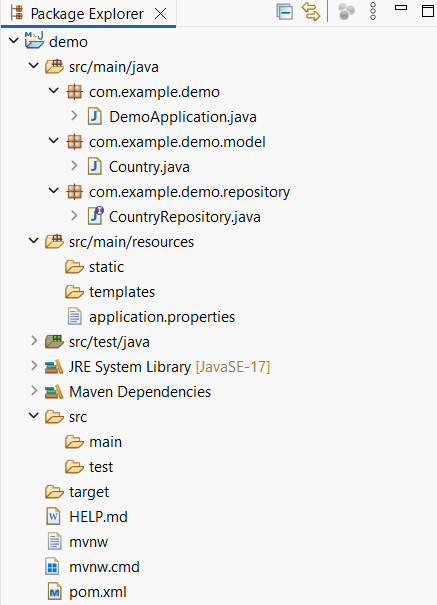
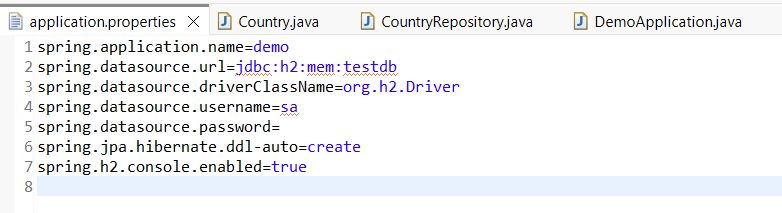
**WEEK - 3**

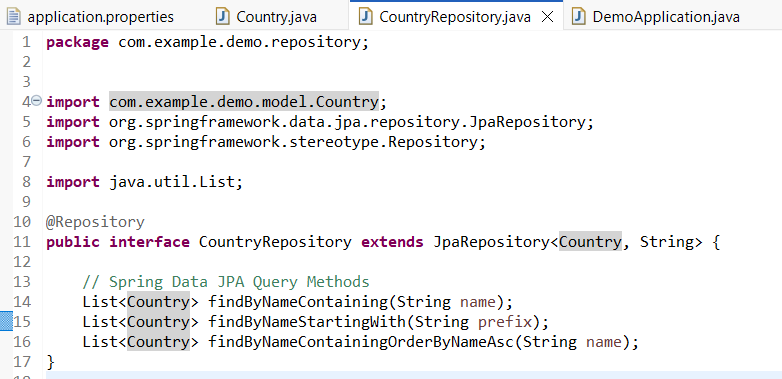
**SKILL : SPRING DATA JPA WITH SPRING BOOT, HIBERNATE**

**Mandatory Hands-on exercises Exercise: Spring Data JPA - Quick Example Project Structure:**

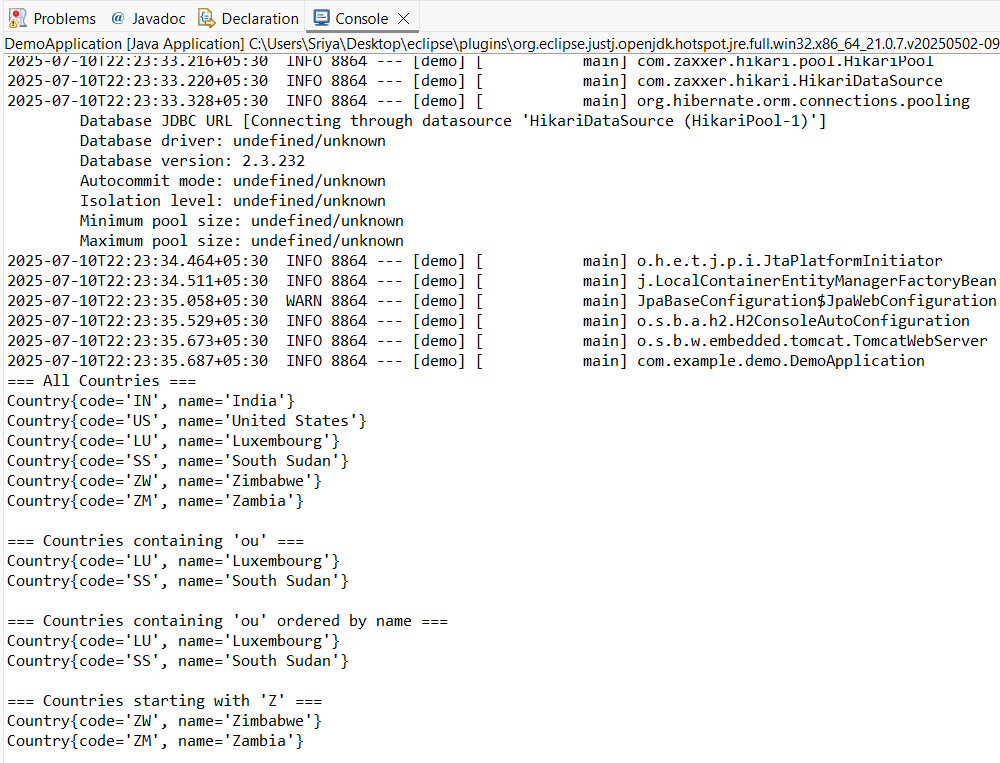
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**applicationproperties:**



**CountryRepository.java:**

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# JPA (Java Persistence API):

* JPA is a specification defined by Oracle for managing relational data in Java applications using object-relational mapping (ORM).
* It provides a set of interfaces and annotations for defining how Java objects map to database tables and how persistence operations (like saving, retrieving, updating, and deleting data) are performed.
* JPA itself does not provide an implementation; it defines a standard API that ORM frameworks can implement.

