

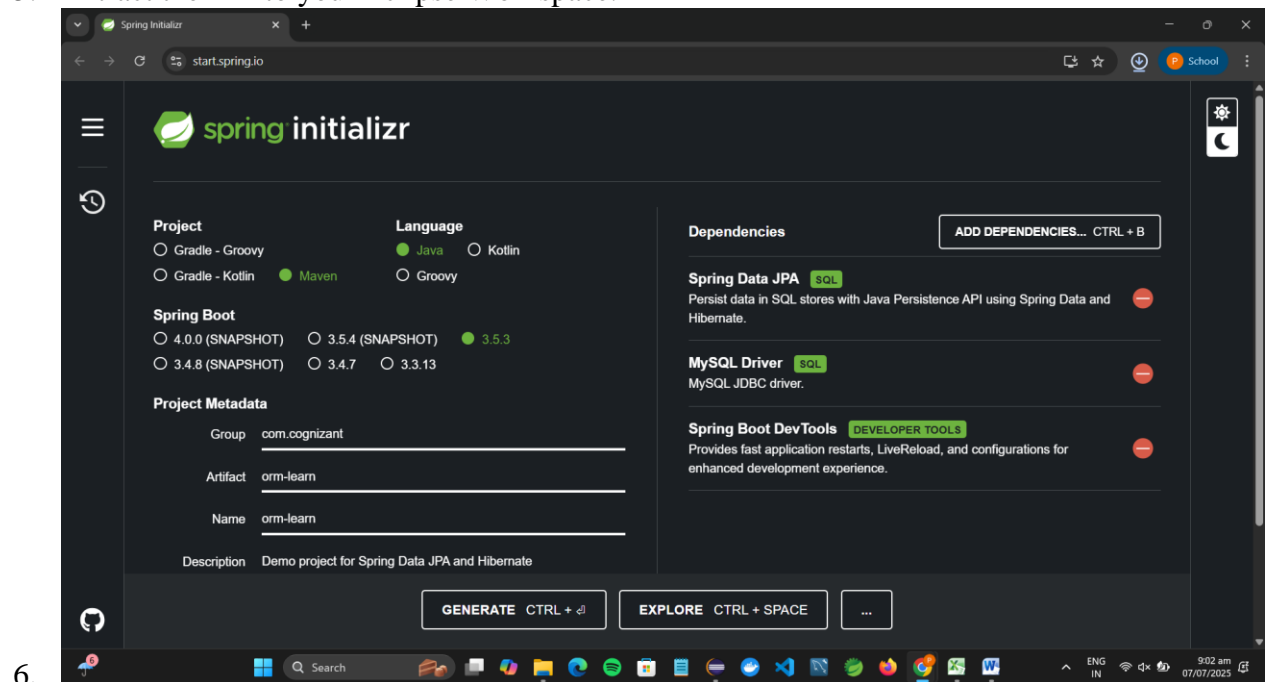
Spring Data JPA - Quick Example

1. Software Installation (Ensure the following are installed)

- MySQL Server 8.0
- MySQL Workbench 8
- Eclipse IDE for Enterprise Java Developers 2019-03 R
- Maven 3.6.2

