

Intro to Spring Part 3

Java Accelerator 7

Lesson 2.3



Learning Objectives

01

Build a REST web service with Spring Boot.

02

Design a simple REST API.

03

Exercise a REST API using Postman.

04

Use Spring testing libraries to practice TDD.

Error Handlers

Error Handlers

Although the Spring Framework does return error information to the client, the default behavior gives us little control over how these errors are reported.

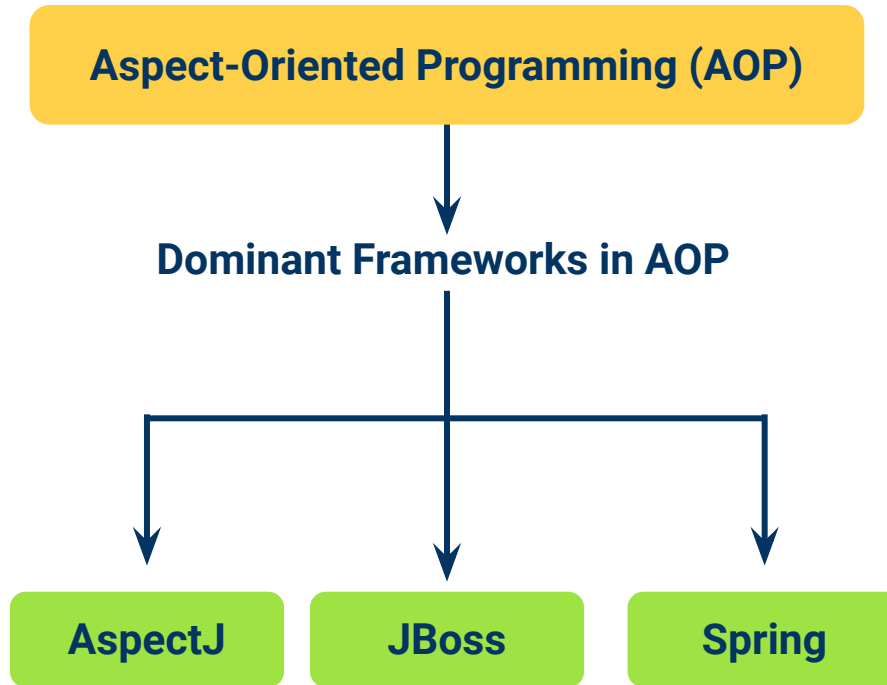


Error 404 – Page Not Found

The page you requested could not be found.

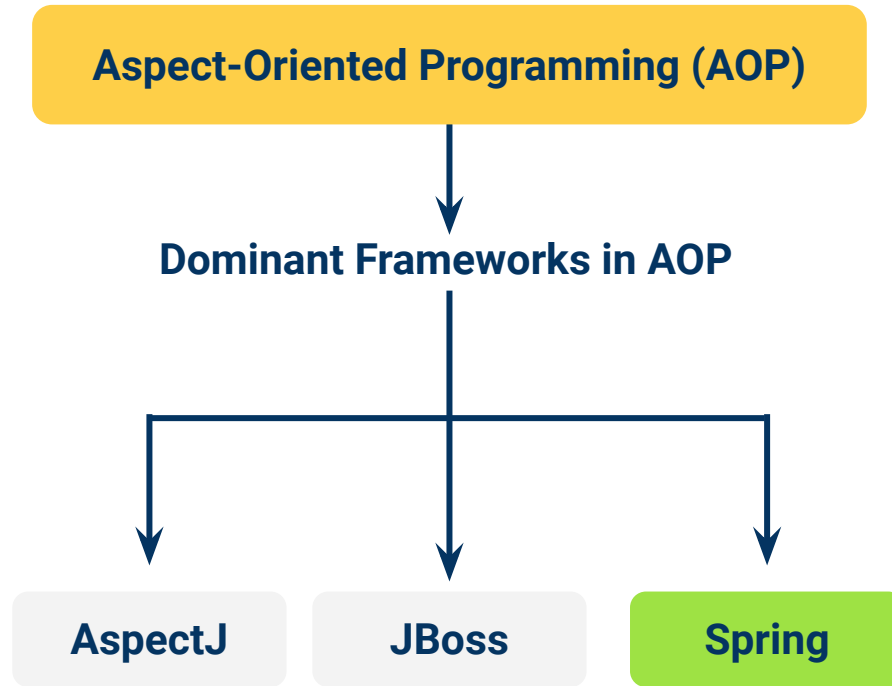
Error Handlers

The mechanism that the Spring Framework uses to have this class handle errors for all controllers is called **Aspect-Oriented Programming (AOP)**.



