

Search...

How to Run Your First Spring Boot Application in Spring Tool Suite?

Last Updated : 23 Jul, 2025

Spring Tool Suite (STS) is a Java IDE tailored for developing Spring-based enterprise applications. It is easier, faster, and more convenient. Most importantly, it is based on Eclipse IDE. STS is free, open-source, and powered by VMware.

Spring Tools 4 is the next generation of Spring tooling for your favorite coding environment. Largely rebuilt from scratch, it provides world-class support for developing Spring-based enterprise applications, whether you prefer Eclipse, Visual Studio Code, or Theia IDE.

In this article, we will discuss how to run your first Spring Boot application in STS.

Prerequisite: Download and install Spring Tool Suite (Spring Tools 4 for Eclipse) IDE in your system. You may refer to this article: [How to Download and Install Spring Tool Suite \(Spring Tools 4 for Eclipse\) IDE?](#)

Procedure

1. Create a Spring Boot project in Spring Tool Suite
2. Import the Project into STS IDE
3. An entry file named Application.java will be created for STS
4. Run the application on the server.

Step 1: Create Spring Boot Project in Spring Tool Suite

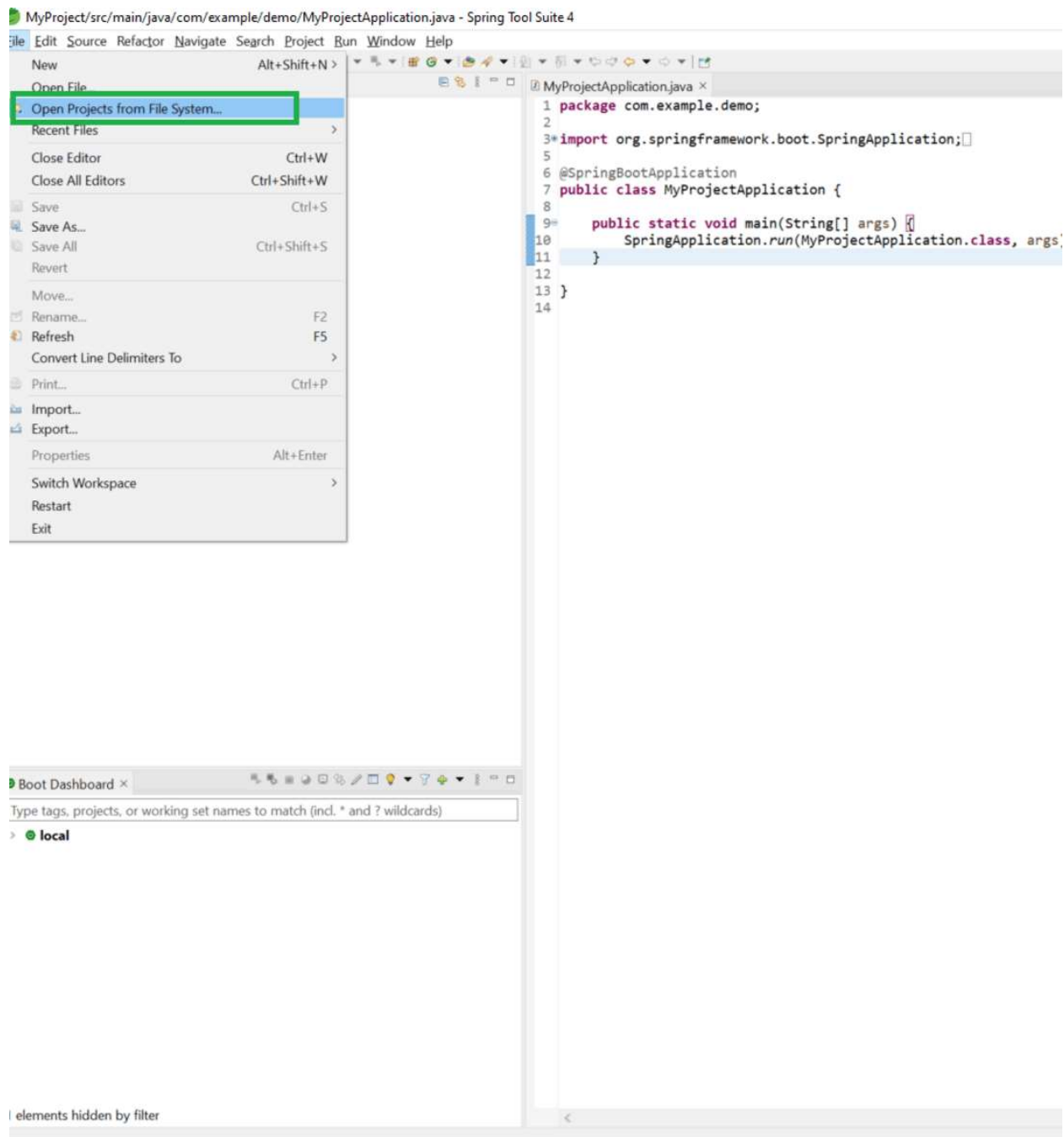
You may refer to this article, [How to Create and Setup Spring Boot Project in Spring Tool Suite](#), and create your first Spring Boot Application.

