Professor As a Service

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Introduction

Currently, the internet has become widely prevalent. It has created many opportunities and made it easy for people to communicate across the world with minimum effort. Using the internet, Professors from any university can publish their courses worldwide such that any student from anywhere can access them. The primary purpose of this model is to give a platform for the Professor to publish their course offerings so that the Student can attend them wherever possible. Students will be graded and issued certificates from third-party educational providers like Coursera, EDX, etc. Ultimately, it could save a lot of time and money for professors as well as for the university as well.

Problem:

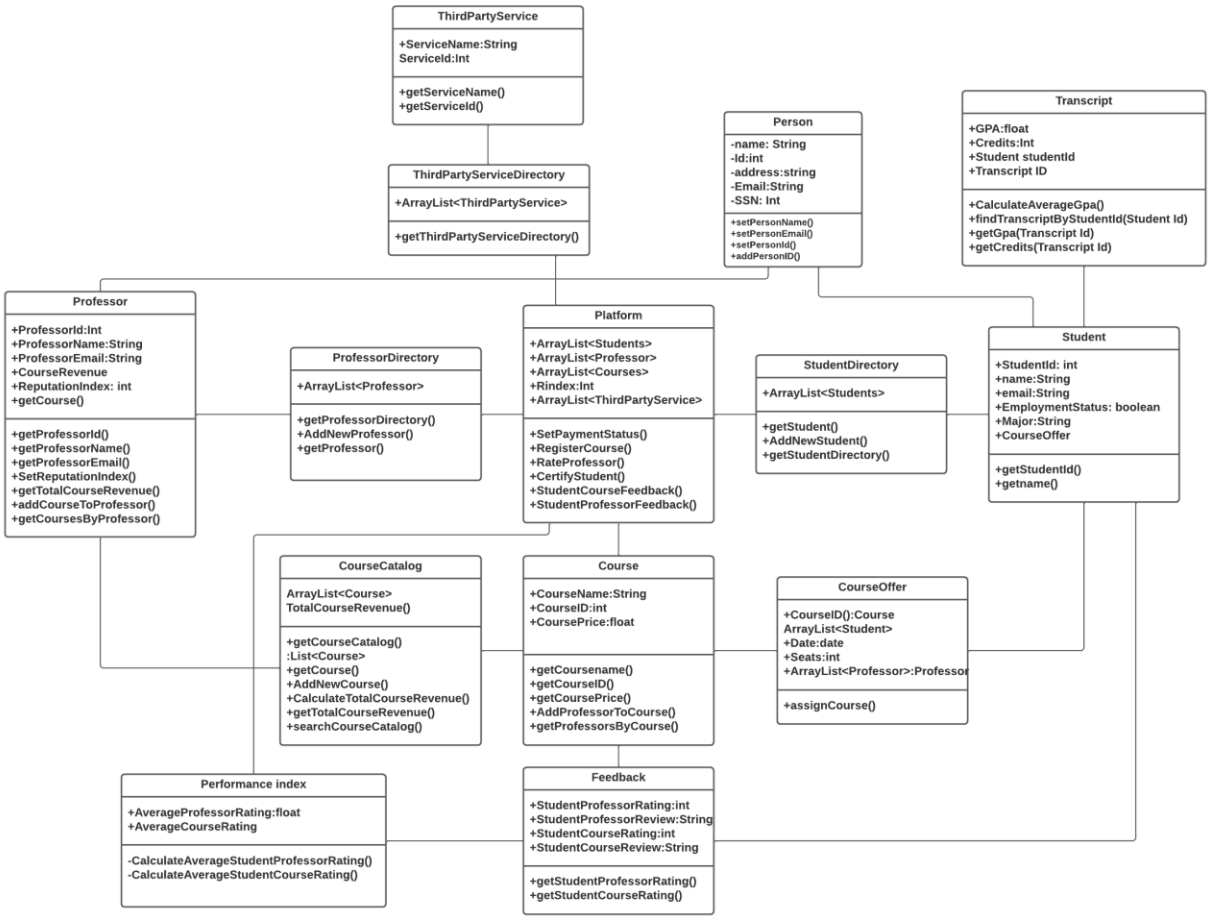
Professors require a platform to charge their talent and experience rather than the educational institution. A professor will be able to work from anywhere in the world. The degree can be approved by a third-party certification authority using the underlying digital platform. Different certification authorities may be worth considering. For example, a third party might have greater accessibility to employers. The Professor sets the course price, which can vary and be easily adjusted depending on demand. Course tuition is paid directly to the Professor. For the use of the digital platform, the Professor will pay a subscription fee.

