

# Creating Your First Spring Boot Application

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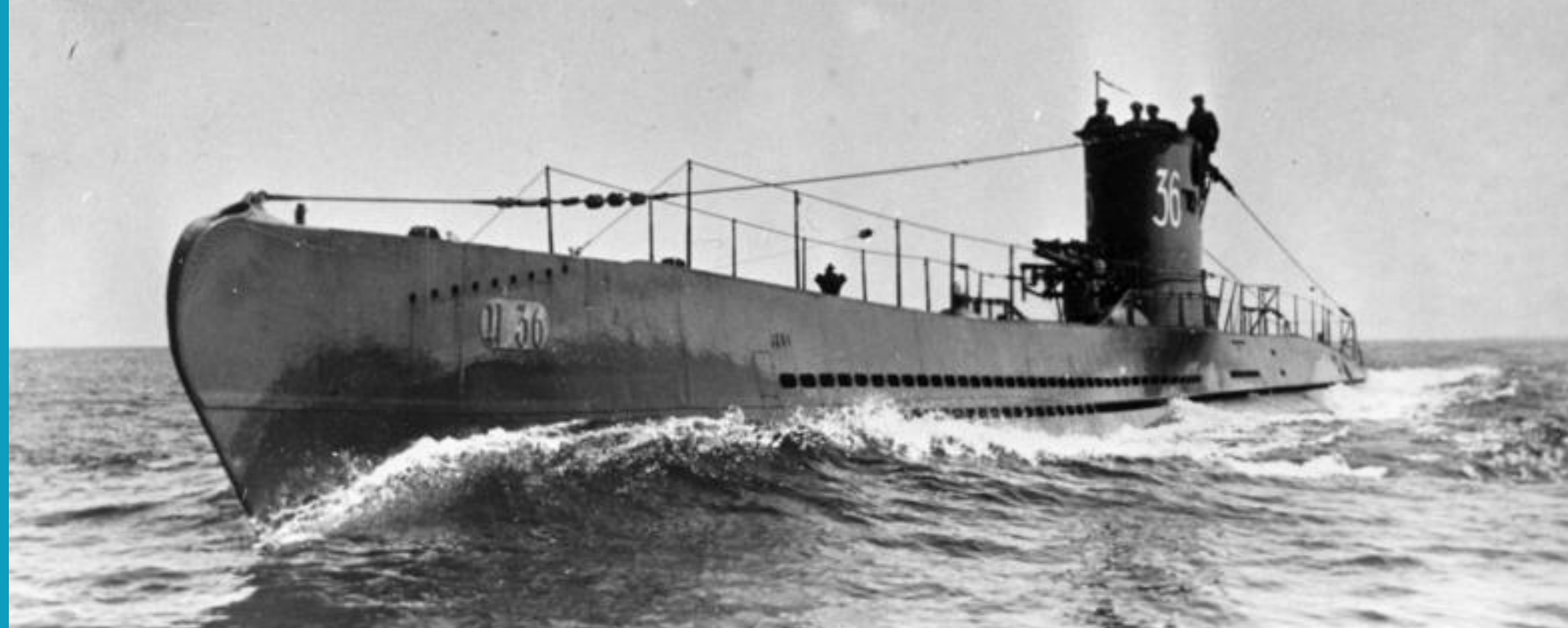
## CREATING THE SPRING BOOT PROJECT



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# Demo



**App: “Das Boot” built with Spring Boot**

## **Prerequisites**

- Java 1.8+ (<http://www.oracle.com>)
- Maven (<https://maven.apache.org>)
- IDE (Spring STS, IntelliJ, etc.)  
(<https://spring.io/tools>)

# Learning Path for Spring Boot



**Use this course!**



**Be curious!**



**Spring Reference**  
**<http://spring.io>**



**Google and**  
**Stack Overflow**

# Learning Path for Spring Boot



**Java Fundamentals 1 & 2 - *Sonmez***

**Maven Fundamentals - *Hansen***

**Spring Fundamentals - *Hansen***

**Introduction to Spring MVC 4 - *Hansen***

**Spring Security Fundamentals - *Hansen***

**Spring with JPA and Hibernate - *Hansen***

**Getting Started with Spring Data JPA - *Bunker***

**Getting Started with Spring Data REST - *Bunker***

```
<parent>
  <groupId>org.springframework.boot</groupId>
  <artifactId>spring-boot-starter-parent</artifactId>
  <version>1.3.0.RELEASE</version>
</parent>
```

# Spring Boot Dependency Management

**BOM - bill of materials**

**Example - spring-core 4.2.3 works well with logback-core 1.1.3**

# Other Spring Boot Initializers

**Web initializer**

<http://start.spring.io>

**Command line**

Spring boot CLI

# Examples

<https://github.com/spring-projects/spring-boot/tree/master/spring-boot-samples>

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The screenshot shows the GitHub interface for the `spring-projects / spring-boot` repository. The repository has 631 watchers, 3,895 stars, and 3,932 forks. The `Code` tab is selected, showing the `spring-boot / spring-boot-samples` directory. The current branch is `master`. A commit by `snicoll` is highlighted, titled "Fixup version numbers following release", with the latest commit hash `ecf56f0` made 11 days ago. Below the commit, a list of files in the `spring-boot-samples` directory is shown, including `spring-boot-sample-activemq`, `spring-boot-sample-actuator`, and `spring-boot-sample-amqp`, all updated 11 days ago.

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spring-projects / spring-boot Watch 631 Star 3,895 Fork 3,932

<> Code Issues 470 Pull requests 65 Wiki Pulse Graphs

Branch: master spring-boot / spring-boot-samples / New file Find file History

**snicoll** Fixup version numbers following release Latest commit ecf56f0 11 days ago

..

spring-boot-sample-activemq	Next Development Version	11 days ago
spring-boot-sample-actuator	Next Development Version	11 days ago
spring-boot-sample-actuator	Next Development Version	11 days ago
spring-boot-sample-actuator	Next Development Version	11 days ago
spring-boot-sample-actuator	Next Development Version	11 days ago
spring-boot-sample-actuator	Fixup version numbers following release	11 days ago
spring-boot-sample-amqp	Next Development Version	11 days ago



# How Does Spring Boot Work?



## Java

Main method entry  
point



## Spring Application

Spring context  
Spring environment  
Initializers



## Embedded Server

Default is Tomcat  
Auto configured

```
public static void main( ... )
```

```
@SpringBootApplication
```

```
@Configuration
```

```
@EnableAutoConfiguration
```

```
@ComponentScan
```

```
SpringApplication.run( ... );
```

◀ **Starts Java and then the application**

◀ **A convenience annotation that wraps commonly used annotations with Spring Boot**

◀ **Spring configuration on startup**

◀ **Auto configures frameworks**

◀ **Scans project for Spring components**

◀ **Starts Spring, creates spring context, applies annotations and sets up container**

# Why Move to Containerless Deployments?



## Container Deployments

- Pre-setup and configuration
- Need to use files like web.xml to tell container how to work
- Environment configuration is external to your application



## Application Deployments

- Runs anywhere Java is setup (think cloud deployments)
- Container is embedded and the app directs how the container works
- Environment configuration is internal to your application

# Summary

**Created a fully working Java web application from scratch!**

**Spring Boot builds and Spring Boot bill of materials (BOM)**

**Spring Boot Initializers**

**How Spring Boot really works**

- Plain Java program
- Spring context initialization
- Embedded container and container less deployments