جامعة الأمير مقرن بن عبد العزيز
University of Prince Mugrin

SE 343 – Software Process and Modeling

Team A - Attendance Recording

Team members:

Basant Mahmoud 4010064

Salwa Shama 4010405

Samah Shama 4010403

Sana Shama 4010404

Shatha Faraj 4010378

Instructor:

Dr. Khaled Khankan

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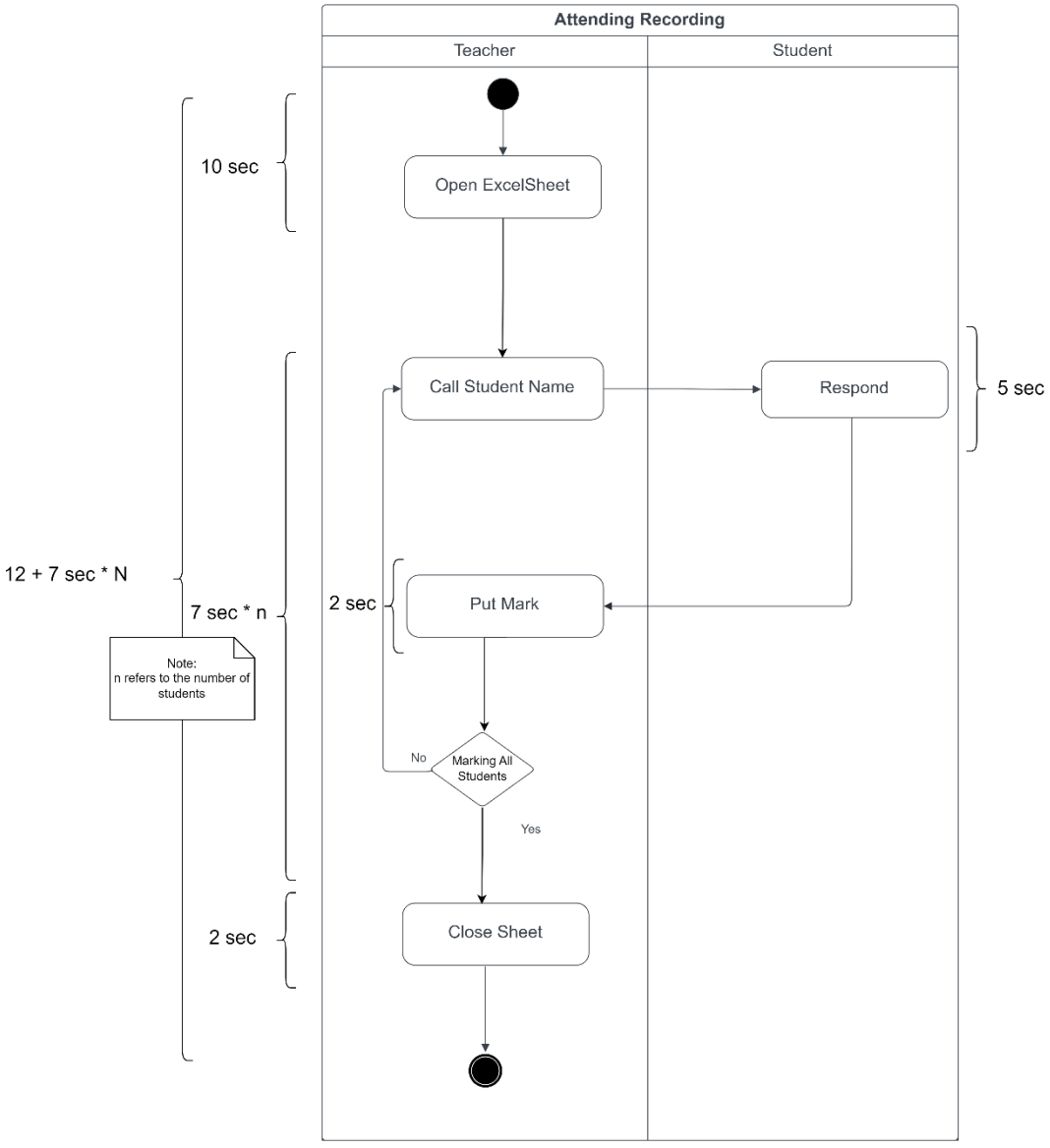
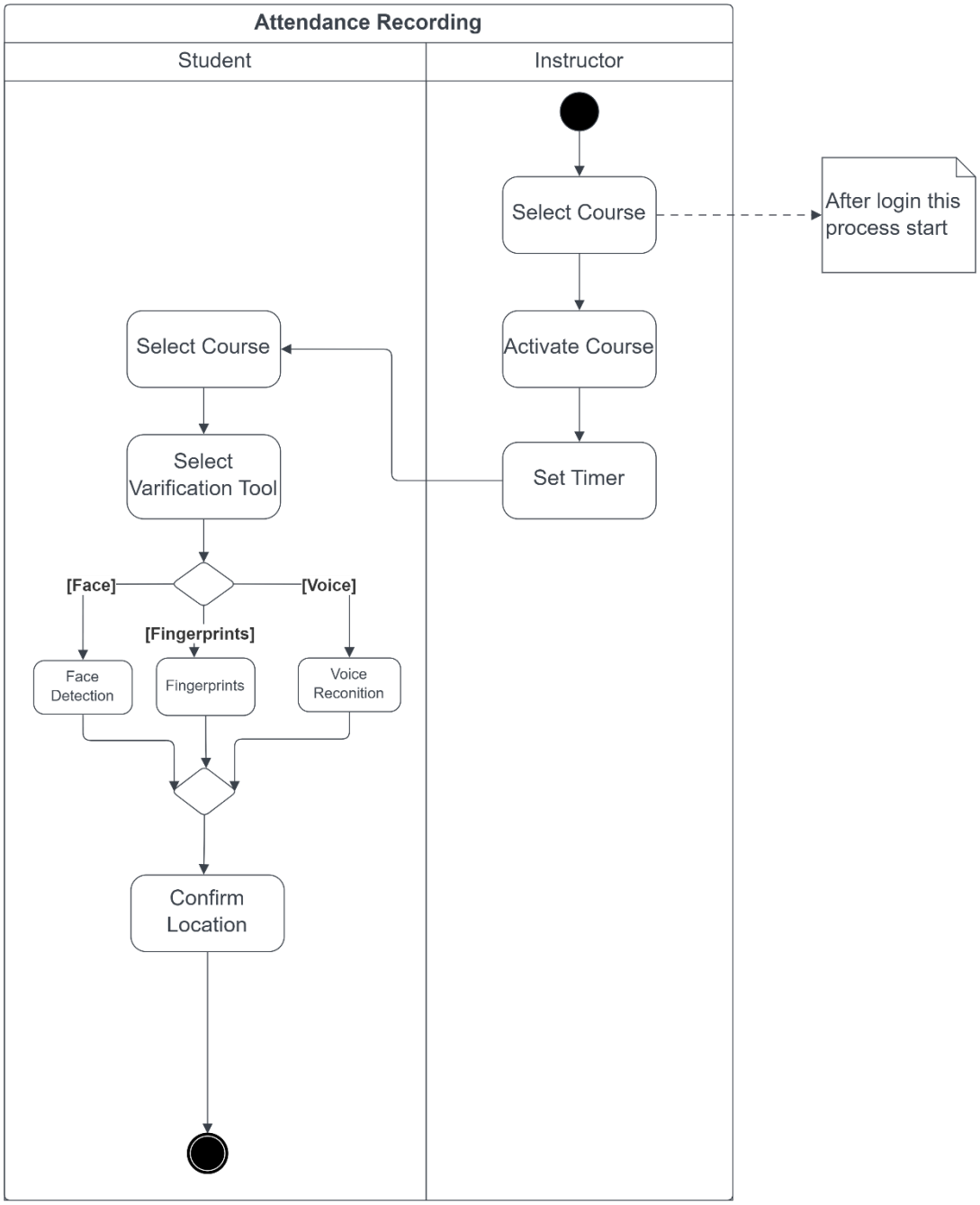
1. Business Models

1.1 As-Is Model



1.2 To-Be Model



2. Software Requirements

2.1 Functional Requirements

FR For INSTRUCTOR

1.1- The instructor shall be able to set timer for an attendance session.