Alternatively, you can use [Spring Initializr](#) to create your project and then import it into your STS IDE.

Step 2: Import the Project into Your STS IDE

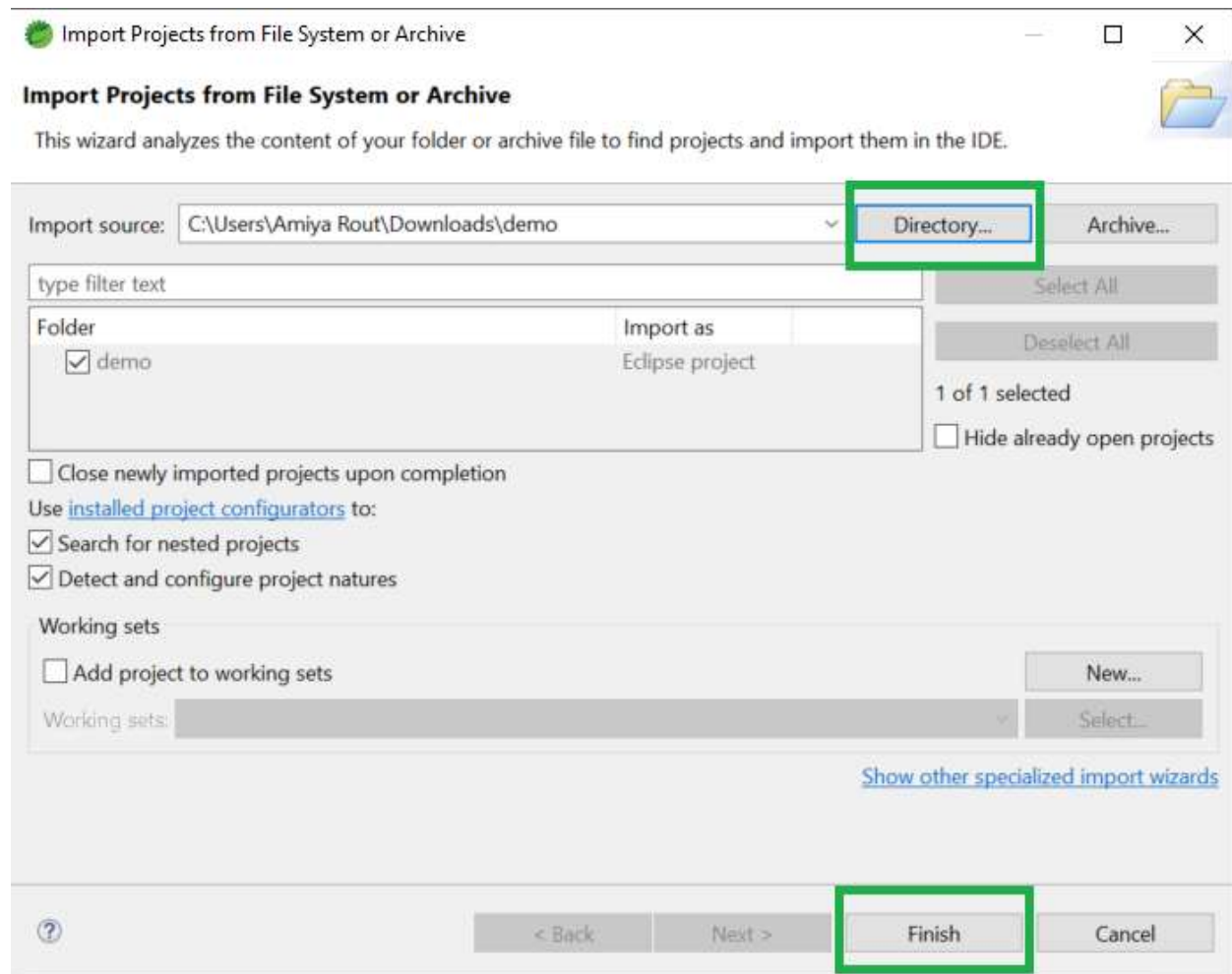
2.1: Open the Project in STS

Go to your **STS IDE > File > Open Project from File System** as shown in the below image.



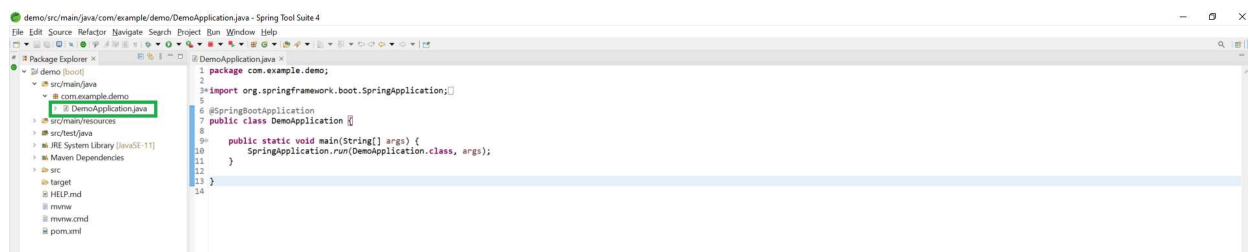
2.2: Select Your Project Directory

