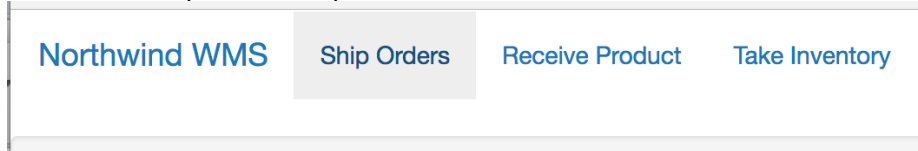


# Routing Lab

So far we have a few components but you'd be hard-pressed to call it a site or a single-page app. None of the components allow us to navigate to any of the others. We'll fix that in this lab. By the time we're through, our users will be able to visit any of our pages and get to any other.

## Defining the routes

1. First, make sure the AppComponent is your startup component. Go ahead and run it to make sure.
2. Notice at the top of the component, there's a menu that looks kind of like this:



3. Click on any of the three options. They don't do anything yet.

## Creating the routing module

The first step would be to design the routes. In this case they're pretty obvious since so far we only have five places to go. So let's go with these routes:

Component	URL
Landing page	/
Orders to ship	/ship
Receive product	/receive
Ship a single order	/ship/<orderID>
Take inventory	/inventory

4. Create a new file called app.router.ts.

This file isn't like most of our other files. It doesn't have a class. Instead it should export an object which is created by calling the `.forRoot()` method of `RouterModule`. You'll set up the routes by passing a JavaScript array to it of the route objects, each of which have a path and a component. And how do you do that? Read on ...

5. Create an array. Here's a start:

```
const routes = [  
  {path:"ship", component: OrdersToShipComponent},  
  // Okay, you fill in the other three  
];
```

6. Pass that array into `.forRoot()`. Something like this will work:

```
const routing = RouterModule.forRoot(routes);
```

7. Export the new object:

```
export {routing};
```

## Adding your new routing module

Since this is a bona fide module, we need to *import* it in our main module.

8. Open `app.module.ts`.
9. Find the imports array in the `@NgModule` annotation. Add your routing module to it.

## Creating a place for the pages to go

Now we've got some refactoring to do. The routing subsystem was built to dynamically place components into a host page/component. We don't have one of those. We're going to pull the dashboard functionality out of AppComponent and repurpose AppComponent to be our hosting page.

10. Edit app.component.html again. Add a tag like this:  
`<router-outlet></router-outlet>`
11. Edit app.router.ts and change your default route to DashboardComponent instead of AppComponent.
12. Run and test. When you navigate to the root of your site, you should see AppComponent hosting your DashboardComponent.

You're probably thinking, "All that to get us back to where we started?!?" Be patient, the payoff is coming.

## The payoff: Making all the routes work

13. Edit app.component.html and find the link for "Ship Orders". Make it look like this:  
`<a [routerLink]="['ship']">Ship Order</a>`
14. Use that same pattern for "/receive", "/", and "/inventory".
15. Run and test. You should be able to navigate to any component and you should see the navigation menu at the top of every one.

## Programmatically activating a route

We have a problem that we can easily solve; in ship-order.component.ts, the order number to ship is hardcoded. It should be passed to the ShipOrderComponent when you click on an order in the DashboardComponent or OrdersToShipComponent.

16. Open dashboard.component.html and add a router link to each order `<div>`. Have it route the user to "ship" but this time, pass the order ID to the route. This take the user to the ShipOrderComponent.
17. Run and test. You should be able to click on any order in the DashboardComponent and have the ShipOrderComponent come up.

Take note though that the same order comes up every time. It should bring up a different order each time -- the one you clicked on. Let's fix that.

18. Open ship-order.component.ts. Look at the ngOnInit method. Add the code to read the order ID from the route parameters. (Hint: you will need to read `_route.params` after having declared `_route` as an ActivatedRoute).
19. Go ahead and set order.id to the order ID read in as a route parameter.
20. Run and test. You should be able to click on any order in the DashboardComponent and see the order ID dynamically set on the page.

As of now, the only thing you'll see change on the page is the order ID but very soon we will be reading the order details live from a RESTful service via Ajax. Stay tuned for that!

Once you can route to all the components and see a route value passed from one to another you can be finished!

Bonus! Note that the orders-to-ship component has a list of orders also but clicking on the orders does nothing. Can you make them also link to the ship-order component? (Hint: No need for a `<a>` tag and no need for a click event).