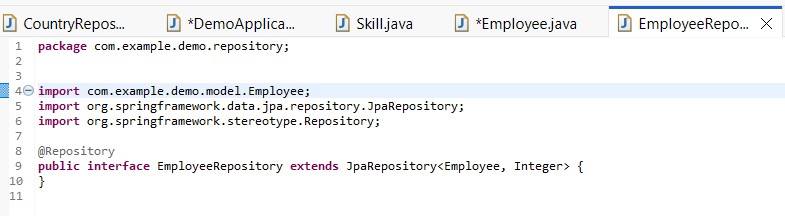
# Hibernate:

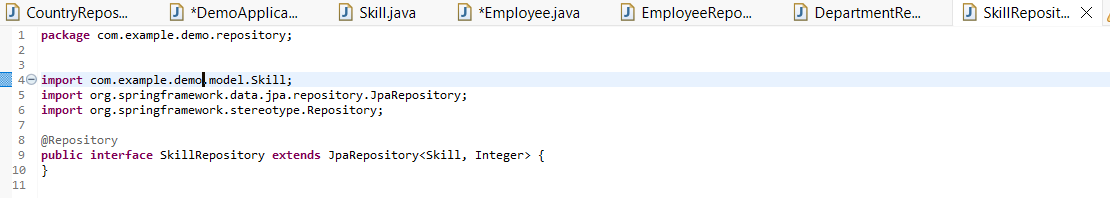
* Hibernate is a popular implementation of the JPA specification.
* It is a full-featured ORM framework that provides the concrete classes and logic to perform object-relational mapping and interact with databases according to the JPA standard.
* Hibernate offers additional features beyond the JPA specification, such as advanced caching mechanisms and custom query capabilities (HQL).

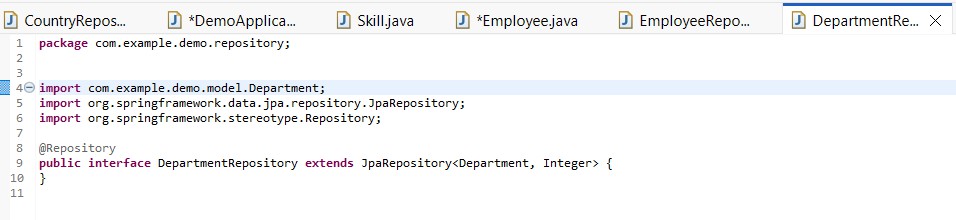
# Spring Data JPA:

