Reactive Form in Context

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Module Overview

Sample Application

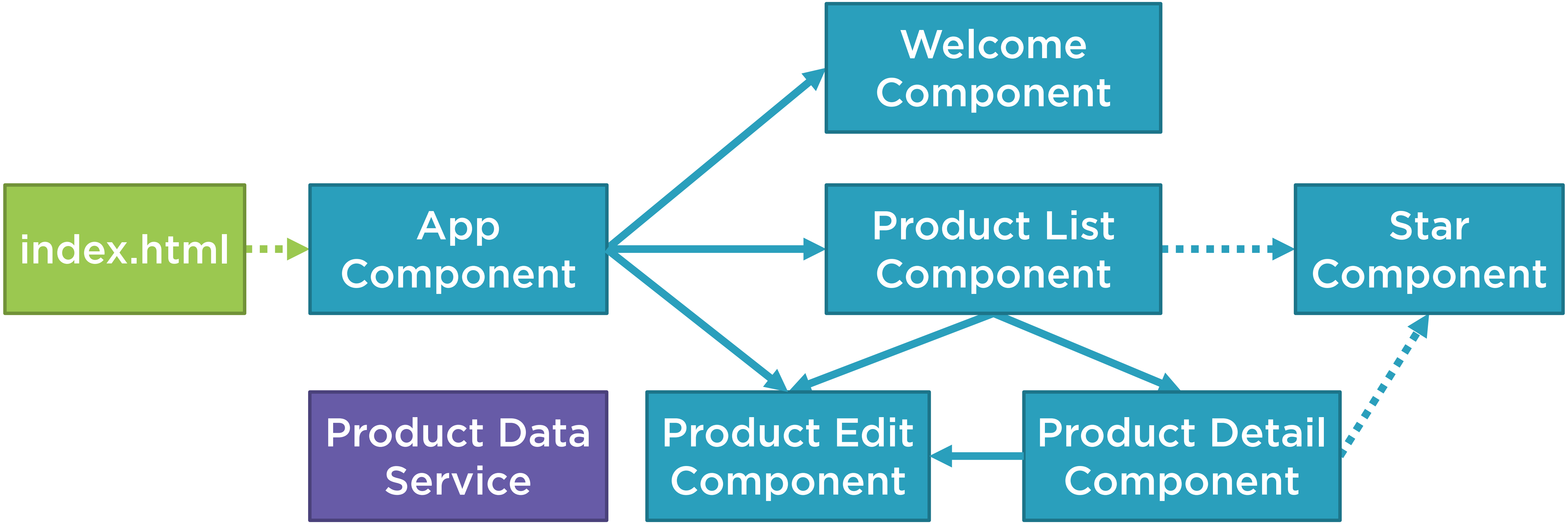
Routing to the Form

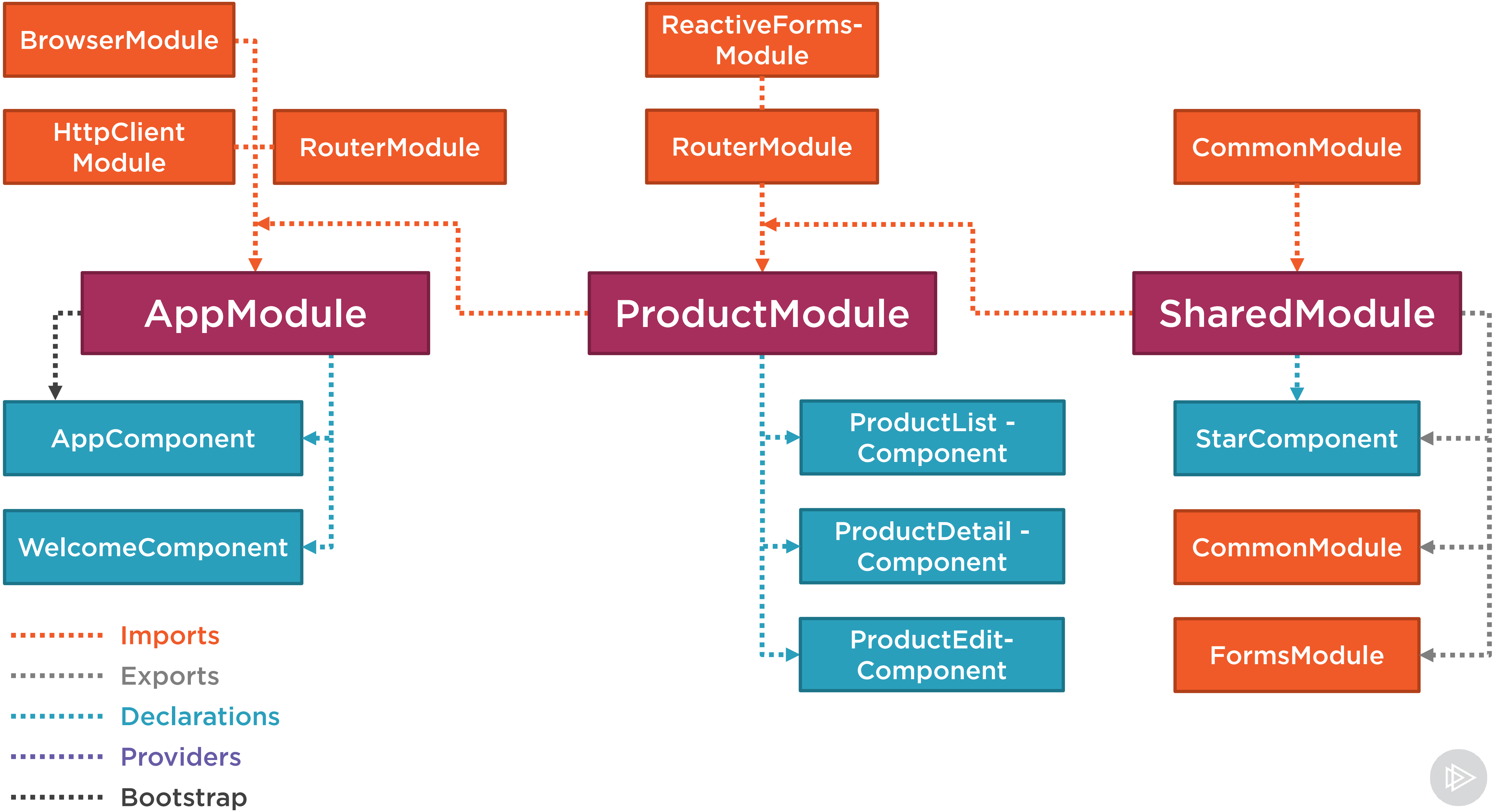
Reading a Route Parameter

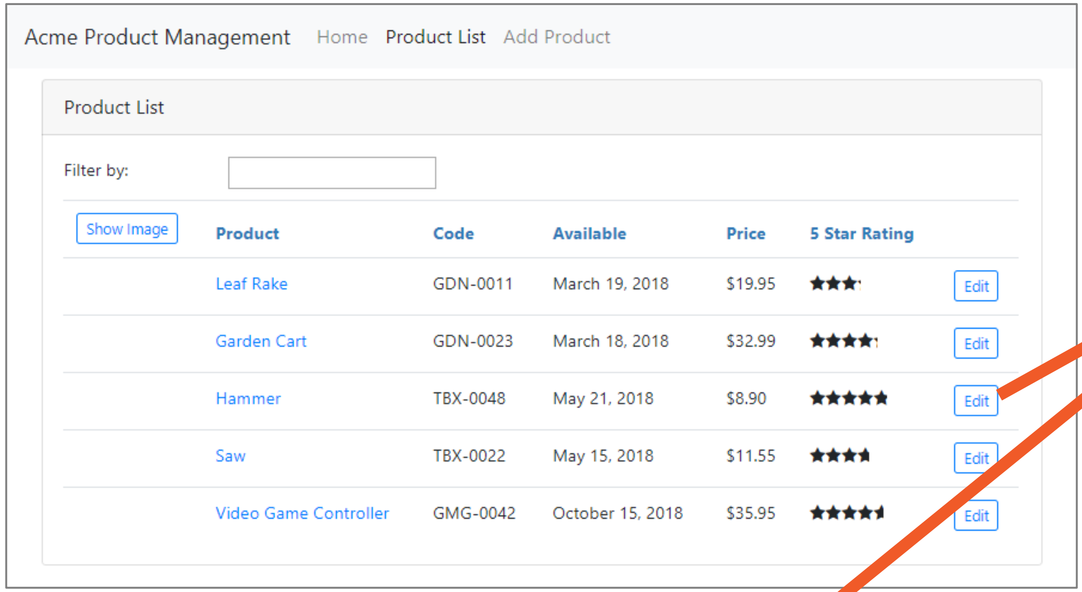