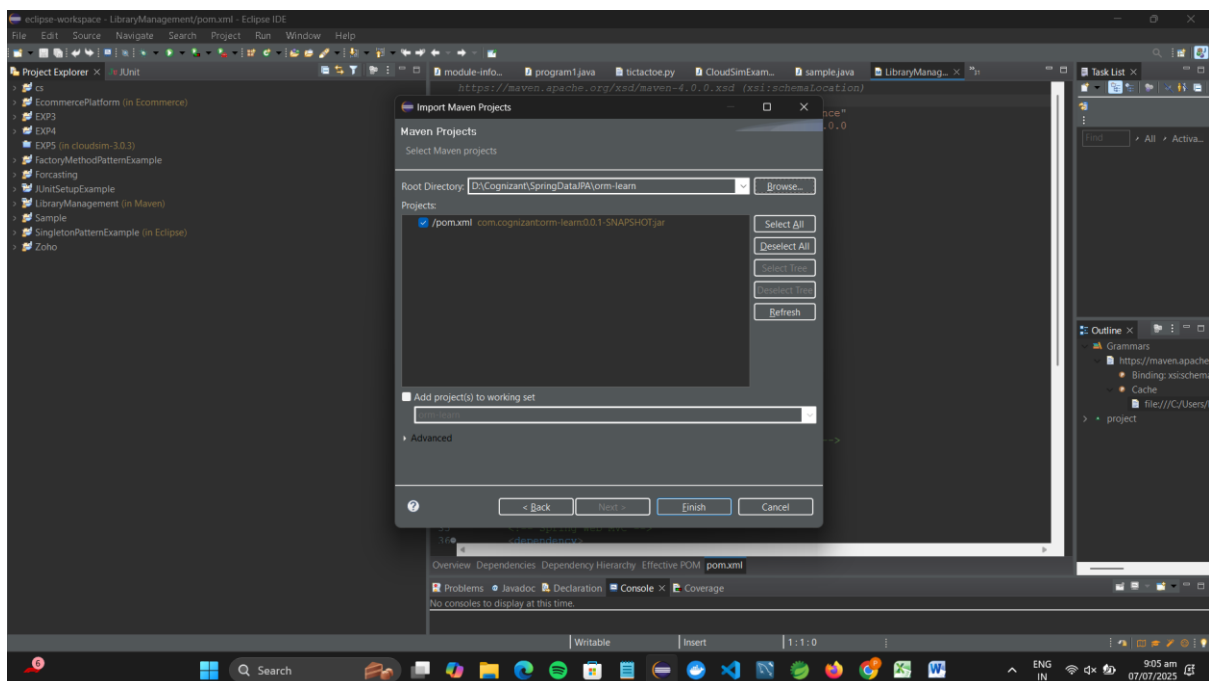
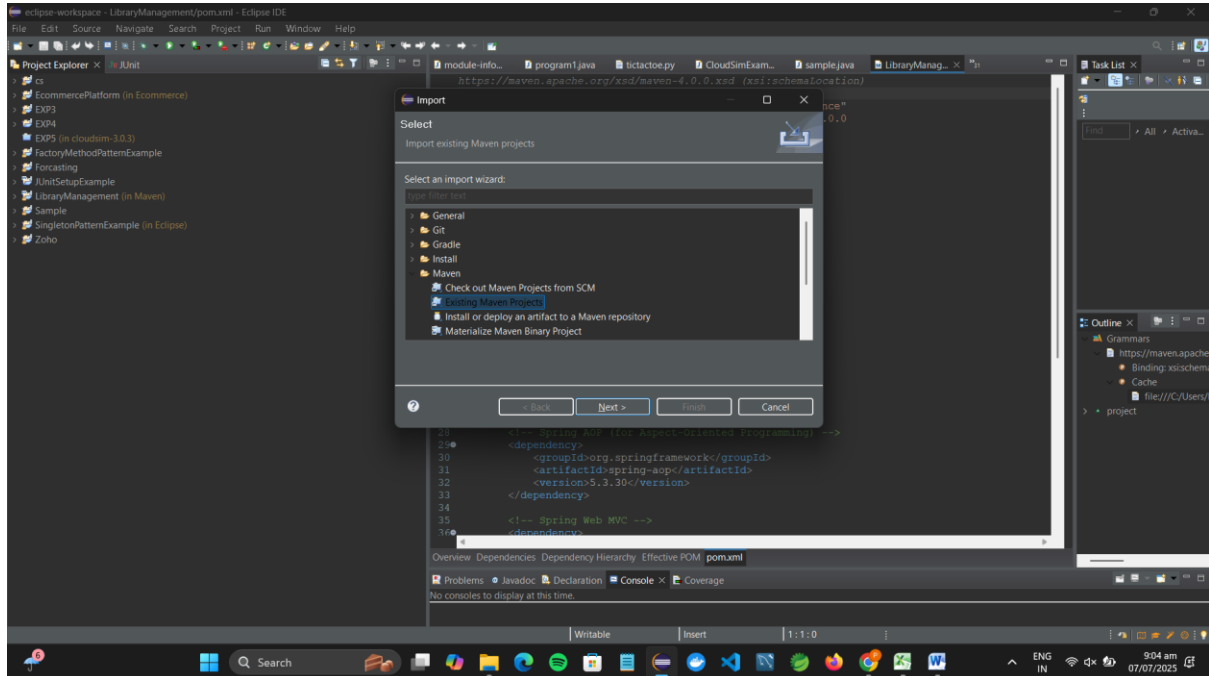
2. Project Creation Using Spring Initializr

1. Go to: <https://start.spring.io>
2. Fill details:
 - Group: com.cognizant
 - Artifact: orm-learn
 - Description: Demo project for Spring Data JPA and Hibernate
3. Select dependencies:
 - **Spring Boot DevTools**
 - **Spring Data JPA**
 - **MySQL Driver**
4. Click **Generate** and download the ZIP.
5. Extract the ZIP to your Eclipse Workspace.



3. Import Project into Eclipse

1. Open Eclipse → File > Import > Maven > Existing Maven Projects.
2. Browse and select extracted folder.
3. Click **Finish**.