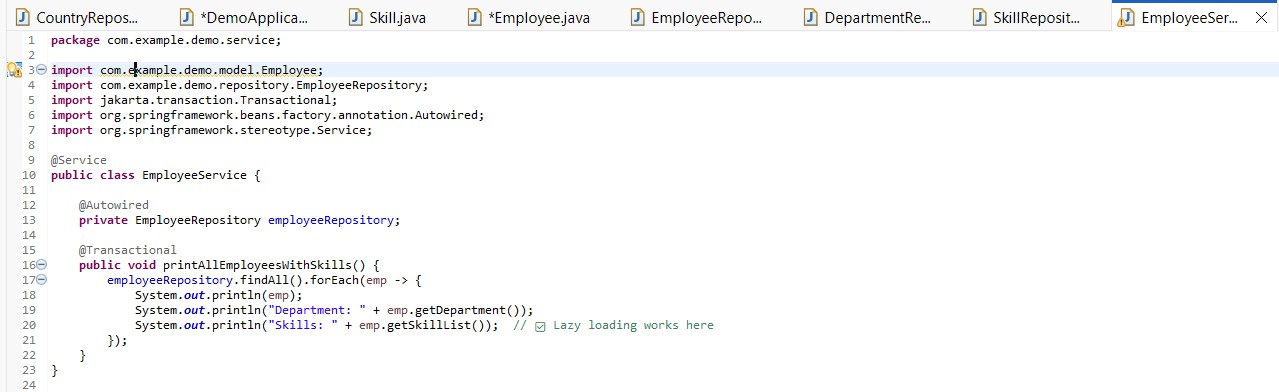
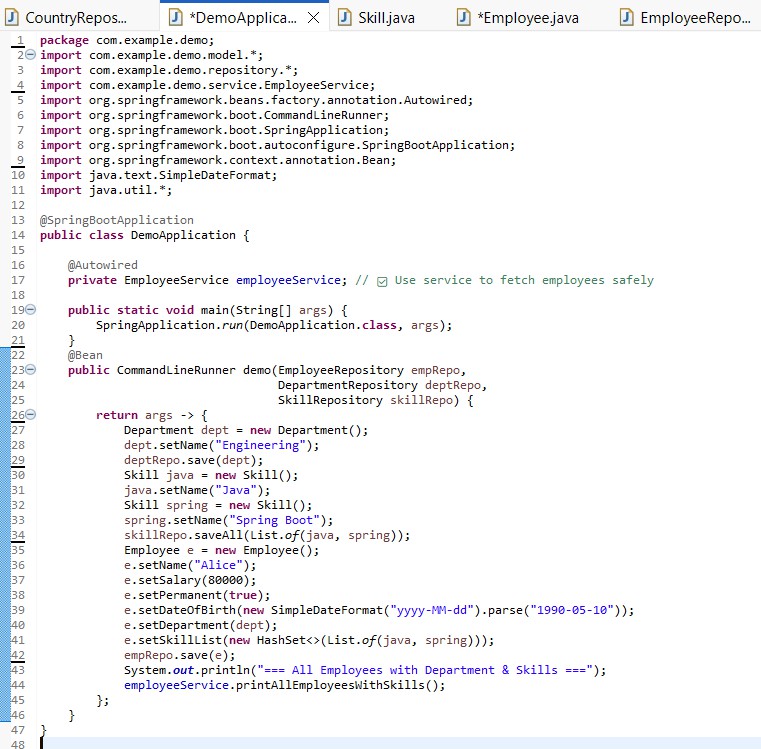
* Spring Data JPA is a higher-level abstraction built on top of JPA and its providers (like Hibernate) within the Spring Framework.
* It aims to significantly reduce the boilerplate code required for data access layers by providing a set of conventions and interfaces for defining data repositories.
* Spring Data JPA can automatically generate common database queries based on method names in repository interfaces (e.g., findByLastName(String lastName)).
* It simplifies transaction management and integrates seamlessly with other Spring components.

