VALLEY VIEW UNIVERSITY

FACULTY OF SCIENCE

DEPARTMENTS OF COMPUTER SCIENCE

COURSE CODE : COSC 346

COURSE TITLE : SOFTWARE ENGINEERING

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OCCUPI-CLASSROOM DOCUMENTATION

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8.1 Classroom Change Feature

1. Introduction

1.1 Overview

occupi-class is a web-based application designed to help students easily identify ongoing, upcoming, and past classes, along with information about the classrooms and courses. The application is accessible via a web page and offers a user-friendly interface to students and administrators.

1.2 Problem Statement

Students often face difficulty in determining which classes are currently happening and their locations. occupi-class addresses this issue by providing real-time information about classes, including details such as the lecturer, timings, day, and live status.

1.3 Goals and Objectives

- Provide students with a simple platform to access information about ongoing, upcoming, and past classes.
- Enable administrators to manage and update course locations efficiently.
- Enhance the experience of students and administrators in accessing class-related information.

2. System Architecture

2.1 Technology Stack

- HTML
- Tailwind Css
- Javascript
- PHP
- MySQL

2.3 Frontend

The frontend is built using Tailwind Css, HTML, and Javascript ensuring a responsive and interactive user interface.

2.4 Backend

The backend handles data processing and retrieval, managing real-time class status, and supporting administrative functionalities. It communicates with the frontend and database to ensure seamless user experiences which are built with PHP.

2.4 Database

The database stores information about departments, courses, classrooms, and their respective details. The departments, classrooms, and timetable is stored in json from a python script which is extracted from the timetable.xlsx which can be accessed by the application while user information is stored in MySQL database.

3. Features

3.1 Classroom and Course Listing

Users can easily navigate through departments to view a list of classrooms, courses, lecturers, timings, and day details.

3.2 Real-time Class Status

The application displays the current status of classes, indicating whether a class is ongoing, upcoming, or has already taken place.

3.3 Departments Specific Navigation

Users can select a specific department to see relevant classes, simplifying the process of finding information for a particular course.

4. Use Cases

4.1 Student Use Case

Students can access the webpage, navigate through departments, and view real-time information about classes without the need for authentication.

4.2 Administrator Use Case

Administrators (future enhancement) will have the ability to update course locations, facilitating efficient management of classroom assignments.

5. User Personas and Scenarios

5.1 Student Persona

Name: Pamela
Role: Student
Scenario: Alex wants to check the ongoing classes in the Computer Science department. He visits the occupi-class webpage, selects the Computer Science department, and views the real-time status of classes.

5.2 Administrator Persona

Name: David
Role: Administrator (Future Enhancement)
Scenario: Emma needs to update the location of a Biology class to a different classroom. She logs into the occupi-class admin panel, selects the relevant class, and updates the classroom information.