Setting a `canDeactivate` Guard

Refactoring to a Custom Validation Class

APM Sample Application Architecture




BrowserModule
HttpClient Module
RouterModule
ReactiveForms-Module
RouterModule
CommonModule
AppModule
ProductModule
SharedModule
AppComponent
WelcomeComponent
ProductList - Component
ProductDetail - Component
ProductEdit-Component
StarComponent
CommonModule
FormsModule
Imports
Exports
Declarations
Providers
Bootstrap

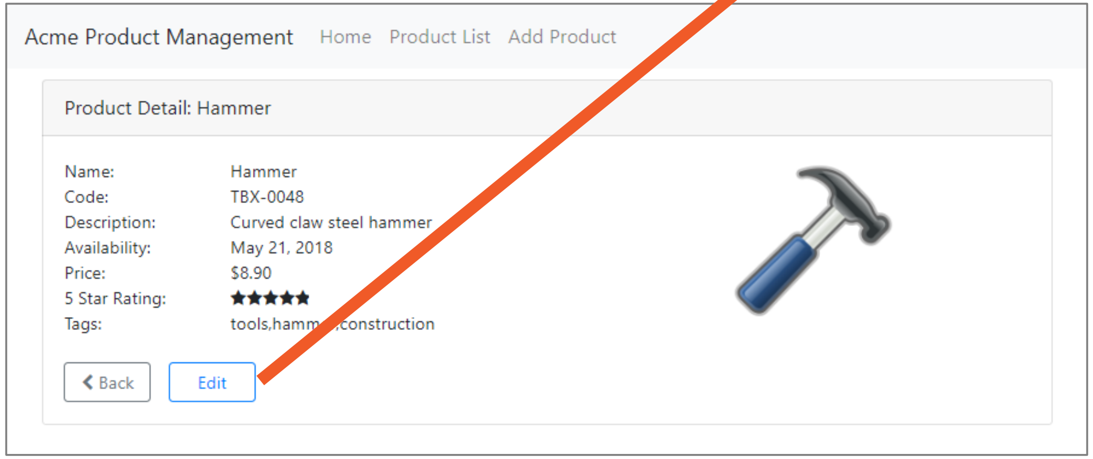


Acme Product Management Home Product List Add Product

Product List

Filter by:

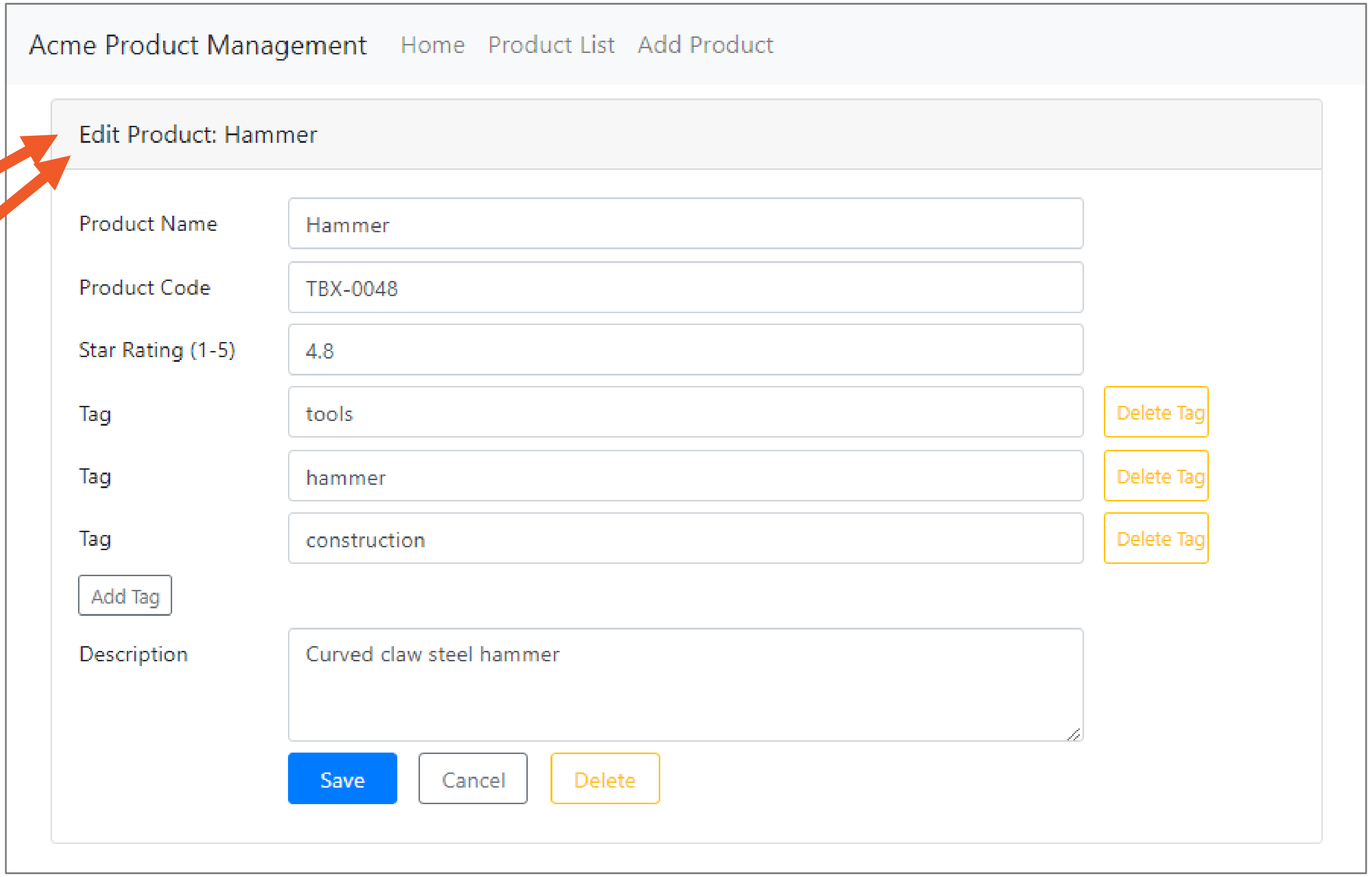
Show Image	Product	Code	Available	Price	5 Star Rating	
	Leaf Rake	GDN-0011	March 19, 2018	$19.95	★★★	Edit
	Garden Cart	GDN-0023	March 18, 2018	$32.99	★★★★	Edit
	Hammer	TBX-0048	May 21, 2018	$8.90	★★★★★	Edit
	Saw	TBX-0022	May 15, 2018	$11.55	★★★★	Edit
	Video Game Controller	GMG-0042	October 15, 2018	$35.95	★★★★★	Edit