Solution:

We want to use software engineering techniques to lower tuition costs while also improving education quality worldwide. Through education, learning, and feedback, we want to hold people accountable for improving the quality of life for the masses. We want a completely decentralized system where professors, not educational institutions, own their talent and experience.

- Professors can provide course offerings
- Students can pay for that course and attend the classes
- Third-party services can provide authentic certification and grade the students accordingly and additionally receive their transcripts
- Students can give feedback and rating for the system and to the Professor

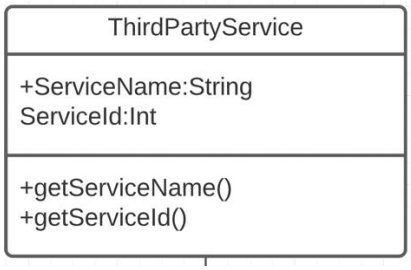
UML Class Diagram:



Model Components:

Third-Party Service:

It stores the name and ID of third-party certificate services like Coursera, EDX, etc. Implemented a couple of getters and setters to give and retrieve the value of Service Name and Service ID.

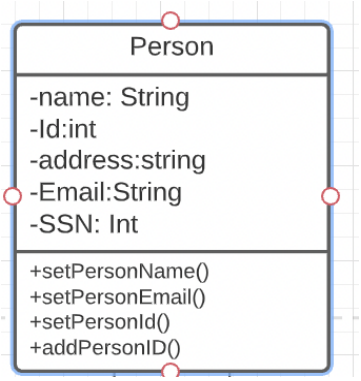


Third-Party Service Directory:

This contains the list of third-party certification services. This class handles all the CRUD operations of ThirdPartyService.

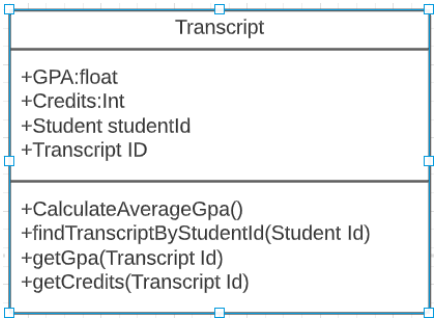
Person Directory:

It is a superclass of Professor and Student. It has general parameters like Name, Address, Email and unique SSN. SSN is included to make sure if the person is indeed valid. Added the getters and setters to create or retrieve the person's details.



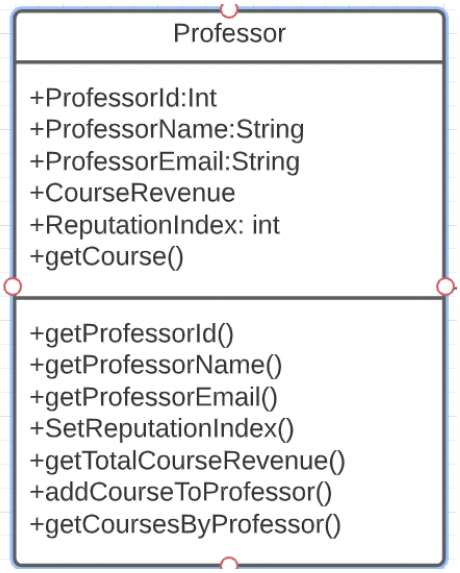
Transcript class:

Each Student will be receiving a transcript and can view their credits and grades. Added a few getters and setters to get the details such as the average GPA and overall credits achieved.



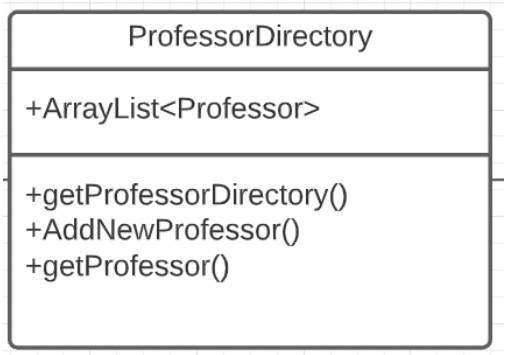
Professor:

This extends the "Person" class and has additional attributes like Courses revenue and Reputation Index. Additionally, using the provided getters and setters, we can get the Professor's overall performance and metrics.