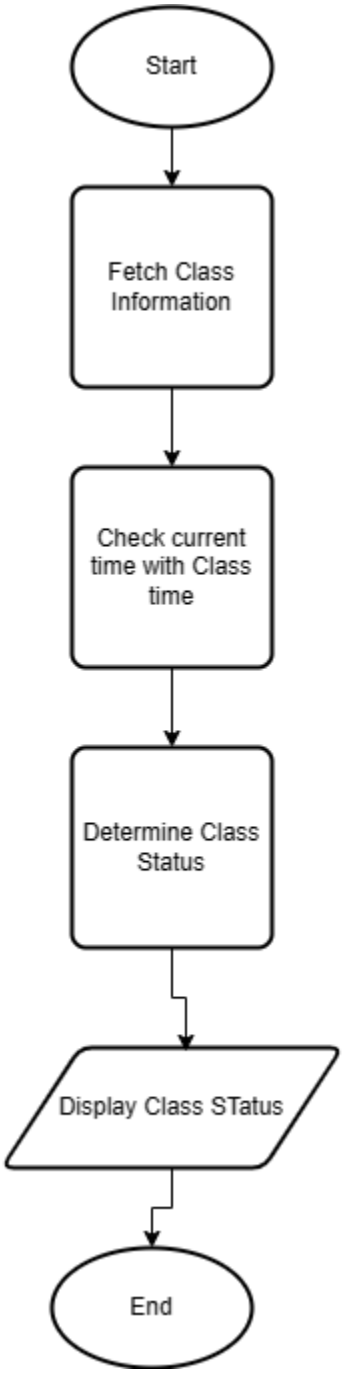
5.3 Scenarios

Scenario 1: A student wants to know the schedule for a specific computer science class. They visit the computer science department page to view details about the class, including timings and the current status.
Scenario 2: An administrator needs to find available classrooms for a new computer science course. They log in to the admin panel, check classroom availability, and assign a suitable location.

