ASSIGNMENT 3 - UNIVERSITY MODEL

Team Members:

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Problem Statement -

Building a software engineering design to measure the quality of education that universities deliver to their students by ascertaining the professional growth of graduates over a period of 5 years.

Proposed Solution:

We have proposed a comprehensive model that allows us to ascertain various analytics to measure the success for the education system based on the university model. Course, Faculty and Alumni are assessed to get important ratings which indicate the statistics of the course and faculty's contribution towards student's employment and professional growth after gaining a job.

The degree of a course's industry relevance is measured, by generating a course rating that is related to the number of students, which have completed the course and received an employment subsequently after graduating. The alumni's promotion and salary growth can be used as important quantifiers to measure the importance and relevance of a course for future job growth.

The **Courses Job Rating** can be used to indicate a particular courses relation with future employment prospective. This rating can be calculated for each course by:

> Dividing the number of students that took up the course and were employed in future, by the total strength of students enrolled in the course
>
> And then multiplying this number by 10 to represent it as a rating on a scale from 1-10

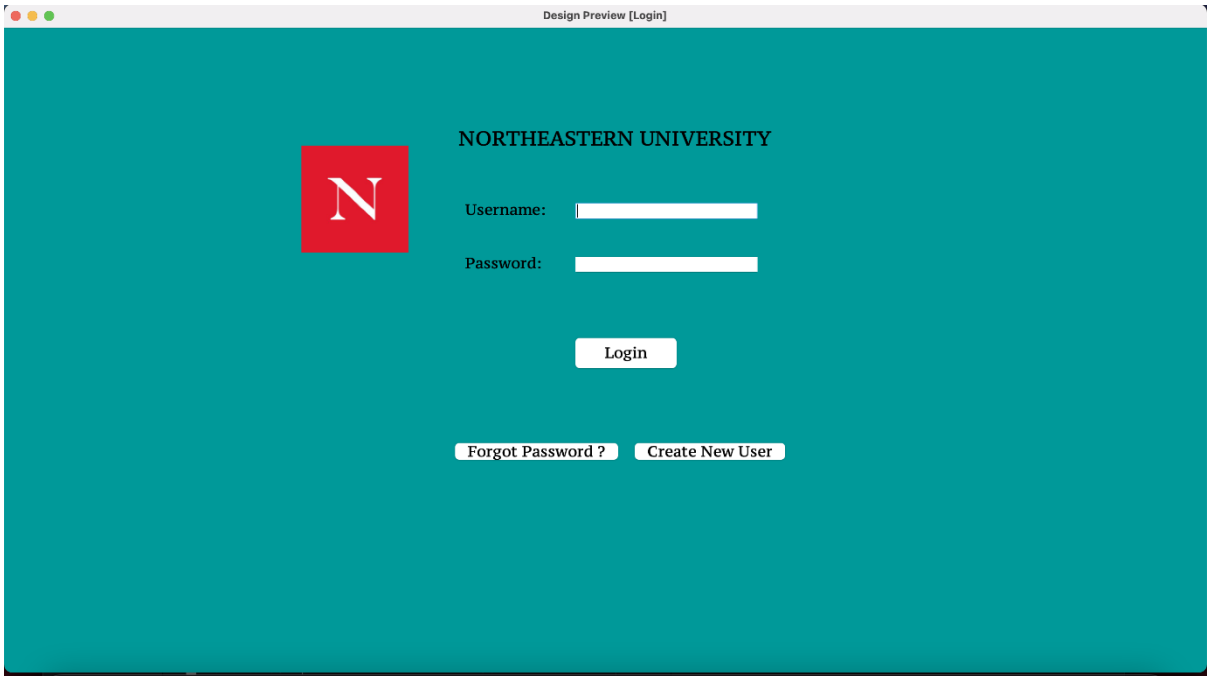
The **Faculty Rating** is the rating given by every student enrolled in each course of the particular faculty member. This gives the ratings of each professor.