A pop-up window will occur like the following. Here you have to choose the directory that has been generated while creating the spring boot project in Spring Initializr. And then click on the Finish button.



Step 3: Application.java

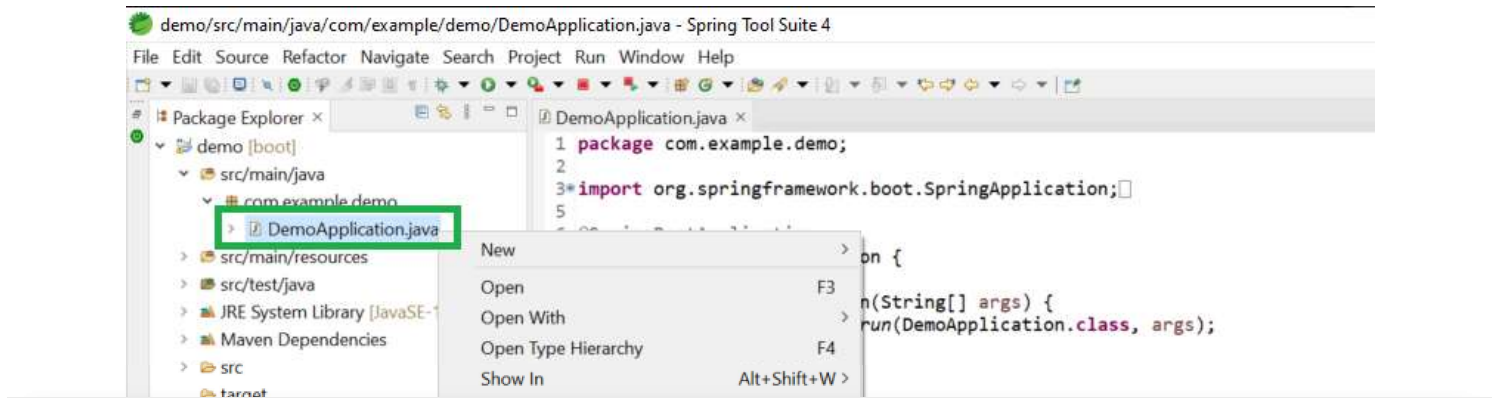
After successfully creating or importing the spring boot project a file name Application.java (here, DemoApplication) will be created automatically and this is your entry point. This file serves as the main method of your Spring Boot application.