7. Algorithms

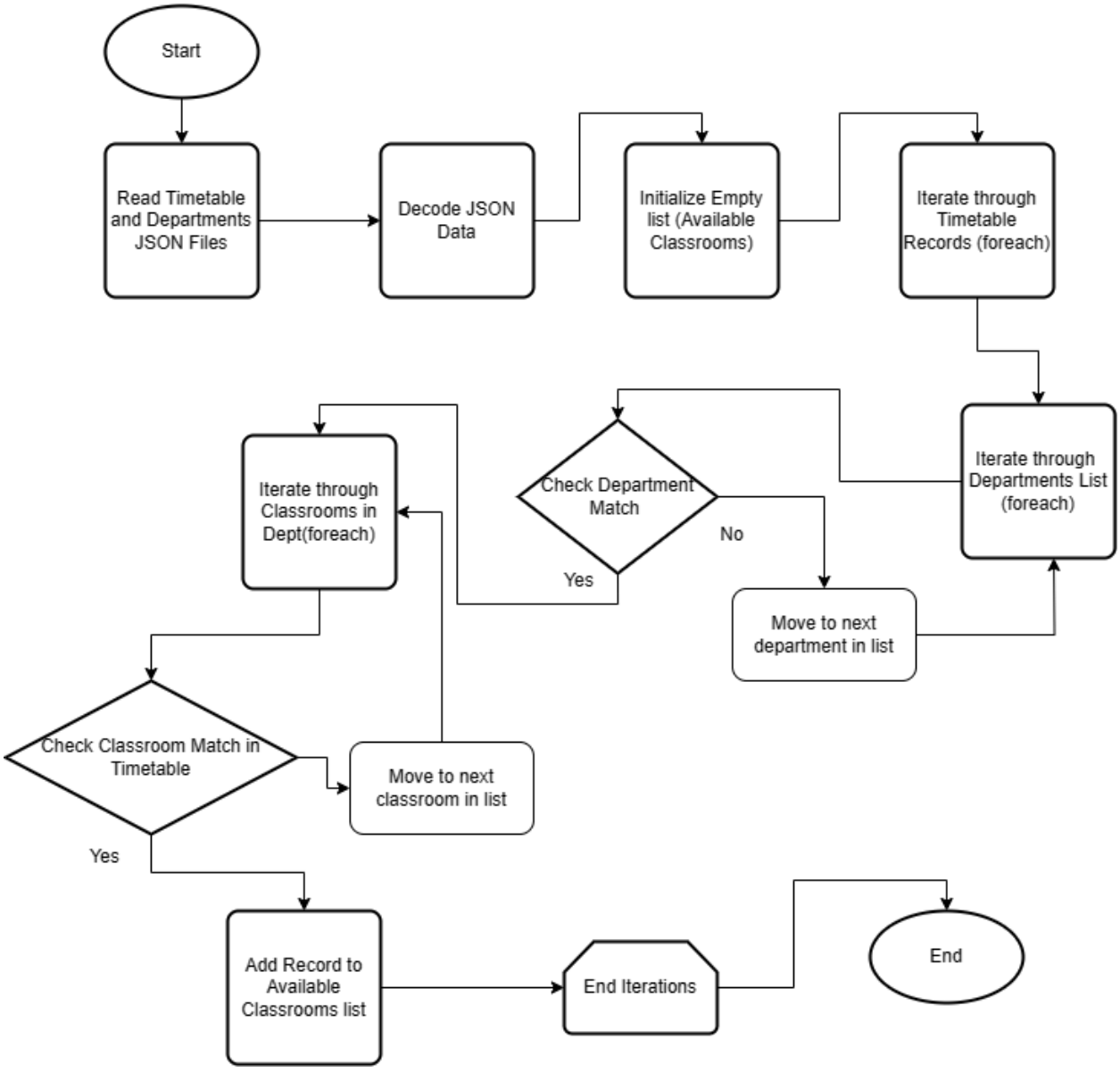
7.1 Real-time Status Algorithm

Algorithm continuously checks the current time against the scheduled class timings to determine if a class is ongoing, upcoming, or has passed.

