



Spring Boot

By Vo Van Hai

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Introduction

- Spring Boot makes it easy to create stand-alone, production-grade Spring based Applications that you can "just run".
- Features
 - Create stand-alone Spring applications
 - Embed Tomcat, Jetty or Undertow directly (no need to deploy WAR files)
 - Provide opinionated 'starter' dependencies to simplify your build configuration
 - Automatically configure Spring and 3rd party libraries whenever possible
 - Provide production-ready features such as metrics, health checks, and externalized configuration
 - Absolutely no code generation and no requirement for XML configuration

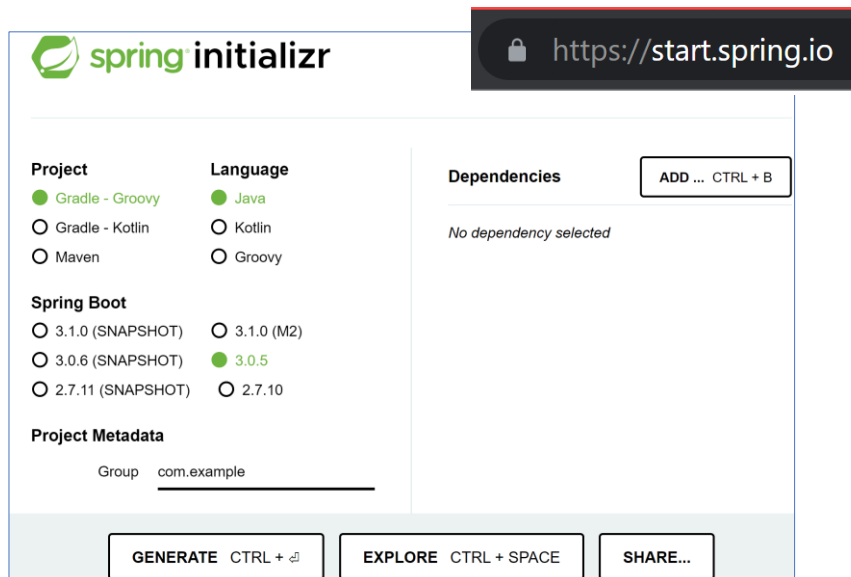
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Spring initializer

- Quickly create a starter Spring project
- Select your dependencies
- Creates a Maven/Gradle project
- Import the project into your IDE: Eclipse, IntelliJ, NetBeans etc ...

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Spring initializer



The screenshot shows the Spring Initializr web application interface. At the top, the logo "spring initializr" is displayed next to a browser address bar showing "https://start.spring.io". The main content area is divided into three sections: "Project", "Language", and "Dependencies".

Project

- ☒ Gradle - Groovy
- ☐ Gradle - Kotlin
- ☐ Maven

Language

- ☒ Java
- ☐ Kotlin
- ☐ Groovy

Spring Boot

- ☐ 3.1.0 (SNAPSHOT)
- ☐ 3.0.6 (SNAPSHOT)
- ☐ 2.7.11 (SNAPSHOT)
- ☒ 3.1.0 (M2)
- ☒ 3.0.5
- ☐ 2.7.10

Project Metadata

Group

Dependencies

No dependency selected

At the bottom, there are three buttons: , , and

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Spring initializer

Project
☒ Gradle - Groovy
☐ Gradle - Kotlin ☐ Maven

Language
☒ Java ☐ Kotlin ☐ Groovy

Spring Boot
☐ 3.1.0 (SNAPSHOT) ☐ 3.1.0 (M2) ☐ 3.0.6 (SNAPSHOT) ☒ 3.0.5
☐ 2.7.11 (SNAPSHOT) ☐ 2.7.10

Project Metadata
 Group
 Artifact
 Name
 Description
 Package name
 Packaging ☒ Jar ☐ War
 Java ☐ 20 ☒ 17 ☐ 11 ☐ 8

Dependencies ADD DEPENDENCIES... CTRL + B
Spring Boot DevTools DEVELOPER TOOLS
 Provides fast application restarts, LiveReload, and configurations for enhanced development experience.
Spring Data JDBC SQL
 Persist data in SQL stores with plain JDBC using Spring Data.
Spring Data JPA SQL
 Persist data in SQL stores with Java Persistence API using Spring Data and Hibernate.
Lombok DEVELOPER TOOLS
 Java annotation library which helps to reduce boilerplate code.
Spring Web WEB
 Build web, including RESTful, applications using Spring MVC. Uses Apache Tomcat as the default embedded container.

GENERATE CTRL + G EXPLORE CTRL + SPACE SHARE...

