

Spring REST using Spring Boot 3

1. spring-rest-handson

Hands on 1

Create a Spring Web Project using Maven

Solution:-

Go to <https://start.spring.io/>

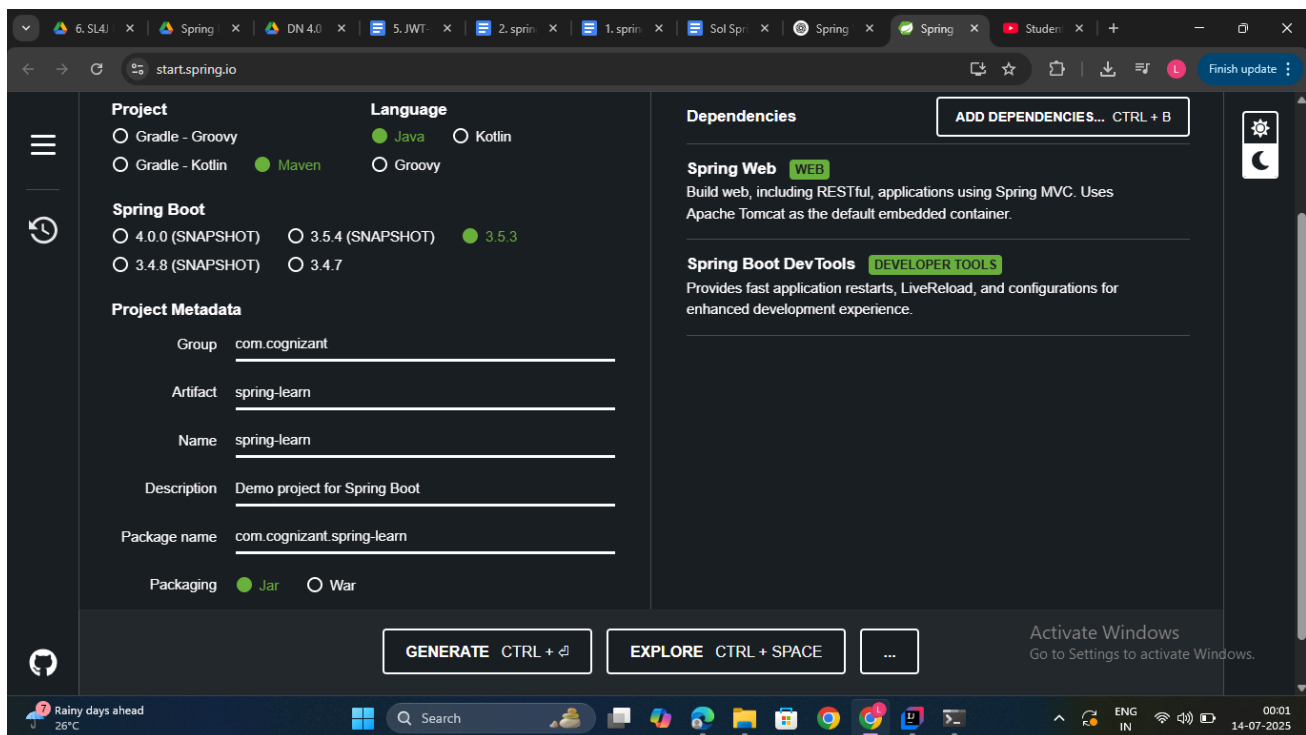
Change Group as “com.cognizant”

Change Artifact Id as “spring-learn”

