# Spring Data JPA - Assignment Submission

## Software Pre-requisites

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

## Creating Eclipse Project using Spring Initializr

* Go to https://start.spring.io/
* Set Group to 'com.cognizant'
* Set Artifact Id to 'orm-learn'
* In Description enter: Demo project for Spring Data JPA and Hibernate
* Select dependencies: Spring Boot DevTools, Spring Data JPA, MySQL Driver
* Click Generate to download the project as ZIP
* Extract and import into Eclipse via File > Import > Maven > Existing Maven Projects

## MySQL Setup

* Create new schema 'ormlearn' in MySQL:
* Commands:
* mysql -u root -p

mysql> create schema ormlearn;

## application.properties Configuration

# Logging

* logging.level.org.springframework=info
* logging.level.com.cognizant=debug
* logging.level.org.hibernate.SQL=trace
* logging.level.org.hibernate.type.descriptor.sql=trace
* logging.pattern.console=%d{dd-MM-yy} %d{HH:mm:ss.SSS} %-20.20thread %5p %-25.25logger{25} %25M %4L %m%n

# Database

* spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver
* spring.datasource.url=jdbc:mysql://localhost:3306/ormlearn
* spring.datasource.username=root
* spring.datasource.password=root

# Hibernate

* spring.jpa.hibernate.ddl-auto=validate
* spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.MySQL5Dialect

## Logging Setup in OrmLearnApplication.java

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

private static final Logger LOGGER = LoggerFactory.getLogger(OrmLearnApplication.class);

public static void main(String[] args) {

SpringApplication.run(OrmLearnApplication.class, args);

LOGGER.info("Inside main");

}

## Schema and Sample Data

* CREATE TABLE:

create table country(co\_code varchar(2) primary key, co\_name varchar(50));

* INSERT DATA:

insert into country values ('IN', 'India');

insert into country values ('US', 'United States of America');

## Entity Class: Country.java

import javax.persistence.\*;

* @Entity
* @Table(name="country")

public class Country {

* @Id
* @Column(name="code")

private String code;

* @Column(name="name")

private String name;

* // getters and setters
* // toString()

}

## Repository Class: CountryRepository.java

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.stereotype.Repository;

import com.cognizant.ormlearn.model.Country;

* @Repository

public interface CountryRepository extends JpaRepository<Country, String> {

}

## Service Class: CountryService.java

import org.springframework.stereotype.Service;

import org.springframework.beans.factory.annotation.Autowired;

import java.util.List;

* @Service

public class CountryService {

* @Autowired

private CountryRepository countryRepository;

* @Transactional

public List<Country> getAllCountries() {

return countryRepository.findAll();

}

}

## Testing in OrmLearnApplication.java

private static CountryService countryService;

private static void testGetAllCountries() {

LOGGER.info("Start");

List<Country> countries = countryService.getAllCountries();

LOGGER.debug("countries={}", countries);

LOGGER.info("End");

}

ApplicationContext context = SpringApplication.run(OrmLearnApplication.class, args);

countryService = context.getBean(CountryService.class);

testGetAllCountries();