

## Intro to Custom Directives Lab

Better watch out! Our UX experts and marketing types have been talking. This always means more work for developers. And sure enough, they've come up with a way to increase sales and to make it easier on our users. Who couldn't get behind that? They've gotten feedback that our users would love to add products to their cart directly from the search results and from the browse page. As of now users must click through to the product details page to add to the cart. So let's roll up our sleeves and get to work!

1. Open the `productSearchPartial.html` and `productListPartial.html` files in your IDE. Note that they both present lists that are identical.

This is not DRY. A template sounds like a good idea at first. But as you re-think, you remember that we're now adding behavior as well as presentation. So a custom directive would be a better idea. Let's do that! We'll start with the presentation which is a template.

### Creating the template

2. Copy the inner contents of the `ng-repeat` into a new file called `nwProductOverviewPartial.html`. (Note: you don't want the `ng-repeat` div itself, just the things inside of it.)
3. Replace those lines in `productSearchPartial.html` and in `productListPartial.html` with this:

```
<nw-product-overview></nw-product-overview>
```

### Creating the custom directive file

4. Create a new file called `nwProductOverviewDirective.js`
5. Don't forget to...
  - Use an IIFE,
  - Add a reference to the `productModule`,
  - Call the `".directive()"` function, passing the name of the directive (`nwProductOverview`) and the directive function,
  - Return a DDO from the custom directive which has ...
    - a `restrict` property
    - a `template` property that says `"<p>product overview</p>"`
    - a `controller` property pointing to a function with one line:  
`console.log("product overview directive controller")`.
6. Include the `nwProductOverviewDirective.js` file in a `<script>` tag.
7. Run and test. Eliminate any JavaScript errors you see in the console.
8. At this point you should see the directive being repeated. The page should say "product overview". You should also see "product overview directive controller" in the console once for each item.

## Showing the actual product

9. Open the directive function again. Change your template property to be a templateUrl property and point it to your nwProductPartial.html file.
10. Run and test. You should now see all of your products just as before.

## Adding the new functionality

Let's add the input box for them to specify quantity and a button to add it to the cart.

11. In your directive's partial, add something like this:

```
<div class="col-sm-2">
  <input ng-model="quantity" type="number" class="form-control" />
  <button ng-click="addToCart(product, quantity)" class="btn btn-
primary btn-sm glyphicon glyphicon-shopping-cart"></button>
</div>
```

All those classes are there just to make it look good.

12. Bonus: Change the numbers in col-sm-\* to add up to 12 and they'll all fit in on a row.
13. Open your productDetailController.js and find the addToCart function. Copy it and paste it in your directive's controller.
14. Note that it requires a few services like \$scope and cartService. Make sure to add those to your controller as injected dependencies.
15. Run and test.

Your users should now have the ability to add products to their cart directly from the browse page, the search page, and the details page.