Select Spring Boot DevTools and Spring Web

Create and download the project as zip

Extract the zip in root folder to Eclipse Workspace



7. Build the project using 'mvn clean package -Dhttp.proxyHost=proxy.cognizant.com -Dhttp.proxyPort=6050 -Dhttps.proxyHost=proxy.cognizant.com -Dhttps.proxyPort=6050 -Dhttp.proxyUser=123456' command in command line

```
PS C:\Users\anish\Desktop\JAVA FSE round 2\Week 4\Spring REST using Spring Boot 3>spring-learn> mvn clean package "-Dhttp.proxyHost=proxy.cognizant.com" "-Dhttp.proxyPort=6050" "-Dhttps.proxyHost=proxy.cognizant.com" "-Dhttps.proxyPort=6050" "-Dhttps.proxyUser=123456"
WARNING: A terminally deprecated method in sun.misc.Unsafe has been called
WARNING: sun.misc.Unsafe:staticFieldBase has been called by com.google.inject.internal.aop.HiddenClassDefiner (file:/D:/Program%20Files/Apache/Maven/apache-maven-3.9.10/lib/guice-5.1.0-classes.jar)
WARNING: Please consider reporting this to the maintainers of class com.google.inject.internal.aop.HiddenClassDefiner
WARNING: sun.misc.Unsafe:staticFieldBase will be removed in a future release
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.cognizant:spring-learn >-----
[INFO] Building spring-learn 0.0.1-SNAPSHOT
[INFO] from pom.xml
[INFO]
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- clean:3.4.1:clean (default-clean) @ spring-learn ---
[INFO] Deleting C:\Users\anish\Desktop\JAVA FSE round 2\Week 4\Spring REST using Spring Boot 3\spring-learn\target
[INFO]
[INFO] --- resources:3.3.1:resources (default-resources) @ spring-learn ---
[INFO] Copying 1 resource from src/main/resources to target/classes
[INFO] Copying 0 resource from src/main/resources to target/classes
[INFO]
[INFO] --- compiler:3.14.0:compile (default-compile) @ spring-learn ---
[INFO] Recompiling the module because of changed source code.
[INFO] Compiling 1 source file with javac [debug parameters release 17] to target/classes
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ spring-learn ---
[INFO] skip non existing resourceDirectory C:\Users\anish\Desktop\JAVA FSE round 2\Week 4\Spring REST using Spring Boot 3\spring-learn\src\test\resources
[INFO]
[INFO] --- compiler:3.14.0:testCompile (default-testCompile) @ spring-learn ---
[INFO] Recompiling the module because of changed dependency.
[INFO] Compiling 1 source file with javac [debug parameters release 17] to target\test-classes
[INFO]
[INFO] --- surefire:3.5.3:test (default-test) @ spring-learn ---
[INFO] Using auto detected provider org.apache.maven.surefire.junitplatform.JUnit4PlatformProvider
[INFO]
[INFO]
[INFO] T E S T S
[INFO]
[INFO] Running com.cognizant.spring.learn.SpringLearnApplicationTests
23:56:30.170 [main] INFO org.springframework.test.context.support.AnnotationConfigContextLoaderUtils -- Could not detect default configuration classes for test class
[com.cognizant.spring.learn.SpringLearnApplicationTests]: SpringLearnApplicationTests does not declare any static, non-private, non-final, nested classes annotated with
@Configuration
23:56:30.341 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper -- Found @SpringBootConfiguration com.cognizant.spring.learn.SpringLe
arnApplication for test class com.cognizant.spring.learn.SpringLearnApplicationTests
```

```

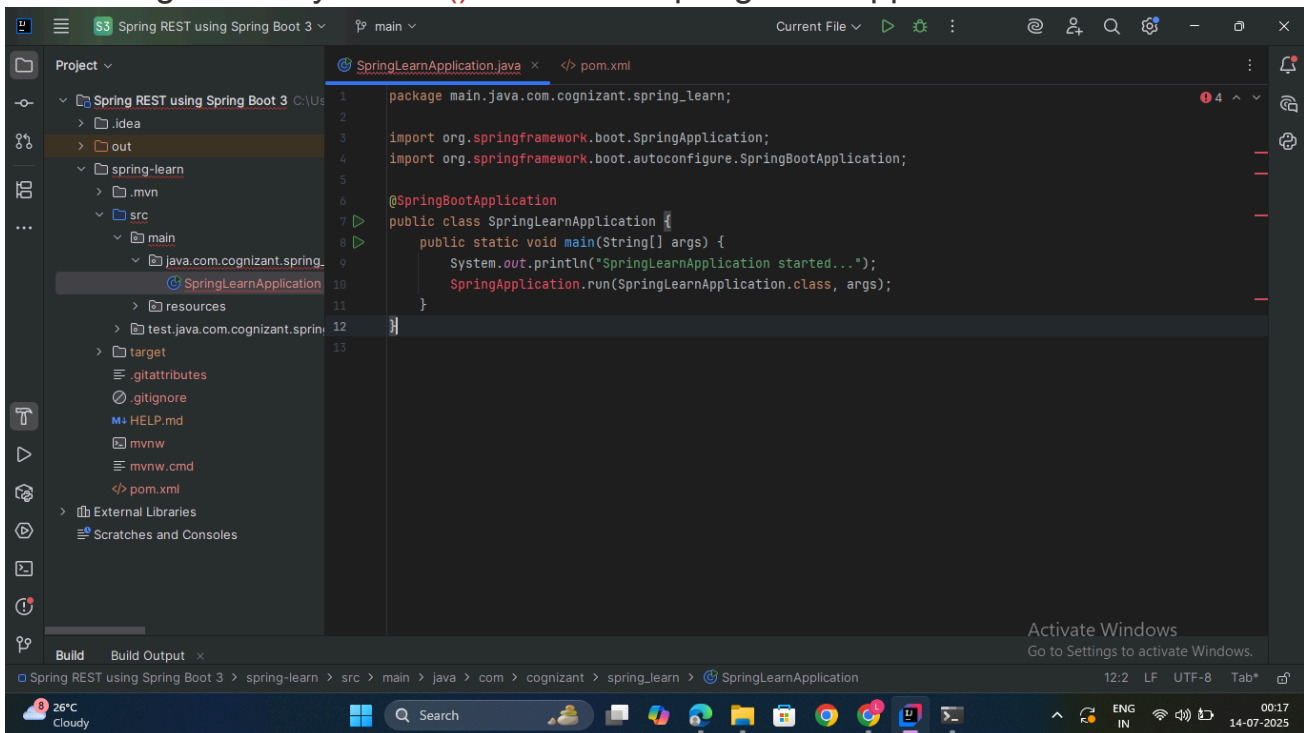
Windows PowerShell
+ ~

=====
:: Spring Boot ::                (v3.5.3)

2025-07-13T23:56:31.628+05:30 INFO 14260 --- [spring-learn] [ava 24.0.1 with PID 14260 (started by anish in C:\Users\anish\Desktop\JAVA FSE round 2\Week 4\Spring REST using Spring Boot 3\spring-learn)
2025-07-13T23:56:31.630+05:30 INFO 14260 --- [spring-learn] [ault profile: "default"
2025-07-13T23:56:31.266+05:30 INFO 14260 --- [spring-learn] [main] c.c.s.SpringLearnApplicationTests : Starting SpringLearnApplicationTests using J
2025-07-13T23:56:31.266+05:30 INFO 14260 --- [spring-learn] [main] c.c.s.SpringLearnApplicationTests : No active profile set, falling back to 1 def
2025-07-13T23:56:31.266+05:30 INFO 14260 --- [spring-learn] [main] c.c.s.SpringLearnApplicationTests : Started SpringLearnApplicationTests in 2.55
seconds (process running for 4.068)
Mockito is currently self-attaching to enable the inline-mock-maker. This will no longer work in future releases of the JDK. Please add Mockito as an agent to your bu
ild as described in Mockito's documentation: https://javadoc.io/doc/org.mockito/mockito-core/latest/org.mockito/org/mockito/Mockito.html#0.3
Java HotSpot(TM) 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended
WARNING: A Java agent has been loaded dynamically (C:\Users\anish\m2repository\net\bytebuddy\byte-buddy-agent\1.17.6\byte-buddy-agent-1.17.6.jar)
WARNING: If a serviceability tool is in use, please run with -XX:+EnableDynamicAgentLoading to hide this warning
WARNING: If a serviceability tool is not in use, please run with -Djdk.instrument.traceUsage for more information
WARNING: Dynamic loading of agents will be disallowed by default in a future release
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 4.071 s -- in com.cognizant.spring_learn.SpringLearnApplicationTests
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- jar:3.4.2:jar (default-jar) @ spring-learn ---
[INFO] Building jar: C:\Users\anish\Desktop\JAVA FSE round 2\Week 4\Spring REST using Spring Boot 3\spring-learn\target\spring-learn-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot:2.5.7:repackage (repackage) @ spring-learn ---
[INFO] Replying main artifact C:\Users\anish\Desktop\JAVA FSE round 2\Week 4\Spring REST using Spring Boot 3\spring-learn\target\spring-learn-0.0.1-SNAPSHOT.jar with
repackaged archive, adding nested dependencies in BOOT-INF/.
[INFO] The original artifact has been renamed to C:\Users\anish\Desktop\JAVA FSE round 2\Week 4\Spring REST using Spring Boot 3\spring-learn\target\spring-learn-0.0.1
-SNAPSHOT.jar.original
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 10.690 s
[INFO] Finished at: 2025-07-13T23:56:35+05:30
[INFO]
=====

