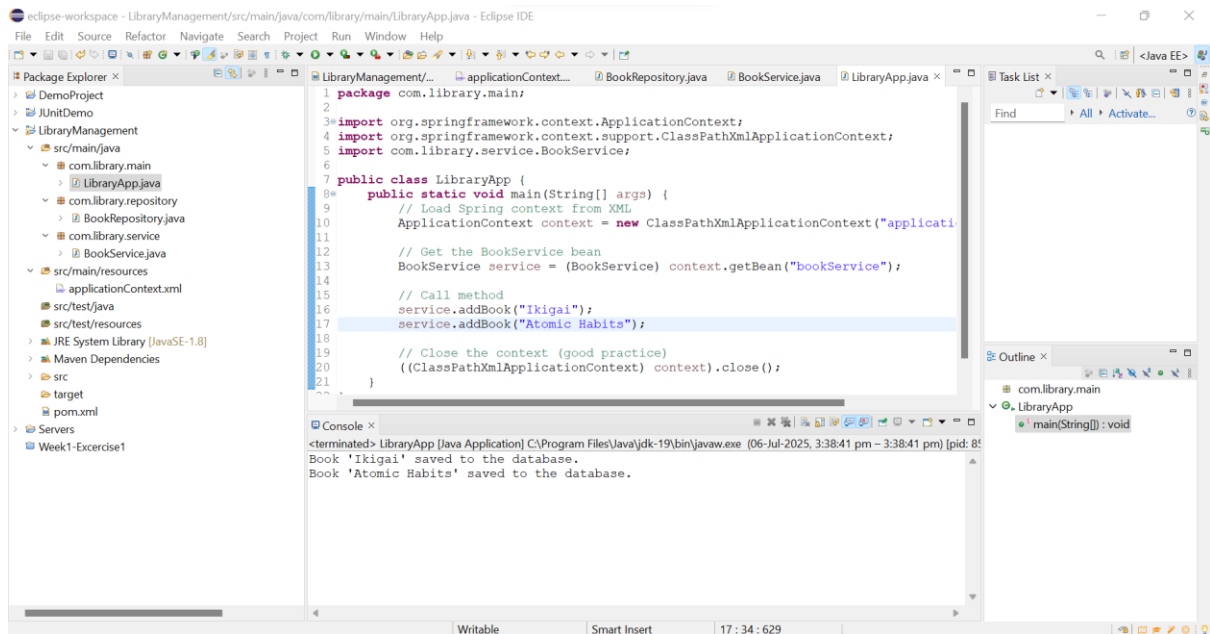


WEEK 3 EXERCISES

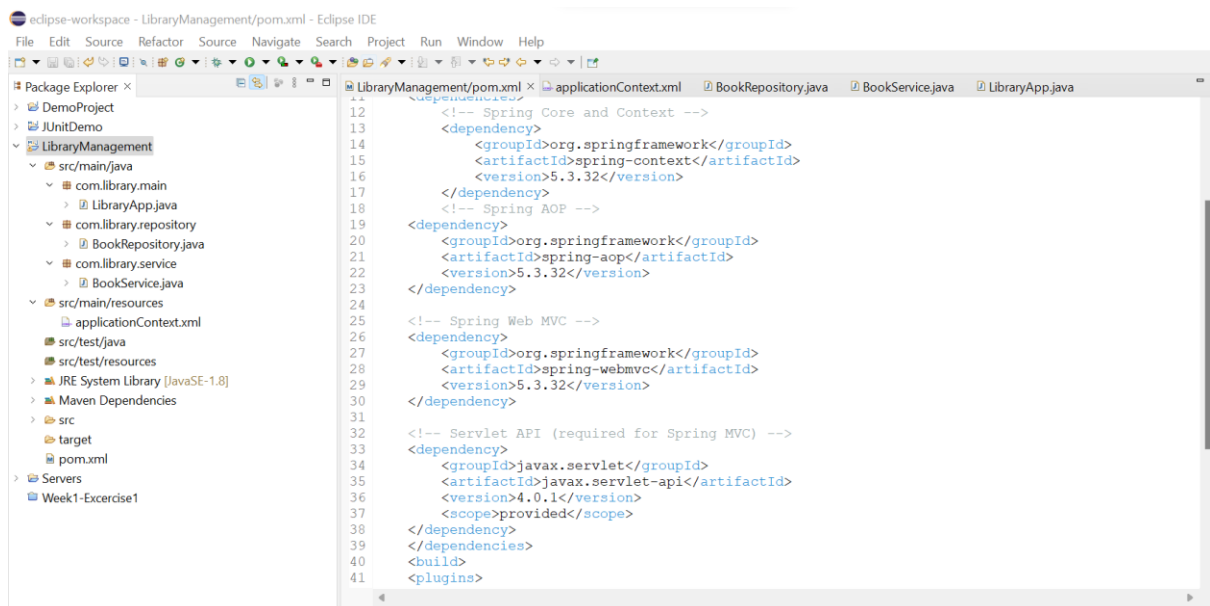
SPRING CORE AND MAVEN

Exercise 1: Configuring a Basic Spring Application

Exercise 2: Implementing Dependency Injection

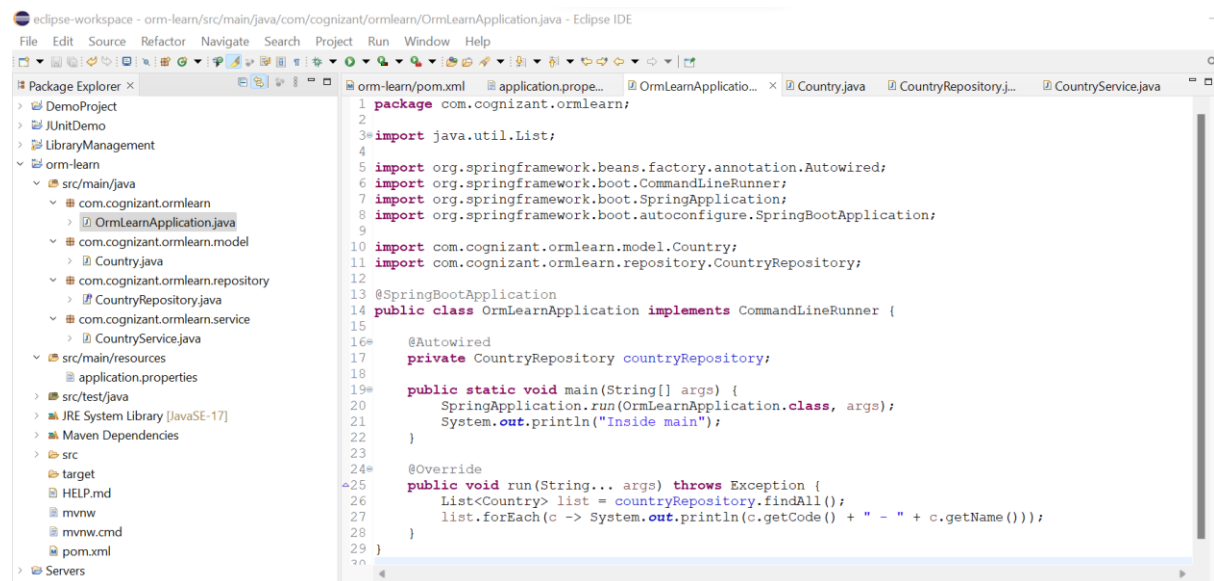


Exercise 4: Creating and Configuring a Maven Project



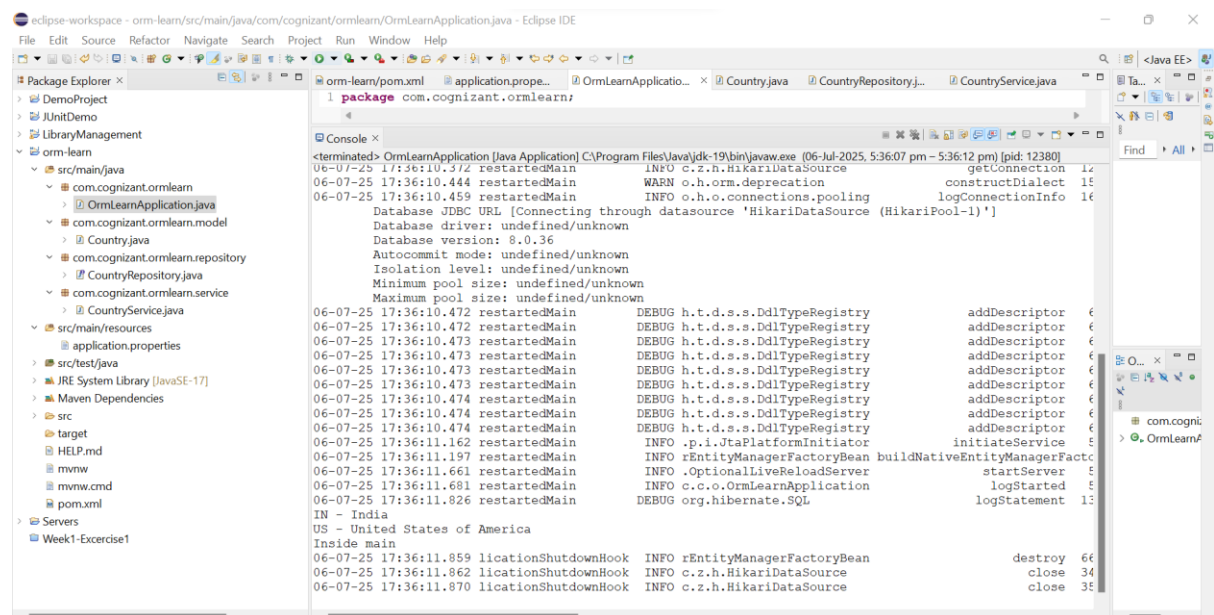
SPRING DATA JPA WITH SPRING BOOT, HIBERNATE

Spring Data JPA - Quick Example



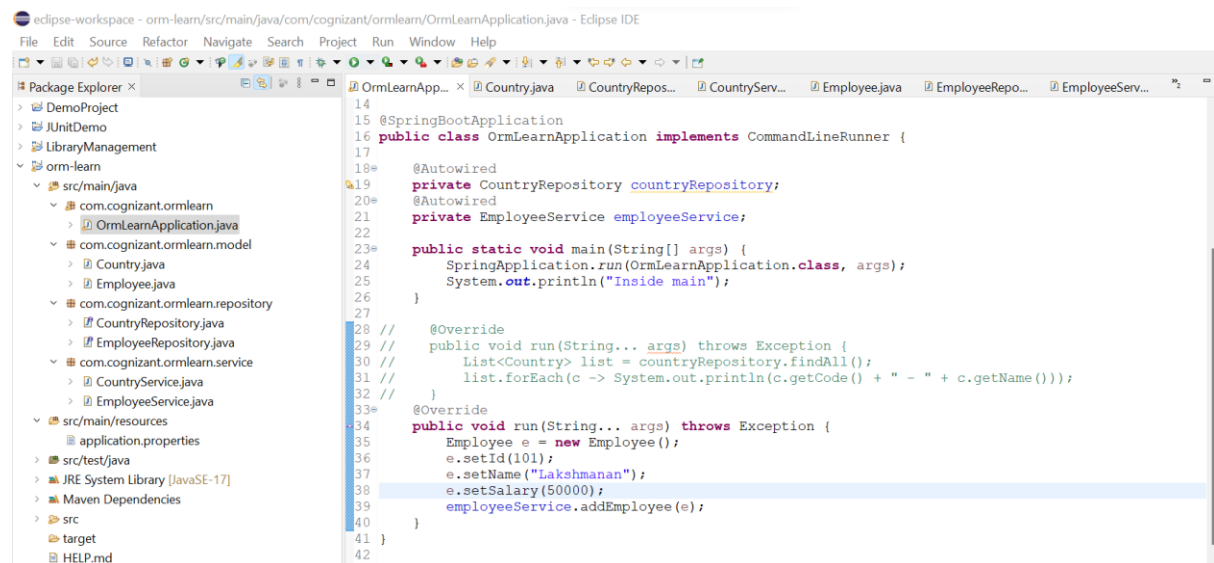
```
1 package com.cognizant.ormlearn;
2
3 import java.util.List;
4
5 import org.springframework.beans.factory.annotation.Autowired;
6 import org.springframework.boot.CommandLineRunner;
7 import org.springframework.boot.SpringApplication;
8 import org.springframework.boot.autoconfigure.SpringBootApplication;
9
10 import com.cognizant.ormlearn.model.Country;
11 import com.cognizant.ormlearn.repository.CountryRepository;
12
13 @SpringBootApplication
14 public class OrmLearnApplication implements CommandLineRunner {
15
16     @Autowired
17     private CountryRepository countryRepository;
18
19     public static void main(String[] args) {
20         SpringApplication.run(OrmLearnApplication.class, args);
21         System.out.println("Inside main");
22     }
23
24     @Override
25     public void run(String... args) throws Exception {
26         List<Country> list = countryRepository.findAll();
27         list.forEach(c -> System.out.println(c.getCode() + " - " + c.getName()));
28     }
29 }
30
```