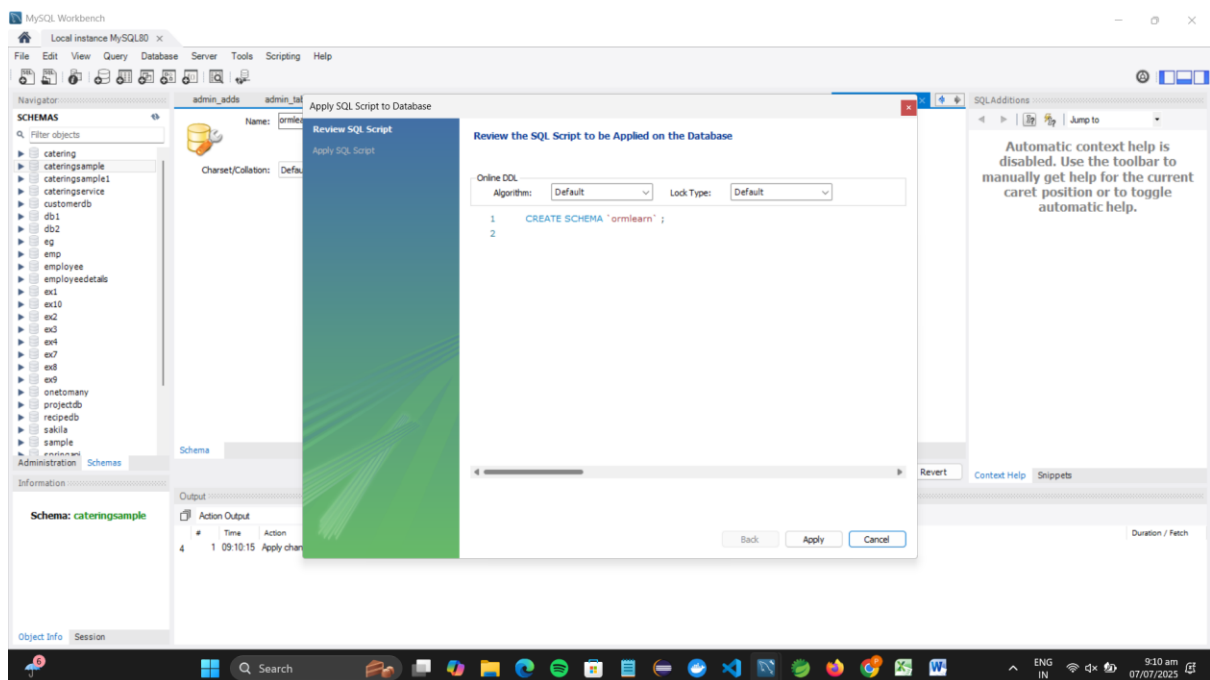
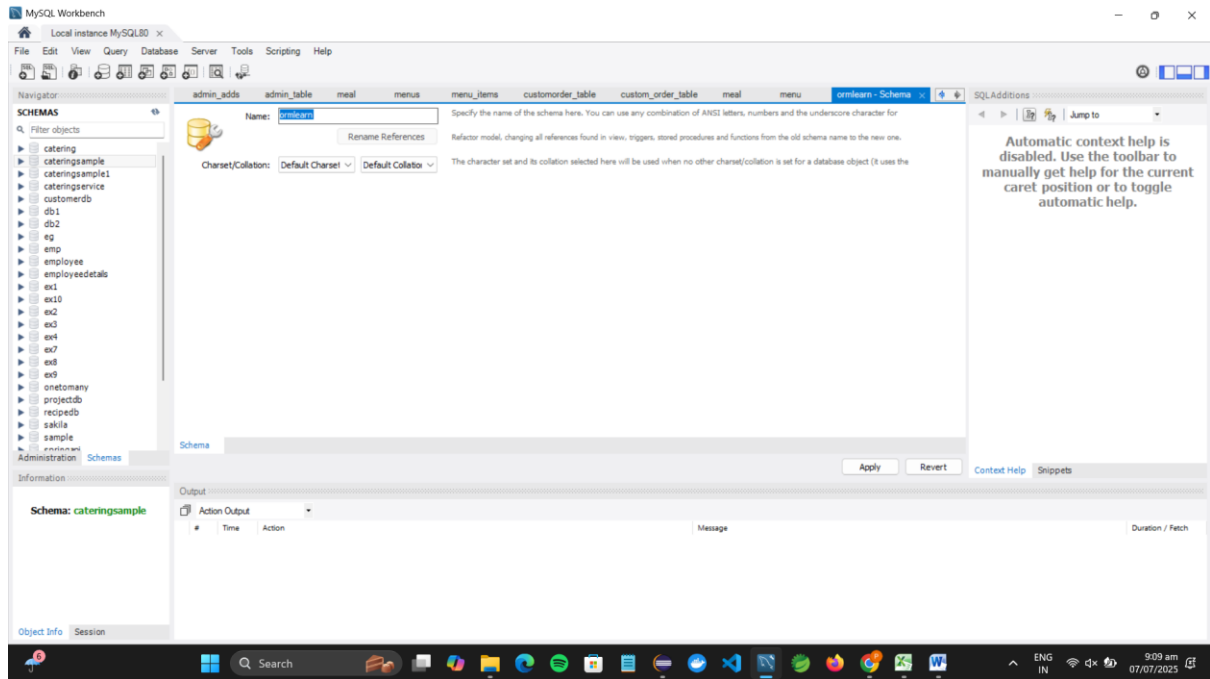
4. MySQL Database Setup

