

# BUILDING REST APIs WITH SPRING BOOT

# WHAT IS SPRING?

- Originally a very simple dependency injection framework for Java
- Now consists of many projects and components for building applications
- Data Access - transaction support, JDBC, ORM
- Spring MVC and the newer WebFlux
- Integration with external concerns e.g. messaging and caching
- Multiple language support for the JVM

# BUILDING SERVICES USING JAVA

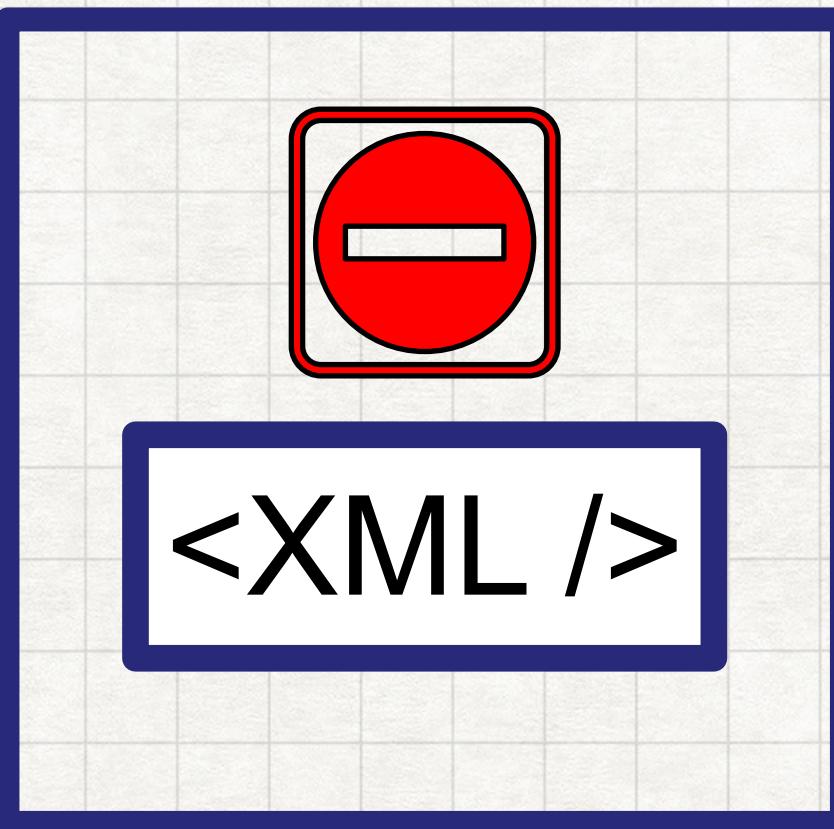
## IN THE OLD(ISH) DAYS

<XML />

<XML />

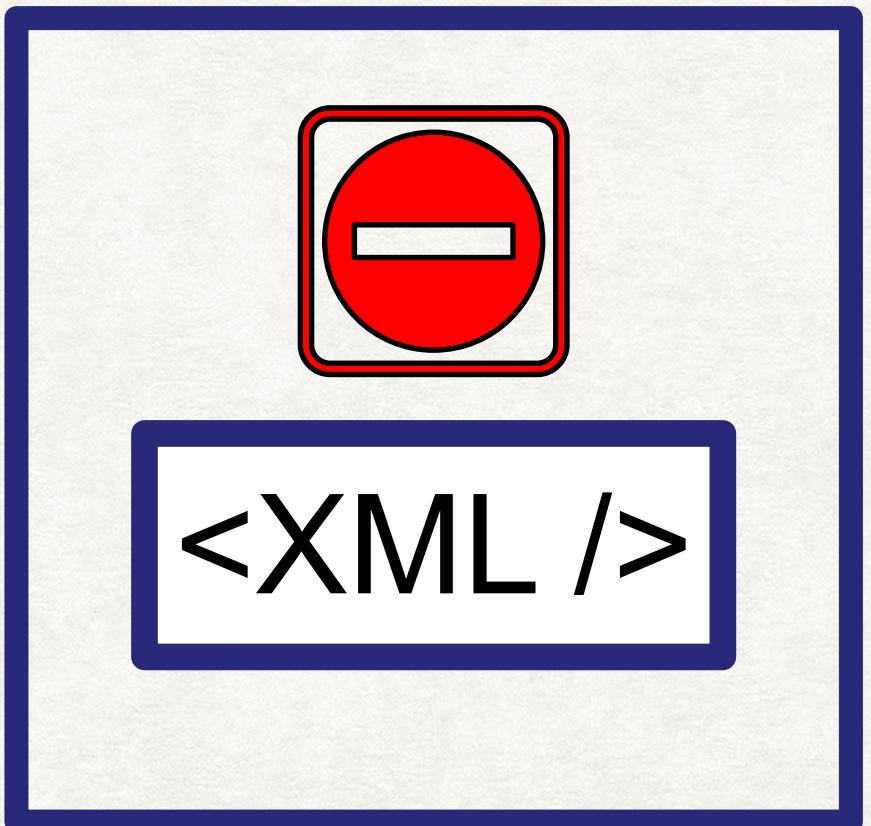
<XML />

# WHAT IS SPRING BOOT?



# AUTO CONFIGURATION

- Including a library dependency will usually also include auto configuration
  - This is facilitated by Spring Boot Starters
- Driven by the **@EnableAutoConfiguration** annotation
- The configuration of a **@Bean** can be overridden



# STANDALONE

- Previously with Java applications we had to
  - Package the application up into a WAR file or similar
  - Download the package onto a webserver
  - Configure that webserver to run the application
  - Deploy and start the webserver
- Spring boot is simply package and run

Stand Alone

# OPINIONATED

- Closely tied to Autoconfiguration
- Spring will make opinions about how to configure your application
- Using Spring's opinion means you can be up and running in minutes



# HTTP://START.SPRING.IO

 Spring Initializr  
Bootstrap your application

Github | Twitter

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**Project** Maven Project Gradle Project

**Language** Java Kotlin Groovy

**Spring Boot** 2.2.0 M1 2.2.0 (SNAPSHOT) 2.1.4 (SNAPSHOT) 2.1.3 1.5.19

**Project Metadata**  
Group com.jpgough  
Artifact apiworkshop

More options

**Dependencies** See all

Search dependencies to add  
Web, Security, JPA, Actuator, Devtools...

**Selected dependencies**

**Cloud Contract Verifier** [Cloud Contract]  
Test dependencies required for autogenerated tests

**Web** [Web]  
Servlet web application with Spring MVC and Tomcat

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Generate Project - ⌘ + ↵

# WHAT IS REST?

DRAFT

METHOD: POST    SCHEME: http://HOST[:PORT][PATH[?QUERY]]    http://localhost:8080/todo/item/1    length: 33 bytes

QUERY PARAMETERS

HEADERS: Content-Type: application/json

Form

+ Add header    Add authorization

BODY:

```
1 {  
2   "description": "Test"  
3 }
```

Text | JSON | XML | HTML    Enable body evaluation

length: 26 bytes

**Response**

Cache Detected - Elapsed Time: 22ms

200

HEADERS: Content-Type: application/json; charset=UTF-8  
Transfer-Encoding: chunked  
Date: Mon, 25 Mar 2019 16:14:07 GMT -1d 3h

pretty

COMPLETE REQUEST HEADERS

BODY:

```
{  
  id: 1,  
  description: "Test"  
}
```

pretty

lines nums

length: 29 bytes