```

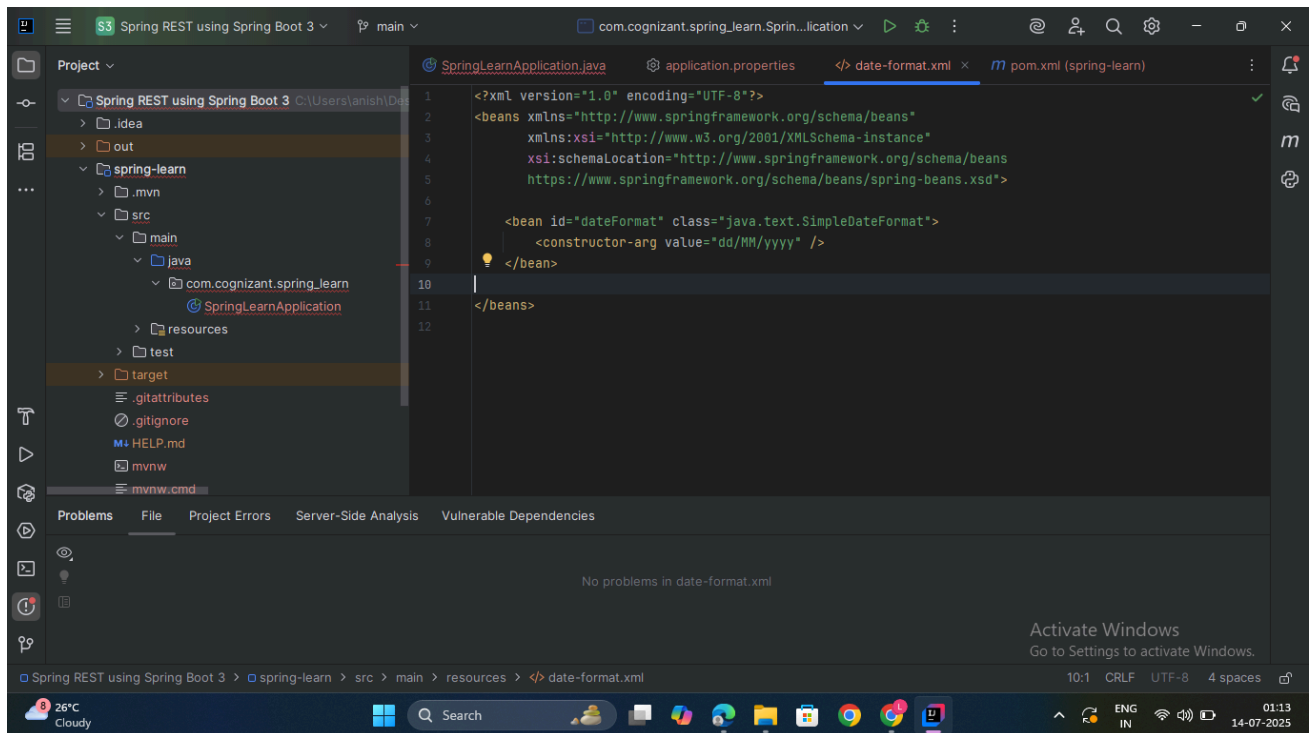
Include logs to verify if **main()** method of SpringLearnApplication.



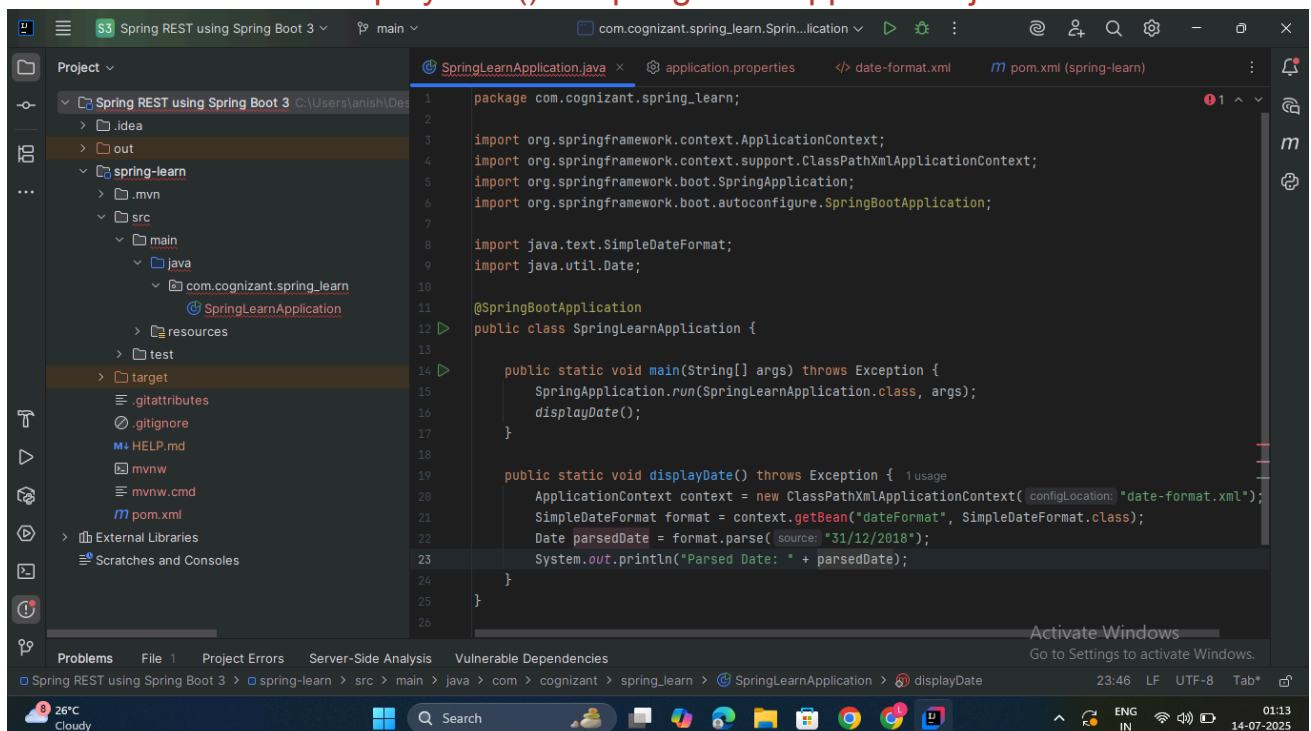
Hands on 2

Spring Core – Load SimpleDateFormat from Spring Configuration XML

- Define bean tag in the XML with for date format.



