

Designing the User Interface



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Previous Module



Bootstrap the Angular application

Angular CLI

Directory structure

Configuration files

Bootstrap component libraries

Run the application

Feedback loop



Overview



Understand Angular Components

HTML file

TypeScript file

Component binding

Angular CLI generate components



What Is a Component?



Visual aspect

- HTML and CSS
- Graphical properties

Behavior

- JavaScript or TypeScript

Simple or complex

Single widget or entire page

book-list works!

book-detail works!

book-form works!

Anatomy of a Component



Template



Class



Binding

```
<nav class="navbar">
  <a href="">{{title}}</a>
  <div class="collapse">
    <ul>
      <li class="nav-item">
        <a href="">List</a>
      </li>
      <li class="nav-item">
        <a href="">Create</a>
      </li>
    </ul>
  </div>
</nav>
```

app.component.html

```
import { Component } from
    '@angular/core';

@Component({
  selector: 'bs-root',
  templateUrl:
    './app.component.html'
})
export class AppComponent {
  title = 'BookStore';
}
```

app.component.ts



```
<!doctype html>
<html>
  <head>
    <meta charset="utf-8">
    <title>BookStore</title>
    <base href="/">
  </head>

  <body>
    <bs-root></bs-root>
  </body>
</html>
```

index.html

```
@Component({
  selector: 'bs-root',
  templateUrl:
    './app.component.html'
})
export class AppComponent {...}
```

app.component.ts

```
<nav class="navbar">
  <a href="">{{title}}</a>
  <div class="collapse">
    <ul>
      <li class="nav-item">
        <a href="">List</a>
        ...
    </li>
  </div>
</nav>
```

app.component.html



Binding

<!-- Interpolation {{}} -->

`<p>{{book.title}}</p>`

<!-- Property binding [] -->

`<p [textContent]="book.title"></p>`

<!-- Event binding () -->

`<button (click)="deleteBook()">Delete</button>`

<!-- Two way binding [()] -->

`<input type="number" [(ngModel)]="book.unitCost">`



The BookStore Components



Main component

- app.component [.html | .ts]

Lists all the books

- book-list.component [.html | .ts]

Displays the details of a book

- book-detail.component [.html | .ts]

Form to create a new book

- book-form.component [.html | .ts]

List all the books - 3



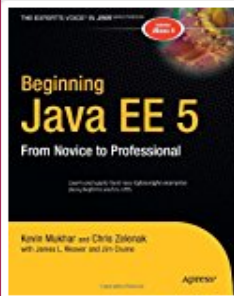
Beginning Java EE 7

Java enterprise edition (java ee) continues to be one of the leading java technologies and platforms. Beginning java ee 7 is the first tutorial book on java ee 7. Step by step and easy to follow, this book describes many of the java ee 7 specifications and reference implementations and shows them in action using practical examples. This definitive book also uses the newest version of glassfish to deploy and administer the code examples. Java ee 7 environment context and dependency injection bean validation java persistence api object-relational mapping managing persistent o...



Beginning Java EE 6 with GlassFish 3

Java Enterprise Edition (Java EE) continues to be one of the leading Java technologies and platforms from Oracle (previously Sun). Beginning Java EE 6 Platform with GlassFish 3, Second Edition is this first tutorial book on the final version of the Java EE 6 Platform. Step by step and easy to follow, this book describes many of the Java EE 6 specifications and reference implementations, and shows them in action using practical examples. This book uses the new version of GlassFish 3 to deploy and administer the code examples. Written by an expert member of the Java EE 6 spec...