Output:



```
<terminated> OrmLearnApplication [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (06-Jul-2025, 5:36:12 pm) [pid: 12380]
06-07-25 17:36:10.572 restartedMain INFO c.z.h.HikariDataSource getConnection 12
06-07-25 17:36:10.444 restartedMain WARN o.h.orm.deprecation constructDialect 15
06-07-25 17:36:10.459 restartedMain INFO o.h.o.connections.pooling logConnectionInfo 16
Database JDBC URL [Connecting through datasource 'HikariDataSource (HikariPool-1)']
Database driver: undefined/unknown
Database version: 8.0.36
Autocommit mode: undefined/unknown
Isolation level: undefined/unknown
Minimum pool size: undefined/unknown
Maximum pool size: undefined/unknown
06-07-25 17:36:10.472 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:10.472 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:10.473 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:10.473 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:10.473 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:10.473 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:10.474 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:10.474 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:10.474 restartedMain DEBUG h.t.d.s.s.DdlTypeRegistry addDescriptor 6
06-07-25 17:36:11.162 restartedMain INFO p.i.JtaPlatformInitiator initiateService 5
06-07-25 17:36:11.197 restartedMain INFO r.EntityManagerFactoryBean buildNativeEntityManagerFacto 5
06-07-25 17:36:11.661 restartedMain INFO .OptionalLiveReloadServer startServer 5
06-07-25 17:36:11.681 restartedMain INFO c.c.o.OrmLearnApplication logStarted 5
06-07-25 17:36:11.826 restartedMain DEBUG org.hibernate.SQL logStatement 13
IN - India
US - United States of America
Inside main
06-07-25 17:36:11.859 licationShutdownHook INFO r.EntityManagerFactoryBean destroy 66
06-07-25 17:36:11.862 licationShutdownHook INFO c.z.h.HikariDataSource close 34
06-07-25 17:36:11.870 licationShutdownHook INFO c.z.h.HikariDataSource close 35
```

Difference between JPA, Hibernate and Spring Data JPA



```
14
15 @SpringBootApplication
16 public class OrmLearnApplication implements CommandLineRunner {
17
18     @Autowired
19     private CountryRepository countryRepository;
20     @Autowired
21     private EmployeeService employeeService;
22
23     public static void main(String[] args) {
24         SpringApplication.run(OrmLearnApplication.class, args);
25         System.out.println("Inside main");
26     }
27
28     // @Override
29     // public void run(String... args) throws Exception {
30     //     List<Country> list = countryRepository.findAll();
31     //     list.forEach(c -> System.out.println(c.getCode() + " - " + c.getName()));
32     // }
33
34     // @Override
35     // public void run(String... args) throws Exception {
36     //     Employee e = new Employee();
37     //     e.setId(101);
38     //     e.setName("Lakshmanan");
39     //     e.setSalary(50000);
40     //     employeeService.addEmployee(e);
41     // }
42 }
```

Output:



```
mysql> select * from employee;
+----+-----+-----+
| id | name   | salary |
+----+-----+-----+
| 1  | Lakshanya | 400000 |
| 101 | Lakshmanan | 50000 |
+----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```