

Observables Lab

In this lab we're going to make the ShipOrderComponent work with real data instead of the hardcoded values we've had so far.

Real data in the order

1. Run your application. Look at either the dashboard or the orders to ship component. Click on an order. You should be sent to `http://localhost:4200/ship/<id>`. Then look at the order ID in the url and on the page. Do they match? _____. They should. Now look at the order date, the ship_via, the shipping label at the bottom and the list of products. All of those are hardcoded so they will always say the same thing. Let's get some real data from our Ajax API.
2. Open `ship-order.component.ts`. Prepare it to make Ajax calls by importing and injecting `HttpClient`. (Hint: This is what you did in the last lab and you should be familiar with it by now).

In `ngOnInit`, you're properly getting the order ID from the URL. But then you create fake hardcoded data that looks like an order.

3. Delete the code where you're creating that fake order.
4. Change `ngOnInit` to populate `this.order` from the Ajax API. You'll need to ...
 - import and inject `HttpClient`
 - import the `map` function from `rxjs/operators`
 - Make a get call to `/api/orders/<id>`
 - Pipe it through the `map` function to convert the raw response to an actual `Order`
 - subscribe to the observable with a function that sets `this.order = order`.
5. Run and test. Make adjustments until you can see all the right order details on the page. You should see the right order date, ship via, shipping address, the right products in the list, and the right shipping address in the shipping label at the bottom of the component.

Getting locations for those products

Remember where we're hardcoding a location from which to pick? Let's get an actual location from the database.

6. Still in `ship-order.component.ts`, find the `getBestLocation` method where you hardcoded the return.
7. Change that hardcode to hit the GET endpoint for `/api/locations/forProduct/:productID`. Of course you're passing the product ID in that `productID` parameter.
8. Note that what comes back from the API call is an array of `Locations` so you'll want to convert the response to `Array<Location>` using the `map` function.
9. Make sure you're subscribing a function. In that success callback, set your `orderLine's locationID`.
10. Run and test. When the button is pressed by the user, a real location should be displayed. You'll know you got it right when there's a different location for each product.

Set the shipped or problem flag

11. Still in `ship-order.component`, find the method you're running when the "Mark as problem" button is clicked.
12. Make that send a PATCH request to `/api/orders/<orderID>/MarkAsProblem`. (Note: the PATCH protocol requires a body but our service ignores it, so send an object -- even an

empty one). We're doing nothing with the response so no need to map anything. Don't forget to subscribe() or the observable never gets run.

13. Run and test. Mark one as problem. Then look at your list of orders and you'll see that it is no longer ready to be picked because you've said it has a problem. When you can mark it as problem and see it removed from the list, you know you've got it working.
14. Do the same for "Mark as shipped"
15. Run and test them both. When you mark as shipped, you should see that the inventory amount is reduced by the amount shipped.

Remember, you can always look at an order and manually set the order status by directly editing database.json in the webServer folder. Just find your order and set status to 0.

Receive product

Remember how when we receive product we're displaying the product ID and quantity? We'd like to display an entire product on the page instead of merely the product ID. Let's go grab a product from our server.

16. As soon as the user enters a product ID, make an Ajax GET call to `/api/products/<productID>`. The response will contain the details for that product. On success, populate `this.product` from the response so it will display your product on the form. On failure, show a message that that product ID is not found.