That's where `self` comes into play. If you call the `change_price` method on `shirt_one`, how does Python know to change the price of `shirt_one` and not of `shirt_two`?

```
shirt_one.change_price(12)
```

Behind the scenes, Python is calling the `change_price` method:

```
def change_price(self, new_price):

    self.price = new_price
```

`Self` tells Python where to look in the computer's memory for the `shirt_one` object. And then Python changes the price of the `shirt_one` object. When you call the `change_price` method,

`shirt_one.change_price(12)`, `self` is implicitly passed in.

The word `self` is just a convention. You could actually use any other name as long as you are consistent; however, you should always use `self` rather than some other word or else you might confuse people.

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