1.2- The instructor shall be able to view the attendance list.

1.3- The instructor shall be able to download the attendance list.

1.4- The system shall be able to activate the selected course .

1.5- The instructor shall be able to create courses .

١,٥,١-The student shall add automatically by using accessing UPM system or manually.

1.6- The instructor shall be able to delete the courses.

1.7 -The instructor shall be to edit course attribute.

FR For STUDENT

1.1- The student shall be able to select the course.

2.1- The student shall be able to select a suitable verification tool such as (face deduction, fingerprint, voice recognition).

2.2 -The student shall be able to confirm his/her location(indoor).

2.2 Non-functional Requirements

1- The system shall work on different types of devices (Portability).

2- Novice users shall choose to attend or absent within few minutes (usability).

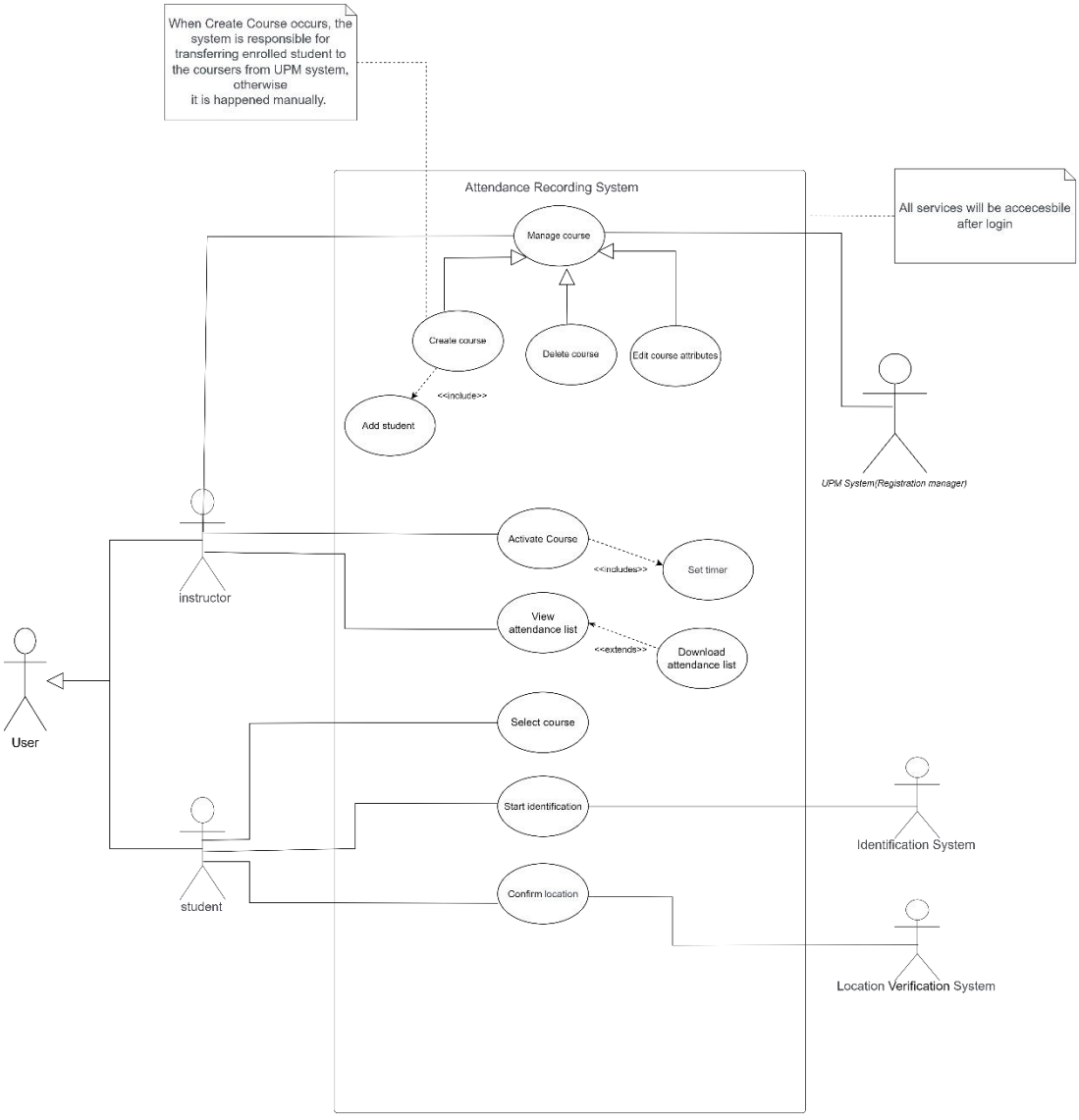
3- The user shall be able to log in to the system (security) (authentication &authorization).

