**Spring Data JPA**

**Exercise 1:** **Spring Data JPA - Quick Example**

**Code:**

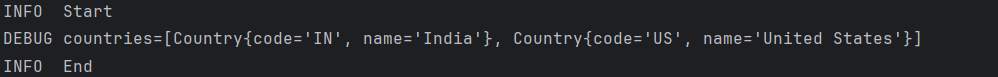
@Entity  
@Table(name="country")  
public class Country {  
  
 @Id  
 @Column(name="code")  
 public String countryCode;  
  
 @Column(name="name")  
 public String countryName;  
  
 public String getCountryCode() {  
 return countryCode;  
 }  
  
 public void setCountryCode(String countryCode) {  
 this.countryCode = countryCode;  
 }  
  
 public String getCountryName() {  
 return countryName;  
 }  
  
 public void setCountryName(String countryName) {  
 this.countryName = countryName;  
 }  
  
 @Override  
 public String toString() {  
 return "Country{" +  
 "countryCode='" + countryCode + '\'' +  
 ", countryName='" + countryName + '\'' +  
 '}';  
 }  
}

@Repository  
public interface CountryRepository extends JpaRepository<Country,String > {  
}

@Service  
public class CountryService {  
  
 @Autowired  
 private CountryRepository countryRepository;  
  
 @Transactional  
 public List<Country> getAllCountries(){  
 return countryRepository.findAll();  
 }  
}

@SpringBootApplication  
public class OrmLearnApplication {  
  
 private static CountryService *countryService*;  
 private static final Logger *LOGGER* = LoggerFactory.*getLogger*(OrmLearnApplication.class);  
 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*.info("countries={}", countries);  
 *LOGGER*.info("End");  
 }  
}

**Output:**

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**Exercise 2: Difference between JPA, Hibernate and Spring Data JPA**

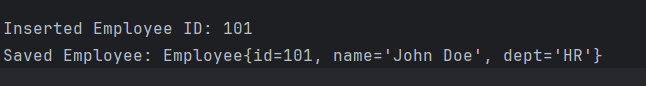
**Code:**

public Integer addEmployee(Employee employee) {  
 Session session = factory.openSession();  
 Transaction tx = null;  
 Integer employeeID = null;  
  
 try {  
 tx = session.beginTransaction();  
 employeeID = (Integer) session.save(employee); // INSERT happens here  
 tx.commit();  
 } catch (HibernateException e) {  
 if (tx != null) tx.rollback();  
 e.printStackTrace();  
 } finally {  
 session.close();  
 }  
 return employeeID;  
}

@Autowired  
private EmployeeRepository employeeRepository;  
  
@Transactional  
public void addEmployee(Employee employee) {  
 employeeRepository.save(employee); // INSERT happens here  
}

@SpringBootApplication  
public class OrmLearnApplication {  
  
 Employee e = new Employee();  
 e.setName("John Doe");  
 e.setDept("HR");  
 Integer id = service.addEmployee(e);  
 System.*out*.println("Inserted Employee ID: " + id);  
  
 }

**Output:**

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