do the same application by integrating with hibernate

Entity Mapping

First, let's create a Product entity class with Hibernate annotations:

@Entity

@Table(name = "products")

public class Product {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

@Column(name = "id")

private Long id;

@Column(name = "name")

private String name;

// Getters and setters

}

DAO Class

Next, let's create a ProductDao class that uses Hibernate's EntityManager to perform CRUD operations:

@Component

public class ProductDao {

@PersistenceContext

private EntityManager em;

public void persist(Product product) {

em.persist(product);

}

public List<Product> findAll() {

return em.createQuery("SELECT p FROM Product p", Product.class).getResultList();

}

public Product findById(Long id) {

return em.find(Product.class, id);

}

public void update(Product product) {

em.merge(product);

}

public void delete(Long id) {

Product product = em.find(Product.class, id);

em.remove(product);

}

}

Service Class

Now, let's create a ProductService class that uses the ProductDao class to perform business logic:

@Service

public class ProductServiceImpl implements ProductService {

@Autowired

private ProductDao productDao;

@Transactional

public void saveProduct(Product product) {

productDao.persist(product);

}

@Transactional(readOnly = true)

public List<Product> listAll() {

return productDao.findAll();

}

@Transactional(readOnly = true)

public Product findById(Long id) {

return productDao.findById(id);

}

@Transactional

public void updateProduct(Product product) {

productDao.update(product);

}

@Transactional

public void deleteProduct(Long id) {

productDao.delete(id);

}

}

Spring Configuration

Finally, let's configure Spring to use Hibernate as the ORM tool:

<?xml version="1.0" encoding="UTF-8"?>

<beans xmlns="http://www.springframework.org/schema/beans"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://www.springframework.org/schema/beans

http://www.springframework.org/schema/beans/spring-beans.xsd">

<bean id="dataSource" class="org.springframework.jdbc.datasource.DriverManagerDataSource">

<property name="driverClassName" value="com.mysql.cj.jdbc.Driver"/>

<property name="url" value="jdbc:mysql://localhost:3306/mydb"/>

<property name="username" value="root"/>

<property name="password" value="password"/>

</bean>

<bean id="sessionFactory" class="org.springframework.orm.hibernate5.LocalSessionFactoryBean">

<property name="dataSource" ref="dataSource"/>

<property name="configLocation" value="classpath:hibernate.cfg.xml"/>

</bean>

<bean id="transactionManager" class="org.springframework.orm.hibernate5.HibernateTransactionManager">

<property name="sessionFactory" ref="sessionFactory"/>

</bean>

<tx:annotation-driven transaction-manager="transactionManager"/>

</beans>