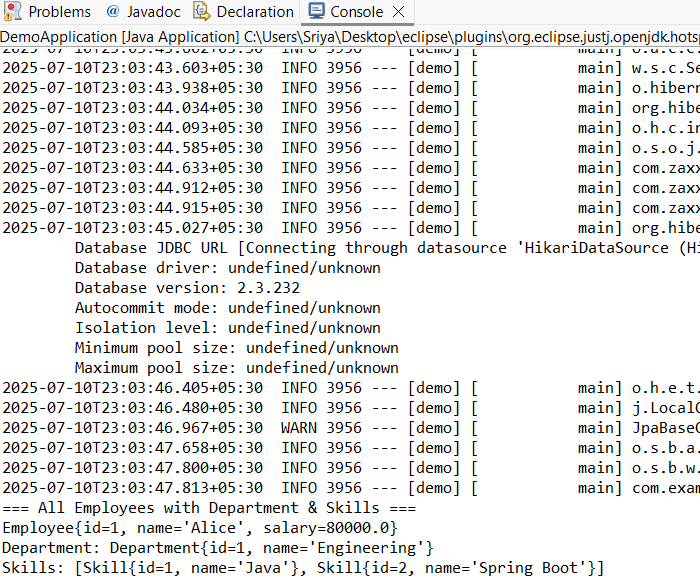
**Employee.java:**

**EmployeeRepository.java:**

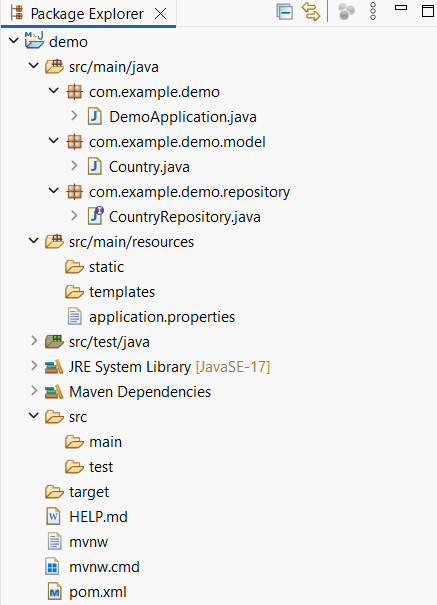
**SkillRepository.java:**

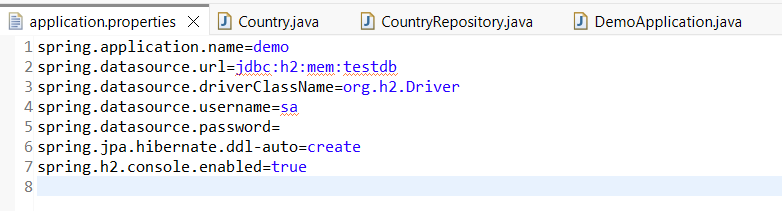
**DepartmentRepository.java:**

**EmployeeServices.java:**

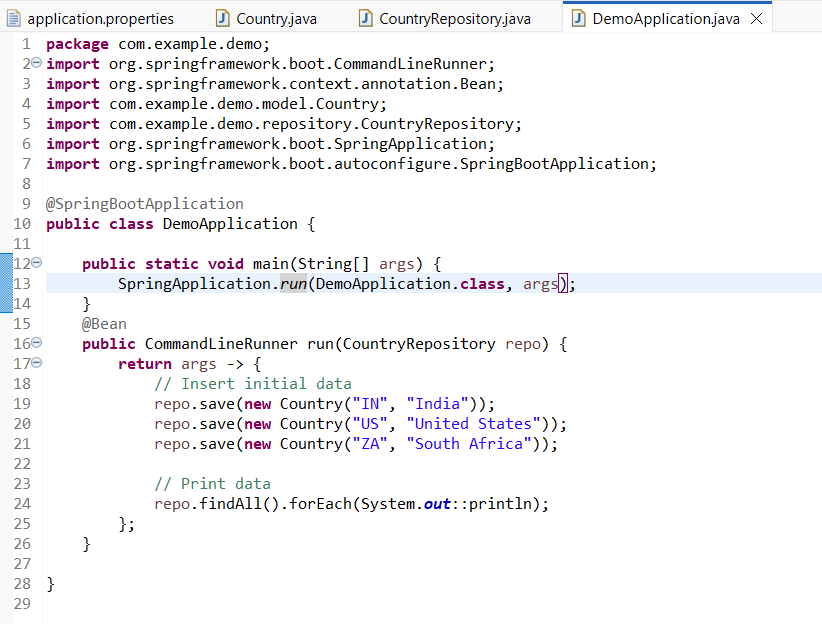
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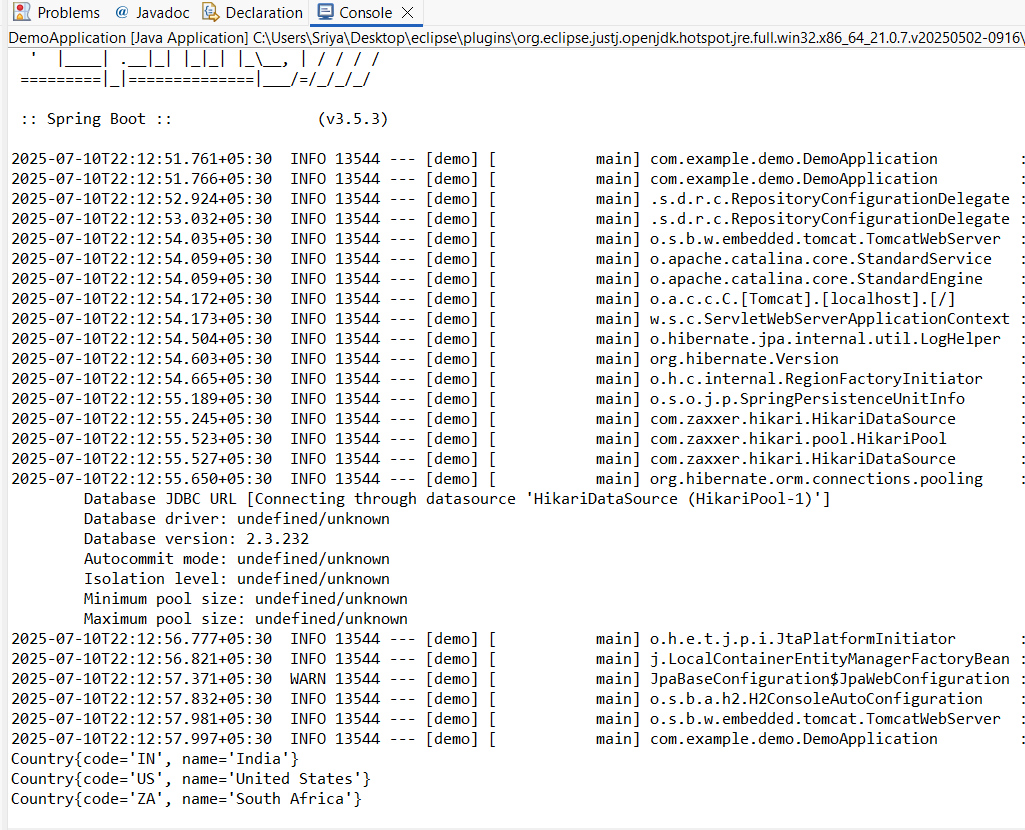
**Project Structure:**