4- The system shall display the activated courses to the student within 5 seconds (Responsivenes).

3. Software Design

3.1 Object-oriented Analysis and Design (OOAD)

3.1.1 Use case Diagram



3.1.1 Sequence Diagram

Basic Flow for Manage Course Use Case:

1. The instructor will log in to the system.

2. The system displays notification massage.

Basic Flow for Create Course Use Case:

1 .The instructor retrieves his/ her courses with enrolled students from UPM System.

2 .The system saves the course that has been created into system's database.

3 .The system displays succussed massage .

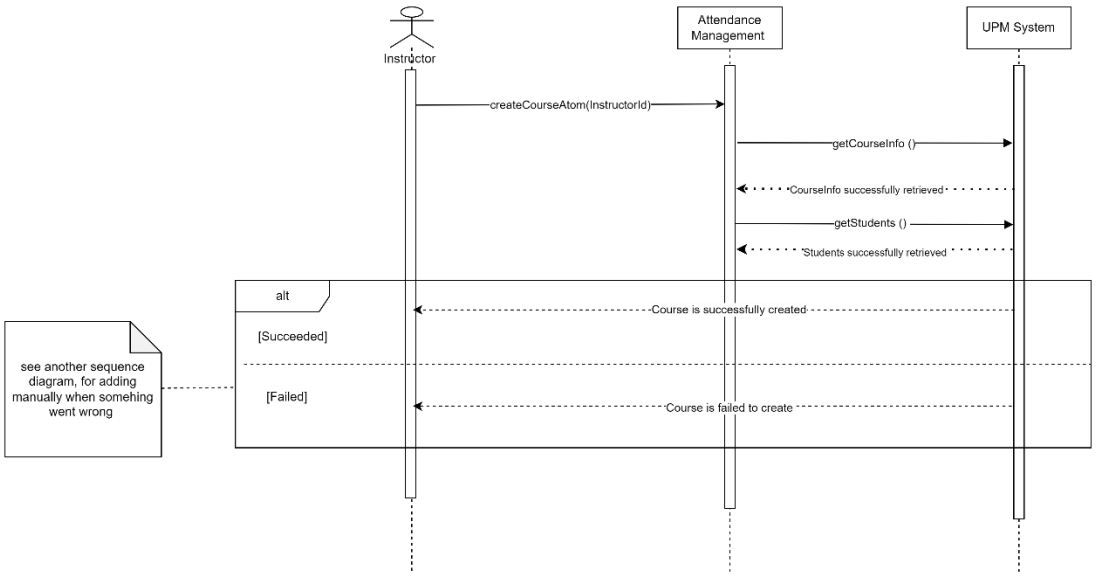
Alternative Flow for Create Course Use Case:

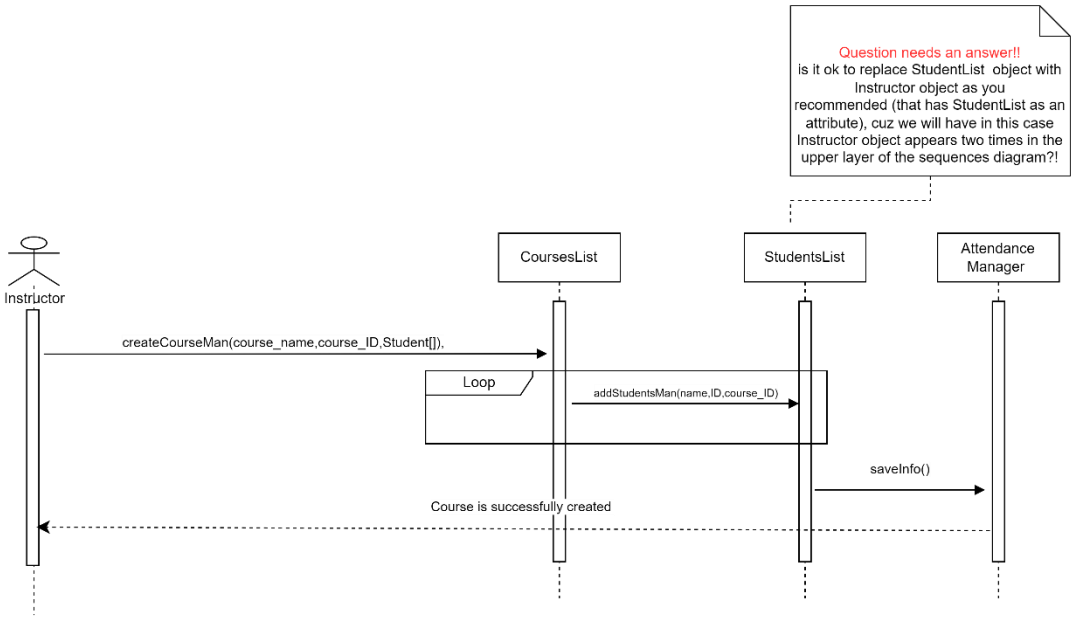
1 .The instructor creates a course manually and fills course information such as Course Name, ID.

2 .The instructor adds students with their information manually such as Names, IDs in the specified course.

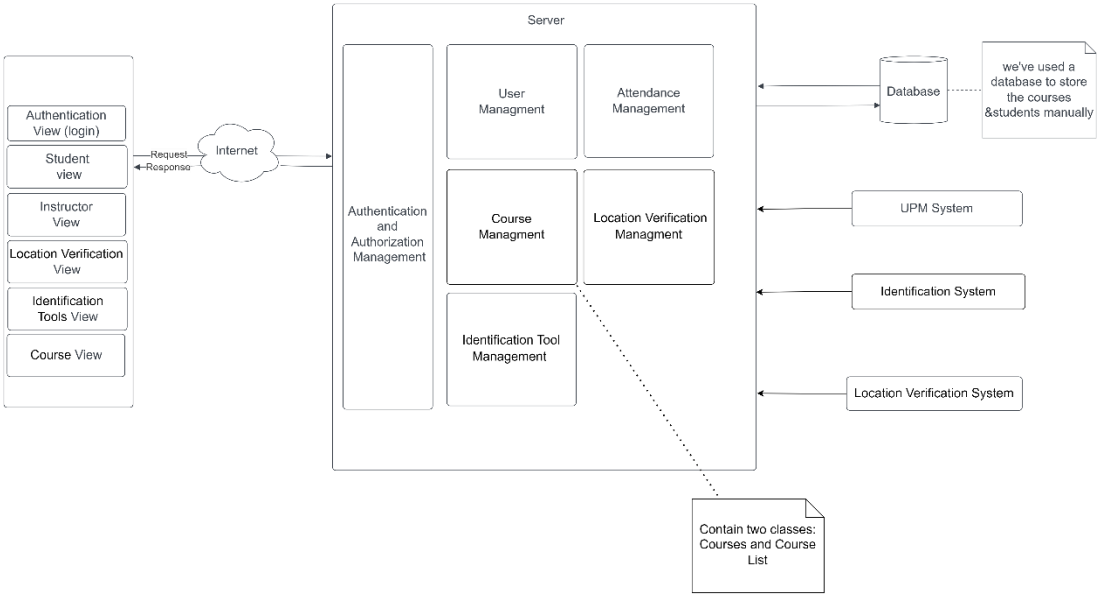
3 .The system saves the added course with enrolled students into the system's database.