Beginning Java EE 5: From Novice to Professional

Sun's new lightweight Java Enterprise Edition (EE) 5 is an extremely powerful platform for developing enterprise-level Java-based applications, primarily for the server. This book shows you how to harness that power, examining how the pieces of the new Java EE 5 platform fit together, including the redesigned annotations-driven EJB 3 spec as well as JavaServer Faces (JSF), integrated into the platform for the first time. Hands-on tutorials are also included, along with clear explanations and working code examples. You will grow to take the next step—from writing client-side...

book-list.component

```
<h2>List all the books {{nbBooks}}</h2>

<ul>
  <li *ngFor="let book of books">
    
    <h5>
      <a href="">{{book.title}}</a>
    </h5>
    {{book.description}}
  </li>
</ul>
```

book-list.component.html

```
@Component({
  selector: 'bs-book-list',
  templateUrl:
    './book-list.component.html'
})
export class BookListComponent {
  private nbBooks: number = 3;
  private books = [
    { id: "1",
      title: "title 1",
      url: "http://www.img.com/1234",
      description: "description 1"},
    { id: "2",
      title: "title 2",
      url: "http://www.img.com/2345",
      description: "description 2"}];
  // ...
}
```

book-list.component.ts



Detail of a book

Title	Beginning Java EE 7	
Description	Java enterprise edition (java ee) continues to be one of the leading java technologies and platforms. Beginning java ee 7 is the first tutorial book on java ee 7. Step by step and easy to follow, this book describes many of the java ee 7 specifications and reference implementations and shows them in action using practical examples. This definitive book also uses the newest version of glassfish to deploy and administer the code examples. Java ee 7 environment context and dependency injection bean validation java persistence api object-relational mapping managing persistent object enterprise java beans callbacks, timer service and authorization interceptors and transactions javaserver faces processing and navigation xml and json messaging soap web services restful web service table of contents: introduction to the ejb 3 architecture session beans entities and the java persistence api advanced persistence features message-driven beans ejb and web services integrating session beans, entities, message-driven beans and web services transaction management ejb performance and testing context and dependency injection (cdi) packaging and deployment ejb client applications ejb runtime environments	
Unit cost	9,99	\$
ISBN	8132214080	
Number of pages	29	
Language	ENGLISH	

Delete

Back

book-detail.component

```
<h2>Detail of a book</h2>

<label>Title</label>
<input type="text" readonly
       value="{{book.title}}">

<label>Description</label>
<textarea rows="3" readonly>
    {{book.description}}
</textarea>

<label>Unit cost</label>
<input type="number" readonly
       value="{{book.unitCost}}">
```

book-detail.component.html

```
@Component({
  selector: 'bs-book-detail',
  templateUrl:
    './book-detail.component.html'
})
export class BookDetailComponent {

  private book = {
    title: "dummy title",
    description: "dummy description",
    unitCost: "123",
    isbn: "1234-3456-34564",
    nbOfPages: "234",
    language: "English"
  };
}
```

book-detail.component.ts



Create a new book

Title

Beginning Java EE 7

Description

Java enterprise edition (Java EE) continues to be one of the leading java technologies and platforms. Beginning Java EE 7 is the first tutorial book on Java EE 7. Step by step and easy to follow, this book describes many of the Java EE 7 specifications and reference implementations and shows them in action using practical examples. This definitive book also uses the newest version of Glassfish to deploy and administer the code examples. Java EE 7 environment context and dependency injection bean validation java persistence api object-relational mapping managing persistent object enterprise java beans callbacks, timer service and authorization interceptors and transactions JavaServer Faces processing and navigation xml and JSON messaging soap web services restful web service table of contents: introduction to the EJB 3 architecture session beans entities and the java persistence api advanced persistence features message-driven beans EJB and web services integrating session beans, entities, message-driven beans and web services transaction management EJB performance and testing context and dependency injection (cdi) packaging and deployment EJB client applications EJB runtime environments