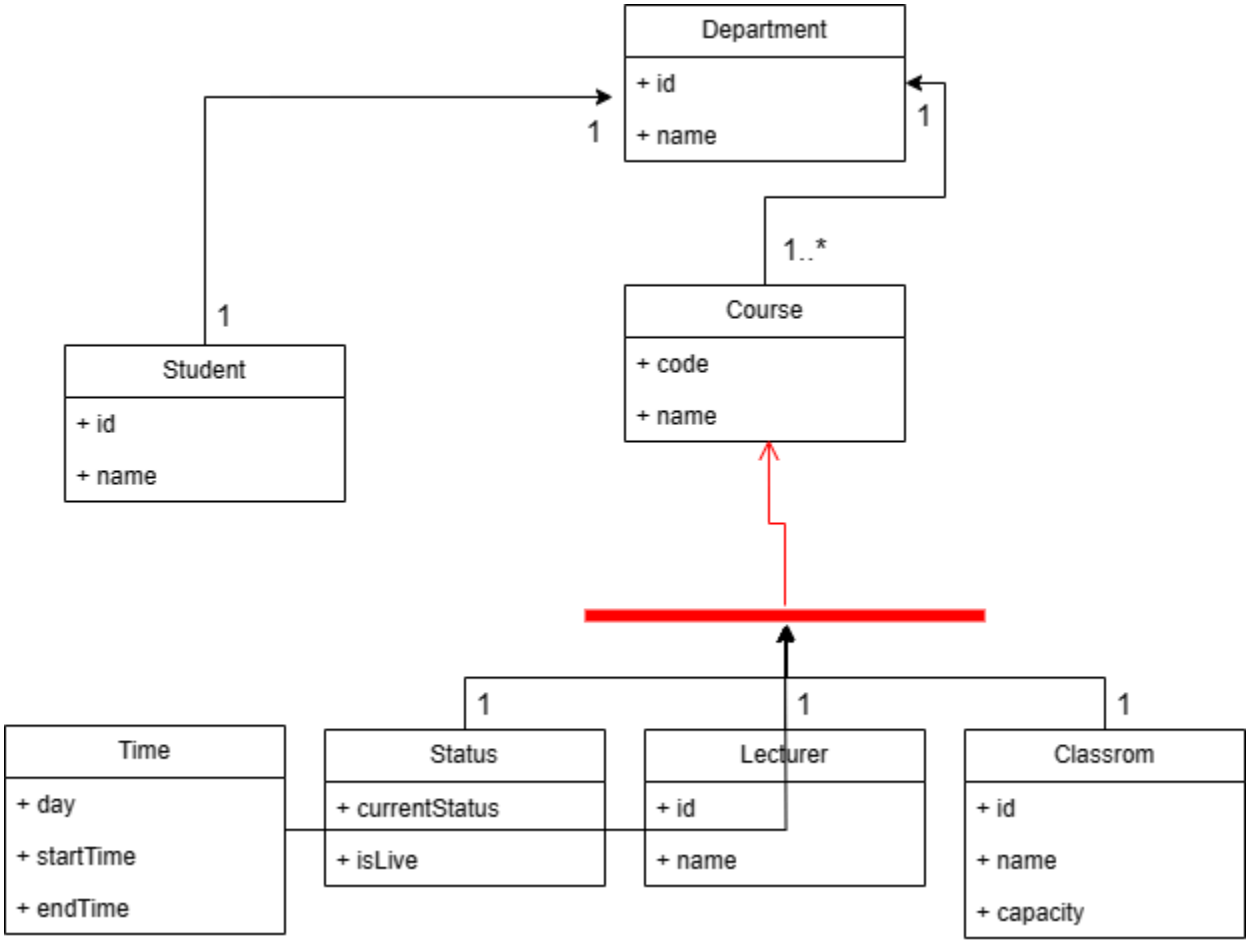


7.2 Department Specific Listing Algorithm

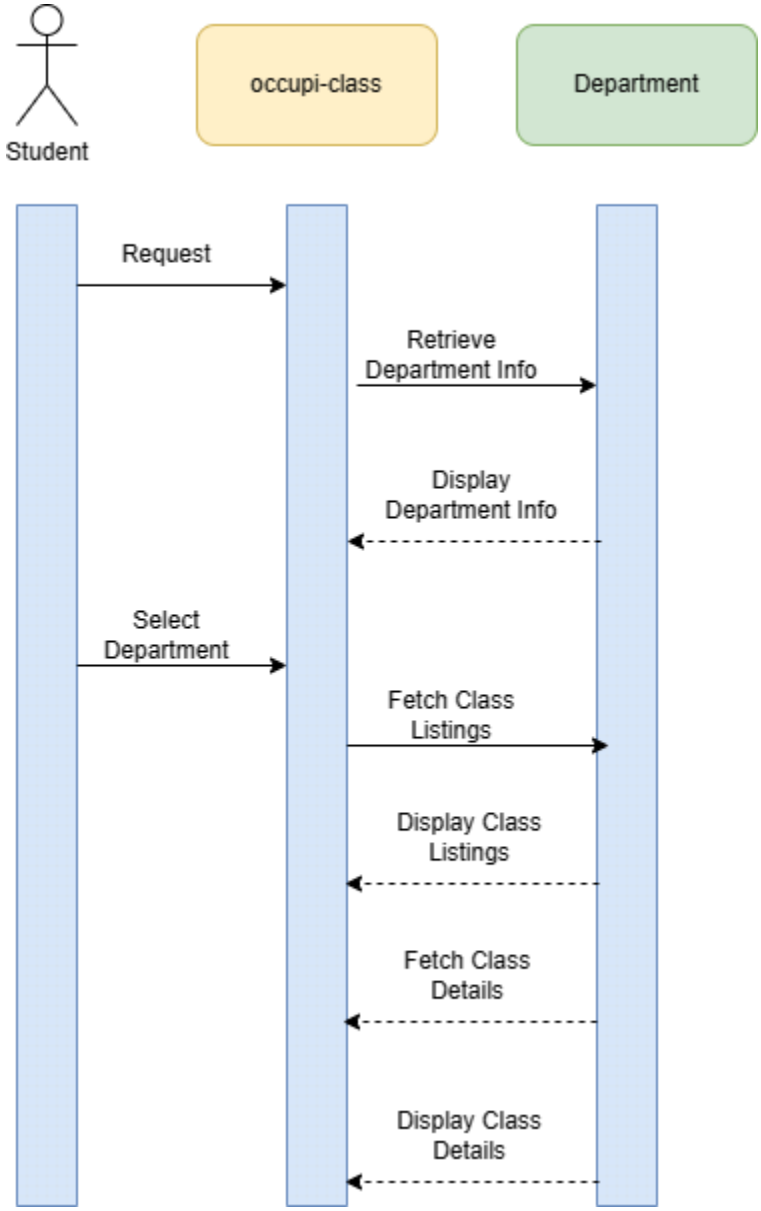
Algorithm retrieves and filters data from the database to display department-specific information on the frontend.



7.3 UML class diagram



7.4 Sequence Diagram



8. Future Enhancements

8.1 Classroom Change Feature

Implement functionality for administrators to easily update course locations and manage classroom assignments.

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