4. The system displays succussed massage.

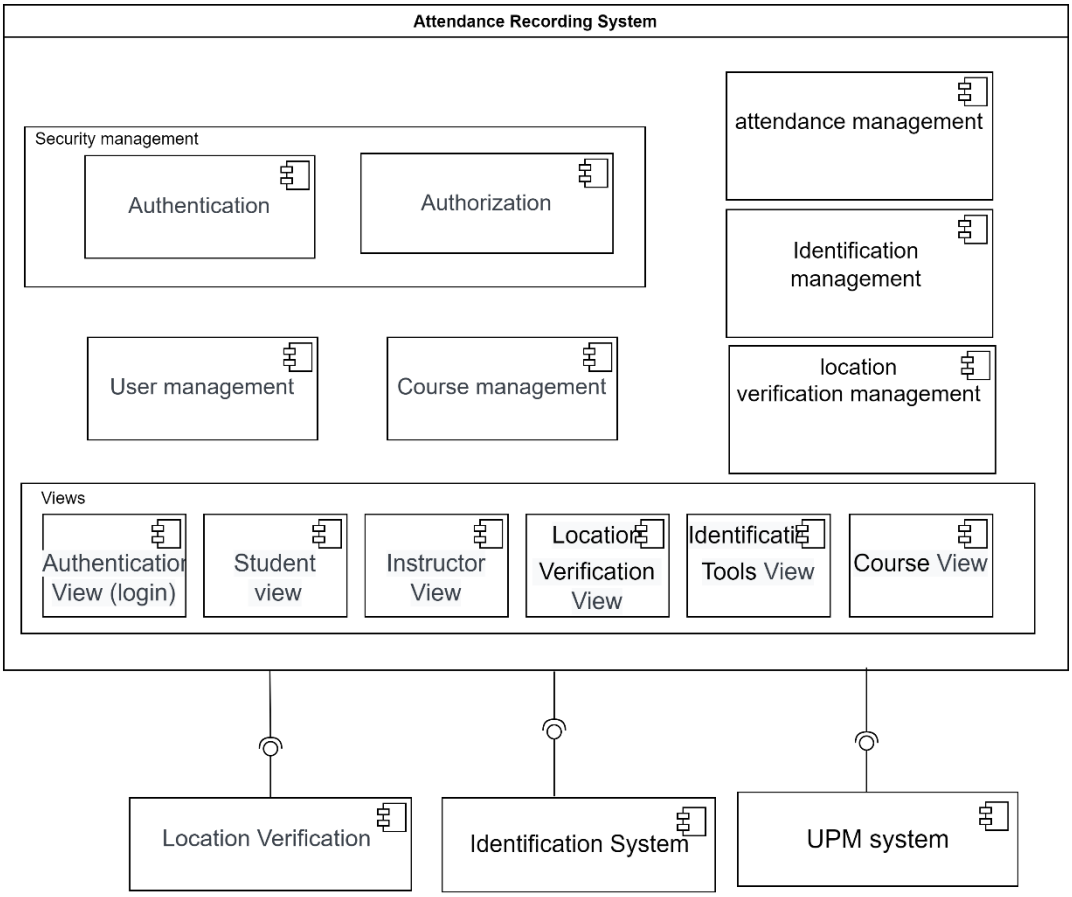



Question needs an answer!!
is it ok to replace StudentList object with Instructor object as you recommended (that has StudentList as an attribute), cuz we will have in this case Instructor object appears two times in the upper layer of the sequences diagram?!
Instructor
CoursesList
StudentsList
Attendance Manager
createCourseMan(course_name,course_ID,Student[]),
Loop
addStudentsMan(name,ID,course_ID)
saveInfo()
Course is successfully created

