

# Prefetching Data Using Route Resolvers

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## Product List

Filter by:

Name:

Code:

Description:

Availability:

Price:

5 Star Rating: ★★★★★

Category:

Tags:

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# Benefits of Prefetching Data



**Prevents display of a partial page**

**Reuses code**

**Improves flow when an error occurs**

# Module Overview



**Providing Data with a Route**

**Using a Route Resolver**

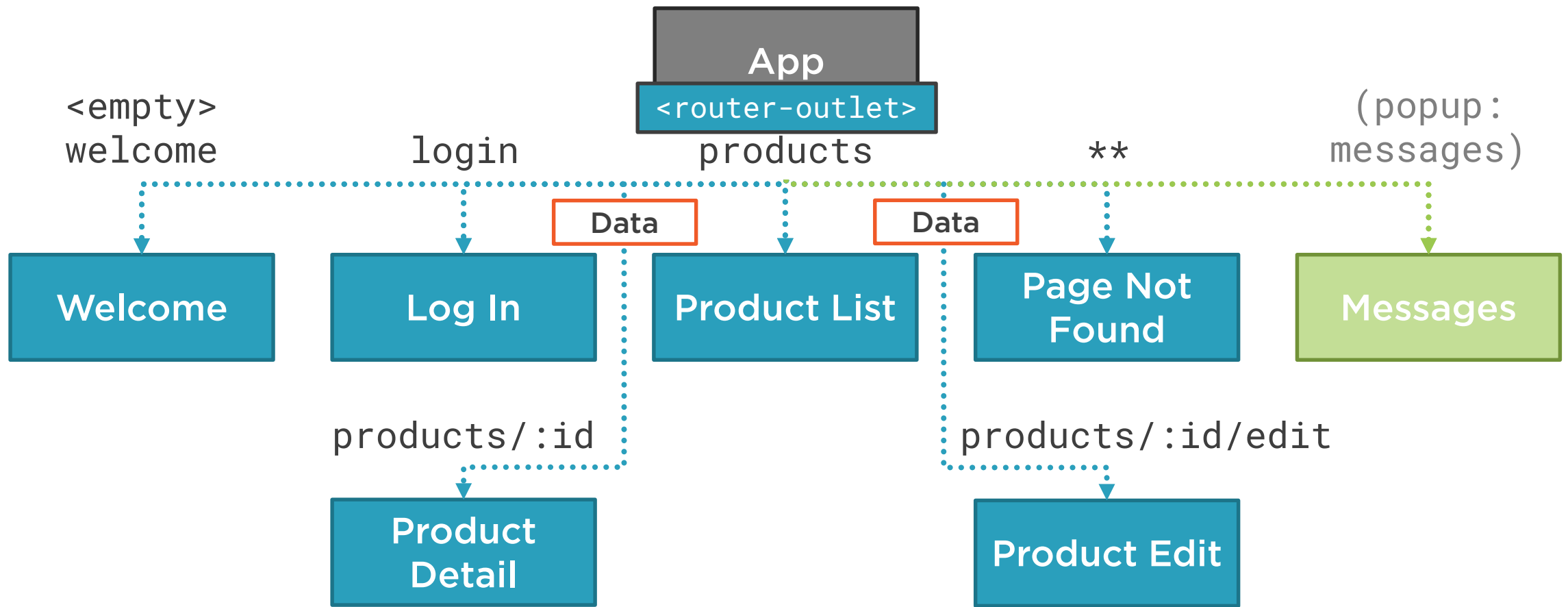
**Building a Route Resolver Service**

**Adding a Resolver to a Route  
Configuration**

**Reading Resolver Data - Snapshot**

**Reading Resolver Data - Observable**





- ..... Primary Routes
- ..... Secondary Routes
- ..... Child Routes



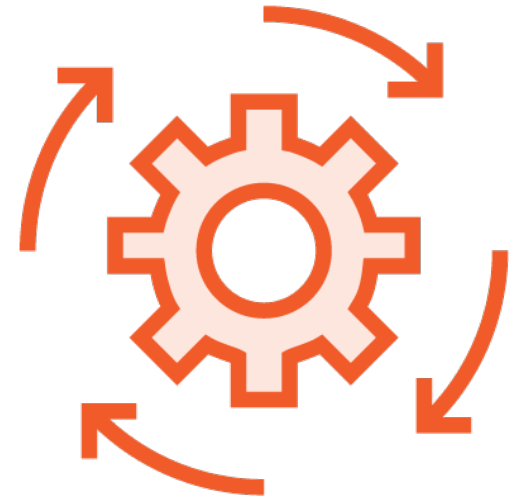