- Create new method **displayDate()** in **SpringLearnApplication.java**

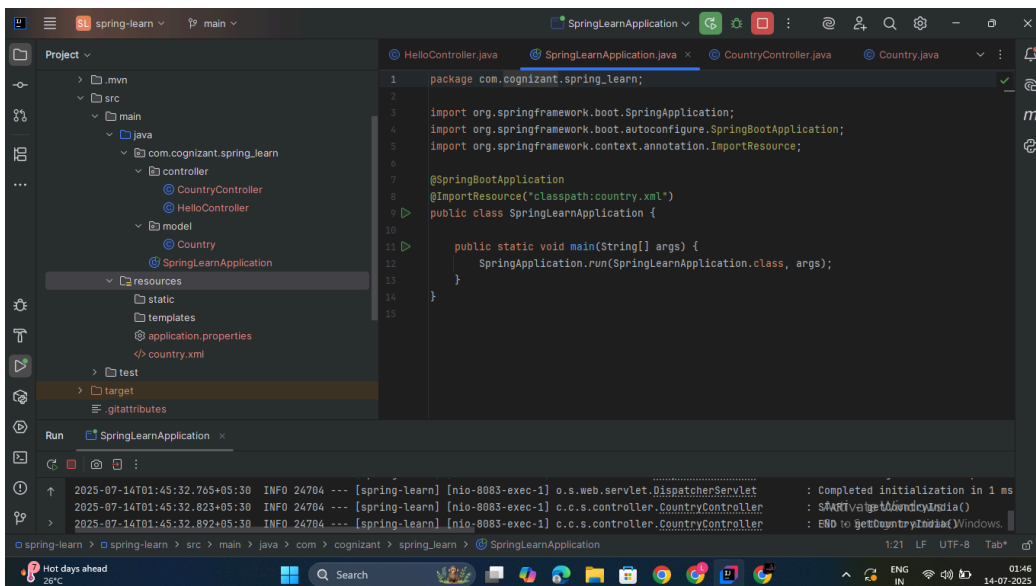
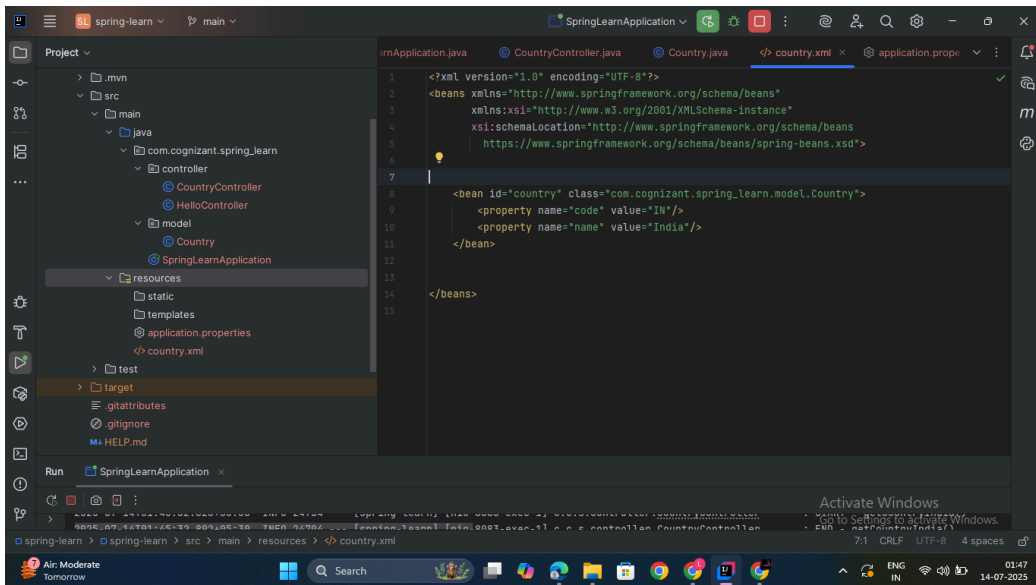
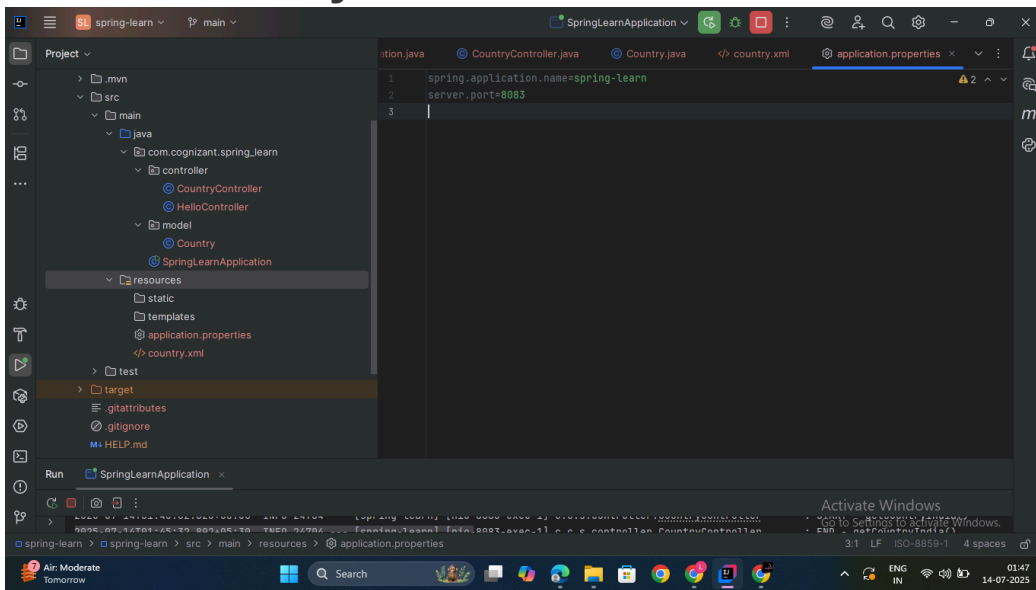


