**Spring Boot**

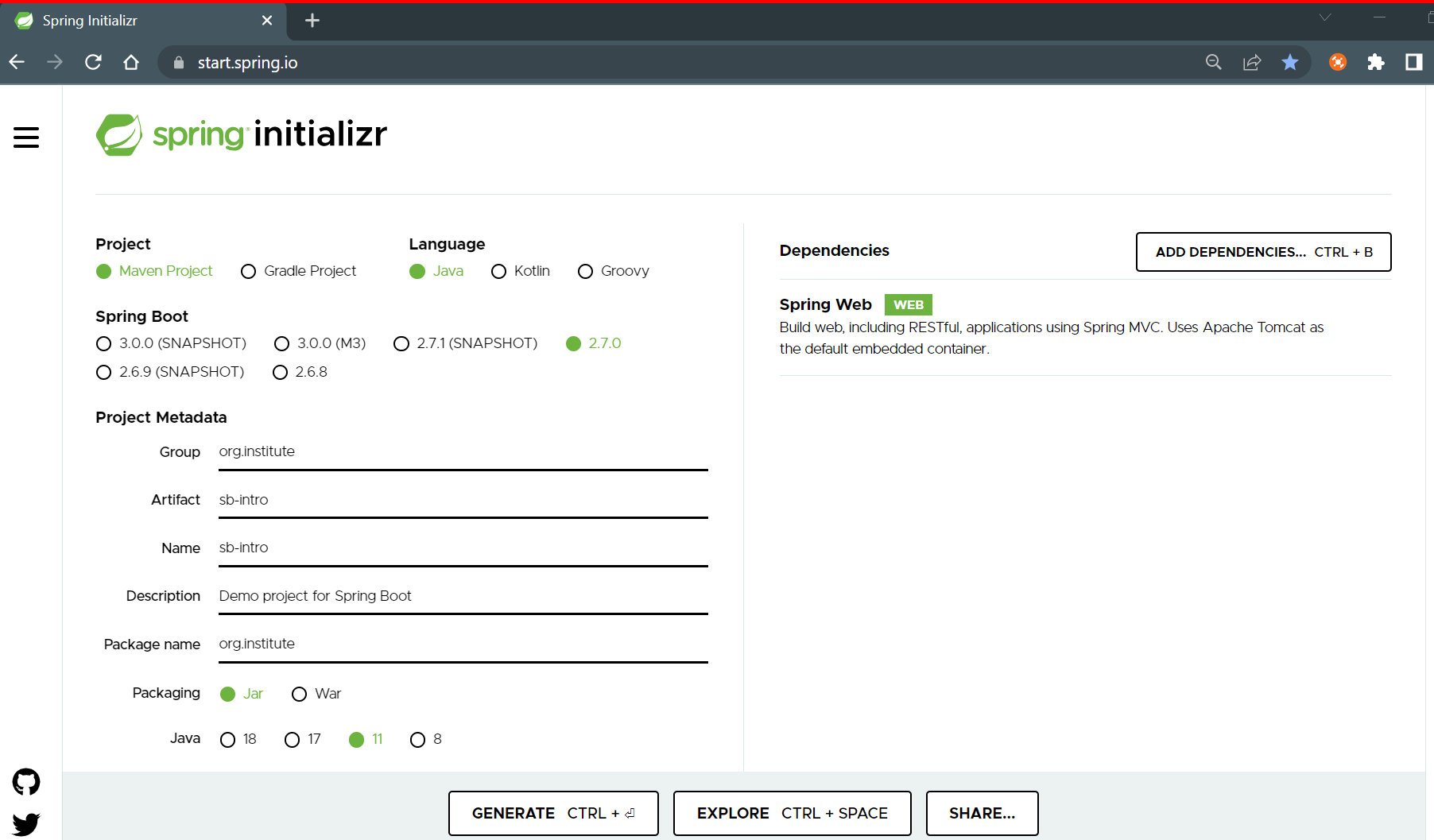
1. Spring and Spring Boot is a framework.
2. Framework is a predefine functionalities provided to the developer using a jar files. In the framework the commonly used functionalities will be provided. Frameworks are use to develop the application faster and with minimum error. Developers can focus on business logic and all the common function will be taken case by framework.
3. Spring and Spring Boot is also known as framework of framework.
4. Can integrate other framework easily like JPA, Hibernate, Struts, JSF etc.
5. In the Full stack development Spring Boot is majorly used to develop a REST APIs.
6. Spring Boot is used to develop micro-service.
7. Using Spring Boot, you can develop the application with minimum configuration.
8. Spring Boot provided auto configuration feature. For example, if you are using DB connection into code then spring provides you H2 embedded database internally and also set all the configuration for H2 database.
9. Spring boot is a highly customized framework.
10. Spring Boot Provides embedded tomcat server. So, you can run your application without any external server.
11. Spring Boot has multiple stater project which is also known as different modules of the spring.
    1. **Spring Bean/IOC**
    2. **Spring Jdbc**
    3. **Spring ORM (JPA/Hibernate)**
    4. **Spring REST APIs**
    5. Spring MVC
    6. Spring Batch
    7. **Spring Cloud**
    8. Spring Security
    9. Spring Cache.
    10. Spring JMS etc.