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**Application properties:**

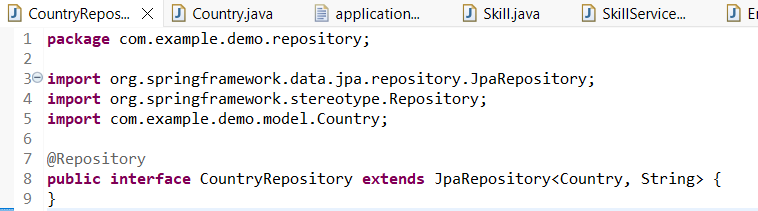
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**DemoApplication.java:**

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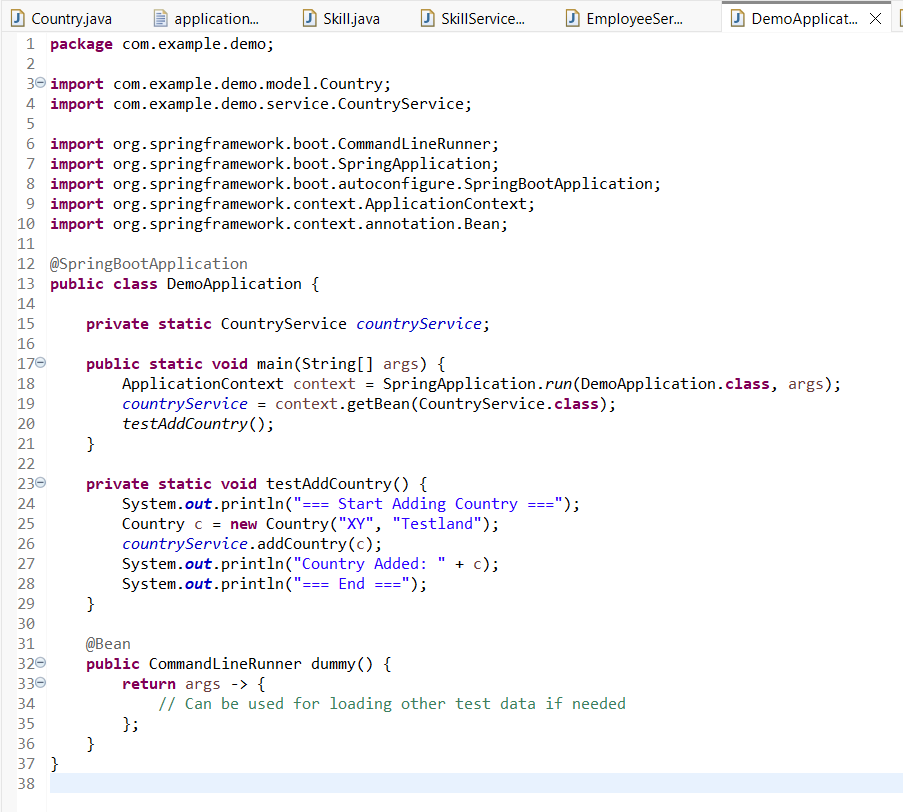
**Country.java:**

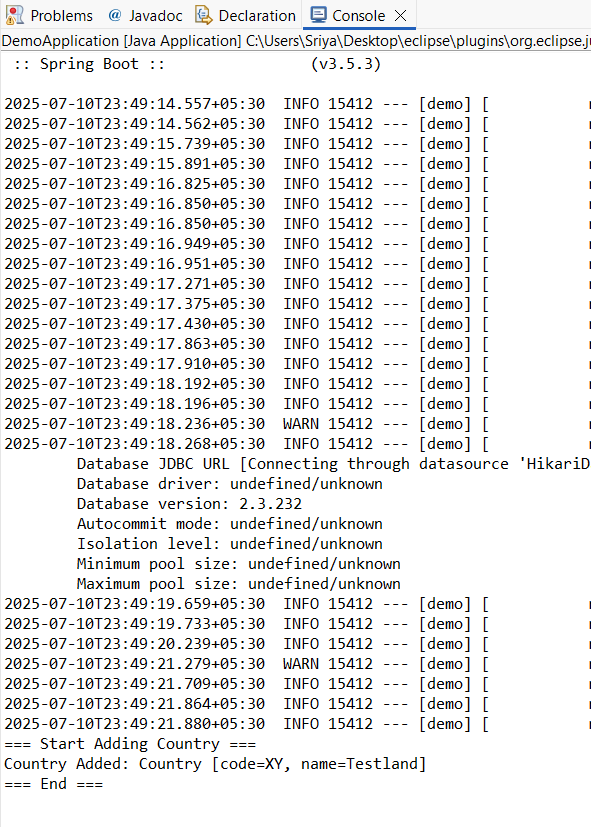
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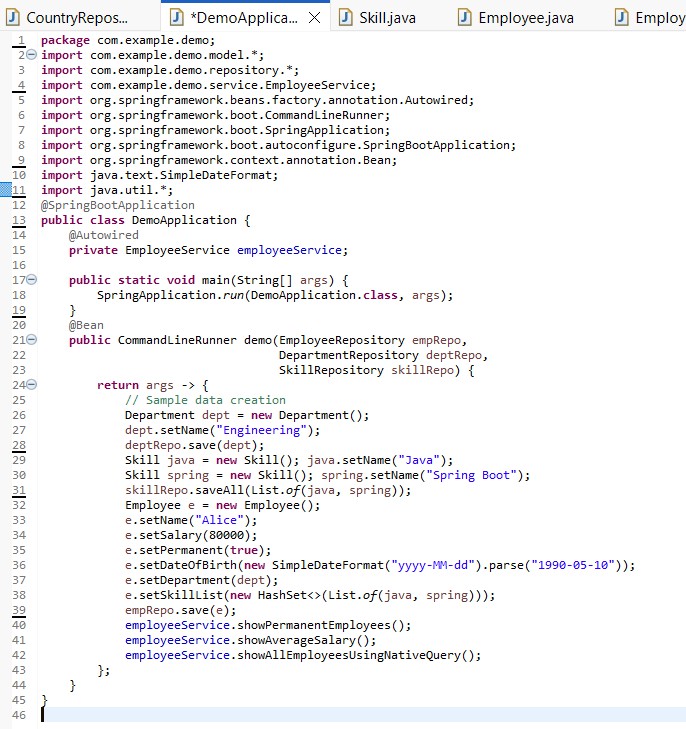
**CountryRepository.java:**