Acme Product Management Home Product List Add Product

Product Detail: Hammer

Name:	Hammer
Code:	TBX-0048
Description:	Curved claw steel hammer
Availability:	May 21, 2018
Price:	$8.90
5 Star Rating:	★★★★★
Tags:	tools,hammer,construction

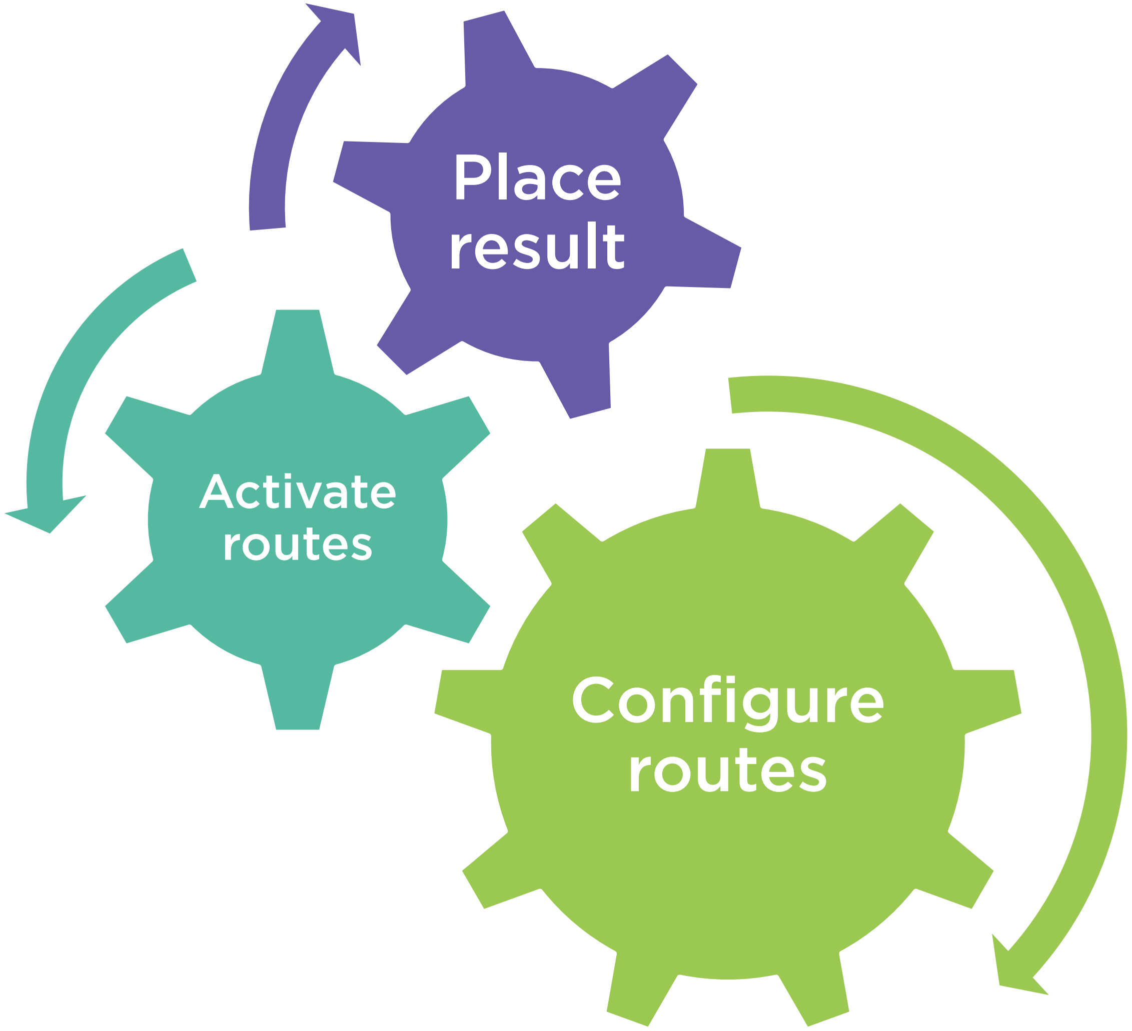


Acme Product Management Home Product List Add Product

Edit Product: Hammer

Product Name	Hammer
Product Code	TBX-0048
Star Rating (1-5)	4.8
Tag	tools
Tag	hammer
Tag	construction
Description	Curved claw steel hammer

