PE\_CSE456\_Q4\_Final-Mock-Exam\_Note

Q4 2025

Subject: CSE 456 – Advanced Java Programming

Duration: 90 minutes

1. **­­­­Working with DB connection string from application.properties**

spring.datasource.url=jdbc:mysql://localhost:3306/fmecse456\_studentID

spring.datasource.username=root

spring.datasource.password=123456

spring.jpa.hibernate.ddl-auto=**create**

spring.jpa.show-sql=true

spring.jpa.properties.hibernate.format\_sql=true

spring.thymeleaf.cache=false

spring.thymeleaf.prefix=classpath:/templates/

spring.thymeleaf.suffix=.html

1. **Working with the pom.xml**

<dependencies>

<dependency>

<groupId>com.microsoft.sqlserver</groupId>

<artifactId>mssql-jdbc</artifactId>

<scope>runtime</scope>

</dependency>

<dependency>

<groupId>org.hibernate</groupId>

<artifactId>hibernate-core</artifactId>

<version>6.5.2.Final</version>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

<scope>provided</scope>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>provided</scope>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-data-jpa</artifactId>

<version>3.4.2</version>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-validation</artifactId>

</dependency>

</dependencies>

1. **Config on SpringBootApplication project**

@SpringBootApplication

@EnableJpaAuditing

public class DemoLab01Application {

public static void main(String[] args) {

SpringApplication.run(DemoLab01Application.class, args);

1. **Sample data**

## **EquipmentType**

|  |  |  |
| --- | --- | --- |
| **equipmentTypeId** | **typeName** | **description** |
| 1 | Laptop | Portable computers used for teaching/research |
| 2 | Projector | Devices used for classroom presentations |
| 3 | Printer | Printers for administrative/student use |
| 4 | Microscope | Lab equipment for biology/medical courses |

## **Equipment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **equipmentId** | **TypeId** | **equipmentName** | **purchasePrice** | **quantityAvailable** | **purchaseDate** |
| EQ00000001 | 1 | Dell Latitude 5420 | 1500.00 | 20 | 2025-08-21 08:00:00 |
| EQ00000002 | 1 | HP ProBook 450 G8 | 1350.00 | 15 | 2025-08-21 08:05:00 |
| EQ00000003 | 2 | Epson EB-X06 Projector | 2200.00 | 5 | 2025-08-21 08:10:00 |
| EQ00000004 | 2 | BenQ MW550 Projector | 2500.00 | 3 | 2025-08-21 08:15:00 |
| EQ00000005 | 3 | Canon LBP2900 Printer | 1200.00 | 10 | 2025-08-21 08:20:00 |
| EQ00000006 | 4 | Olympus CX23 Microscope | 5000.00 | 7 | 2025-08-21 08:25:00 |

## **User**

|  |  |  |  |
| --- | --- | --- | --- |
| **userId** | **username** | **password** | **role (1=Admin, 2=Staff, 3=Customer)** |
| 1 | admin | admin | 1 |
| 2 | staff01 | staff | 2 |
| 3 | customer | customer | 3 |

1. **Thymeleaf**

<html xmlns:th="http://www.thymeleaf.org">

<tr th:each="user : ${users}">

<td th:text="${user.username}"></td>

</tr>

<div class="error-message" th:if="${error}" th:text="${error}">

<div class="form-group">

<label for="username">Username:</label>

<input type="text" name="username" id="username" th:field="\*{username}">

<span class="error-message" th:if="${#fields.hasErrors('username')}"

th:errors="\*{username}"></span>

</div>

**NOTE : This session just for reference, student can use the other approach to do Practical Exam and student must change to run your program**