**How to use spring module**

1. Add the Dependencies (jar files) of the Spring Module.
2. Perform the module configuration.
3. Used the module using the predefine APIs (classes and interfaces) provided by Spring.

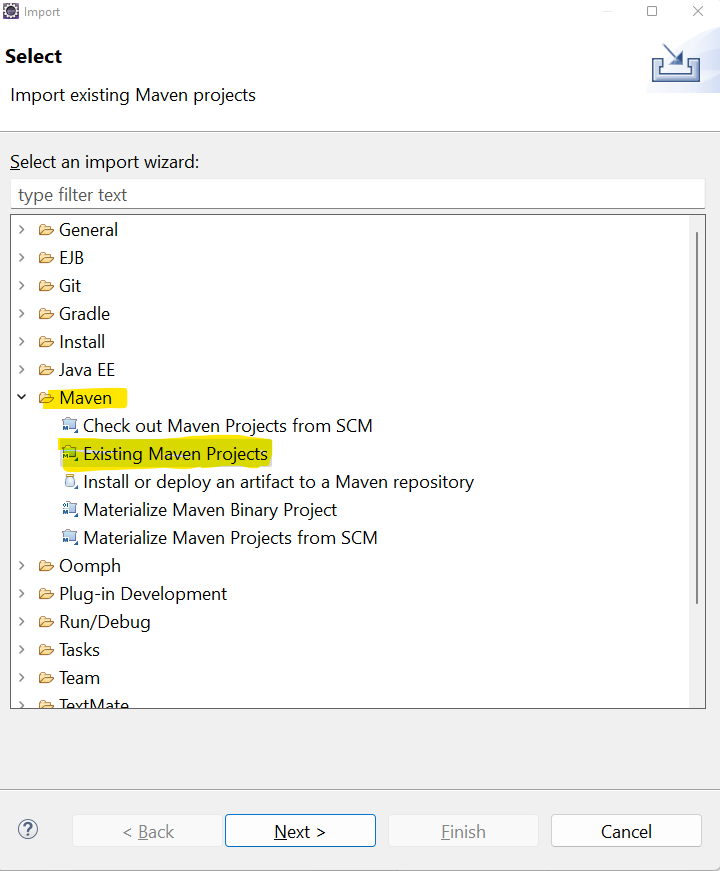
**Create first Spring Boot Application**

1. Options to Create Spring Application
   1. STS tool (Spring Tool Suit) IDE
      1. <https://spring.io/tools>
   2. Spring Boot CLI (Command Line Interface)
      1. <https://docs.spring.io/spring-boot/docs/current/reference/html/cli.html>
   3. Spring Initilizer
      1. This is a web application provided by spring community to create spring application without any local setup.
      2. <https://start.spring.io/>

