Spring Data JPA - Exercise 1: Quick Example

# 🎯 Objective

Build a Spring Boot application using Spring Data JPA to connect to a MySQL database and fetch data from a Country table.

# 🛠️ Tools Required

- MySQL Server 8.0  
- Eclipse IDE or IntelliJ  
- Maven 3.6+  
- Spring Boot Initializr  
- Spring Boot DevTools, Spring Data JPA, MySQL Driver

# 📁 Project Setup

1. Create a new Maven project using Spring Initializr (https://start.spring.io/)  
2. Group: com.cognizant  
3. Artifact: orm-learn  
4. Add Dependencies: Spring Boot DevTools, Spring Data JPA, MySQL Driver

# ⚙️ Database Setup

1. Create a schema named `ormlearn`  
2. Run:  
 CREATE TABLE country (co\_code VARCHAR(2) PRIMARY KEY, co\_name VARCHAR(50));  
 INSERT INTO country VALUES ('IN', 'India'), ('US', 'United States of America');

# 📝 application.properties

spring.datasource.url=jdbc:mysql://localhost:3306/ormlearn  
spring.datasource.username=root  
spring.datasource.password=root  
spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver  
spring.jpa.hibernate.ddl-auto=validate  
spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.MySQL5Dialect  
logging.level.org.hibernate.SQL=trace  
logging.level.org.hibernate.type.descriptor.sql=trace

# 📦 Java Classes

1. Entity - Country.java  
2. Repository - CountryRepository.java  
3. Service - CountryService.java  
4. Main - OrmLearnApplication.java

# 🔁 Flow

OrmLearnApplication -> CountryService.getAllCountries() -> CountryRepository.findAll() -> Output to Console

# ✅ Expected Output

Countries: [IN - India, US - United States of America]

# 📂 Folder Structure

src/  
 └── main/  
 ├── java/  
 │ └── com/  
 │ └── cognizant/  
 │ └── ormlearn/  
 │ ├── model/  
 │ ├── repository/  
 │ ├── service/  
 │ └── OrmLearnApplication.java  
 └── resources/  
 └── application.properties