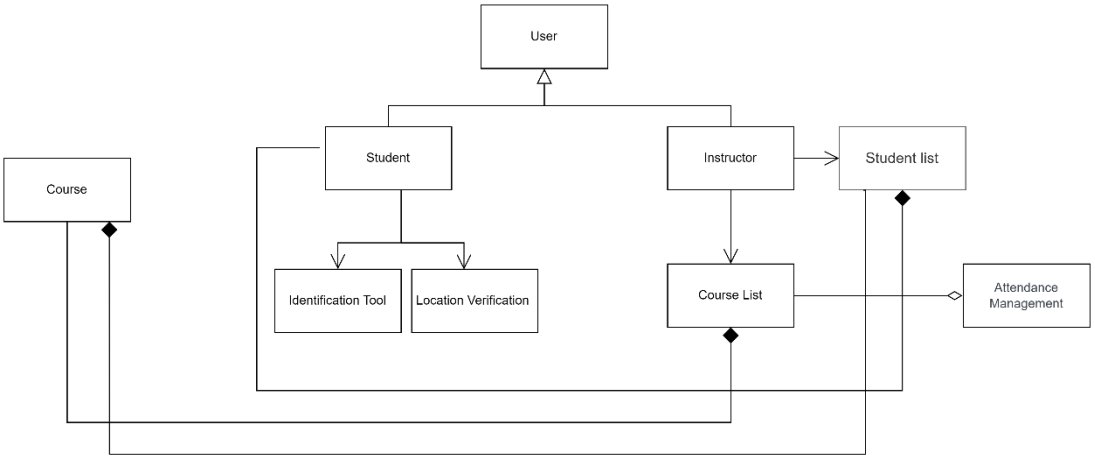
3.2 Architectural Design



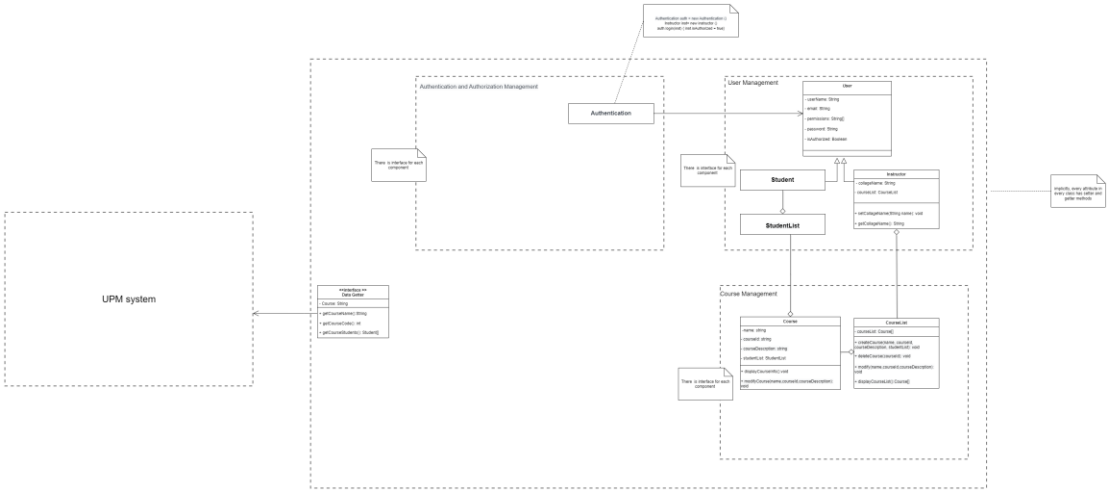
3.3. Component Diagram



3.4. Initial Set of Objects



3.5 Class Diagram



Link:

https://drive.google.com/file/d/1GLaC-h6oVfYZBnxwBcCyKL4ieK2X4y74/view?usp=sharing