Routing Steps


Place result

Activate routes

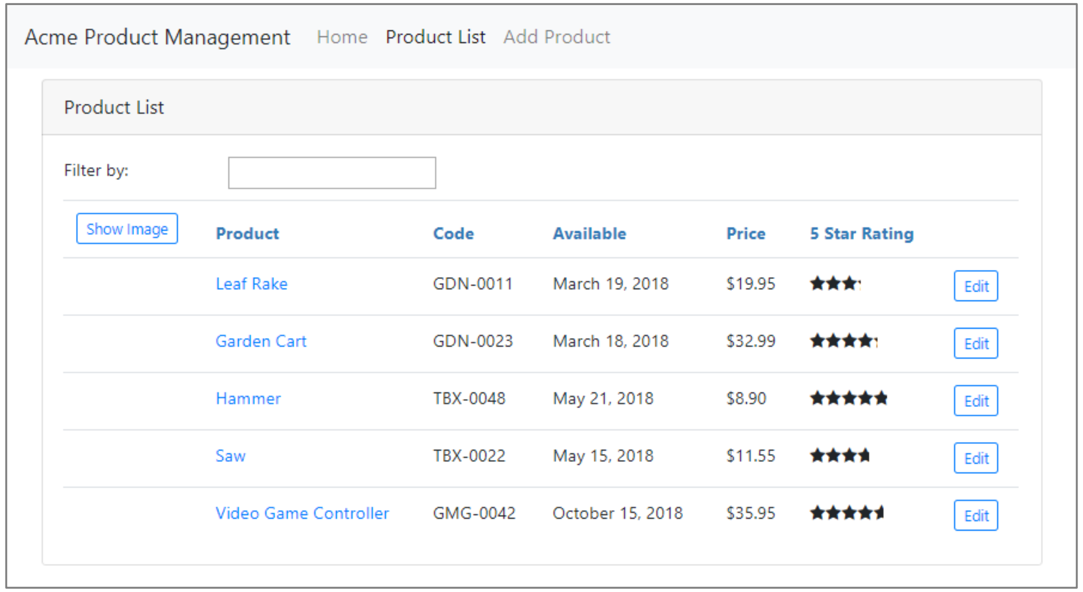
Configure routes

Configuring Routes

```
[
 { path: 'products', component: ProductListComponent },
 { path: 'products/:id', component: ProductDetailComponent },
 { path: 'products/:id/edit', component: ProductEditComponent }
]
```

Route Guards

```
[
 { path: 'products', component: ProductListComponent },
 { path: 'products/:id',
   canActivate: [ ProductDetailGuard ],
   component: ProductDetailComponent },
 { path: 'products/:id/edit',
   canDeactivate: [ ProductEditGuard ],
   component: ProductEditComponent }
]
```



Product List

Filter by:

