

# Refactor Cart Service



# Currently: Basic code for finding item in cart

File: cart.service.ts

```
// check if we already have the item in our cart
let alreadyExistsInCart: boolean = false;
let existingCartItem: CartItem = undefined;

if (this.cartItems.length > 0) {
    // find the item in the cart based on item id

    for (let tempCartItem of this.cartItems) {
        if (tempCartItem.id === theCartItem.id) {
            existingCartItem = tempCartItem;
            break;
        }
    }

    // check if we found it
    alreadyExistsInCart = (existingCartItem != undefined)
}
```

Let's refactor this code

# Array.find(...)

- Method returns the first element in an array that passes a given test

```
existingCartItem = this.cartItems.find( tempCartItem => tempCartItem.id === theCartItem.id );
```

- Executes the test for each element in the array until the test passes
- If test passes, then returns the first element in the array that passed
- If test fails for ALL elements in the array, then returns undefined

# Array.find(...)

Current array element

Test Conditional

```
for (let tempCartItem of this.cartItems) {  
  if (tempCartItem.id === theCartItem.id) {  
    existingCartItem = tempCartItem;  
    break;  
  }  
}
```

Returns first element that passes  
else returns undefined

Executes test for each element  
in the array until test passes

```
existingCartItem = this.cartItems.find(tempCartItem => tempCartItem.id === theCartItem.id);
```

Current array element

Test Conditional

# Refactored: Before and After

## BEFORE

```
// check if we already have the item in our cart
let alreadyExistsInCart: boolean = false;
let existingCartItem: CartItem = undefined;

if (this.cartItems.length > 0) {
    // find the item in the cart based on item id

    for (let tempCartItem of this.cartItems) {
        if (tempCartItem.id === theCartItem.id) {
            existingCartItem = tempCartItem;
            break;
        }
    }

    // check if we found it
    alreadyExistsInCart = (existingCartItem != undefined)
}
```

## AFTER

```
// check if we already have the item in our cart
let alreadyExistsInCart: boolean = false;
let existingCartItem: CartItem = undefined;

if (this.cartItems.length > 0) {
    // find the item in the cart based on item id

    existingCartItem = this.cartItems.find( tempCartItem => tempCartItem.id === theCartItem.id );

    // check if we found it
    alreadyExistsInCart = (existingCartItem != undefined)
}
```