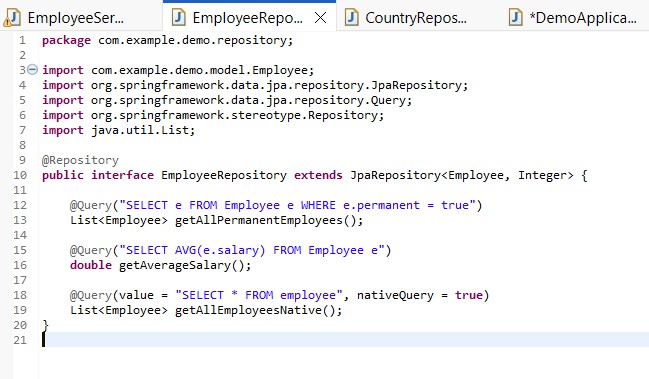


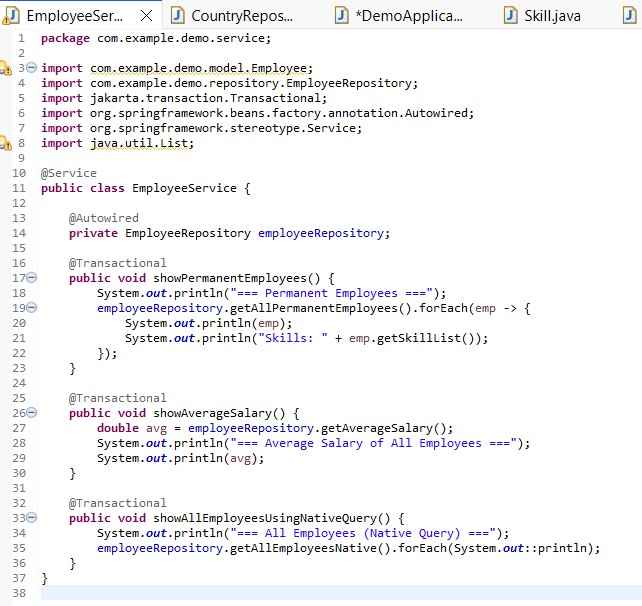
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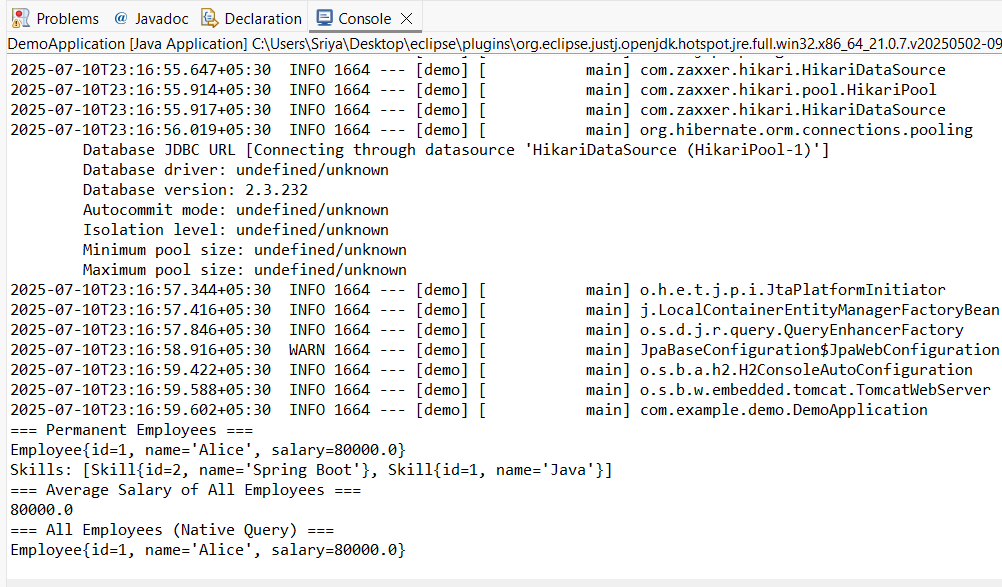
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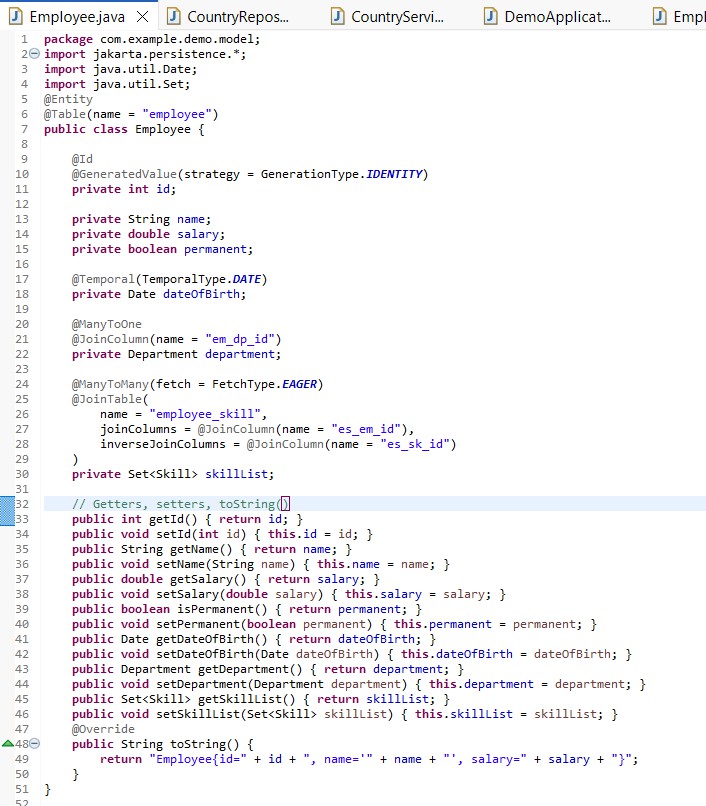
**DemoApplication.java:**