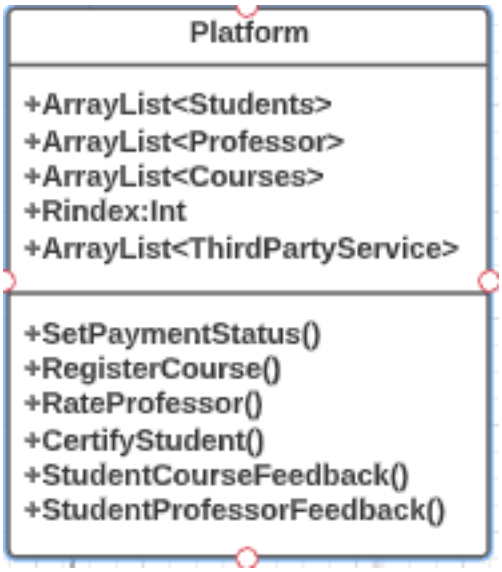
Professor Directory:

This contains the directory of professors in a platform. Additionally, we perform CRUD operations of the Professor object handled in this class.



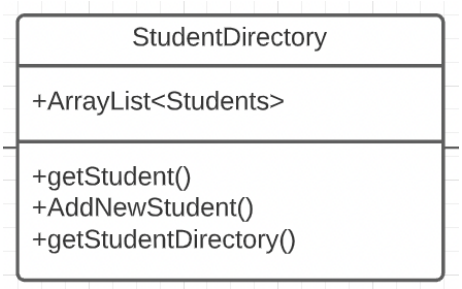
Platform:

The main class in this model. Contains all the information about the courses, students, professors, third-party services, etc. Apart from that, we can also get the payment status, the professor feedback, provide certification to the Student using their respective getters



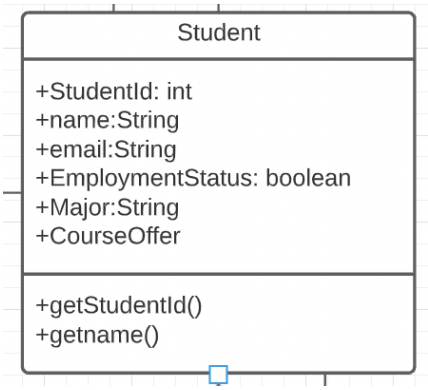
Student Directory:

This is the directory class of students. All the CRUD operations of student objects are done here.



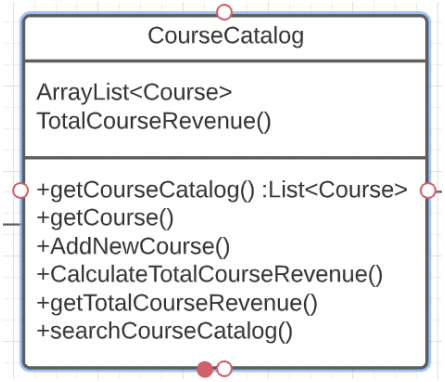
Student:

This class extends the Person class and involves additional attributes like Employment Status, Majors, course offer was taken, etc. Additionally, they can also view their accepted course offer.



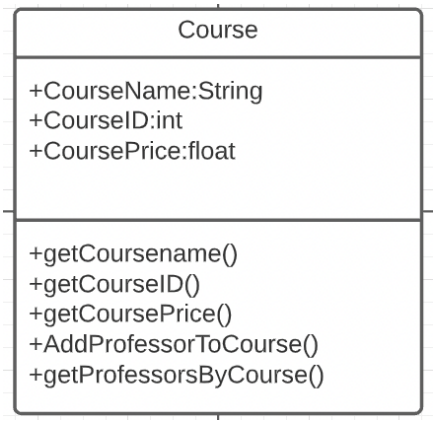
Course Catalog:

It is the directory of all the courses. It handles the CRUD operations of the courses object.



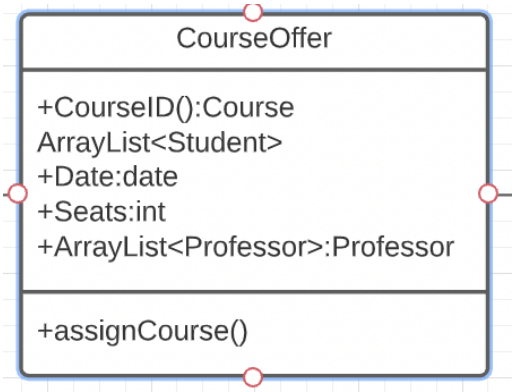
Course:

A simple course class with name, id, description, and price can be assigned to the course offer class.