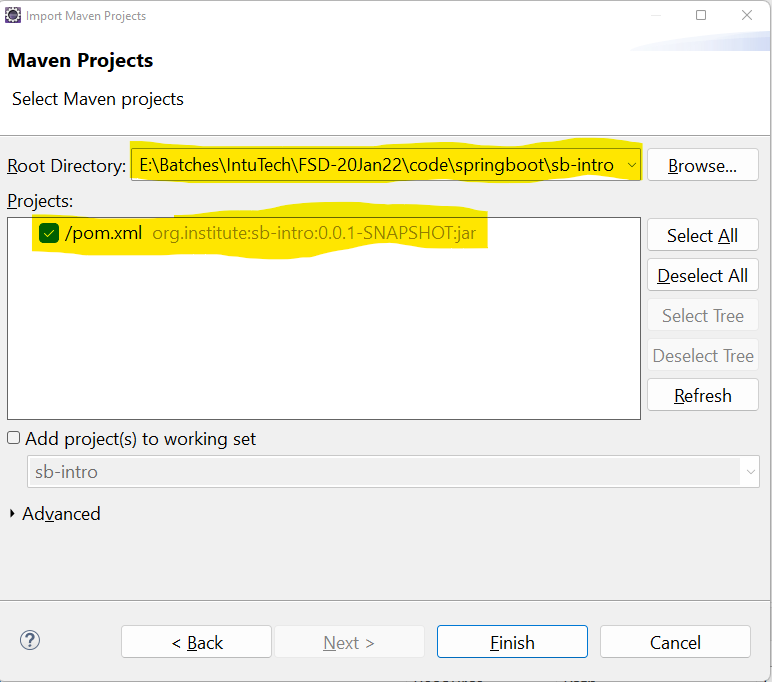


**Open Project in the Eclipse IDE**

1. After generating the project from Spring Initializer web application. Go to Downloads.
2. Extract the ZIP file.
3. Copy the extracted folder and paste it into Eclipse workspace location.
4. Go to “File” Menu -> click on “Import…” option
5. Search and expand “Maven” option
6. Select “Existing Maven Projects” option

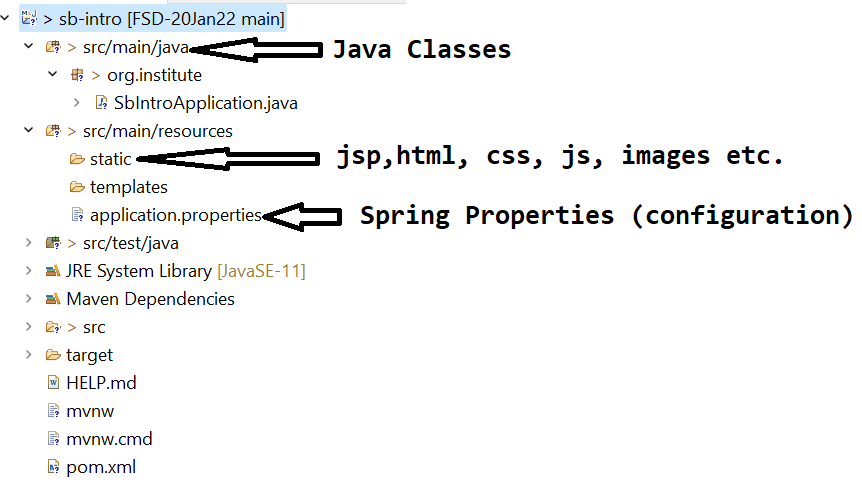
****

1. Click on “Next” button
2. Browser and select for a “Root directory”. (It is a path of the extracted folder and select a folder path in which pom.xml file is present.)



1. Click on “Finish” button
2. Wait till the project import completed. (for the first time it will take some time to download all Spring boot jar files. Make sure that your internet connection is proper and stable.)
3. If download not happened properly due to network issue then you might get an error on project. Follow the septs mention below.
   1. Right click on the project.
   2. Go to “Maven” option -> click on “Update Project…” option
   3. Select the check bob on the new window “Force Update of Snapshots/Releases”
   4. Click in “Ok” button

**Spring Boot Project Structure**



**@SpringBootApplication**

1. This annotation is a combination of 3 annotations
   1. **@Configuration**: This is use to mark any class as a configuration class. These classes will be loaded at the start of spring boot application.