**Documentation for TAAP**

**Overview**

**T**eaching **A**ssistant **A**ssistance **P**latform – TAAP, is a web application that assists teaching assistants and professors in evaluating students' performance in lab sessions that are conducted in-person at the labs.

**Objectives**

We made use of the following objectives to implement the system:

* The system should allow the creation of new lab sessions and generate tokens for teaching assistants and students to join the active lab session.
* The system should allow students to raise a review request to the teaching assistant when they finish their lab exercise.
* The teaching assistant should be able to see the number of students in the queue, and the system should assign review requests to teaching assistants on a first-come, first-serve basis.
* The system supports multiple lab sessions and multiple teaching assistants to be registered with a lab session so that the review requests will be split based on availability.
* Once the teaching assistant taps on the "ready to accept request" button, a request will be assigned to the teaching assistant from the queue.
* The system should allow the teaching assistant to grade the students and submit the evaluation.
* While in the queue, the students should be able to see their queue status on the page.
* The lab session should have a set time duration, and once the session expires, the evaluation results should become available in the dashboard for download for the next 24 hours.

**Technologies Used**

We have made use of the following technologies to implement the system:

* Java Spring Boot
* Server-Sent Events (SSE)
* Thymeleaf
* HTML
* CSS
* Bootstrap
* JavaScript
* jQuery

**Design Patterns**

To satisfy the requirements for the Software Architecture and Design Patterns course, we have implemented the system using the following design patterns:

* Command Pattern
* Factory Pattern
* Iterator Pattern
* Observer Pattern
* Singleton Pattern
* State Pattern

The application follows the architectural style of Model View Controller Architecture.

**Application in Use**

*Homepage*

**Graphical user interface

Description automatically generated with low confidence**

The Homepage is the starting point of the application. Here, a user can either join an active lab session that was already created or create a new lab session.

*Creating a New Lab Session*

Graphical user interface

Description automatically generated with low confidence

**Graphical user interface, table

Description automatically generated with medium confidence**

**Graphical user interface

Description automatically generated**

**Graphical user interface

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**Diagram

Description automatically generated with low confidence**

**Graphical user interface, text, application

Description automatically generated**

**Graphical user interface, application

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