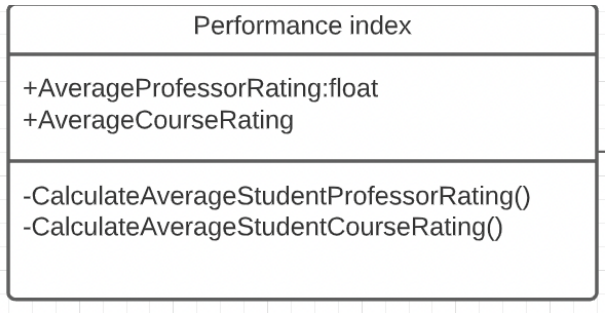
Course Offer:

This class specifies whether which course is available for a particular date, the number of seats available and the number of professors who will be teaching that course



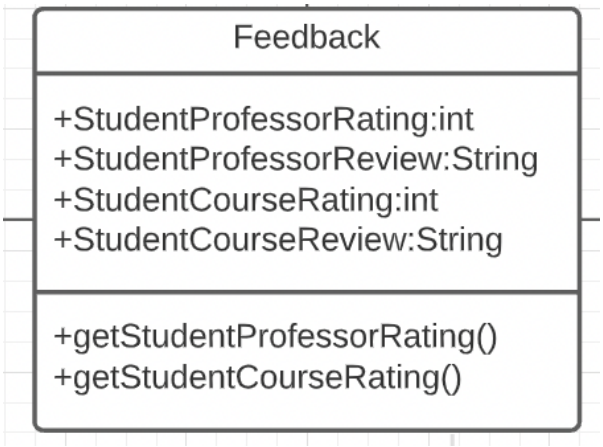
Performance Index:

This class gives out the rating of each Professor and the rating of each course



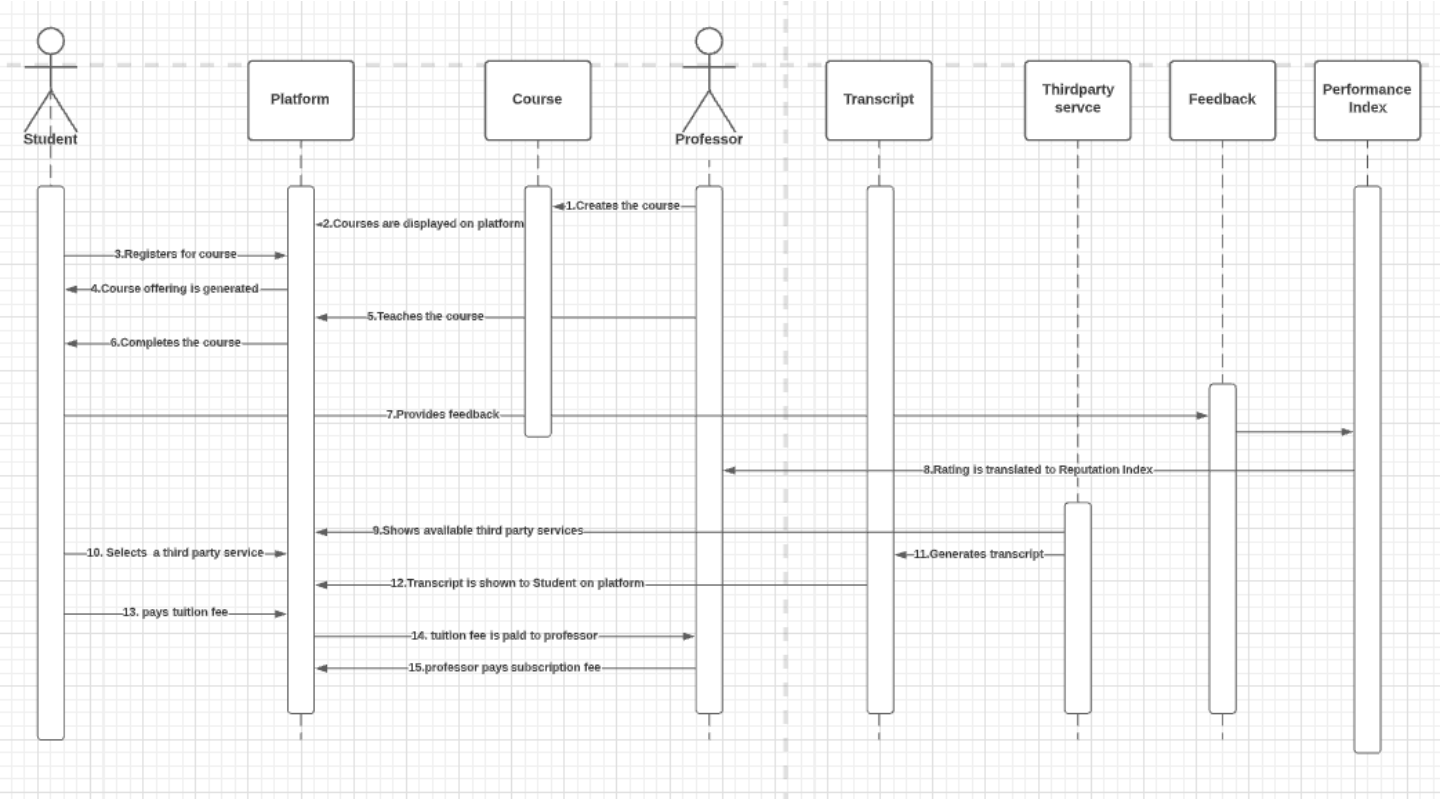
Feedback:

The feedback class wherein students can able to provide their critiques and opinions about a specific professor or course



Sequence Diagram:

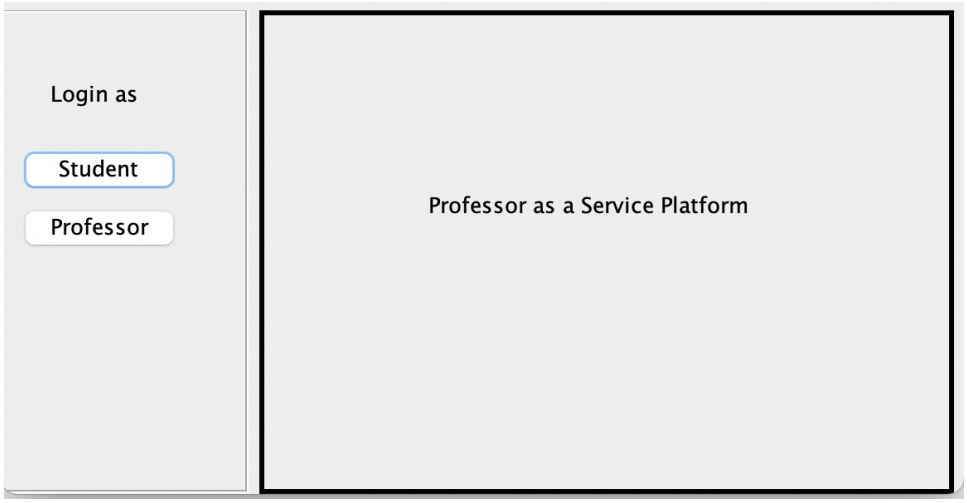
The sequence diagram below shows how Professor and Student will be navigating our application.



UI Diagrams:

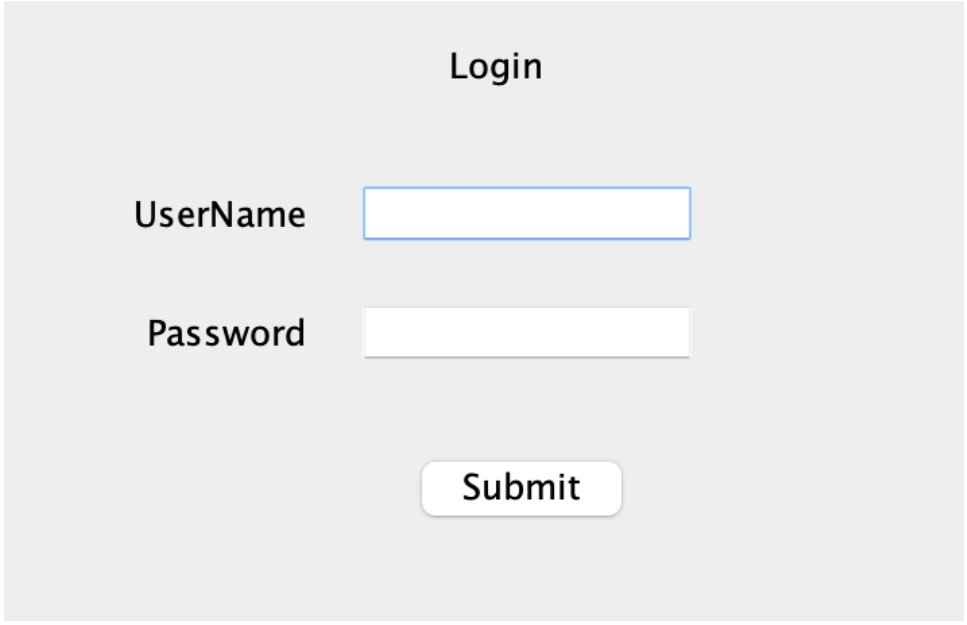
Step 1:

This is how the UI looks when a student or Professor launches the application. They are advised to log in to the application.