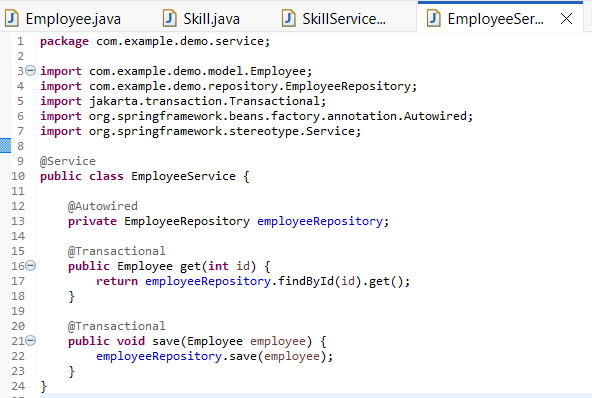
**EmployeeService.java:**

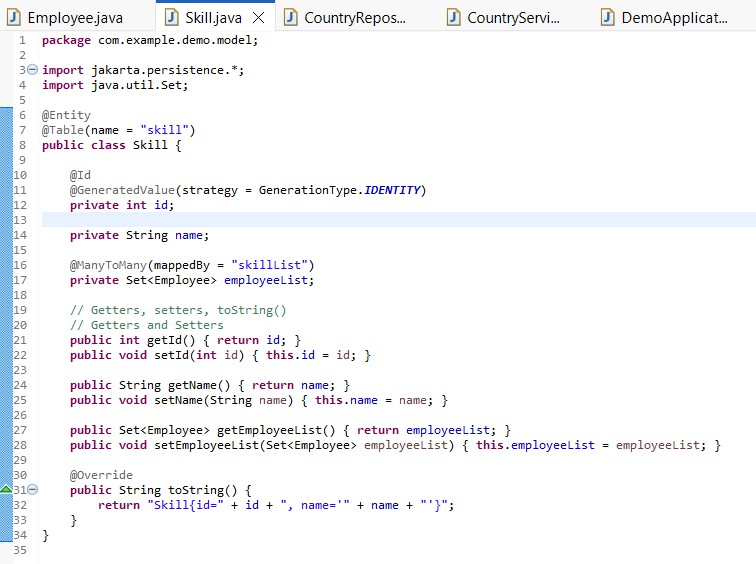
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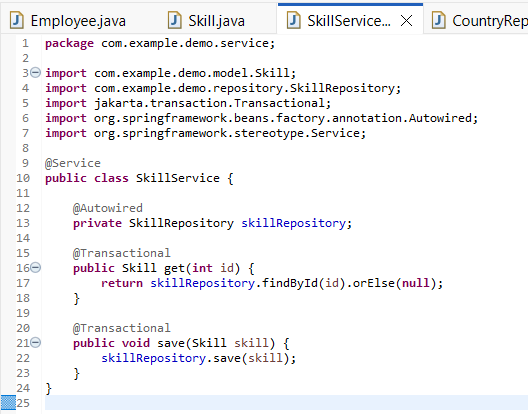
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**Employee.java:**