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	Leaf Rake	GDN-0011	March 19, 2018	$19.95	★★★	Edit
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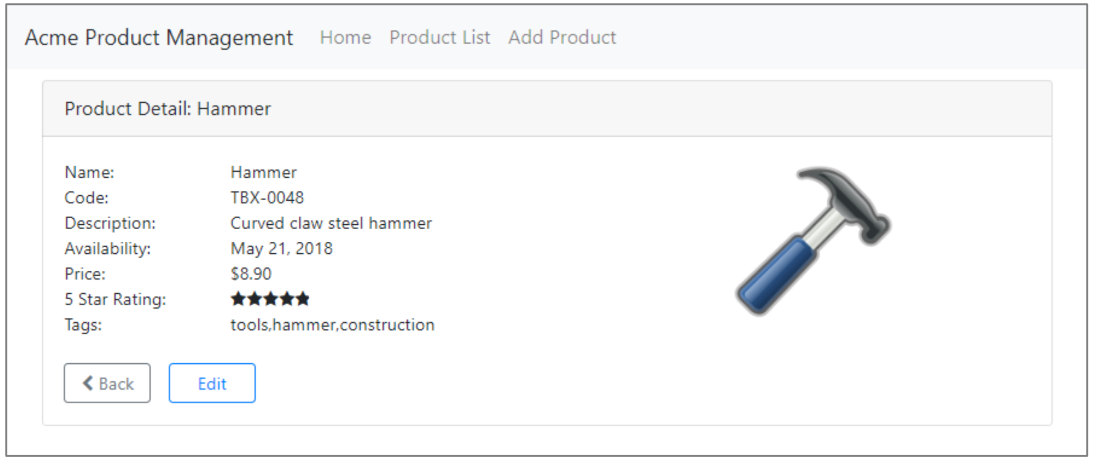
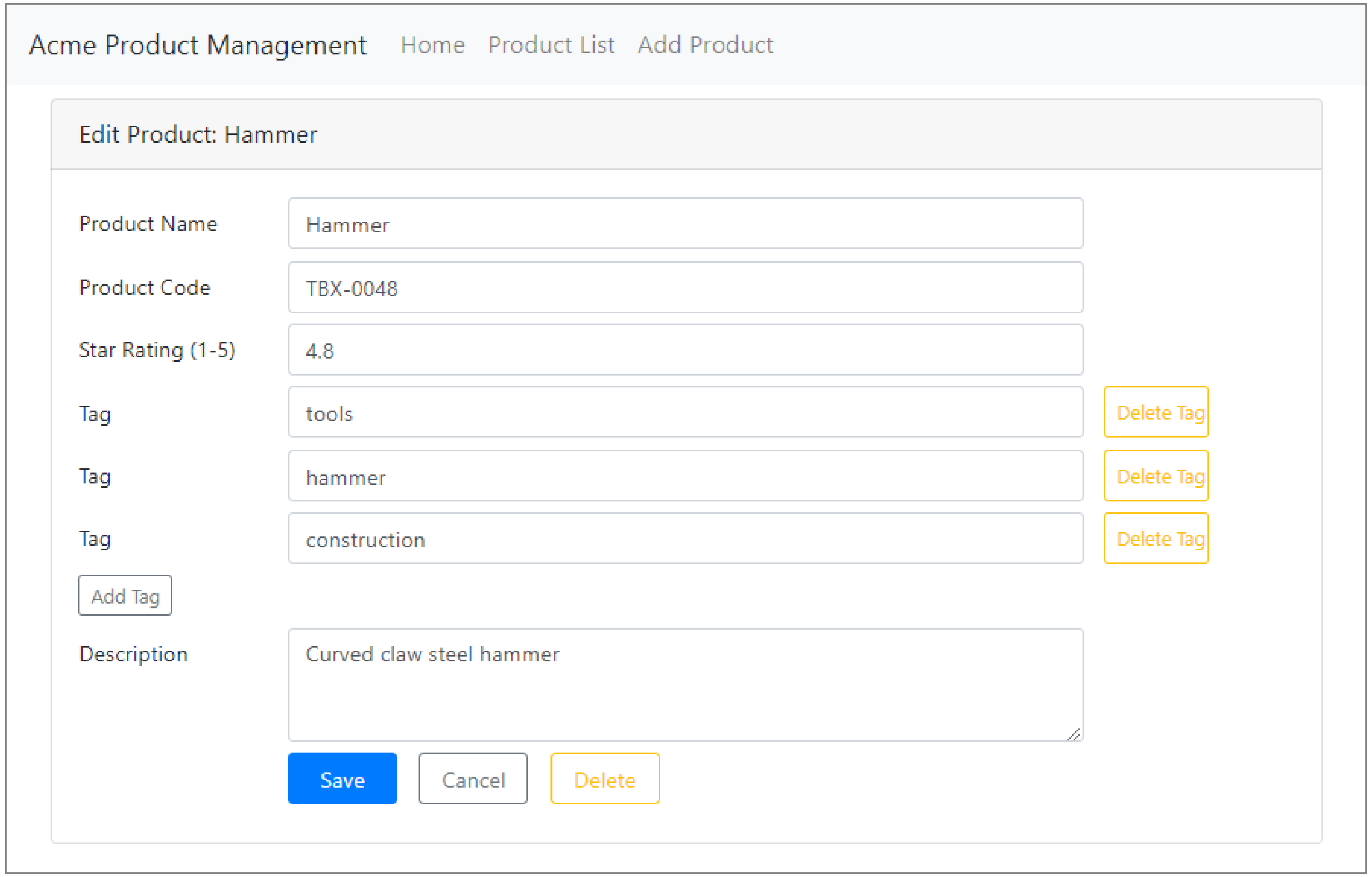