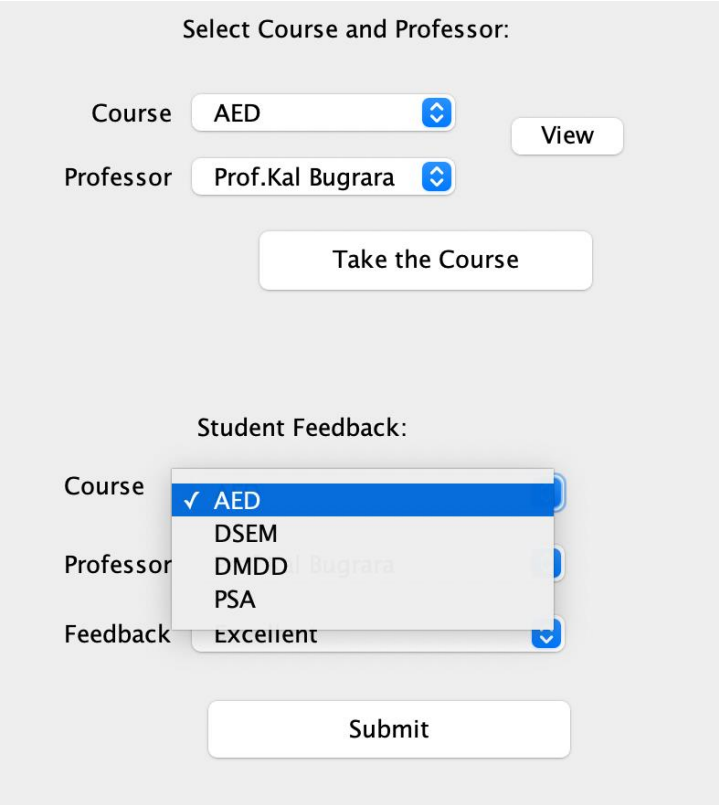
Step 2:

After clicking on the "Student" button, the app directs the user to Student's login page. The user will be given the corresponding username and password and then clicks on "Submit."



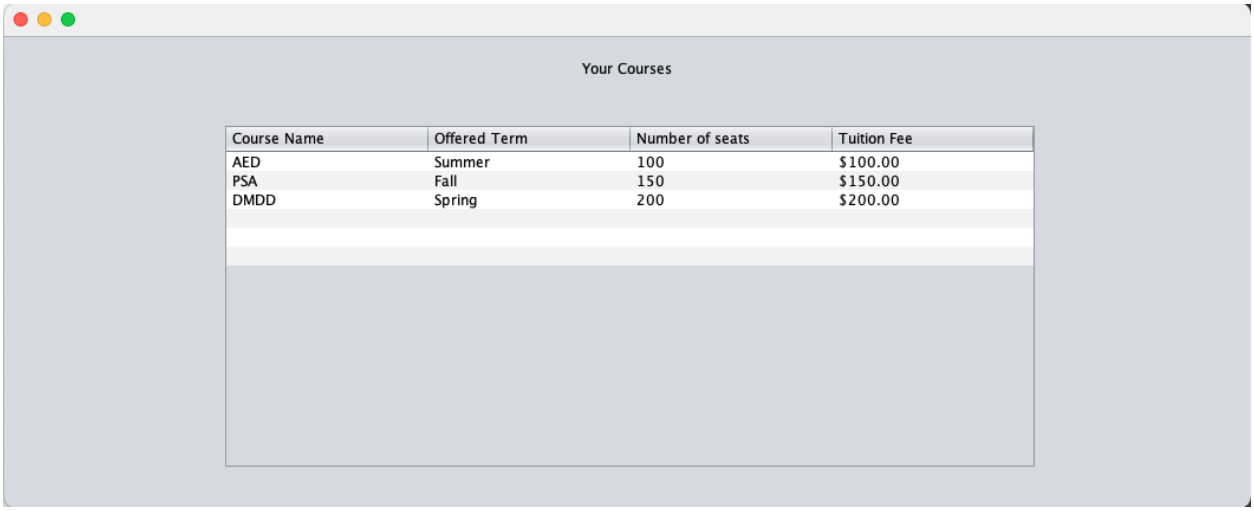
Step-3:

Here Students can be able to choose the course and Professor. After that, he can also view the same professor's courses. Additionally, he can give feedback to the course and the Professor.