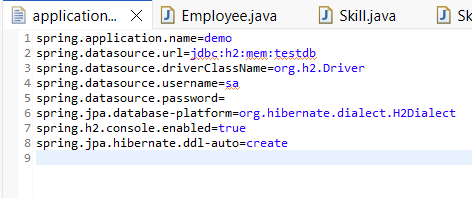
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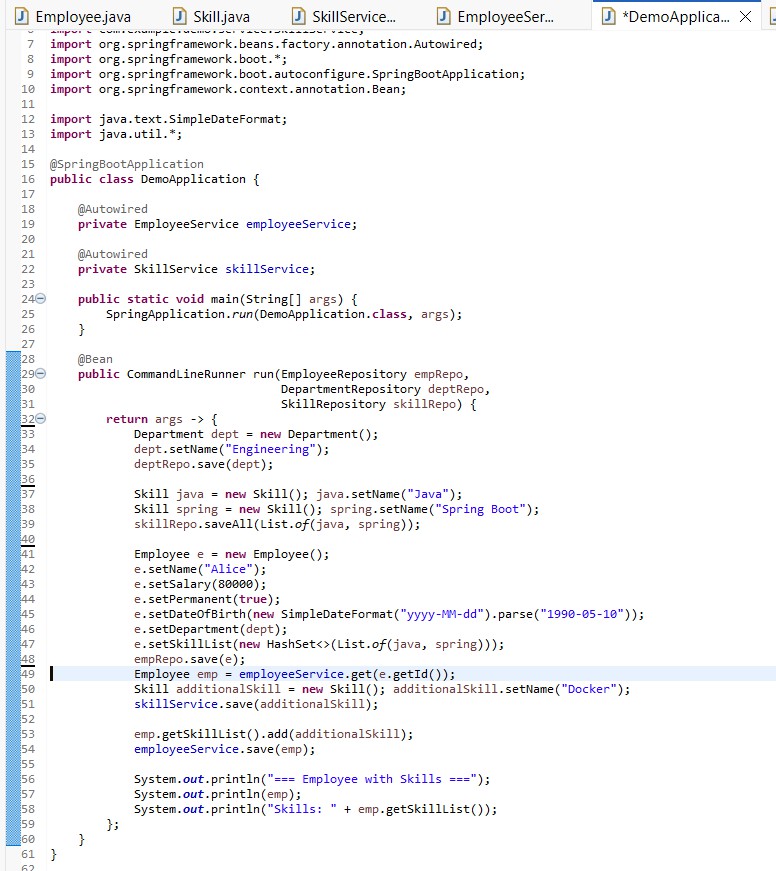


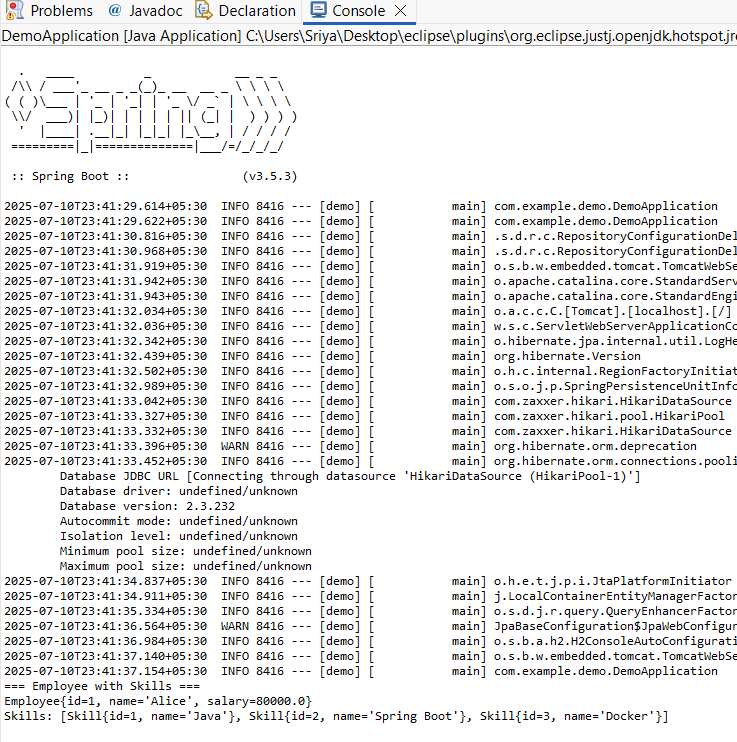
**Skill.java:**



**application properties:**

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**Output:**