Unit cost

9.99

\$

Number of pages

345

Image URL

Language

ENGLISH

Create

Cancel

book-form.component


```
<h2>Create a new book</h2>
<form>

  <label>Title</label>
  <input type="text"
        [(ngModel)]="book.title">

  <label>Description</label>
  <textarea rows="3"
        [(ngModel)]="book.description">
  </textarea>

  <label>Unit cost</label>
  <input type="number"
        [(ngModel)]="book.unitCost">
```

book-form.component.html

```
@Component({
  selector: 'bs-book-form',
  templateUrl:
    './book-form.component.html'
})
export class BookFormComponent {

  private book = {
    title: "dummy title",
    description: "dummy description",
    unitCost: "123",
    nbOfPages: "234",
    imageURL: "http://img.com/1234",
    language: "0"
  };
}
```

book-form.component.ts



Demo



Build the BookStore Components

Angular CLI

TypeScript and HTML code

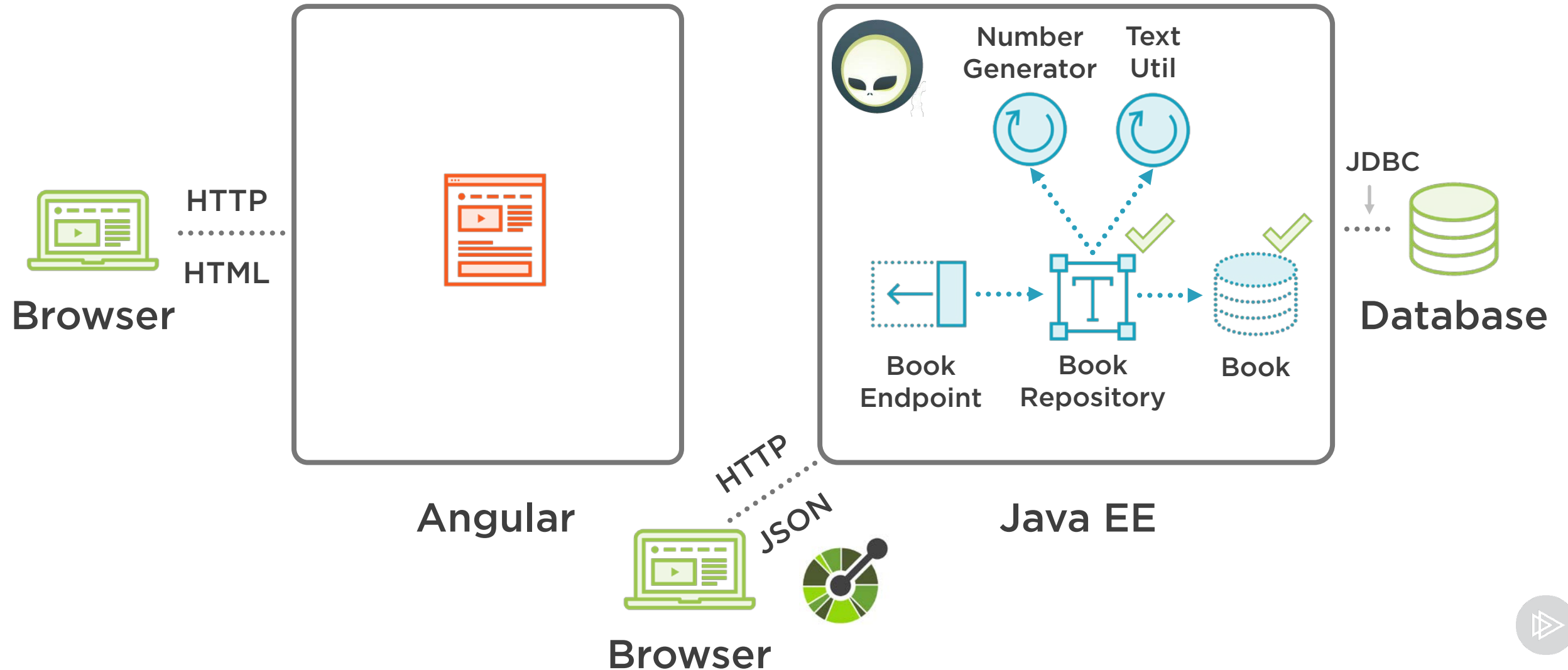
Twitter Bootstrap

Feedback loop

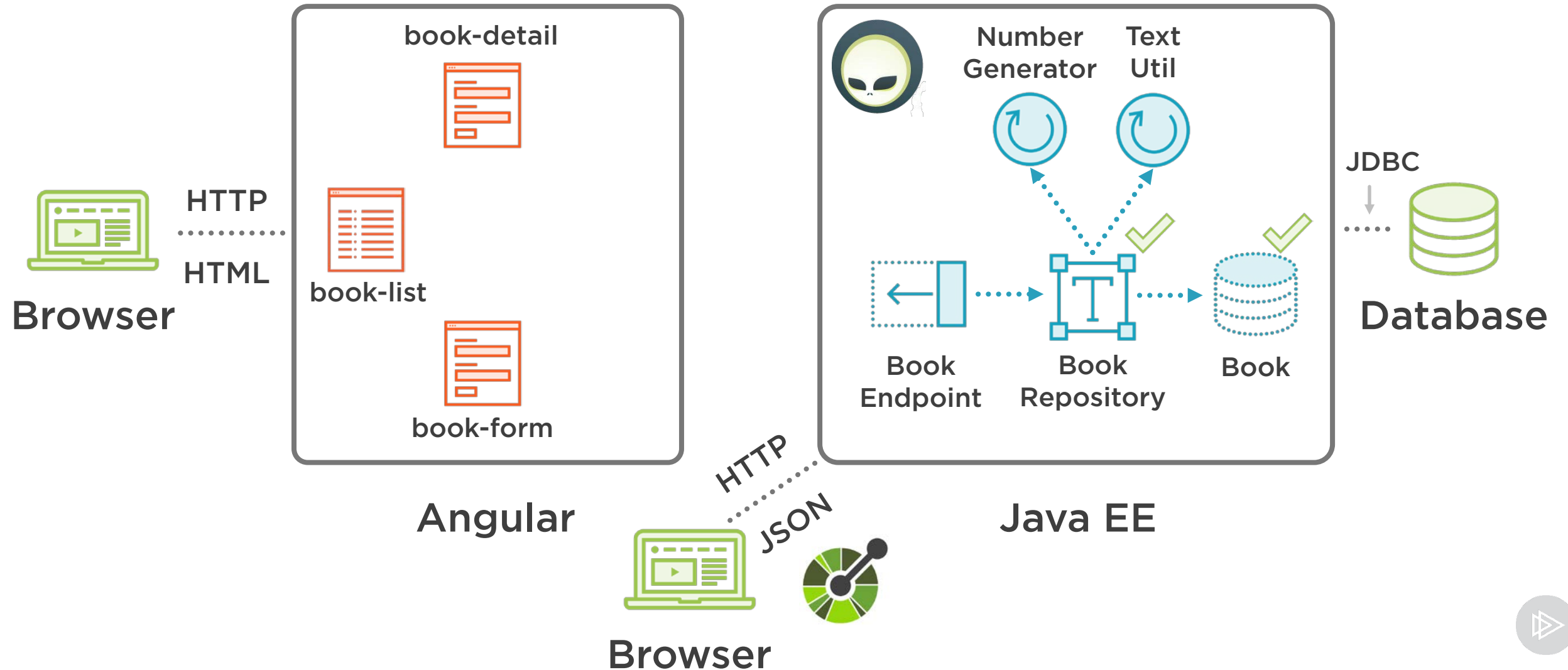
Chrome development tools



Anatomy of the BookStore Application



Anatomy of the BookStore Application



Summary



Understand component

Template (HTML and CSS)

TypeScript class

Binding

- Property
- Event
- Two way

Three BookStore components



Next Module



Navigation

Router

Template

TypeScript class

Passing parameters

