Product Master-Detail View

Master-Detail View

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Master-Detail View

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Master-Detail View

Master View

User clicks the product to see details

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Master-Detail View

Master View

User clicks the product to see details

Detail View

Application shows the details for selected product

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Development Process

Step-By-Step

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Development Process

Step-By-Step

1. Create new component for product details

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Development Process

Step-By-Step

1. Create new component for product details
2. Add new Angular route for product details

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Development Process

Step-By-Step

1. Create new component for product details
2. Add new Angular route for product details
3. Add router links to the product-list-grid HTML page

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Development Process

Step-By-Step

1. Create new component for product details
2. Add new Angular route for product details
3. Add router links to the product-list-grid HTML page
4. Enhance ProductDetailsComponent to retrieve product from ProductService

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Development Process

Step-By-Step

1. Create new component for product details
2. Add new Angular route for product details
3. Add router links to the product-list-grid HTML page
4. Enhance ProductDetailsComponent to retrieve product from ProductService
5. Update ProductService to call URL on Spring Boot app

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Development Process

Step-By-Step

1. Create new component for product details
2. Add new Angular route for product details
3. Add router links to the product-list-grid HTML page
4. Enhance ProductDetailsComponent to retrieve product from ProductService
5. Update ProductService to call URL on Spring Boot app
6. Update HTML page for ProductDetailsComponent to display product details

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Step 1: Create new component for product details

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Step 1: Create new component for product details

```
> ng generate component components/ProductDetails
```


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Step 2: Add new Angular route for product details

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Step 2: Add new Angular route for product details

File: app.module.ts

```
...
  {path: 'products/:id', component: ProductDetailsComponent},
...
```


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Step 2: Add new Angular route for product details

File: app.module.ts

```
...
  {path: 'products/:id', component: ProductDetailsComponent},
...
```

Parameter

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Step 3: Add router links to product-list-grid HTML

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Step 3: Add router links to product-list-grid HTML

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Step 3: Add router links to product-list-grid HTML

Master View

User clicks the product to see details

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Step 3: Add router links to product-list-grid HTML

Master View

User clicks the product to see details

Add a link on the product image

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Step 3: Add router links to product-list-grid HTML

Master View

User clicks the product to see details

Add a link on the product image

Add a link on the product name

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Step 3: Add router links to product-list-grid HTML

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Step 3: Add router links to product-list-grid HTML

File: product-list-grid.component.html

```
<!-- loop over the collection of products -->
<div *ngFor="let tempProduct of products" class="col-md-3">

   <div class="product-box">

     <a routerLink="/products/{{ tempProduct.id }}">
        <img src="{{ tempProduct.imageUrl }}" class="img-responsive">
     </a>

     <a routerLink="/products/{{ tempProduct.id }}">
        <h1>{{ tempProduct.name }}</h1>
     </a>
      ...
   </div>

</div>
```


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Step 3: Add router links to product-list-grid HTML

File: product-list-grid.component.html

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      </a>

      <a routerLink="/products/{{ tempProduct.id }}">
         <h1>{{ tempProduct.name }}</h1>
      </a>
      ...
   </div>

</div>
```

Add a link on the product image

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Step 3: Add router links to product-list-grid HTML

File: product-list-grid.component.html

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     </a>

     <a routerLink="/products/{{ tempProduct.id }}">
        <h1>{{ tempProduct.name }}</h1>
     </a>
      ...
   </div>

</div>
```

Add a link on the product name

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Step 3: Add router links to product-list-grid HTML

File: product-list-grid.component.html

```
<!-- loop over the collection of products -->
<div *ngFor="let tempProduct of products" class="col-md-3">

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     </a>

     <a routerLink="/products/{{ tempProduct.id }}">
        <h1>{{ tempProduct.name }}</h1>
     </a>
      ...
   </div>

</div>
```


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Step 3: Add router links to product-list-grid HTML

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     </a>
      ...
  </div>

</div>
```

Parameter

File: app.module.ts

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        <h1>{{ tempProduct.name }}</h1>
     </a>
      ...
   </div>

</div>
```

Parameter

File: app.module.ts

```
...
  {path: 'products/:id', component: ProductDetailsComponent},
...
```


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Step 4: Enhance ProductDetailsComponent to retrieve product from ProductService

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Step 4: Enhance ProductDetailsComponent to retrieve product from ProductService

File: product-details.component.ts

```
...
    // get the "id" param string. convert string to a number using the "+" symbol
    const theProductId: number = +this.route.snapshot.paramMap.get('id');

    this.productService.getProduct(theProductId).subscribe(
      data => {
        this.product = data;
      }
    )
...
```


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Step 4: Enhance ProductDetailsComponent to retrieve product from ProductService

File: product-details.component.ts

```
...
    // get the "id" param string. convert string to a number using the "+" symbol
    const theProductId: number = +this.route.snapshot.paramMap.get('id');

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```

Parameter

File: app.module.ts

```
...
  {path: 'products/:id', component: ProductDetailsComponent},
...
```


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Step 4: Enhance ProductDetailsComponent to retrieve product from ProductService

File: product-details.component.ts

```
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    // get the "id" param string. convert string to a number using the "+" symbol
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    this.productService.getProduct(theProductId).subscribe(
      data => {
        this.product = data;
      }
    )
...
```

Retrieve product from ProductService

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Step 5: Update product service to call URL on Spring Boot app

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Step 5: Update product service to call URL on Spring Boot app

File: product.service.ts

```
getProduct(theProductId: number): Observable<Product> {

  // need to build URL based on product id
  const productUrl = `${this.baseUrl}/${theProductId}`;

  return this.httpClient.get<Product>(productUrl);
}
```


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Step 5: Update product service to call URL on Spring Boot app

File: product.service.ts