Error Handlers

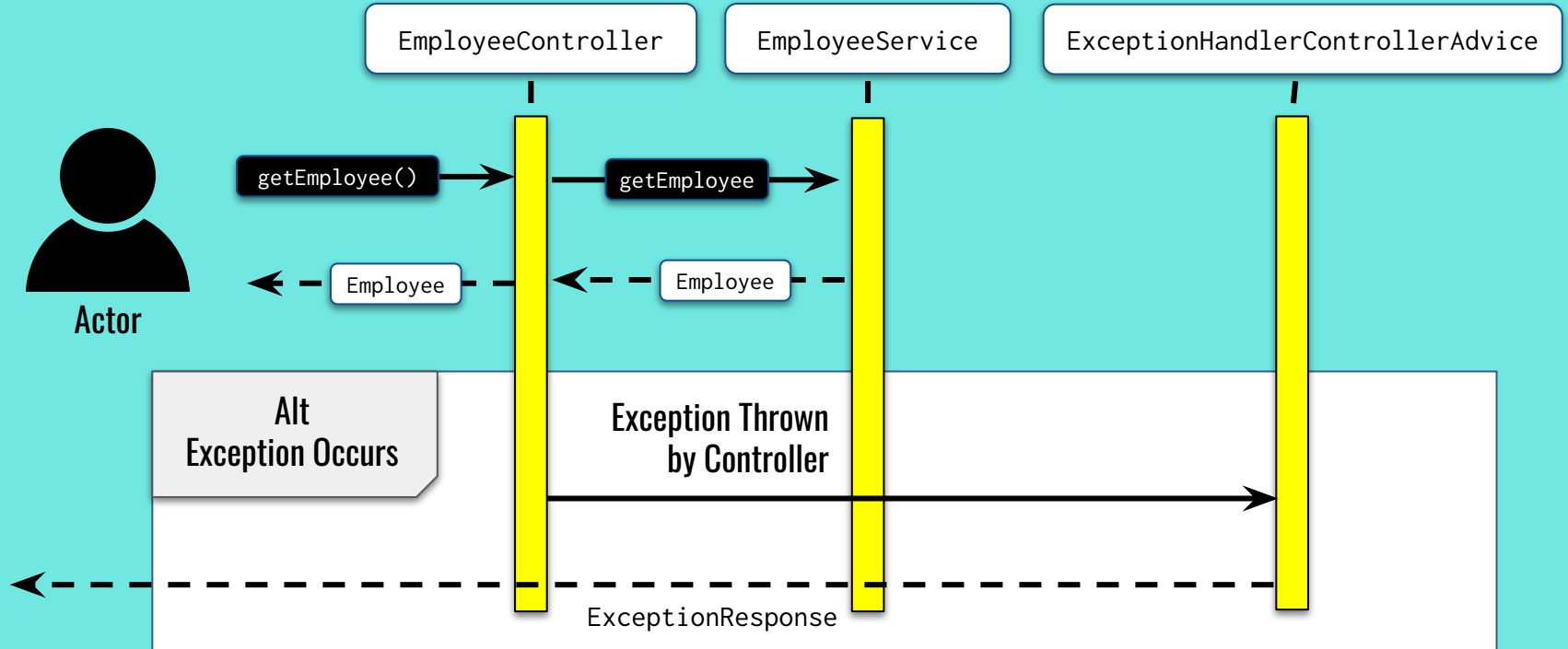
The Spring Framework uses AOP in many places.



Allows you to write functionality in one class and then apply that functionality in many places in your applications.

Error Handlers

We can use the `@ExceptionHandler` method-level annotation to specify which methods in the error-handler class handle which exceptions. We can customize the error message sent in response when the exception is thrown.