# Providing Data with a Route



Amount of data



Scope of data sharing



How data is used

# Providing Data with a Route

**Route  
Parameters**

**Optional  
Route  
Parameters**

**Query  
Parameters**

**Route's Data  
Property**

**Route  
Resolver**

**Angular  
Service**



# Route's Data Property

## Angular Module

```
@NgModule({  
  imports: [  
    RouterModule.forChild([  
      {  
        path: 'products',  
        component: ProductListComponent,  
        data: { pageTitle: 'Product List' }  
      },  
      { path: 'products/:id', component: ProductDetailComponent },  
      { path: 'products/:id/edit', component: ProductEditComponent }  
    ])  
  ], ...  
})
```

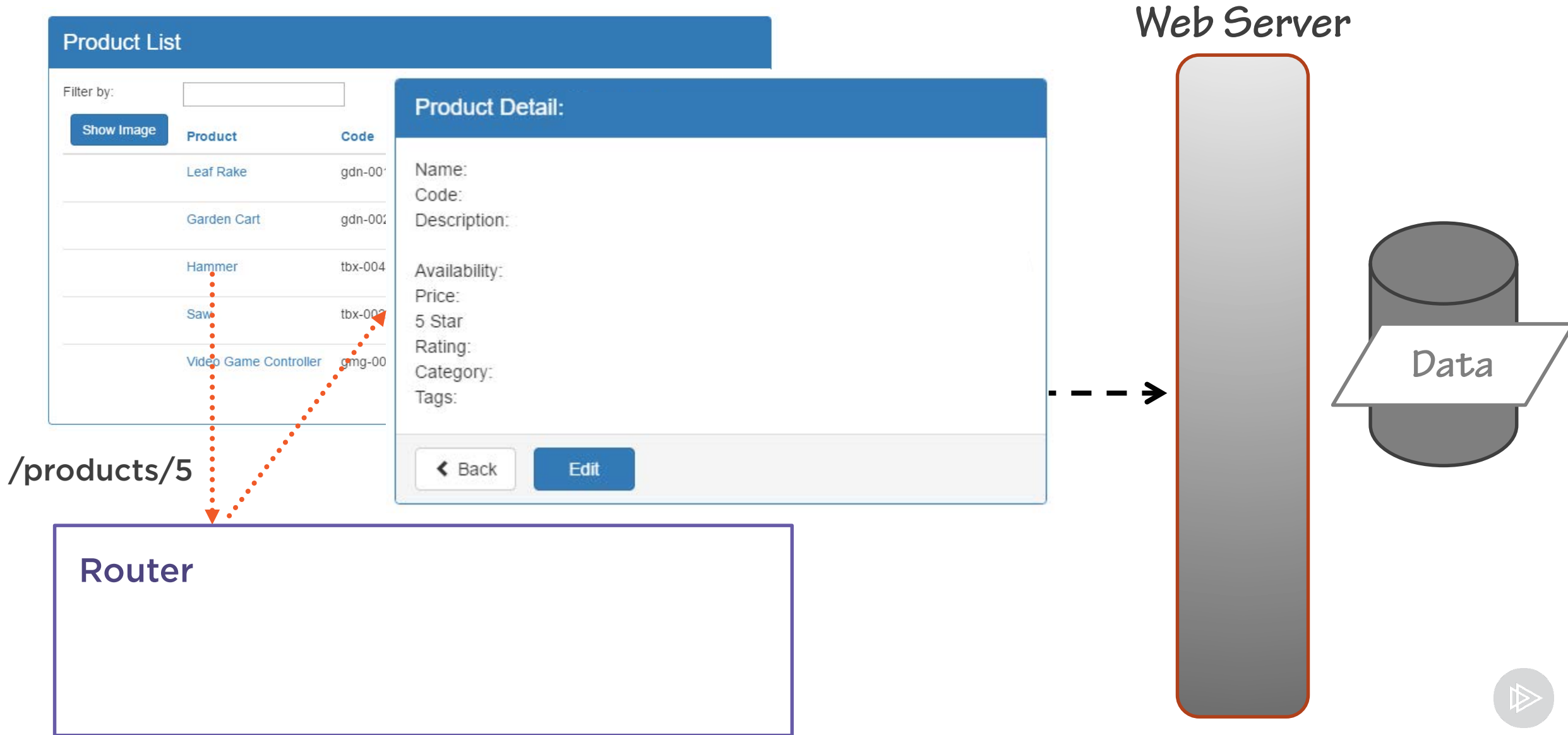
## Component Class

```
this.pageTitle = this.route.snapshot.data['pageTitle'];
```