1. Open MySQL Command Line:

```
mysql -u root -p
```

2. Create Schema:

```
create schema ormlearn;
```



5: Build Project via Maven

❑ Open Command Prompt:

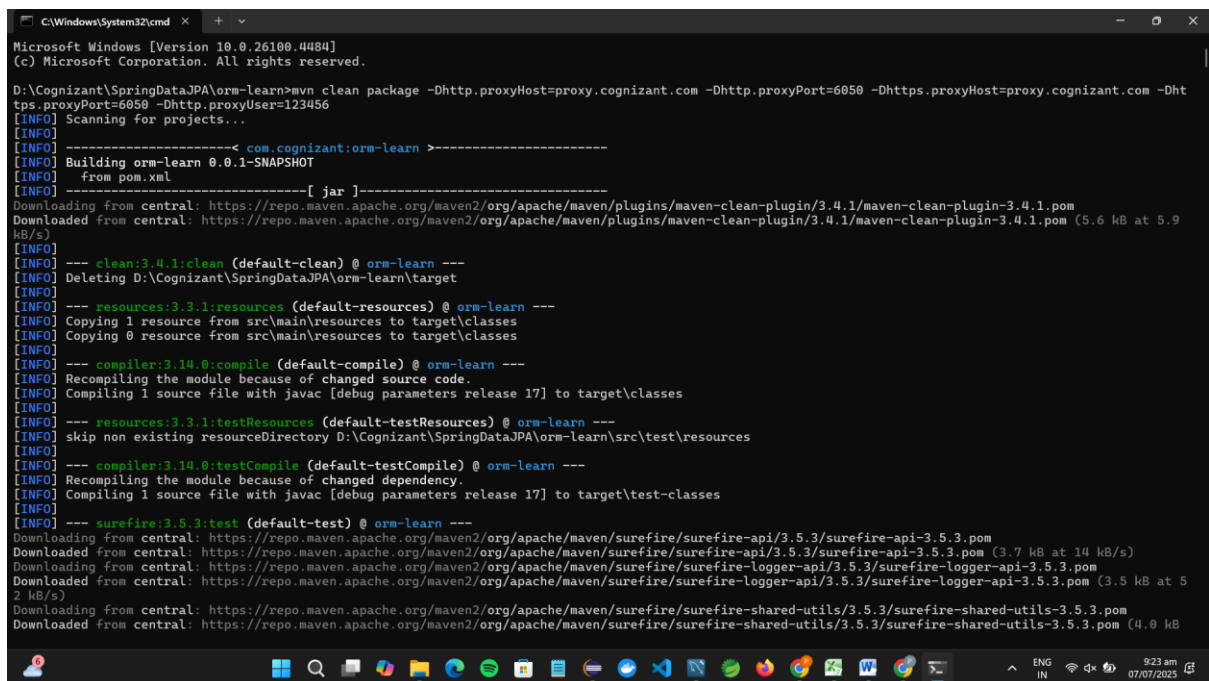
- Press Win + R, type cmd, and hit Enter.
- Go to your project directory:

```
cd D:\Cognizant\SpringDataJPA\orm-learn
```