```
getProduct(theProductId: number): Observable<Product> {

  // need to build URL based on product id
  const productUrl = `${this.baseUrl}/${theProductId}`;

  return this.httpClient.get<Product>(productUrl);
}
```

URL for retrieving a product

http://localhost:8080/api/products/${theProductId}

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Step 5: Update product service to call URL on Spring Boot app

File: product.service.ts

```
getProduct(theProductId: number): Observable<Product> {

  // need to build URL based on product id
  const productUrl = `${this.baseUrl}/${theProductId}`;

  return this.httpClient.get<Product>(productUrl);
}
```

URL for retrieving a product

http://localhost:8080/api/products/${theProductId}

Call REST API

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Step 5: Update product service to call URL on Spring Boot app

File: product.service.ts

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getProduct(theProductId: number): Observable<Product> {

  // need to build URL based on product id
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  return this.httpClient.get<Product>(productUrl);
}
```

URL for retrieving a product

http://localhost:8080/api/products/${theProductId}

Call REST API

Returns an observable

JSON Data return can be converted directly to Product object

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Step 5: Update product service to call URL on Spring Boot app

File: product.service.ts

```
getProduct(theProductId: number): Observable<Product> {

  // need to build URL based on product id
  const productUrl = `${this.baseUrl}/${theProductId}`;

  return this.httpClient.get<Product>(productUrl);
}
```

URL for retrieving a product

http://localhost:8080/api/products/${theProductId}

Call REST API

Returns an observable

JSON Data return can be converted directly to Product object

NO NEED to unwrap the JSON from Spring Data REST

There is no _embedded entry

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Mapping JSON to Product class

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Mapping JSON to Product class

URL for retrieving product id: 2

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Mapping JSON to Product class

URL for retrieving product id: 2

http://localhost:8080/api/products/2

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Mapping JSON to Product class

URL for retrieving product id: 2

http://localhost:8080/api/products/2


```
{
  "id" : 2,
  "sku" : "BOOK-TECH-1001",
  "name" : "Become a Guru in JavaScript",
  "description" : "Learn JavaScript at your own pace. The author explains how the
technology works in easy-to-understand language. This book includes working examples
that you can apply to your own projects. Purchase the book and get started today!",
  "unitPrice" : 20.99,
  "imageUrl" : "assets/images/products/books/book-luv2code-1001.png",
  "active" : true,
  "unitsInStock" : 100,
  "dateCreated" : "2020-01-11T16:58:24.000+0000",
  "lastUpdated" : null,
  "_links" : {
    "self" : {
      "href" : "http://localhost:8080/api/products/2"
    },
    "product" : {
      "href" : "http://localhost:8080/api/products/2"
    },
    "category" : {
      "href" : "http://localhost:8080/api/products/2/category"
    }
  }
}
```


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Mapping JSON to Product class

URL for retrieving product id: 2

Built-in feature of Spring Data REST
No additional coding / config required

http://localhost:8080/api/products/2


```
{
  "id" : 2,
  "sku" : "BOOK-TECH-1001",
  "name" : "Become a Guru in JavaScript",
  "description" : "Learn JavaScript at your own pace. The author explains how the
technology works in easy-to-understand language. This book includes working examples
that you can apply to your own projects. Purchase the book and get started today!",
  "unitPrice" : 20.99,
  "imageUrl" : "assets/images/products/books/book-luv2code-1001.png",
  "active" : true,
  "unitsInStock" : 100,
  "dateCreated" : "2020-01-11T16:58:24.000+0000",
  "lastUpdated" : null,
  "_links" : {
    "self" : {
      "href" : "http://localhost:8080/api/products/2"
    },
    "product" : {
      "href" : "http://localhost:8080/api/products/2"
    },
    "category" : {
      "href" : "http://localhost:8080/api/products/2/category"
    }
  }
}
```


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Mapping JSON to Product class

URL for retrieving product id: 2

http://localhost:8080/api/products/2


```
{
  "id" : 2,
  "sku" : "BOOK-TECH-1001",
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    },
    "category" : {
      "href" : "http://localhost:8080/api/products/2/category"
    }
  }
}
```


File: product.ts

```
export class Product {
    sku: string;
    name: string;
    description: string;
    unitPrice: number;
    imageUrl: string;
    active: boolean;
    unitsInStock: number;
    dateCreated: Date;
    lastUpdated: Date;
}
```


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Mapping JSON to Product class

URL for retrieving product id: 2

JSON Data can be converted directly to Product object

JSON properties map directly to properties in Product class

http://localhost:8080/api/products/2


```
{
  "id" : 2,
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    }
  }
}
```


File: product.ts

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export class Product {
    sku: string;
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    unitPrice: number;
    imageUrl: string;
    active: boolean;
    unitsInStock: number;
    dateCreated: Date;
    lastUpdated: Date;
}
```


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  }
}
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```


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Step 6: Update HTML page for ProductDetailsComponent to display product details

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Step 6: Update HTML page for ProductDetailsComponent to display product details

Image

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Step 6: Update HTML page for ProductDetailsComponent to display product details

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Step 6: Update HTML page for ProductDetailsComponent to display product details

File: product-details.component.html

```
<div class="detail-section">
    <div class="container-fluid">

        <img src="{{ product.imageUrl }}" class="detail-img">

        <h3>{{ product.name }}</h3>
        <div class="price">{{ product.unitPrice | currency:'USD' }}</div>
        <a href="#" class="primary-btn">Add to cart</a>

        <hr>
        <h4>Description</h4>
        <p>{{ product.description }}</p>

        <a routerLink="/products" class="mt-5">Back to Product List</a>

    </div>
</div>
```


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Step 6: Update HTML page for ProductDetailsComponent to display product details

File: product-details.component.html

```
<div class="detail-section">
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