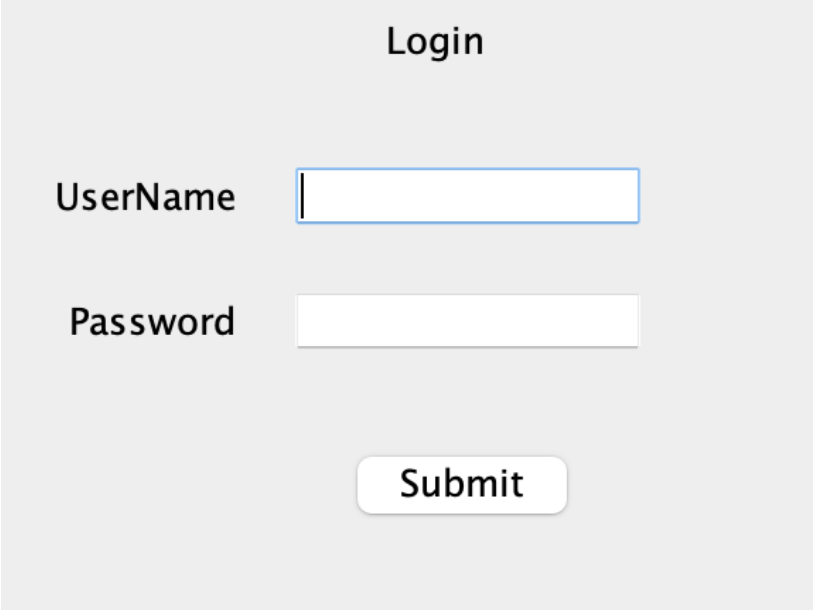
Step 4:

When the student clicks on the "view" button in the previous slide. He can be able to observe the courses offered by the same Professor



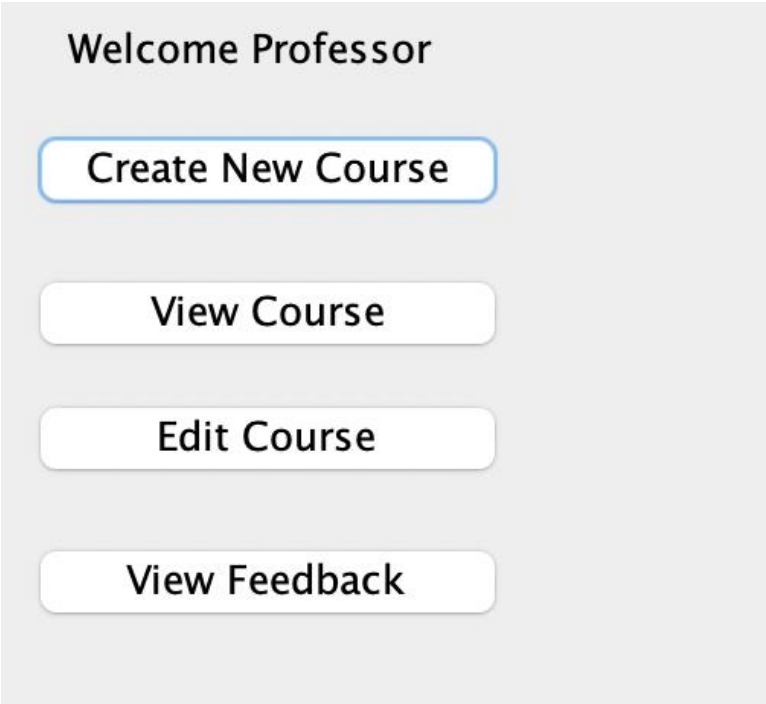
Step 5:

After clicking on the "Professor" button, the app directs the user to Student's login page. The user will be given the corresponding username and password, then clicks on "Submit."