Run Maven Build:

```
mvn clean package -Dhttp.proxyHost=proxy.cognizant.com -Dhttp.proxyPort=6050 -
```

```
Dhttps.proxyHost=proxy.cognizant.com -Dhttps.proxyPort=6050 -Dhttp.proxyUser=123456
```



```
C:\Windows\System32\cmd
Microsoft Windows [Version 10.0.26100.4484]
(c) Microsoft Corporation. All rights reserved.

D:\Cognizant\SpringDataJPA\orm-learn>mvn clean package -Dhttp.proxyHost=proxy.cognizant.com -Dhttp.proxyPort=6050 -Dhttps.proxyHost=proxy.cognizant.com -Dhttps.proxyPort=6050 -Dhttp.proxyUser=123456
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.cognizant:orm-learn >-----
[INFO] Building orm-learn 0.0.1-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.4.1/maven-clean-plugin-3.4.1.pom
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.4.1/maven-clean-plugin-3.4.1.pom (5.6 kB at 5.9 kB/s)
[INFO] --- clean:3.4.1:clean (default-clean) @ orm-learn ---
[INFO] Deleting D:\Cognizant\SpringDataJPA\orm-learn\target
[INFO] --- resources:3.3.1:resources (default-resources) @ orm-learn ---
[INFO] Copying 1 resource from src\main\resources to target\classes
[INFO] Copying 0 resource from src\main\resources to target\classes
[INFO] --- compiler:3.14.0:compile (default-compile) @ orm-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] --- resources:3.3.1:testResources (default-testResources) @ orm-learn ---
[INFO] skip non existing resourceDirectory D:\Cognizant\SpringDataJPA\orm-learn\src\test\resources
[INFO] --- compiler:3.14.0:testCompile (default-testCompile) @ orm-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] --- surefire:3.5.3:test (default-test) @ orm-learn ---
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-api/3.5.3/surefire-api-3.5.3.pom
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-api/3.5.3/surefire-api-3.5.3.pom (3.7 kB at 14 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-logger-api/3.5.3/surefire-logger-api-3.5.3.pom
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-logger-api/3.5.3/surefire-logger-api-3.5.3.pom (3.5 kB at 5.2 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-shared-utils/3.5.3/surefire-shared-utils-3.5.3.pom
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-shared-utils/3.5.3/surefire-shared-utils-3.5.3.pom (4.0 kB
```

```
C:\Windows\System32\cmd
Downloaded from central: https://repo.maven.apache.org/maven2/commons-codec/commons-codec/1.17.1/commons-codec-1.17.1.jar (373 kB at 612 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/httpcomponents/client5/httpclient5/5.5/httpclient5-5.5.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.16.0/commons-lang3-3.16.0.jar (674 kB at 592 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/httpcomponents/core5/httpcore5/5.3.4/httpcore5-5.3.4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-compress/1.27.1/commons-compress-1.27.1.jar (1.1 MB at 871 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/httpcomponents/core5/httpcore5-h2/5.3.4/httpcore5-h2-5.3.4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-loader-tools/3.5.3/spring-boot-loader-tools-3.5.3.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/httpcomponents/client5/httpclient5/5.5/httpclient5-5.5.jar (955 kB at 633 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/io/micrometer/micrometer-observation/1.14.8/micrometer-observation-1.14.8.jar
Downloaded from central: https://repo.maven.apache.org/maven2/io/micrometer/micrometer-observation/1.14.8/micrometer-observation-1.14.8.jar (75 kB at 45 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/io/micrometer/micrometer-commons/1.14.8/micrometer-commons-1.14.8.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-shade-plugin/3.6.0/maven-shade-plugin-3.6.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/springframework/boot/spring-boot-loader-tools/3.5.3/spring-boot-loader-tools-3.5.3.jar (466 kB at 252 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm/9.7/asm-9.7.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm/9.7/asm-9.7.jar (125 kB at 64 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-commons/9.7/asm-commons-9.7.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-shade-plugin/3.6.0/maven-shade-plugin-3.6.0.jar (150 kB at 75 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-tree/9.7/asm-tree-9.7.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-commons/9.7/asm-commons-9.7.jar (73 kB at 35 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/vafer/jdependency/2.10/jdependency-2.10.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm-tree/9.7/asm-tree-9.7.jar (52 kB at 24 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/httpcomponents/core5/httpcore5/5.3.4/httpcore5-5.3.4.jar (909 kB at 407 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/vafer/jdependency/2.10/jdependency-2.10.jar (416 kB at 180 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/net/java/dev/jna/jna/5.17.0/jna-5.17.0.jar (2.0 MB at 818 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/net/java/dev/jna/jna-platform/5.17.0/jna-platform-5.17.0.jar (1.4 MB at 499 kB/s)
[INFO] Replacing main artifact D:\Cognizant\SpringDataJPA\orm-learn\target\orm-learn-0.0.1-SNAPSHOT.jar with repackaged archive, adding nested dependencies in BOOT-INF/.
[INFO] The original artifact has been renamed to D:\Cognizant\SpringDataJPA\orm-learn\target\orm-learn-0.0.1-SNAPSHOT.jar.original
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 13.951 s
[INFO] Finished at: 2025-07-07T09:25:37+05:30
[INFO] -----
D:\Cognizant\SpringDataJPA\orm-learn>
```