Product Detail: Hammer

Name:	Hammer
Code:	TBX-0048
Description:	Curved claw steel hammer
Availability:	May 21, 2018
Price:	$8.90
5 Star Rating:	★★★★★
Tags:	tools,hammer,construction



Edit Product: Hammer

Product Name	Hammer	
Product Code	TBX-0048	
Star Rating (1-5)	4.8	
Tag	tools	Delete Tag
Tag	hammer	Delete Tag
Tag	construction	Delete Tag

Description: Curved claw steel hammer

Tying Routes to Actions

app.component.ts

```
...

@Component({
    selector: 'pm-root',
    template: `
     <ul class='navbar-nav'>
       <li><a [routerLink]="['/welcome']">Home</a></li>
       <li><a [routerLink]="['/products']">Product List</a></li>
       <li><a [routerLink]="['/products', '0', 'edit']">
           Add Product</a>
       </li>
     </ul>
    `
})
```

Placing the Views

app.component.ts

```
...

@Component({
    selector: 'pm-root',
    template: `
     <ul class='navbar-nav'>
       <li><a [routerLink]="['/welcome']">Home</a></li>
       <li><a [routerLink]="['/products']">Product List</a></li>
       <li><a [routerLink]="['/products', '0', 'edit']">
           Add Product</a>
       </li>
     </ul>
     <router-outlet></router-outlet>
    `
})
```

Reading Parameters from a Route

```
{ path: 'products/:id/edit', component: ProductEditComponent }
```

```
import { ActivatedRoute } from '@angular/router';
```

```
constructor(private route: ActivatedRoute) {
   let id = +this.route.snapshot.paramMap.get('id');
   ...
}
```

```
constructor(private route: ActivatedRoute) {
   this.sub = this.route.paramMap.subscribe(
      params => {
         const id = +params.get('id');
         ...
      }
   );
}
```

Building a Guard

product-edit.guard.ts

```
import { Injectable } from '@angular/core';
import { CanDeactivate } from '@angular/router';

@Injectable({
  providedIn: 'root'
})
export class ProductEditGuard
          implements CanDeactivate<ProductEditComponent> {

   canDeactivate(component: ProductEditComponent): boolean {
     ...
   }
}
```

Custom Validator with Parameters

```
function range(min:number, max:number): ValidatorFn {

    return (c: AbstractControl): {[key: string]: boolean} | null => {

    if (c.value < min || c.value > max) {
        return { 'range': true };
    }
    return null;

}
```

Checklist: Reactive Form in Context

- Add a route configuration
- Add user interface element(s) to activate the route
- Read the route parameter
- Set up a `canDeactivate` guard
- Refactor validators to a custom validation class for reuse

Summary

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Routing to the Form

Reading a Route Parameter

Setting a `canDeactivate` Guard

Refactoring to a Custom Validation Class