Step 4: Run the Spring Boot Application

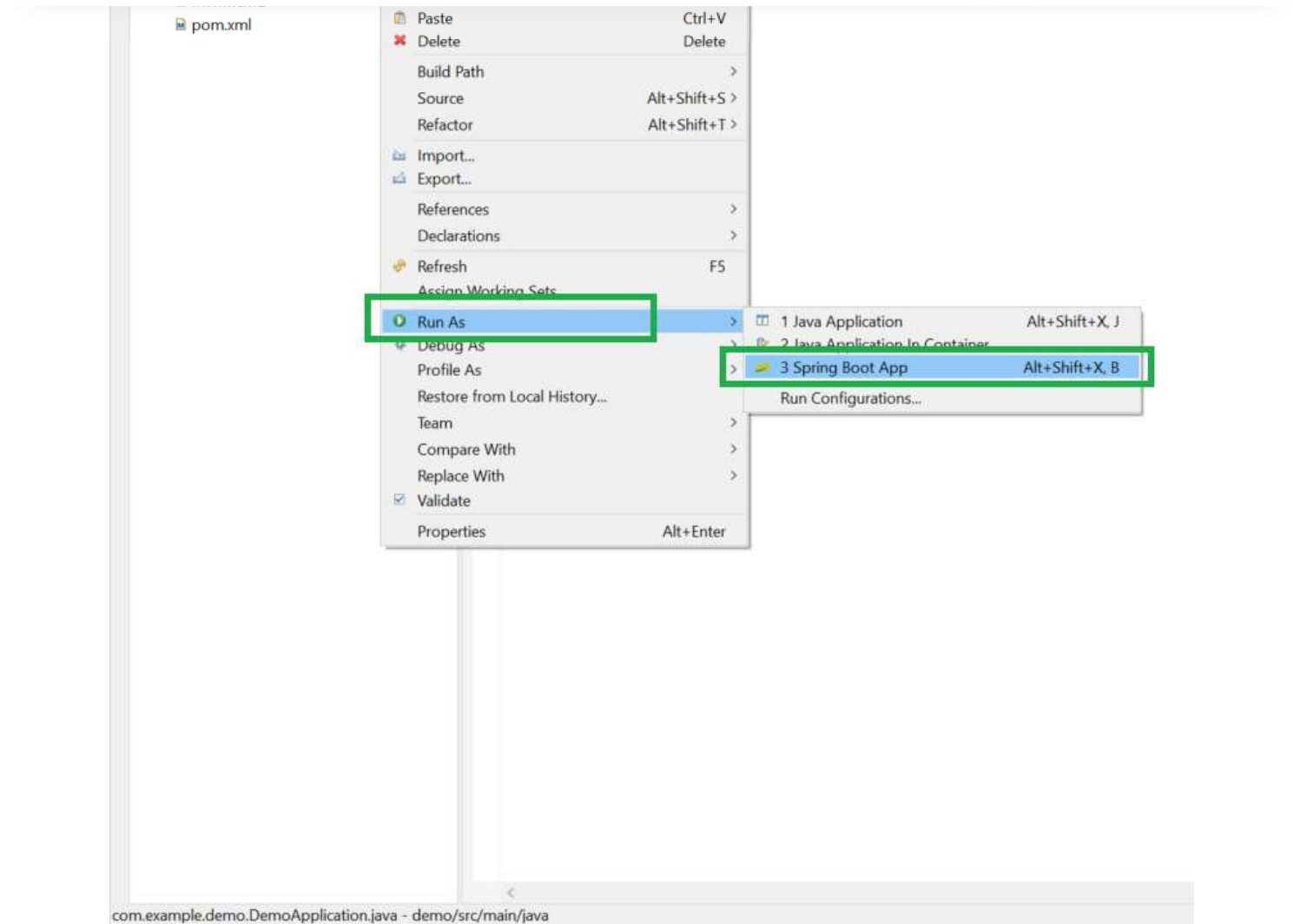
4.1: Run the Application in STS

In order to run this application now, Right-click on the **DemoApplication.java** > **Run As** > **Spring Boot App** as shown in the below image.



