Spring Boot 3 Fundamentals – Jesper de Jong

Spring Boot

-Allows you to create apps consisting of components called Spring Beans

A screenshot of a computer

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-Writing a Sprint app from scratch can be a hassle, Spring Boot helps

Snapshot versions are prerelease versions and can change by the day



-Creates jar files inside target/

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-This is the same way as running your app with the play button

A diagram of a boot deployment

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-Tomcat is part of the app (Spring Web dependency)

-With JaveEE, you package your web app in WAR file

Parent Pom

-It defines versions for a long list of libraries that are used so we don’t have to worry about version numbers



-To run?

Autoconfiguration?

Building REST Web Services

A screenshot of a computer framework

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-Sticking to MVC

Records

-concise way to create immutable class

Repository

-Term comes from domain driven design, and means the same as Data Access Object (DAO)

-Is a class that manages data by providing methods for CRUD items?

RequestParam Vs PathVariable

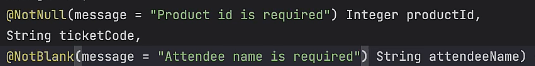
-When looking at a resource by its primary key, then it make to use a path variable

-When doing a query based on one or more parameters, use query parameters



@RequestBody

-Make Spring Web MVC parse the body of the HTTP request as JSON and convert it to that object



Bean Validation Courses

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Accessing Database with Spring Data

Spring Data project is one of the main projects beside Sprint Framework and Spring Boot

-A collection of projects

-Goal is to make it easy to write data access code

- A screenshot of a computer program

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-Spring Data reduces boilerplate code

A screen shot of a computer code

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-With docker-compose.yml file, will pull the MongoDB Docker image from Docker Hub. Then create a container from the image and start it. All we have to do to get MongoDB running!, No installing

docker ps

docker compose down

MongoDB

-Add it to the pom, use the spring initializer to know the name (EXPLORE)

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@Document

-Specific to MongoDB

-Mongo stores records in collections (similar to a table in a traditional relational DB)

@Id

-Generic

-When we store an instance of this record in Mongo, it will generate a unique id

-Has to be String

-<Object Type, Id type>

-Rewatch this? Spring Data knows what to do>

Extends MongoRepository

-Cant get rid of @Repository because it already knows

Commands

docker ps //get the name

docker exec -it <name> mongosh

>show collections

>db.<collections-name>.find()

>exit()

-If we stop and delete the container then the data is gone as well

-Can use a darker volume to store data? Outside of scope

PostgreSQL

-JPA will not allow Records to define JPA entities because they must be mutable and a no args constructor

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-Means we don’t want hibernate to create tables when we start the app

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-Look for schema.sql and data.sql which will execute to create a DB schema and insert example data when app starts

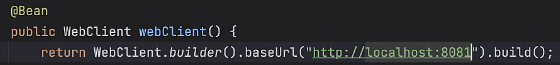
Calling Rest Web Services

Web Client vs HTTP Interface client

WebClient is part of Spring Webflux (Reactive web app framework) so need to dependency spring boot starter webflux

@Configuration

-Spring will call these methods when app starts to create beans



-Could hard code it but better to get this value from app config file

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-Inside app.yml

Mono

-Reactive programming object (same thing as a promise/future)

A screen shot of a computer program

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-Webclient is fine but on create method, we had to specify many details

HTTP Client Method

-Define an interface with methods that correspond to end points and Spring will auto implement