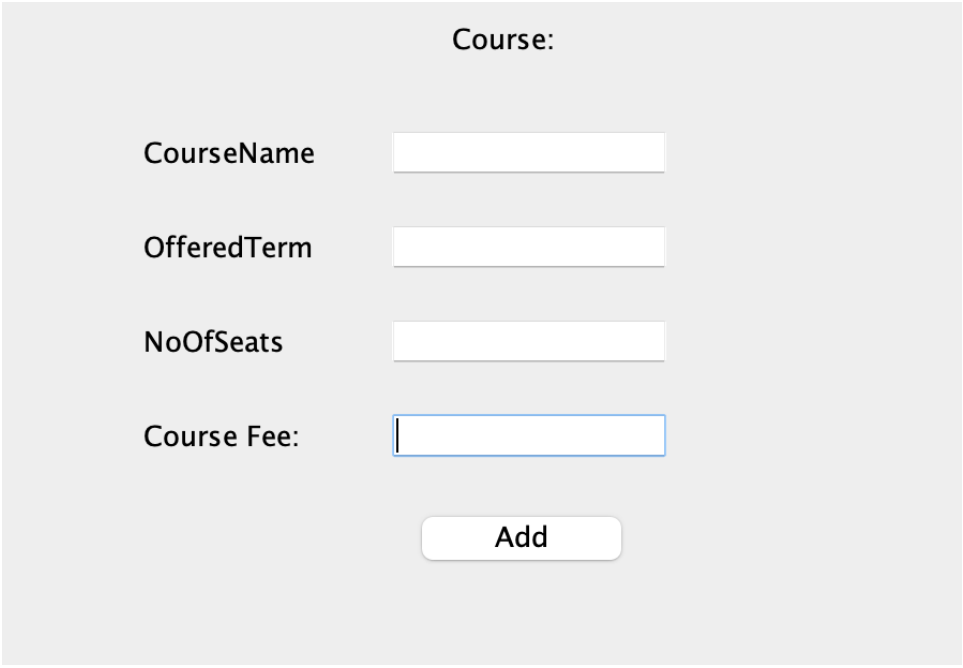
Step 6:

Professor will be able to create/edit/view courses and view feedback given by the students through the platform.



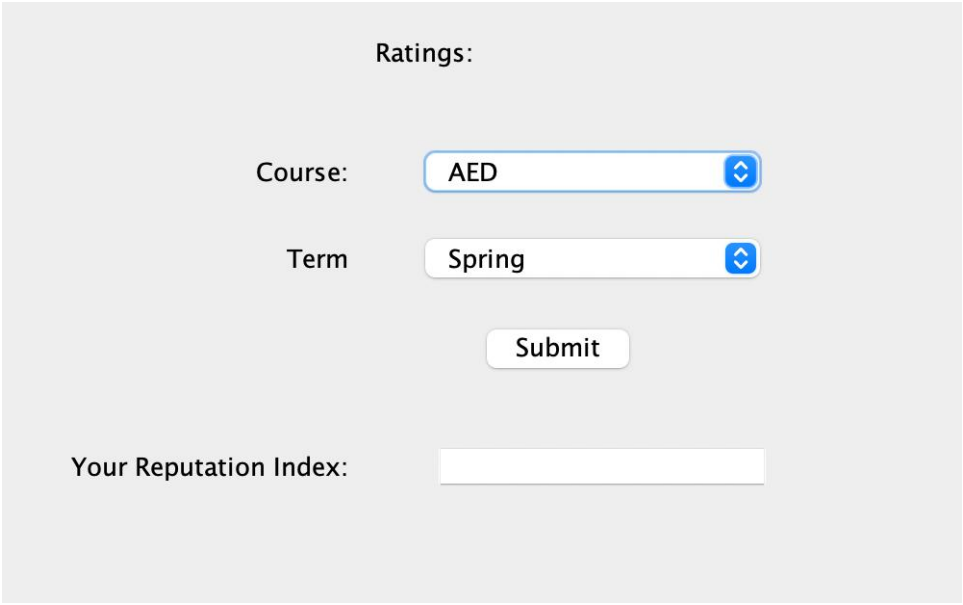
Step 7:

Professor can provide the new course offerings



Step 8:

Professor will be able to view his reputation index from a particular course and term



Final verdict:

With this approach, Professors can have the freedom to teach with their curriculum, and the universities can redirect their funds towards research. This will open the doors for educating underprivileged students, thus creating better opportunities. Additionally, it will benefit the country economically. Just like how present-day businesses are adapting to online privileges, education will soon become decentralized sooner or later.