6.Create country Table and Insert Records in MySQL

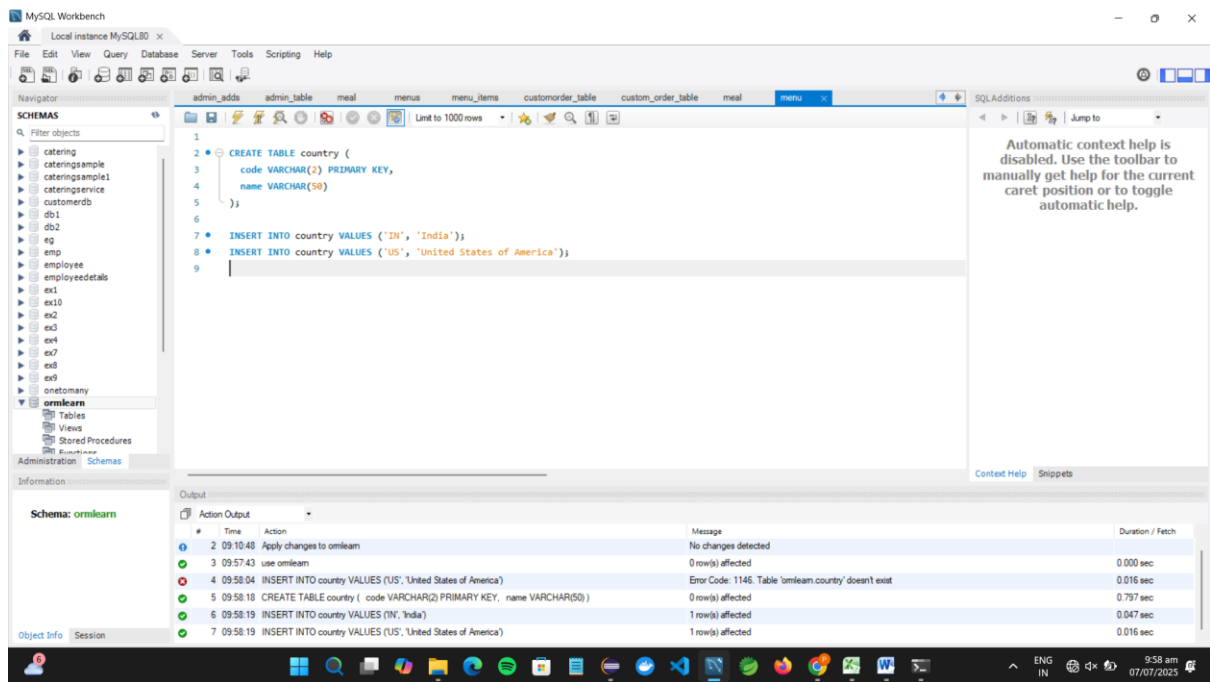
❑ Open MySQL Workbench.

1. Click your connection (e.g., Local instance MySQL80).
2. Choose your schema: ormllearn
3. Open a new SQL tab and run:

```
CREATE TABLE country (
  code VARCHAR(2) PRIMARY KEY,
  name VARCHAR(50)
);
```

```
INSERT INTO country VALUES ('IN', 'India');
INSERT INTO country VALUES ('US', 'United States of America');
```

4. Click **Execute (lightning bolt)**.



7.Create Entity Class Country.java

☐ Package location:

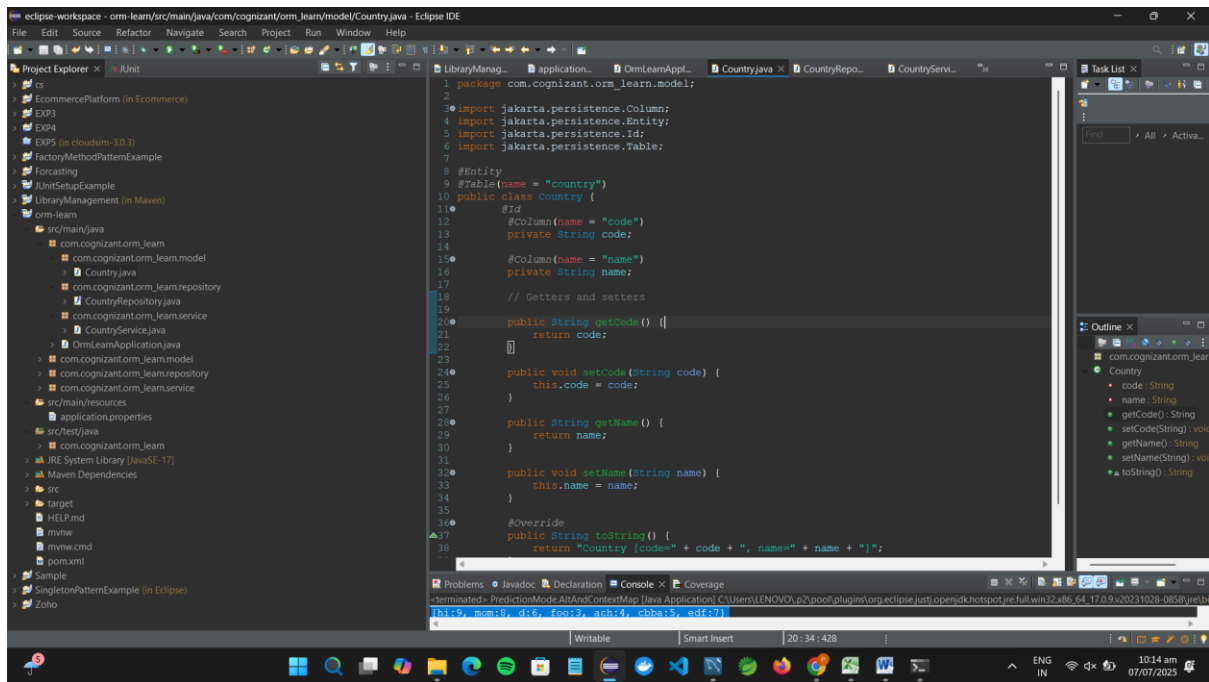
com.cognizant.ormlearn.model

☐ Steps:

1. Right-click src/main/java > com.cognizant.ormlearn → **New > Package** → Name it:

com.cognizant.ormlearn.model

2. Right-click this package → **New > Class** → Name: Country



8.Create Repository Interface

❑ Package location:

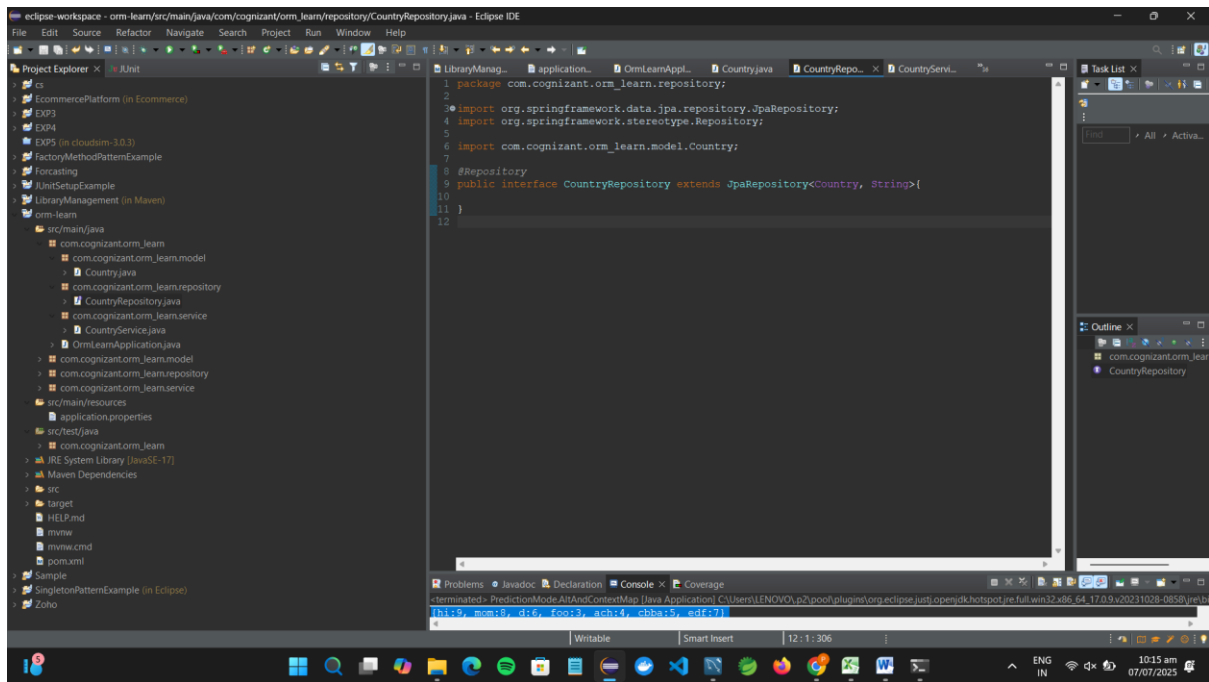
com.cognizant.ormlearn.repository

❑ Steps:

1. Create new package:

com.cognizant.ormlearn.repository

CountryRepository Interface:



9.Create Service Class

☐ Package location:

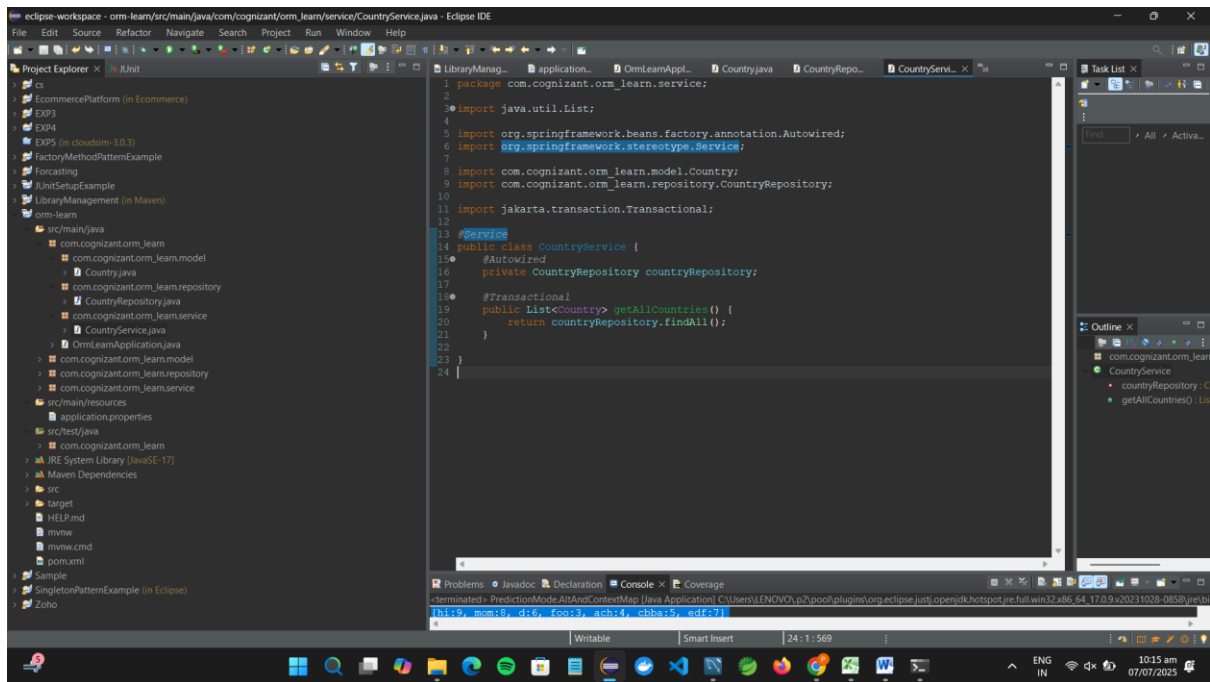
com.cognizant.ormlearn.service

☐ Steps:

1. Create new package:

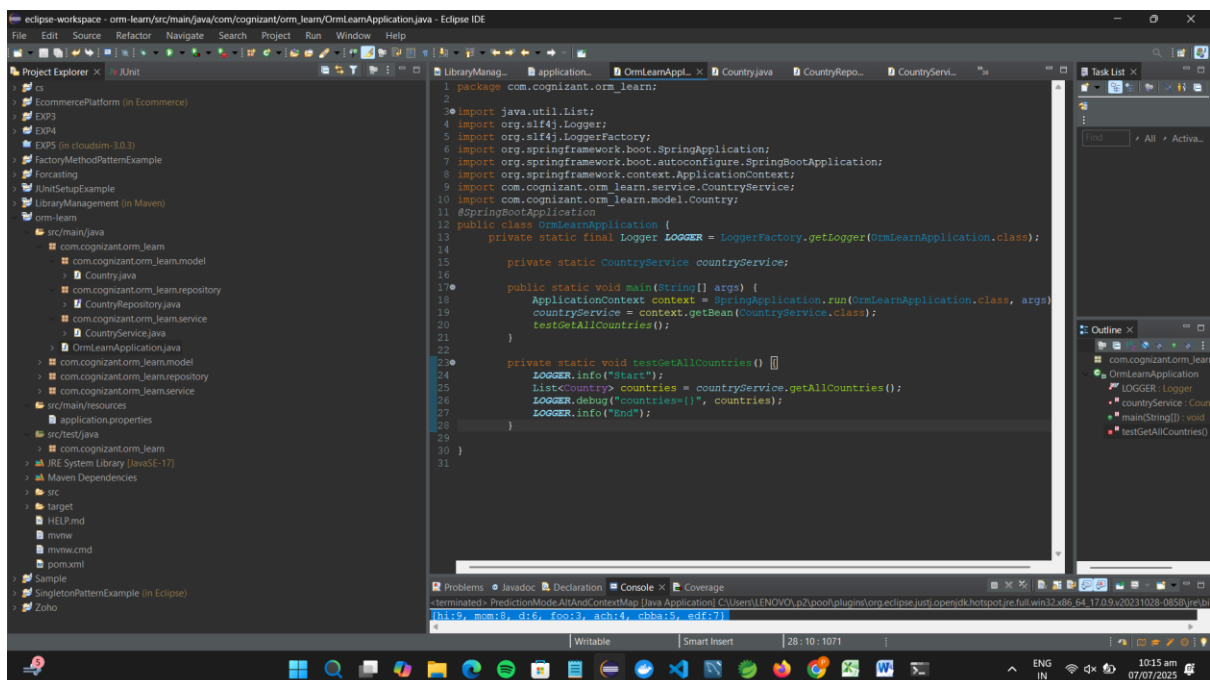
com.cognizant.ormlearn.service

CountryService Class:



10. Modify Main Class to Call the Service

- Modify `OrmLearnApplication.java` to call the service:



Output Screenshot:

