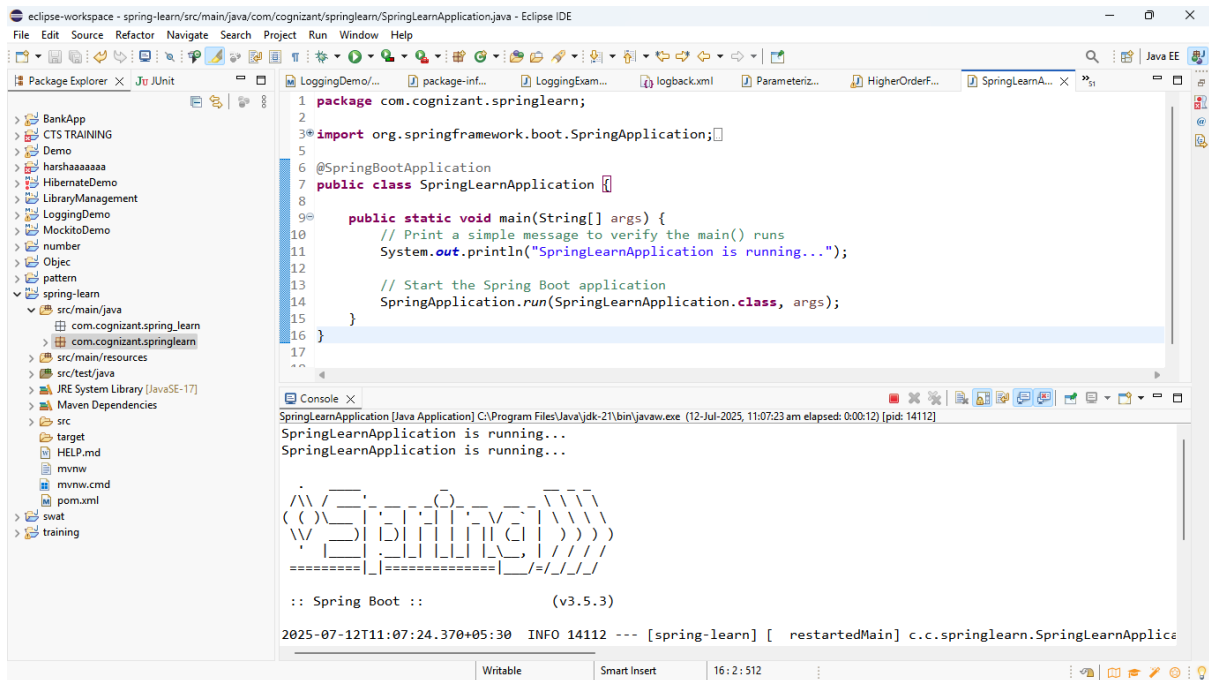


1.SPRING REST HANDS-ON

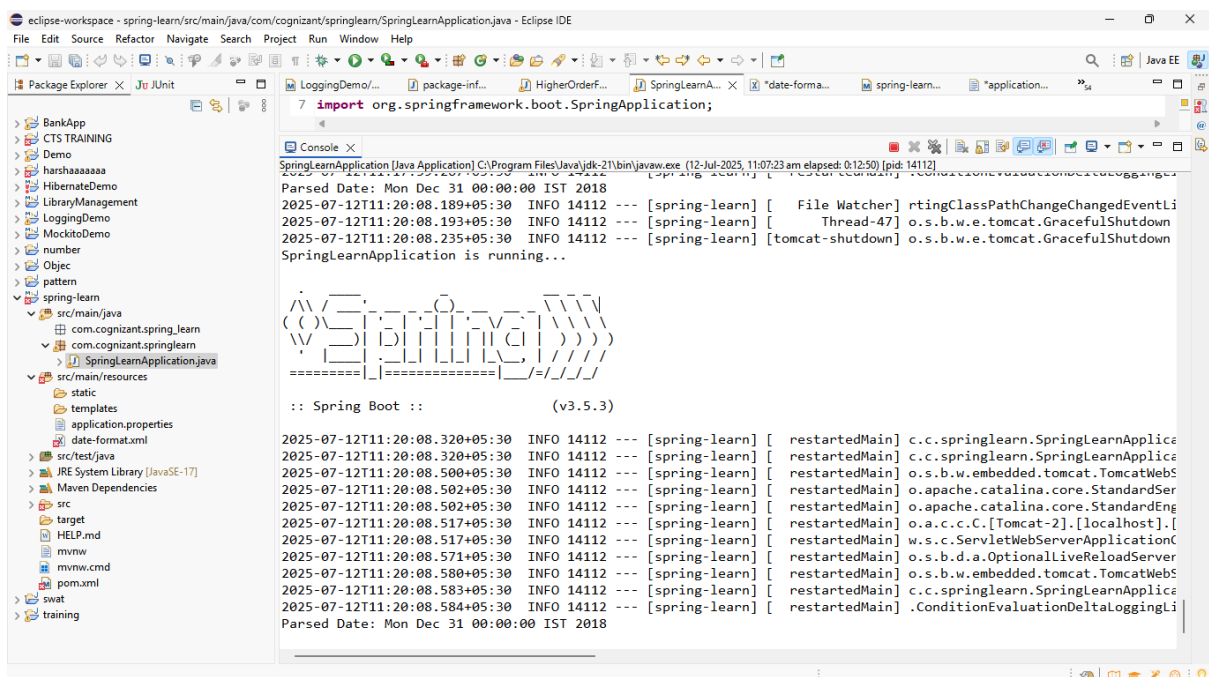
Hands on 1

Create a Spring Web Project using Maven



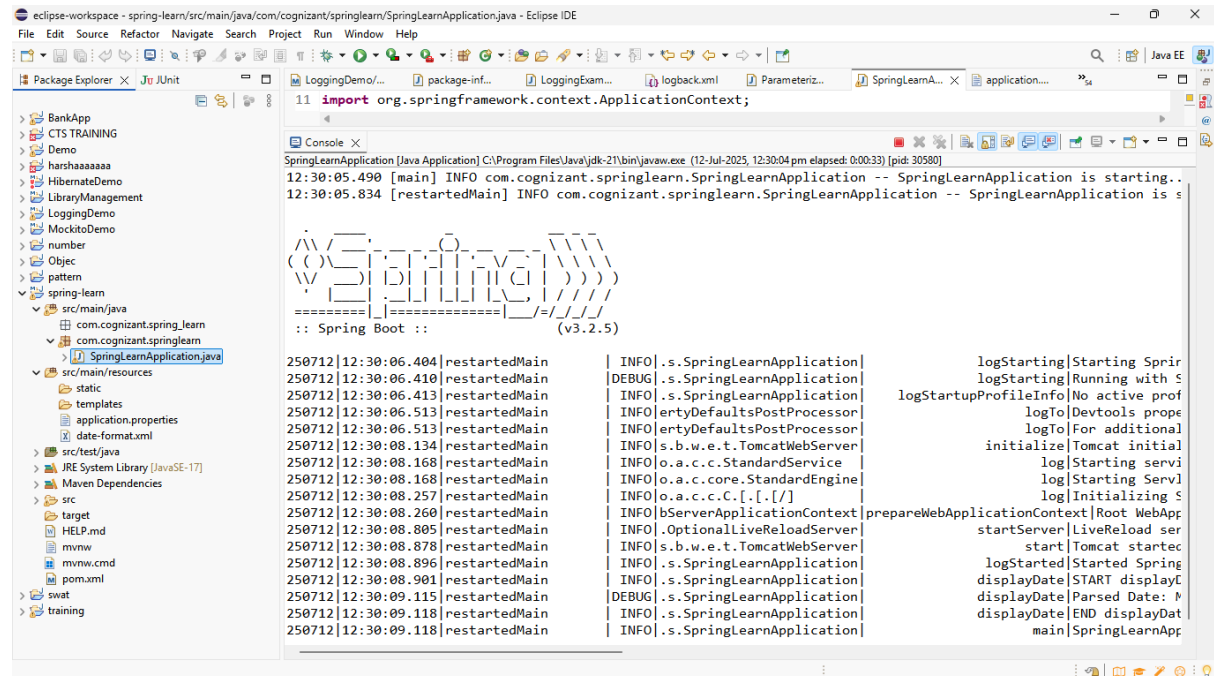
Hands on 2

Spring Core – Load SimpleDateFormat from Spring Configuration XML



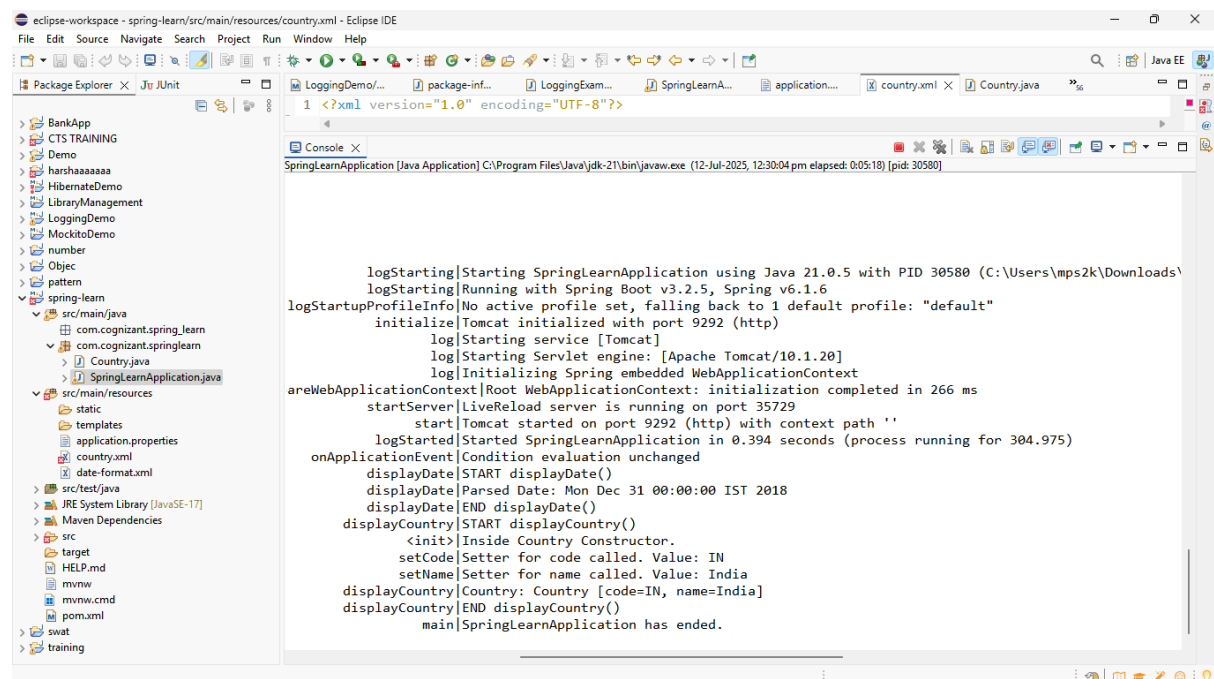
Hands on 3

Spring Core - Incorporate Logging



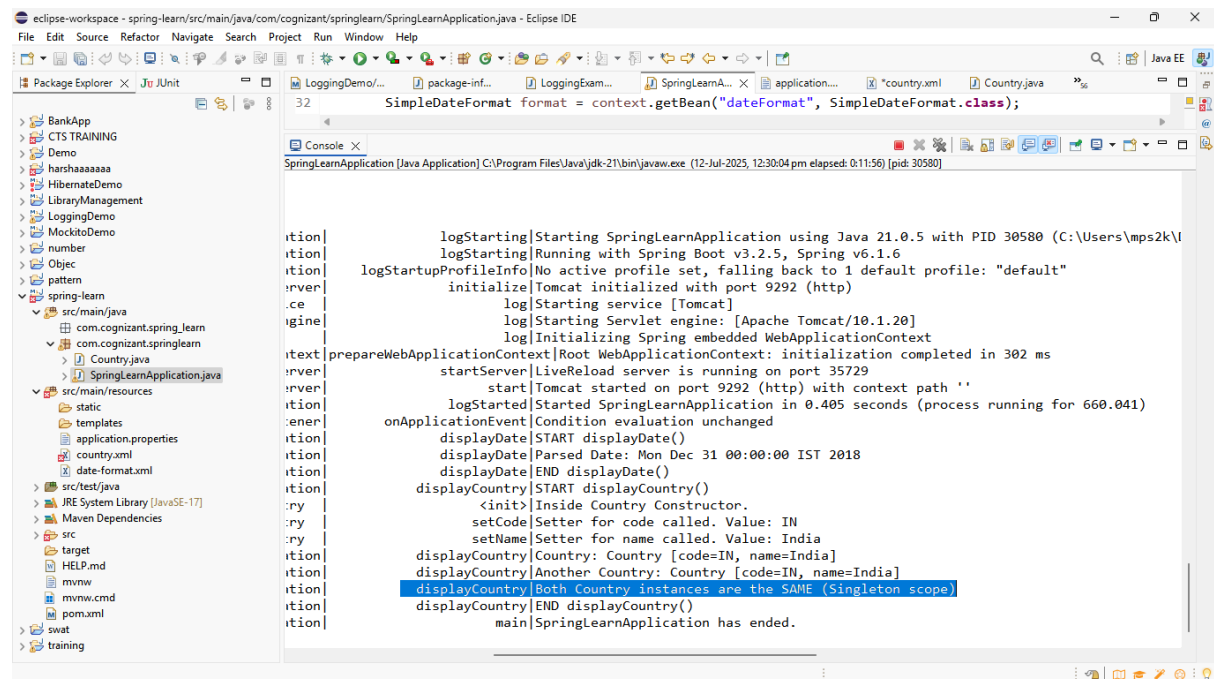
Hands on 4

Spring Core – Load Country from