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ltwww.zip
 .gitignore
 HELP.md
build.gradle
 gradle
 gradlew
 gradlew.bat
 settings.gradle
 src
 main
 java
 edu
 iuh
 fit

DOWNLOAD COPY

```

1  plugins {
2      id 'java'
3      id 'org.springframework.boot' version '3.0.5'
4      id 'io.spring.dependency-management' version '1.1.0'
5  }
6
7  group = 'edu.iuh.fit'
8  version = '0.0.1-SNAPSHOT'
9  sourceCompatibility = '17'
10
11 repositories {
12     mavenCentral()
13 }
14
15 dependencies {
16     implementation 'org.springframework.boot:spring-boot-starter-data-jpa'
17     implementation 'org.springframework.boot:spring-boot-starter-data-jdbc'
18     developmentOnly 'org.springframework.boot:spring-boot-devtools'
19     testImplementation 'org.springframework.boot:spring-boot-starter-test'

```

DOWNLOAD CTRL + G CLOSE ESC

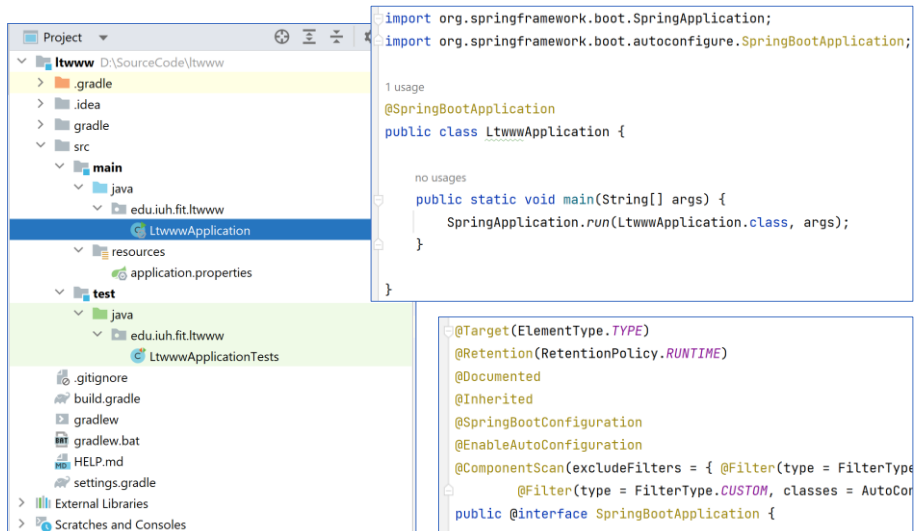
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Dependencies

```
dependencies {
    implementation 'org.springframework.boot:spring-boot-starter-data-jdbc'
    implementation 'org.springframework.boot:spring-boot-starter-data-jpa'
    implementation 'org.springframework.boot:spring-boot-starter-thymeleaf'
    implementation 'org.springframework.boot:spring-boot-starter-web'
    compileOnly 'org.projectlombok:lombok'
    developmentOnly 'org.springframework.boot:spring-boot-devtools'
    annotationProcessor 'org.projectlombok:lombok'
    testImplementation 'org.springframework.boot:spring-boot-starter-test'
}
```

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Project Structure



The screenshot displays an IDE interface with a project structure on the left and code snippets on the right.

Project Structure (Left Panel):

- Project: D:\SourceCode\ltwww
- .gradle
- .idea
- gradle
- src
 - main
 - java
 - edu.iuh.fit.ltwww
 - LtwwwApplication
 - resources
 - application.properties
 - test
 - java
 - edu.iuh.fit.ltwww
 - LtwwwApplicationTests
 - .gitignore
 - build.gradle
 - gradlew
 - gradlew.bat
 - HELP.md
 - settings.gradle
 - External Libraries
 - Scratches and Consoles

Code Snippets (Right Panel):

Snippet 1:

```
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

1 usage
@SpringBootApplication
public class LtwwwApplication {

    no usages
    public static void main(String[] args) {
        SpringApplication.run(LtwwwApplication.class, args);
    }
}
```

Snippet 2:

```
@Target(ElementType.TYPE)
@Retention(RetentionPolicy.RUNTIME)
@Documented
@Inherited
@SpringBootConfiguration
@EnableAutoConfiguration
@ComponentScan(excludeFilters = { @Filter(type = FilterType
    @Filter(type = FilterType.CUSTOM, classes = AutoCor
public @interface SpringBootApplication {
```

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Running Example


```
Console    Actuator

D:\Java\jdk-17.0.1\bin\java.exe ...

      _   _          _         _
     / \   _ __   ___| |__   ___| |___| |
    / _ \ | '__| / __| '_ \| / __|_|_ \| |
   / ___ \| |__| (__| |_) | | (__| |_) | |
  /_/   \_\___|\___|____|_|_____\___|_____|_|

:: Spring Boot ::                (v3.0.5)

2023-03-27T11:36:08.416+07:00 INFO 9712 --- [ restartedMain] edu.iuh.fit.lttwww.LttwwwApplication : Starting LttwwwApp
(D:\SourceCode\lttwww\build\classes\java\main started by VoVanHai in D:\SourceCode\lttwww)
2023-03-27T11:36:08.420+07:00 INFO 9712 --- [ restartedMain] edu.iuh.fit.lttwww.LttwwwApplication : No active profile
2023-03-27T11:36:08.481+07:00 INFO 9712 --- [ restartedMain] .e.DevToolsPropertyDefaultsPostProcessor : Devtools property
```

 application.properties

```
spring.banner.location=classpath:/path/to/banner/bannername.txt
```

<https://devops.datenkollektiv.de/banner.txt/index.html>