

ITE5432 - J2EE Business Components

Assignment 1

Objective:

The primary objective of this application is to provide students with hands-on experience in developing a full-stack application using Spring Boot and Thymeleaf. It aims to help students understand and apply key concepts in software development

Learning Outcome:

By the end of the project, students will:

- Be able to design and develop full-stack web applications.
- Gain confidence in using Spring Boot for backend development.
- Understand how to integrate backend and frontend components using Thymeleaf.

Instructions:

1. Develop a Spring Boot Application with Thymeleaf Template to maintain students' data
2. Structure the Application into Layers
 - Create separate packages for **Controller**, **Service**, and **Entity** classes.
 - Use appropriate Spring annotations to define these layers clearly (e.g., `@Controller`, `@Service`, `@Entity`).
3. Design the POJO Class for Record Management
 - Prompt the user for the following fields and create a POJO class to represent these attributes:
 - ID
 - Name
 - Age
 - Gender
 - Email
 - City
 - Date of Birth
 - Use appropriate data types for each field to handle the data effectively
4. Service Layer Implementation
 - Create an interface and its implementation in the **service layer**.
 - Use a HashMap to store the records. The key can be the student's ID, and the value can be the POJO object.
5. Prepopulate the Data
 - Initialize the application with **three default records** in the HashMap when the application starts.
6. Develop Controller Methods

- Create a **Controller class** to handle HTTP requests and responses.
 - Add methods to process Thymeleaf form submissions and return the appropriate data or views.
7. Create Thymeleaf Pages for User Interaction
- Design the following Thymeleaf pages:
 - A page to **display all records**.
 - A form to **add a new record**.

Submission:

- Name project as **HumberNumber_YourLastName_assignment1**
- Submit your code through GitHub repository
- Create a brief demo video of the running project with explanation.
- Upload the video on blackboard
 - Log in to your Blackboard account.
 - Navigate to the “**J2EE Business Components - ITE-5432-IRA**” course and **Assessments -> Assignments -> Assignment 1** section.
 - Upload video in the designated area.

Rubric:

Deliverables	Score
Code Submission through GitHub	50%
Video Submission on the Blackboard	50%