Spring Configuration XML



Hands on 5

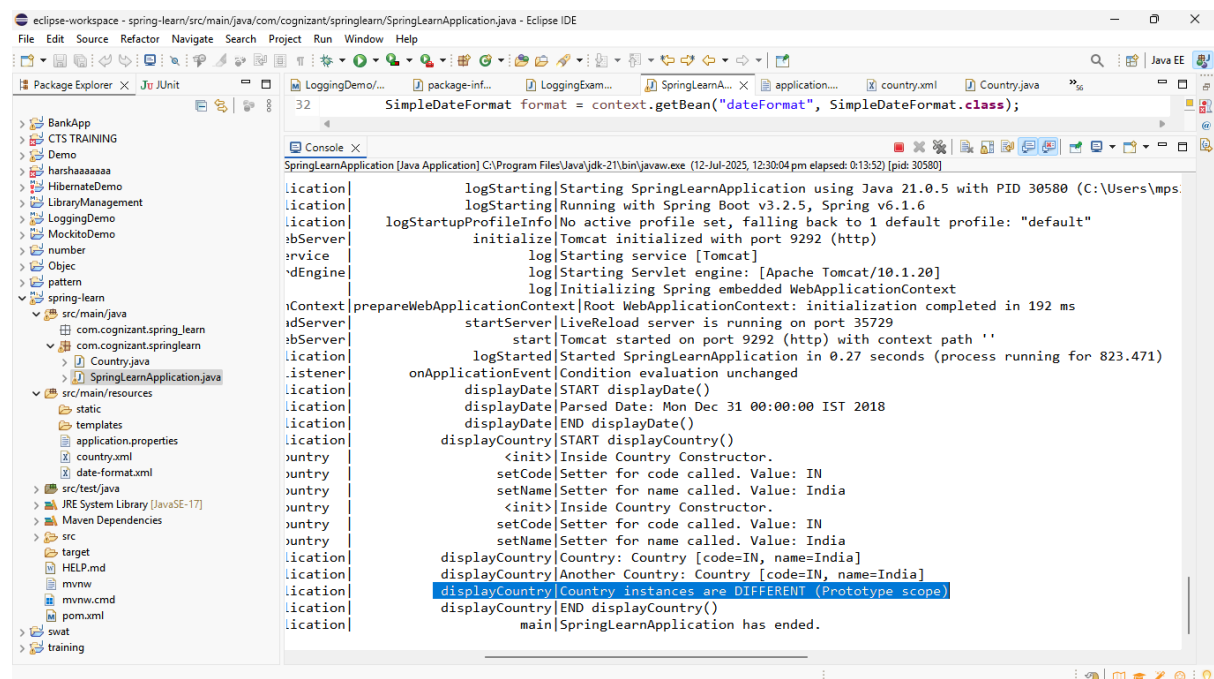
Spring Core – Demonstration of Singleton Scope and Prototype Scope