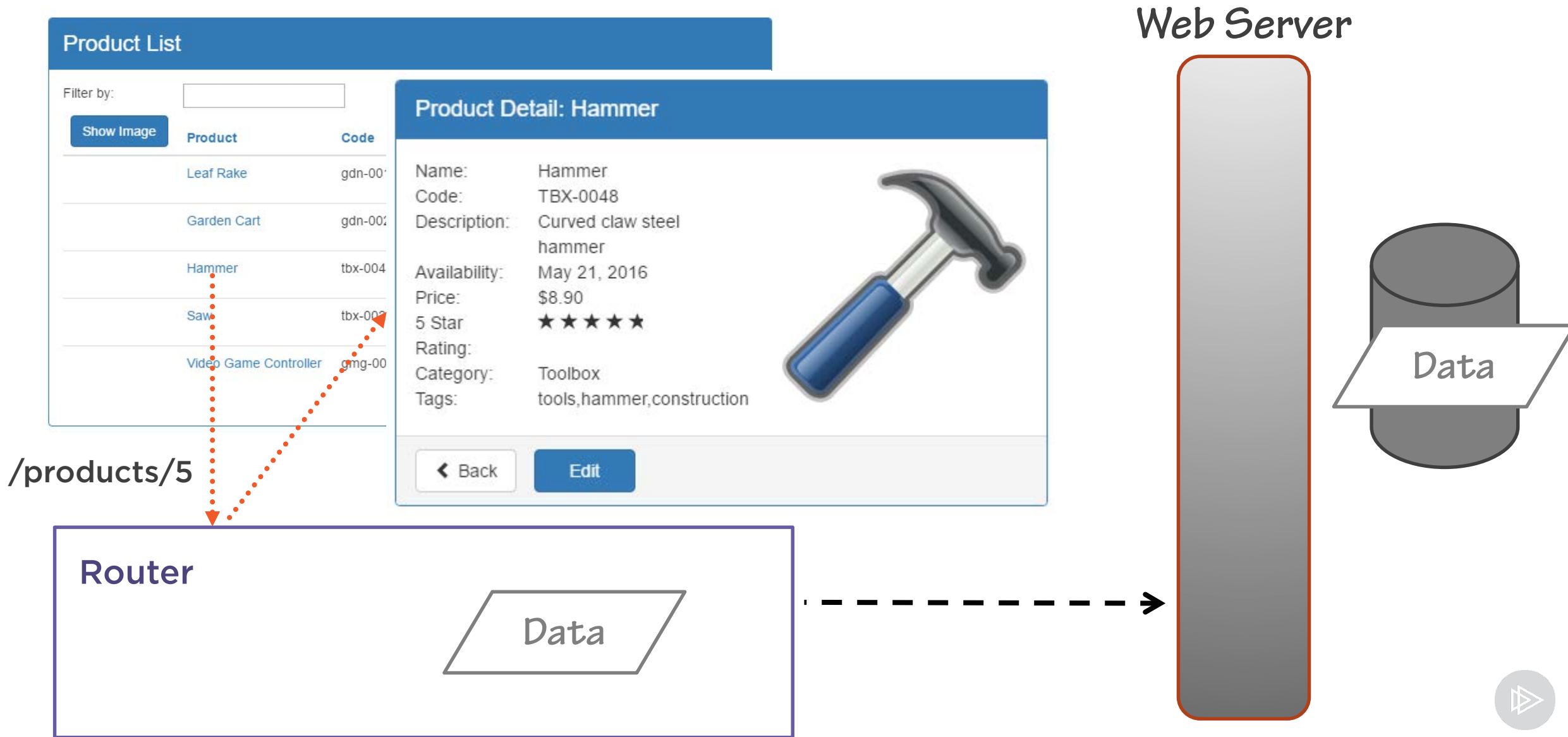




# Without a Route Resolver



# With a Route Resolver



# Using a Route Resolver



Build and register a route resolver service

Add resolve to the route configuration

Read the data from `ActivatedRoute`



# Use a Snapshot

Acme Product Management

Home

Product List

Add Product

Log In

## Product List

Filter by:

Show Image

Product	Code	Available	Price	5 Star Rating
Leaf Rake	gdn-0011	March 19, 20		
Garden Cart	gdn-0023	March 18, 20		
Hammer	tbx-0048	May 21, 2016		
Saw	tbx-0022	May 15, 2016		
Video Game Controller	gmg-0042	October 15, 2		

### Product Detail: Hammer

Name:

Code:

Description:

Availability:

Price:

5 Star Rating:

Category:

Tags:

Hammer

TBX-0048

Curved claw steel hammer


May 21, 2016

\$8.90

★★★★★

Toolbox

tools,hammer,construction



Back

Edit



# Use an Observable

Acme Product Management   Home   Product List   Add Product   Log In

## Edit Product: Hammer

Product Name	<input type="text" value="Hammer"/>
Product Code	<input type="text" value="TBX-0048"/>
Description	<input type="text" value="Curved claw steel hammer"/>

SaveCancelDelete



# Building a Route Resolver Service

## product-resolver.service.ts

```
import { Injectable } from '@angular/core';
import { Resolve, ActivatedRouteSnapshot, RouterStateSnapshot } from
 '@angular/router';
import { Observable } from 'rxjs/Observable';

import { IProduct } from '../product';

@Injectable()
export class ProductResolver implements Resolve<IProduct> {

  resolve(route: ActivatedRouteSnapshot,
        state: RouterStateSnapshot): Observable<IProduct> {

    ...

  }
}
```



# Adding a Resolver to a Route Configuration

## Angular Module

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



# Adding a Resolver to a Route Configuration

## Angular Module

```
[  
  { path: 'products', component: ProductListComponent },  
  { path: 'products/:id', component: ProductDetailComponent,  
    resolve: { product: ProductResolver }},  
  { path: 'products/:id/edit', component: ProductEditComponent,  
    resolve: { product: ProductResolver,  
              categories: CategoryResolver }}  
]
```



# Reading Resolver Data: Snapshot

## Component Class

```
import { ActivatedRoute } from '@angular/router';  
...  
product: IProduct;  
  
constructor(private route: ActivatedRoute) {  
    this.product = this.route.snapshot.data['product'];  
}
```

## Angular Module

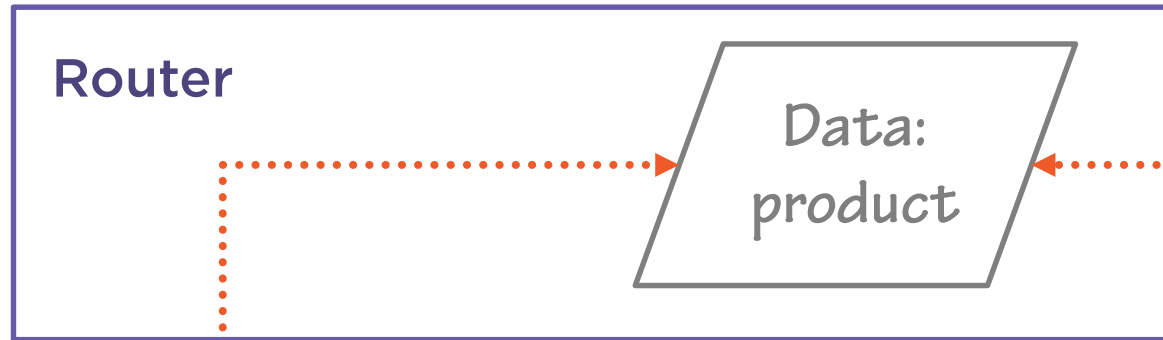
```
{ path: 'products/:id', component: ProductDetailComponent,  
  resolve: { product: ProductResolver } }
```

## Resolver Service

```
export class ProductResolver implements Resolve<IProduct> { }
```



# Sharing the Data Instance



## Component Class 1

```
this.product = this.route.snapshot.data['product'];
```

## Component Class 2

```
this.product = this.route.snapshot.data['product'];
```



# Reading Resolver Data: Observables

## Component Class

```
import { ActivatedRoute } from '@angular/router';  
...  
product: IProduct;  
constructor(private route: ActivatedRoute) {  
    this.route.data.subscribe(  
        data => this.product = data['product'];  
    );  
}
```