Time to Code

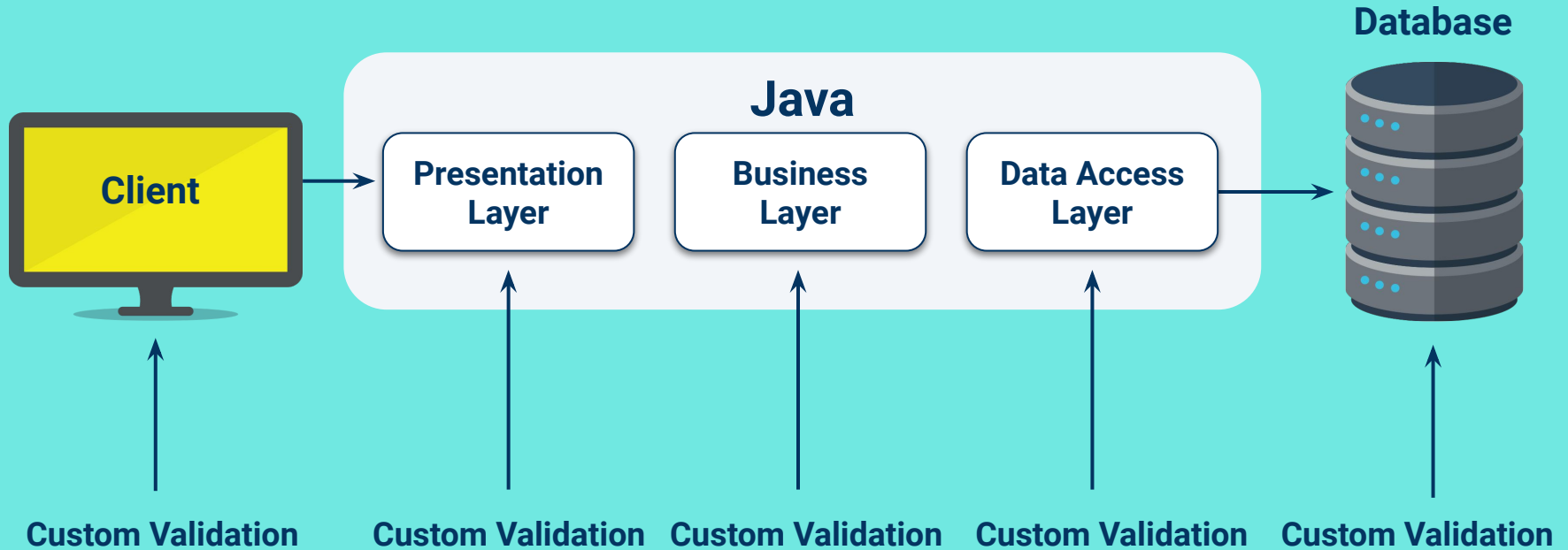
Echo Range Service

Suggested Time:

Input Validation with JSR 303

Input Validation with JSR 303

Java Specification Request (JSR) 303 defines a set of annotations and behaviors that define validation rules for properties in a Java object.



Input Validation with JSR 303

Make sure incoming data conforms to our business rules.

For example,
we can make some
fields required, specify a
minimum and maximum
length for fields, check
that a field is a properly
formatted email
address, and so on.

Password Verification

Username:

Password:

Password must contain the following:

- ✓ At least one letter
- X At least one capital letter
- ✓ At least one number
- X Be at least 8 characters



Time to Code

Record Service Validation and Error Handling

Suggested Time:

Query Parameters

Query Parameters

Query parameters are parameters included in a **query string** appended to the request URL.

http://www.site.com/page.html?parameter1=value1¶meter2=value2

Query string begin

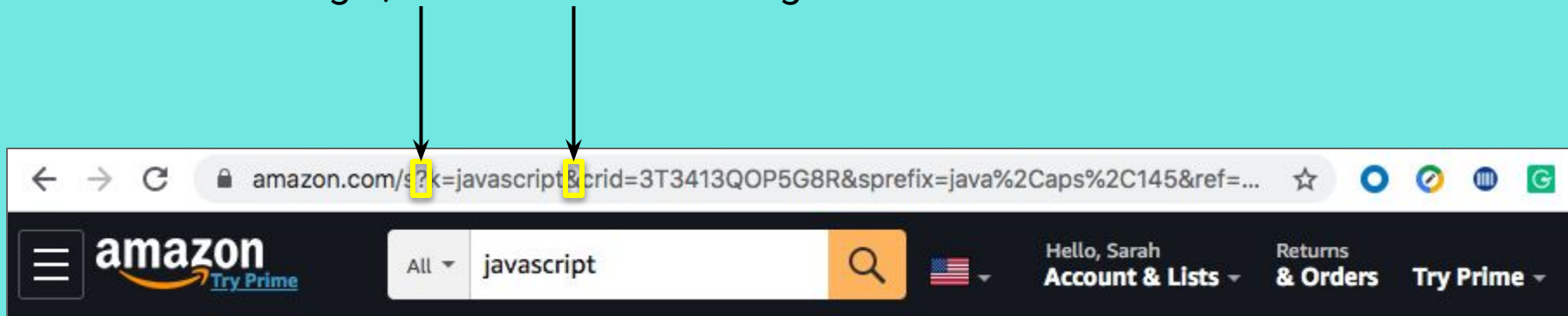


Query string separator

Query Parameters

Query parameters are commonly used to refine the request in some way.

You might have seen these parameters in websites you often visit, like Amazon or Google, without even realizing it.



Query Parameters



Query strings are appended to the end of the URI, and begin with a **?**



They are key-value pairs in the form of **?key1=value1**



We can chain query parameters using the **&** symbol—for example, **?key1=value1&key2=value2**



Time to Code



Query Parameters

Suggested Time:



Activity: Filter by Year Code

Suggested Time:



Time to Code



City Web Service

Suggested Time:



Activity: Month Converter

Suggested Time:



Time's Up! Let's Review.