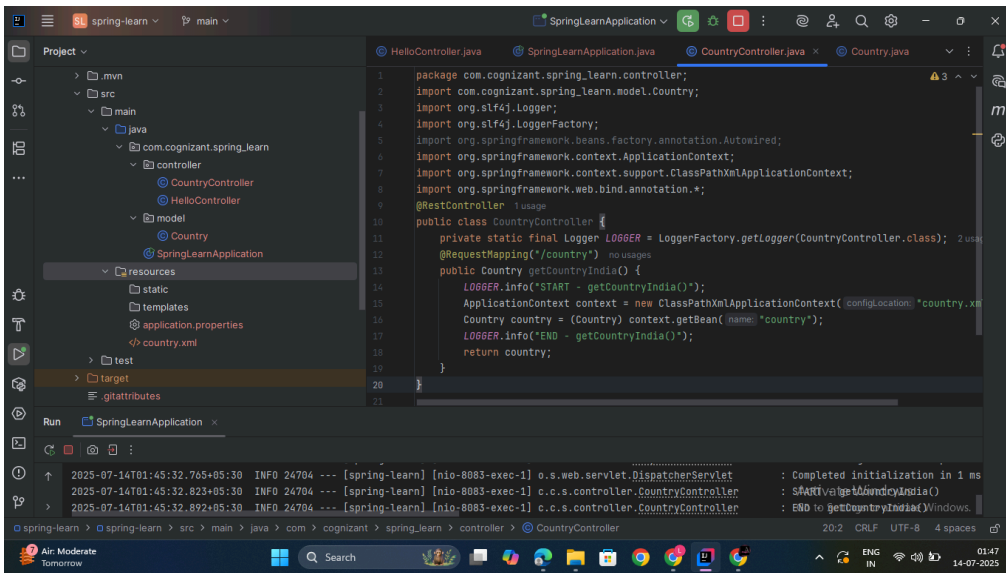
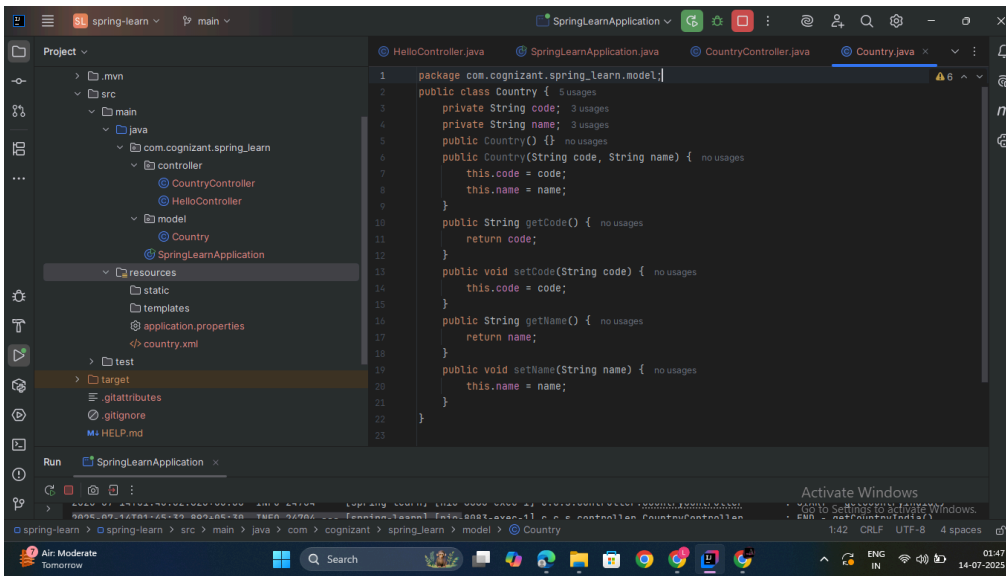
Hello World RESTful Web Service

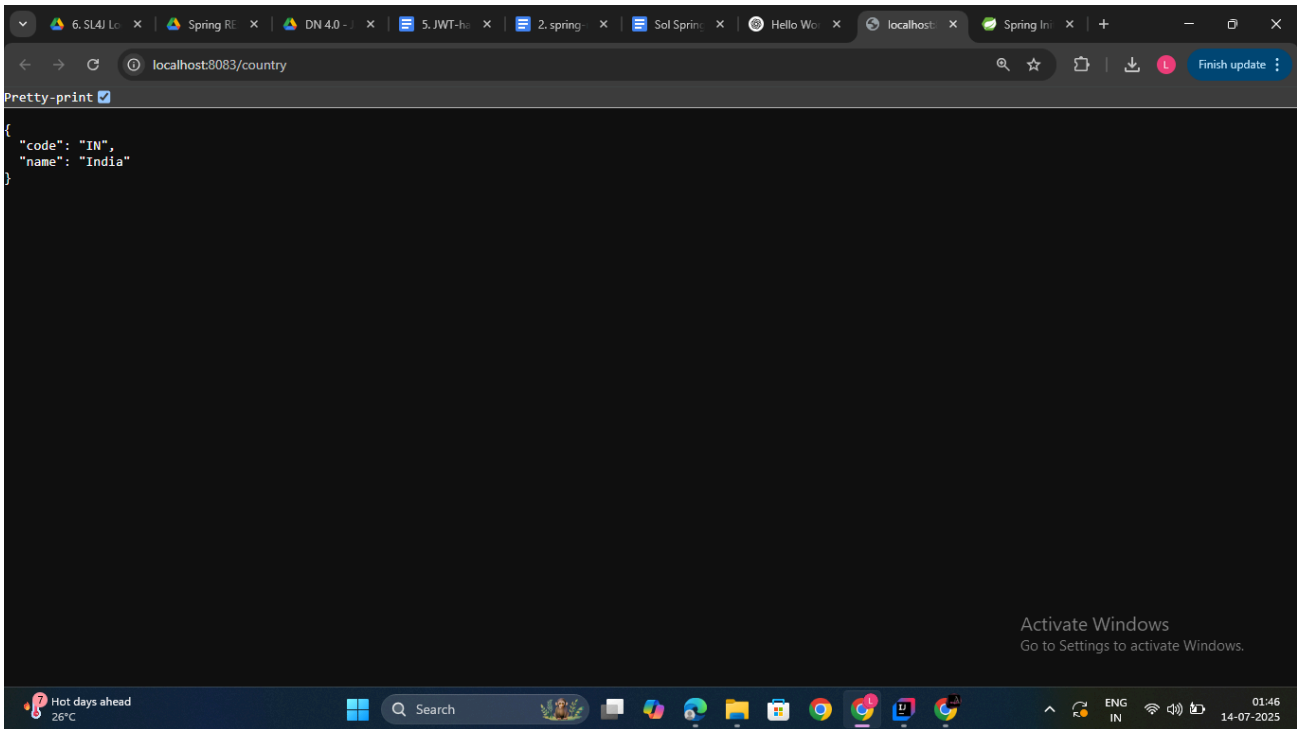
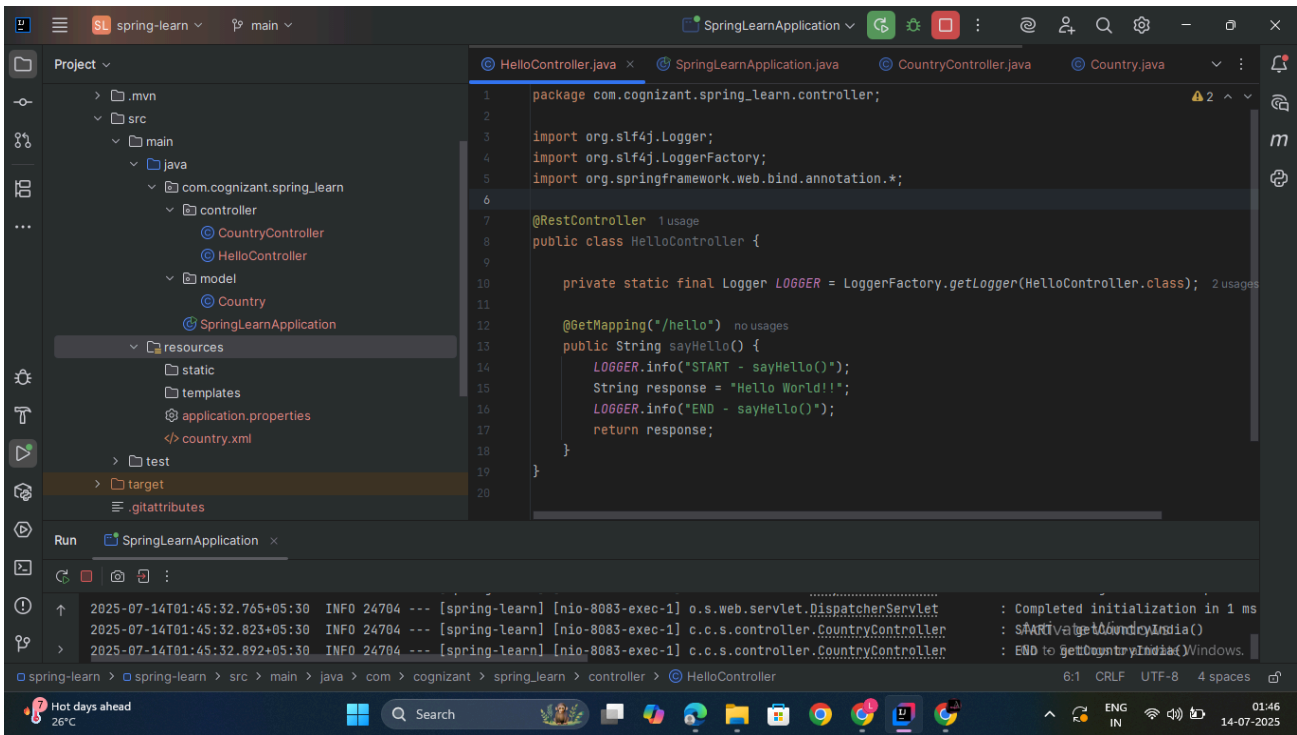


26°C Cloudy Search 01:35 14-07-2025

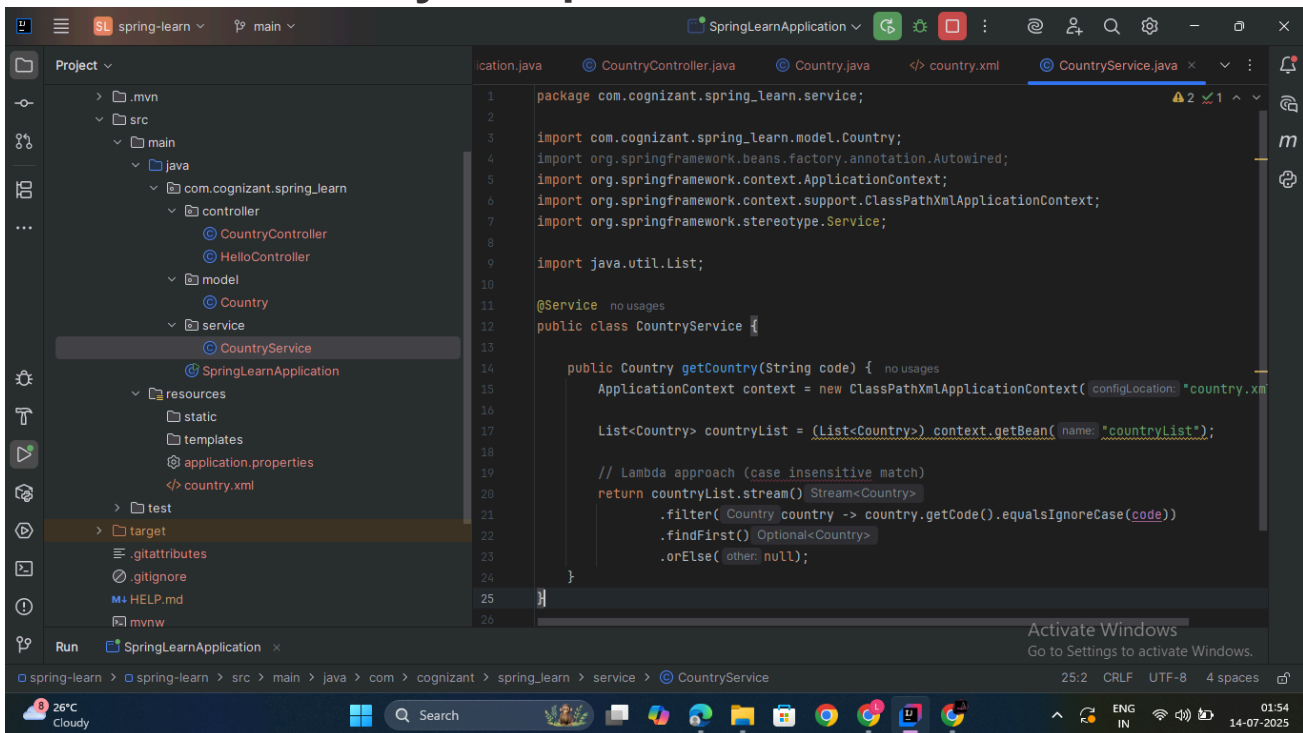
REST - Country Web Service



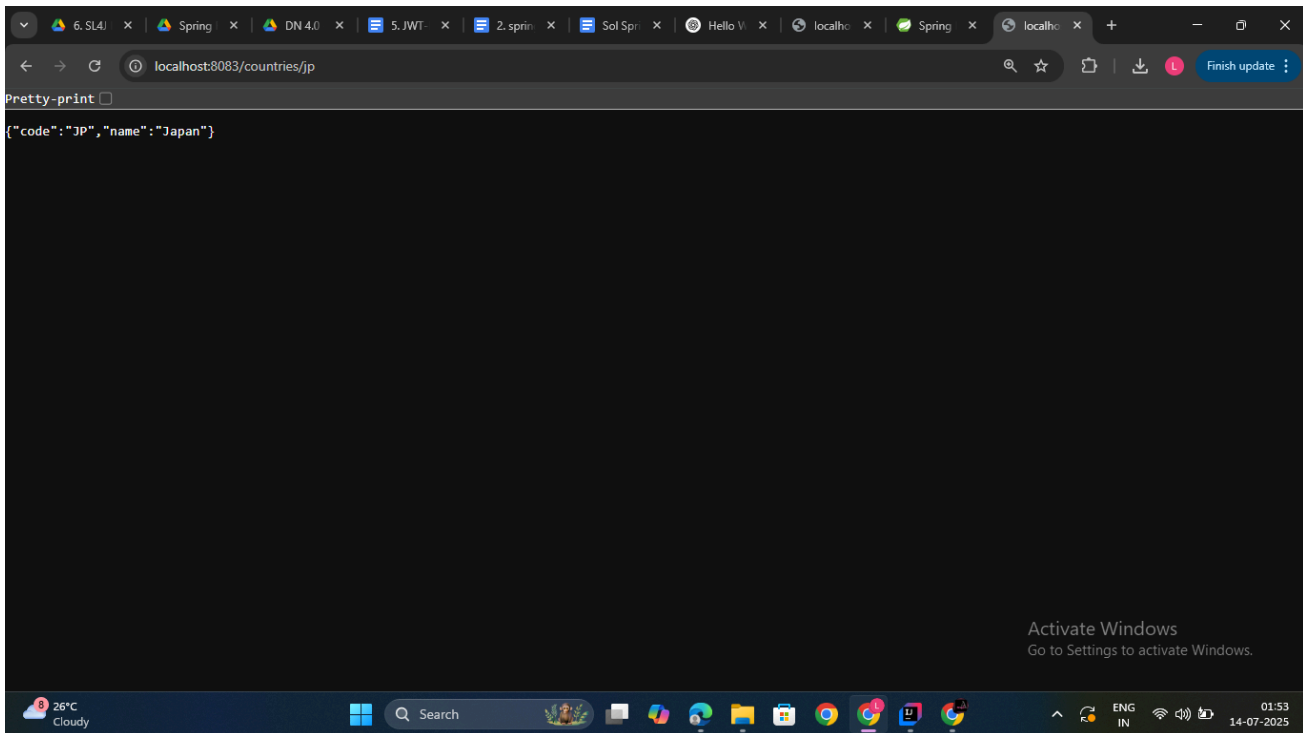




REST - Get country exceptional scenario



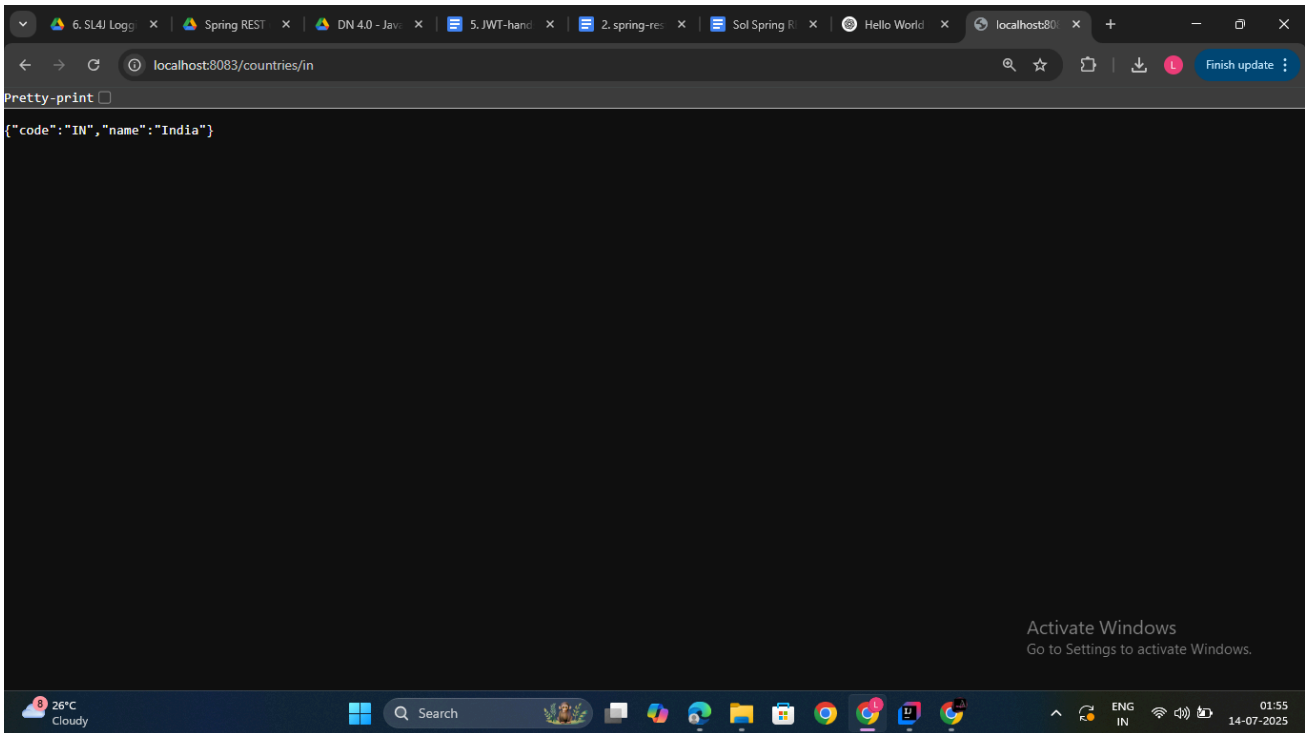
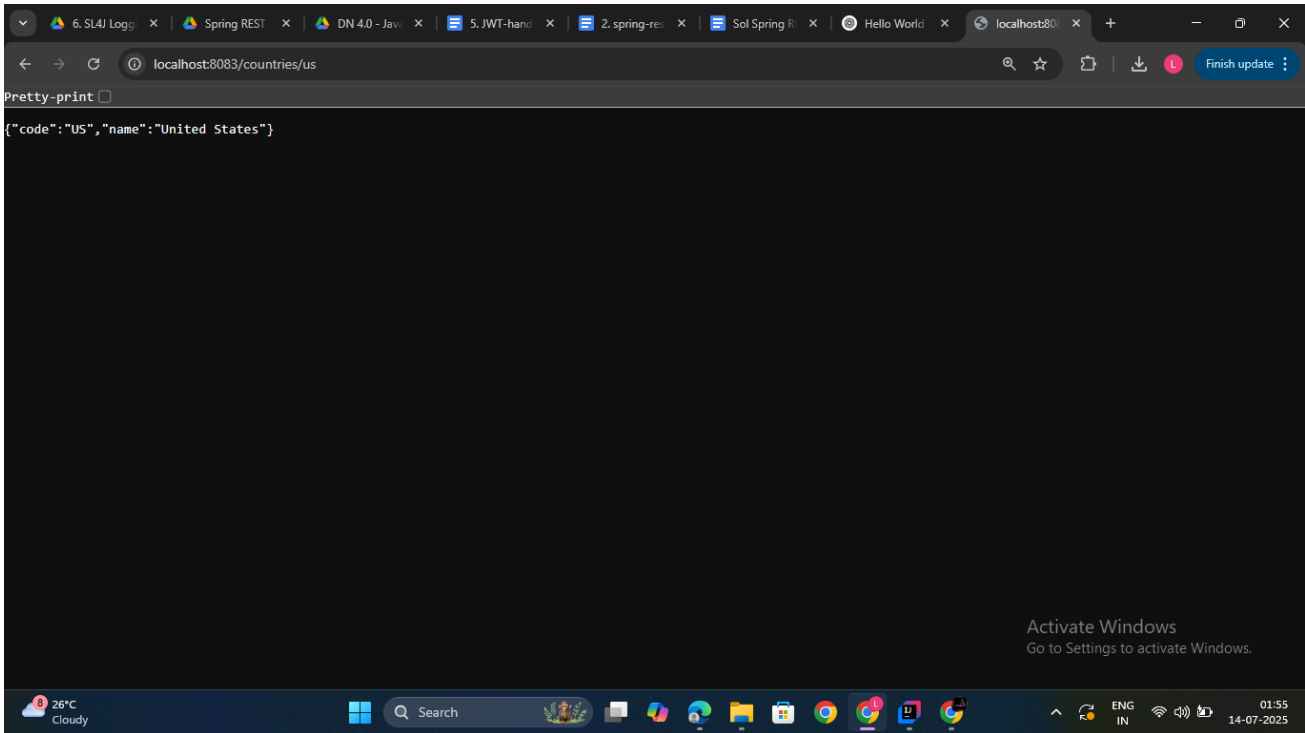
```
1 package com.cognizant.spring_learn.service;
2
3 import com.cognizant.spring_learn.model.Country;
4 import org.springframework.beans.factory.annotation.Autowired;
5 import org.springframework.context.ApplicationContext;
6 import org.springframework.context.support.ClassPathXmlApplicationContext;
7 import org.springframework.stereotype.Service;
8
9 import java.util.List;
10
11 @Service
12 public class CountryService {
13
14     public Country getCountry(String code) {
15         ApplicationContext context = new ClassPathXmlApplicationContext("country.xml");
16
17         List<Country> countryList = (List<Country>) context.getBean("countryList");
18
19         // Lambda approach (case insensitive match)
20         return countryList.stream()
21             .filter(country -> country.getCode().equalsIgnoreCase(code))
22             .findFirst()
23             .orElse(null);
24     }
25 }
```