## Angular Module

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

## Resolver Service

```
export class ProductResolver implements Resolve<IProduct> { }
```



# Route Resolvers Checklist: Building



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Create an Angular service

Implement the `Resolve<>` interface

Add a resolve method

Be sure to register the service

```
export class ProductResolver implements Resolve<IProduct> { }
```

```
resolve(route: ActivatedRouteSnapshot,  
        state: RouterStateSnapshot): Observable<IProduct> { }
```



# Route Resolvers Checklist: Configuring



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Configure using resolve

Give each type of data a logical name

Specify a reference to the route resolver

```
{  
  path: 'products/:id',  
  component: ProductDetailComponent,  
  resolve: { product: ProductResolver }  
}
```



# Route Resolvers Checklist: Reading



## Read the data from the route

- Snapshot

```
this.product = this.route.snapshot.data['product'];
```

- Data Observable

```
this.route.data.subscribe(  
  data => this.product = data['product'];  
);
```



# Summary



Providing Data with a Route

Using a Route Resolver

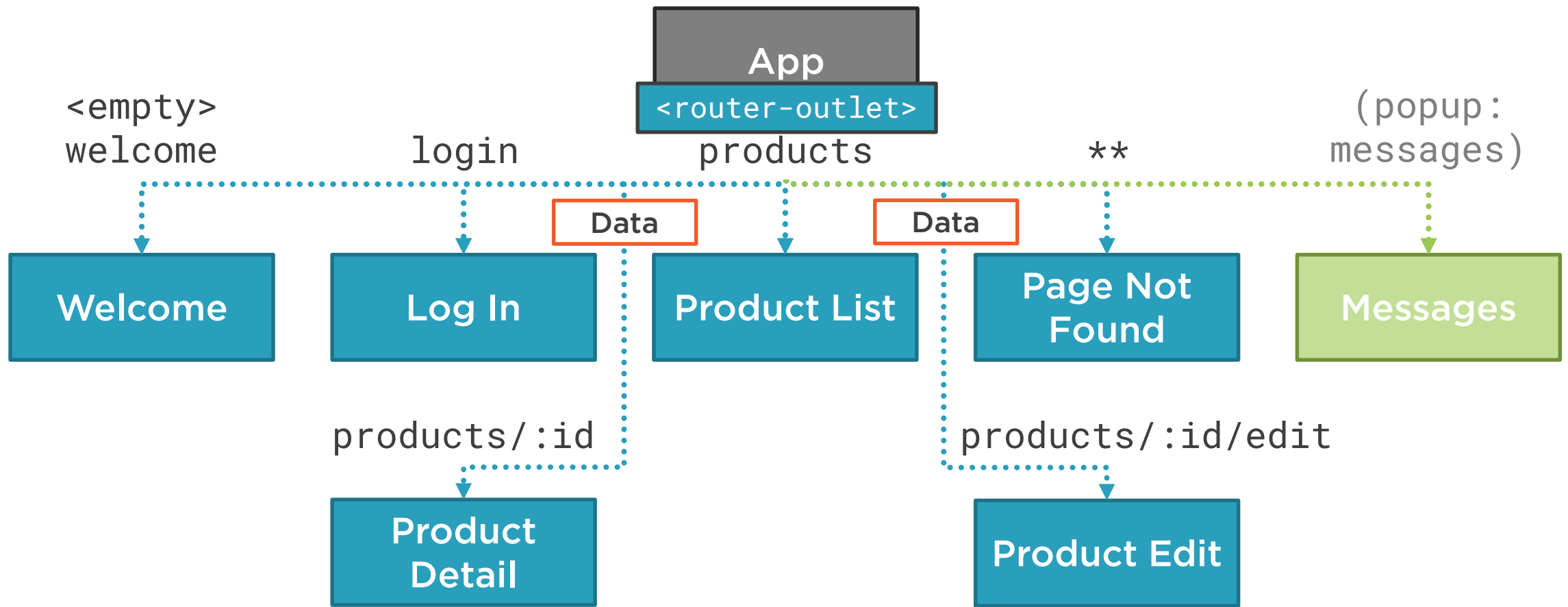
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