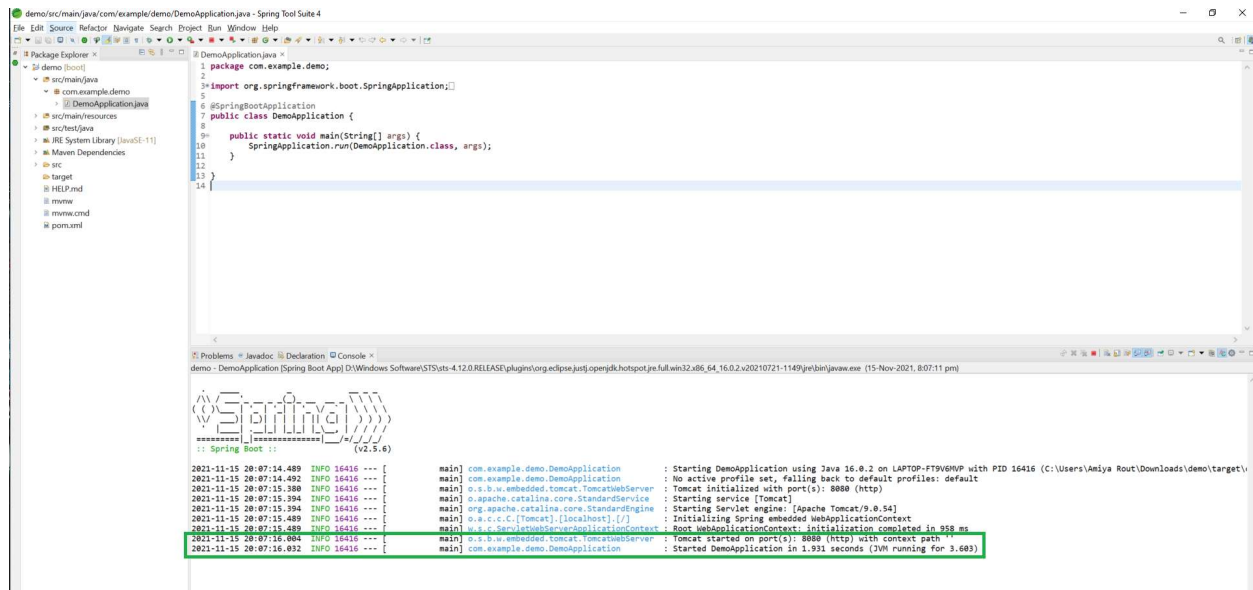
DSA Practice Problems C C++ Java Python JavaScript Data Science

Sign In



4.2: Console Output:

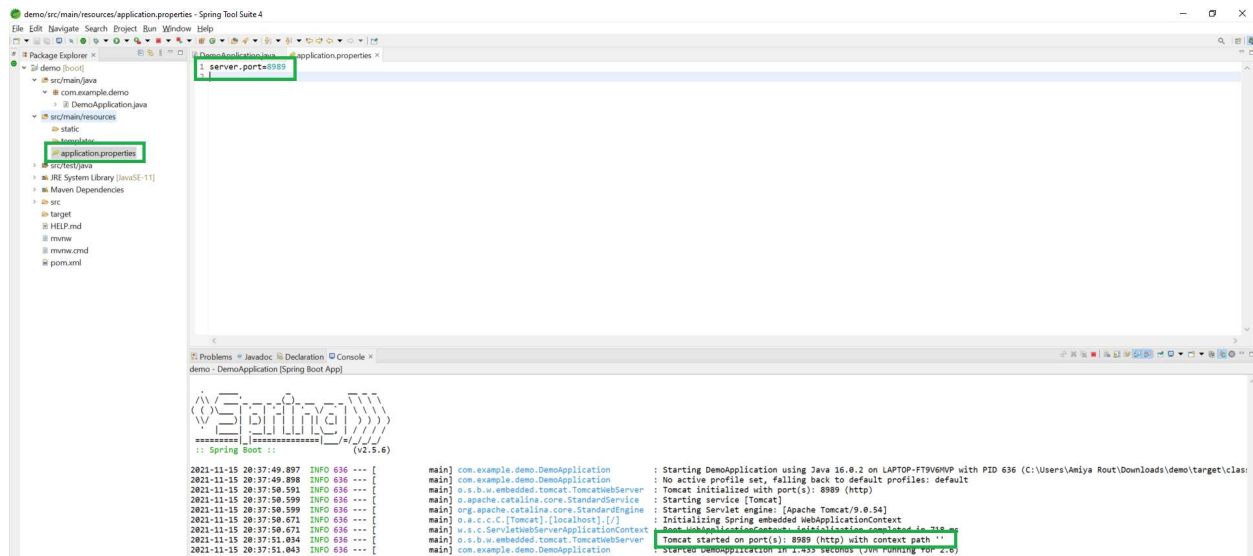
After successfully running the application you can see the console where the Tomcat server starts on default port number 8080 as shown in the below image.



Now geeks you must be wondering about what if we do not want it to be run on the default port number that is the default port of the Tomcat server is 8080. We can change the port number in the application.properties file by using the following line of code as follows:

server.port=8989

A. Now re-run the application again and you can see Your Tomcat server started on the port that you have given like the below image.



B. If you are encountered with the following error then it is highly recommended that you should change your port number.

```

2021-11-15 20:44:07.796 INFO 9564 --- [main] com.example.demo.DemoApplication : Starting DemoApplication using Java 16.0.2 on LAPTOP-FT9V6MVP with PID 9564 (C:\Users\Amiya Rout\Downloads\demo\target\classes)
2021-11-15 20:44:07.798 INFO 9564 --- [main] com.example.demo.DemoApplication : No active profile set, falling back to default profiles: default
2021-11-15 20:44:08.461 INFO 9564 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8989 (http)
2021-11-15 20:44:08.468 INFO 9564 --- [main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
2021-11-15 20:44:08.469 INFO 9564 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.54]
2021-11-15 20:44:08.551 INFO 9564 --- [main] o.s.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext
2021-11-15 20:44:08.551 INFO 9564 --- [main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 696 ms
2021-11-15 20:44:08.811 WARN 9564 --- [main] ConfigServletWebServerApplicationContext : Exception encountered during context initialization - cancelling refresh attempt: org.springframework.context.ApplicationContextException: Unable to start web application
2021-11-15 20:44:08.818 INFO 9564 --- [main] o.apache.catalina.core.StandardService : Stopping service [Tomcat]
2021-11-15 20:44:08.832 INFO 9564 --- [main] ConditionEvaluationReportLoggingListener :

Error starting ApplicationContext. To display the conditions report re-run your application with 'debug' enabled.
2021-11-15 20:44:08.850 ERROR 9564 --- [main] o.s.b.d.LoggingFailureAnalysisReporter :

*****
APPLICATION FAILED TO START
*****

Description:

Web server failed to start. Port 8989 was already in use.

Action:

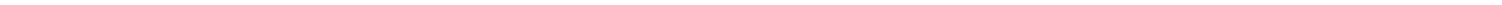
Identify and stop the process that's listening on port 8989 or configure this application to listen on another port.
    
```

Note: You can access the output screen in the URL: <http://localhost:8080/>. Note that at last provide your port number.

Comment

More info

Advertise with us



Corporate & Communications Address:

A-143, 7th Floor, Sovereign Corporate Tower, Sector- 136, Noida, Uttar Pradesh (201305)

Registered Address:

K 061, Tower K, Gulshan Vivante Apartment, Sector 137, Noida, Gautam Buddh Nagar, Uttar Pradesh, 201305



Advertise with us

Company

- About Us
- Legal
- Privacy Policy
- Careers

Explore

- POTD
- Job-A-Thon
- Connect
- Community