**HandsOn1 - Spring Data JPA - Quick Example**   
**Create a Eclipse Project using Spring Initializr**

**Country table creation**

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

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

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

**Persistence Class - com.cognizant.orm-learn.model.Country**

package com.cognizant.ormlearn.model;

import jakarta.persistence.Column;

import jakarta.persistence.Entity;

import jakarta.persistence.Id;

import jakarta.persistence.Table;

@Entity

@Table(name = "country")

public class Country {

@Id

@Column(name = "code")

private String code;

@Column(name = "name")

private String name;

// Getter and Setter for code

public String getCode() {

return code;

}

public void setCode(String code) {

this.code = code;

}

// Getter and Setter for name

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

// toString method

@Override

public String toString() {

return "Country [code=" + code + ", name=" + name + "]";

}

}

**Repository Class - com.cognizant.orm-learn.CountryRepository**

package com.cognizant.ormlearn.repository;

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 - com.cognizant.orm-learn.service.CountryService**

package com.cognizant.ormlearn.service;

import java.util.List;

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

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

import com.cognizant.ormlearn.model.Country;

import com.cognizant.ormlearn.repository.CountryRepository;

@Service

public class CountryService {

@Autowired

private CountryRepository countryRepository;

@Transactional

public List<Country> getAllCountries() {

return countryRepository.findAll();

}

}

**Testing in OrmLearnApplication.java**

package com.cognizant.ormlearn;

import java.util.List;

import org.slf4j.Logger;

import org.slf4j.LoggerFactory;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import org.springframework.context.ApplicationContext;

import com.cognizant.ormlearn.model.Country;

import com.cognizant.ormlearn.service.CountryService;

@SpringBootApplication

public class OrmLearnApplication {

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

private static CountryService *countryService*;

public static void main(String[] args) {

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

*LOGGER*.info("Inside main");

*countryService* = context.getBean(CountryService.class);

*testGetAllCountries*();

}

private static void testGetAllCountries() {

*LOGGER*.info("Start");

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

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

*LOGGER*.info("End");

}

}

Output:

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**Hands on 4**

**Difference between JPA, Hibernate and Spring Data JPA**   
  
**Employee.java**:  
package com.example.ormdemo.entity;

import jakarta.persistence.\*;

@Entity

public class Employee {

public Integer getId() {

return id;

}

public void setId(Integer id) {

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public String getDepartment() {

return department;

}

public void setDepartment(String department) {

this.department = department;

}

@Id

@GeneratedValue(strategy = GenerationType.*IDENTITY*)

private Integer id;

private String name;

private String department;

}  
  
**EmpoyeeRepository.java:**  
package com.example.ormdemo.repository;

import com.example.ormdemo.entity.Employee;

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

public interface EmployeeRepository extends JpaRepository<Employee, Integer> {

}

**EmployeeService.java:**  
package com.example.ormdemo.service;

import com.example.ormdemo.entity.Employee;

import com.example.ormdemo.repository.EmployeeRepository;

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

import org.springframework.stereotype.Service;

import org.springframework.transaction.annotation.Transactional;

@Service

public class EmployeeService {

@Autowired

private EmployeeRepository employeeRepository;

@Transactional

public void addEmployee(Employee employee) {

employeeRepository.save(employee);

}

}

**OrmApplicationDemo.java:**

package com.example.ormdemo;

import com.example.ormdemo.entity.Employee;

import com.example.ormdemo.service.EmployeeService;

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

import org.springframework.boot.CommandLineRunner;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class OrmDemoApplication implements CommandLineRunner {

@Autowired

private EmployeeService employeeService;

public static void main(String[] args) {

SpringApplication.*run*(OrmDemoApplication.class, args);

}

@Override

public void run(String... args) {

Employee emp = new Employee();

emp.setName("Amirtha");

emp.setDepartment("Engineering");

employeeService.addEmployee(emp);

System.*out*.println("Employee added successfully");

}

}

**Output:**

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