The screenshot shows the Eclipse IDE with a Spring application running. The console output displays the startup sequence, including the initialization of the Tomcat server and the application context. The application is configured to use the Singleton scope for the 'dateFormat' bean. The logs show that the bean is initialized once and shared across the application.

```
SimpleDateFormat format = context.getBean("dateFormat", SimpleDateFormat.class);

logStarting|Starting SpringLearnApplication using Java 21.0.5 with PID 30580 (C:\Users\mps2k\l
logStarting|Running with Spring Boot v3.2.5, Spring v6.1.6
logStartupProfileInfo|No active profile set, falling back to 1 default profile: "default"
initialize|Tomcat initialized with port 9292 (http)
logStarting service [Tomcat]
logStarting Servlet engine: [Apache Tomcat/10.1.20]
log|Initializing Spring embedded WebApplicationContext
prepareWebApplicationContext|Root WebApplicationContext: initialization completed in 302 ms
startServer|LiveReload server is running on port 35729
start|Tomcat started on port 9292 (http) with context path ''
logStarted|Started SpringLearnApplication in 0.405 seconds (process running for 660.041)
onApplicationEvent|Condition evaluation unchanged
displayDate|START displayDate()
displayDate|Parsed Date: Mon Dec 31 00:00:00 IST 2018
displayDate|END displayDate()
displayCountry|START displayCountry()
<init>|Inside Country Constructor.
setCode|Setter for code called. Value: IN
setName|Setter for name called. Value: India
displayCountry|Country: Country [code=IN, name=India]
displayCountry|Another Country: Country [code=IN, name=India]
displayCountry|Both Country instances are the SAME (Singleton scope)
displayCountry|END displayCountry()
main|SpringLearnApplication has ended.
```



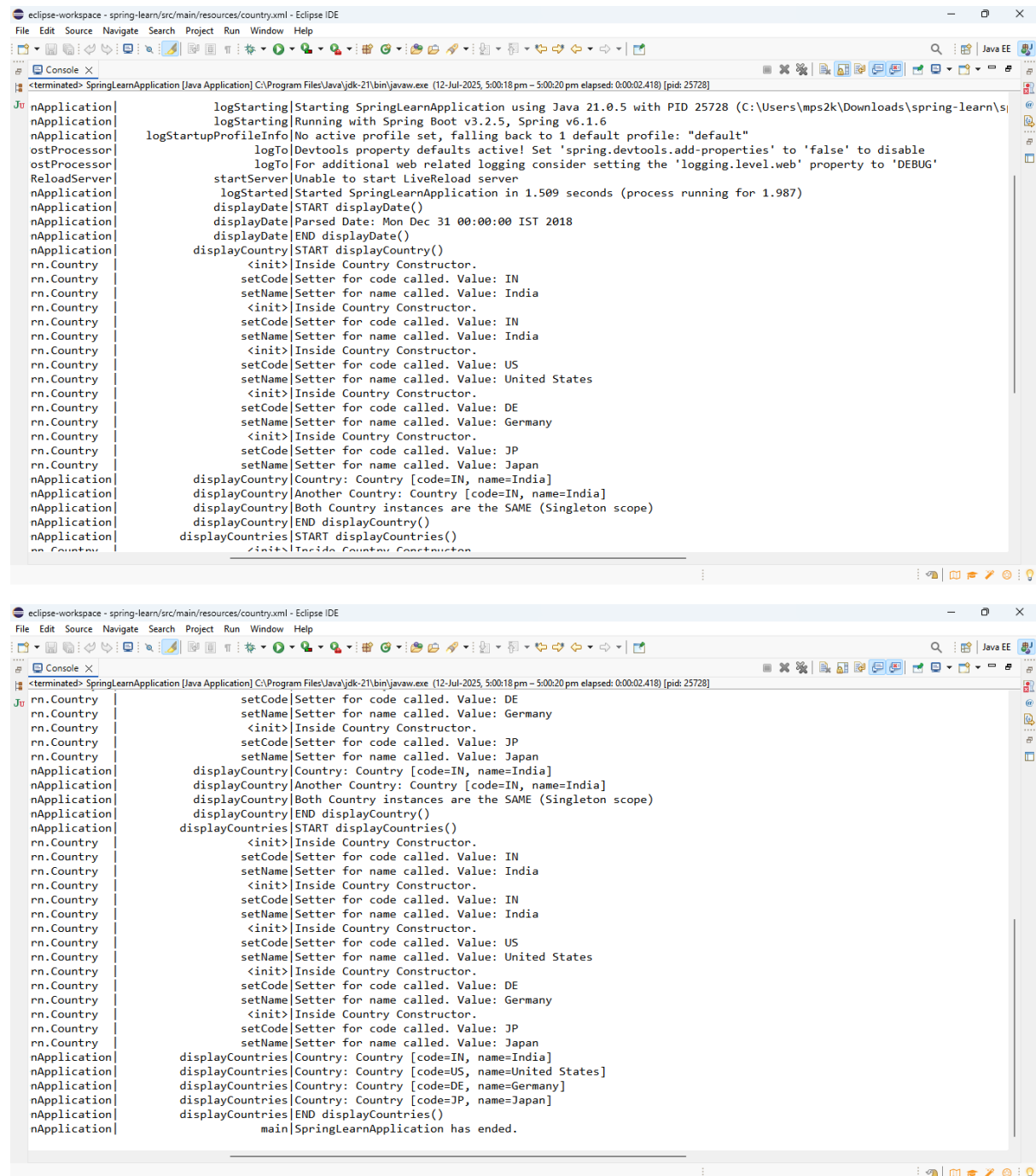
The screenshot shows the Eclipse IDE with a Spring application running. The console output displays the startup sequence, including the initialization of the Tomcat server and the application context. The application is configured to use the Prototype scope for the 'dateFormat' bean. The logs show that the bean is initialized multiple times, creating new instances each time it is requested.

```
SimpleDateFormat format = context.getBean("dateFormat", SimpleDateFormat.class);

logStarting|Starting SpringLearnApplication using Java 21.0.5 with PID 30580 (C:\Users\mps.
logStarting|Running with Spring Boot v3.2.5, Spring v6.1.6
logStartupProfileInfo|No active profile set, falling back to 1 default profile: "default"
initialize|Tomcat initialized with port 9292 (http)
logStarting service [Tomcat]
logStarting Servlet engine: [Apache Tomcat/10.1.20]
log|Initializing Spring embedded WebApplicationContext
prepareWebApplicationContext|Root WebApplicationContext: initialization completed in 192 ms
startServer|LiveReload server is running on port 35729
start|Tomcat started on port 9292 (http) with context path ''
logStarted|Started SpringLearnApplication in 0.27 seconds (process running for 823.471)
onApplicationEvent|Condition evaluation unchanged
displayDate|START displayDate()
displayDate|Parsed Date: Mon Dec 31 00:00:00 IST 2018
displayDate|END displayDate()
displayCountry|START displayCountry()
<init>|Inside Country Constructor.
setCode|Setter for code called. Value: IN
setName|Setter for name called. Value: India
<init>|Inside Country Constructor.
setCode|Setter for code called. Value: IN
setName|Setter for name called. Value: India
displayCountry|Country: Country [code=IN, name=India]
displayCountry|Another Country: Country [code=IN, name=India]
displayCountry|Country instances are DIFFERENT (Prototype scope)
displayCountry|END displayCountry()
main|SpringLearnApplication has ended.
```

Hands on 6

Spring Core – Load list of countries from Spring Configuration XML



```
eclipse-workspace - spring-learn/src/main/resources/country.xml - Eclipse IDE
File Edit Source Navigate Search Project Run Window Help

<terminated> SpringLearnApplication [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (12-Jul-2025, 5:00:18 pm - 5:00:20 pm elapsed: 0:00:02.418) [pid: 25728]

nApplication| logStarting|Starting SpringLearnApplication using Java 21.0.5 with PID 25728 (C:\Users\mps2k\Downloads\spring-learn\s
nApplication| logStarting|Running with Spring Boot v3.2.5, Spring v6.1.6
nApplication| logStartupProfileInfo|No active profile set, falling back to 1 default profile: "default"
ostProcessor| logTo|Devtools property defaults active! Set 'spring.devtools.add-properties' to 'false' to disable
ostProcessor| logTo|For additional web related logging consider setting the 'logging.level.web' property to 'DEBUG'
ReloadServer| startServer|Unable to start LiveReload server
nApplication| logStarted|Started SpringLearnApplication in 1.509 seconds (process running for 1.987)
nApplication| displayDate|START displayDate()
nApplication| displayDate|Parsed Date: Mon Dec 31 00:00:00 IST 2018
nApplication| displayDate|END displayDate()
nApplication| displayCountry|START displayCountry()
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: IN
nn.COUNTRY| setName|Setter for name called. Value: India
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: IN
nn.COUNTRY| setName|Setter for name called. Value: India
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: US
nn.COUNTRY| setName|Setter for name called. Value: United States
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: DE
nn.COUNTRY| setName|Setter for name called. Value: Germany
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: JP
nn.COUNTRY| setName|Setter for name called. Value: Japan
nApplication| displayCountry|Country: Country [code=IN, name=India]
nApplication| displayCountry|Another Country: Country [code=IN, name=India]
nApplication| displayCountry|Both Country instances are the SAME (Singleton scope)
nApplication| displayCountry|END displayCountry()
nApplication| displayCountries|START displayCountries()
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: DE
nn.COUNTRY| setName|Setter for name called. Value: Germany
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: JP
nn.COUNTRY| setName|Setter for name called. Value: Japan
nApplication| displayCountry|Country: Country [code=IN, name=India]
nApplication| displayCountry|Another Country: Country [code=IN, name=India]
nApplication| displayCountry|Both Country instances are the SAME (Singleton scope)
nApplication| displayCountry|END displayCountry()
nApplication| displayCountries|START displayCountries()
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: IN
nn.COUNTRY| setName|Setter for name called. Value: India
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: IN
nn.COUNTRY| setName|Setter for name called. Value: India
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: US
nn.COUNTRY| setName|Setter for name called. Value: United States
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: DE
nn.COUNTRY| setName|Setter for name called. Value: Germany
nn.COUNTRY| <init>|Inside Country Constructor.
nn.COUNTRY| setCode|Setter for code called. Value: JP
nn.COUNTRY| setName|Setter for name called. Value: Japan
nApplication| displayCountries|Country: Country [code=IN, name=India]
nApplication| displayCountries|Country: Country [code=US, name=United States]
nApplication| displayCountries|Country: Country [code=DE, name=Germany]
nApplication| displayCountries|Country: Country [code=JP, name=Japan]
nApplication| displayCountries|END displayCountries()
nApplication| main|SpringLearnApplication has ended.
```