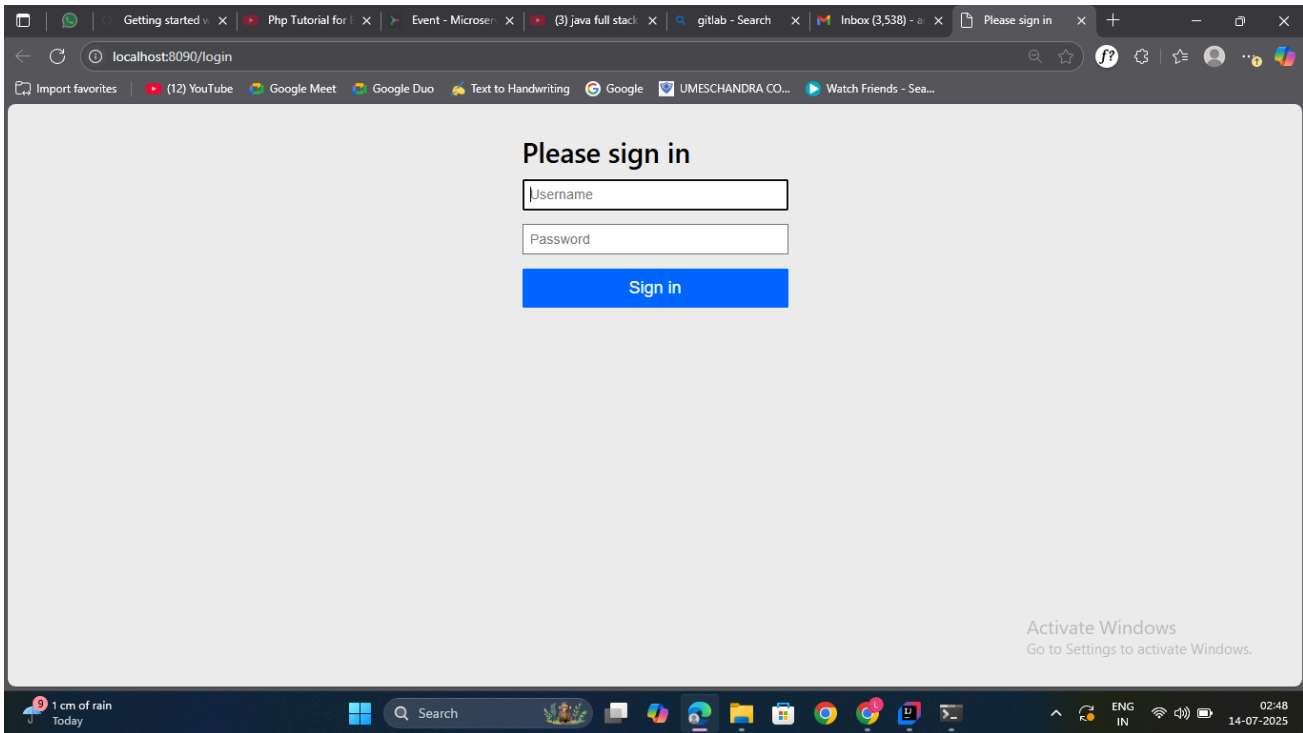
localhost:8083/countries/jp

Pretty-print

```
{"code": "JP", "name": "Japan"}
```



5. JWT-handson



Request

```
curl -s -u user:pwd http://localhost:8090/authenticate
```

Response

```
{"token":"eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJ1c2VyIiwiaWF0IjoxNTcwMzc5NDc0LCJleHAiOjE1NzAzODAzR9.t3LRv1CV-hwKfoqZYlaVQqEUiBloWcWn0ft3tgv0dL0"}
```