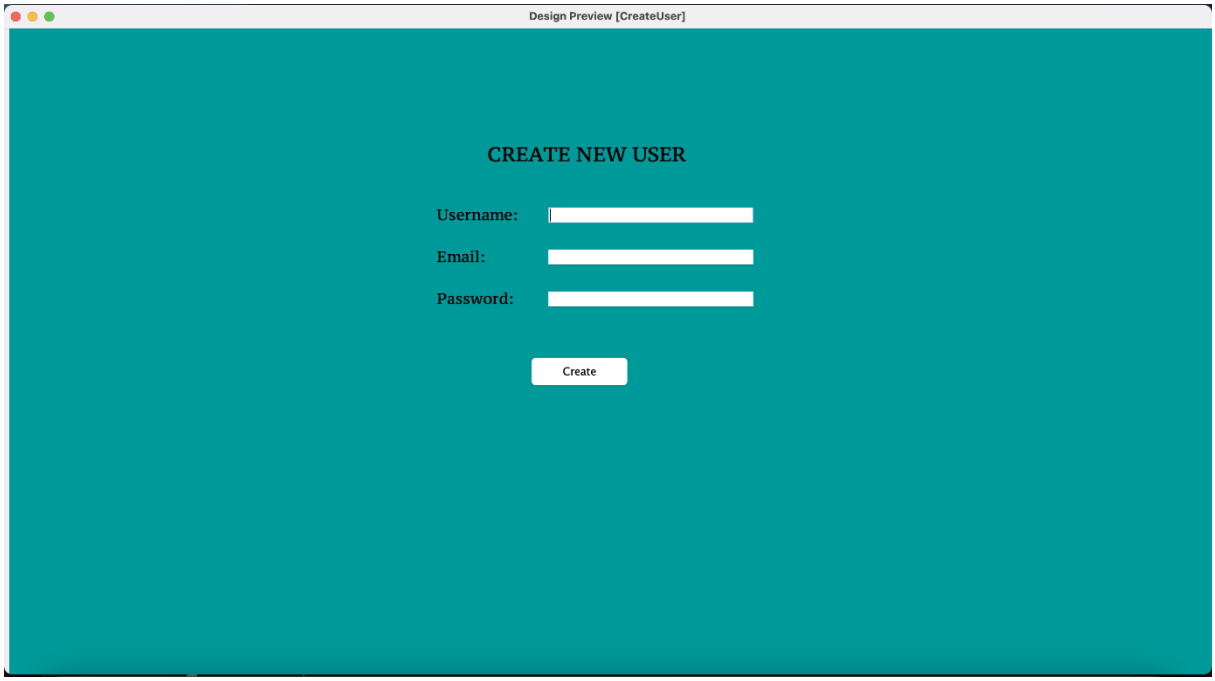
The **Course Salary Growth Rating** for a course can be used to measure the professional growth of an alumni by taking into consideration their growth in terms of salary increments and promotions. This indicates the courses contribution in salary growth per year.

The **Average GPA** for a course is calculated by finding the sum of GPA's for every seat assignment of a particular course and then dividing this sum by the total number of seat assignments.

Implementation:

Dashboard Design:





Design Preview [Dashboard]

ANALYTICS

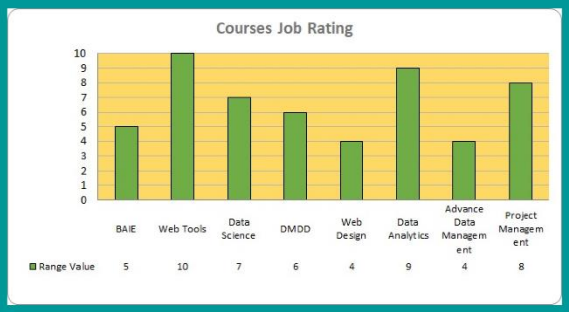
Choose analytics parameter

Course Job Rating

Faculty Rating

Salary Growth Rating

Average GPA



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ANALYTICS

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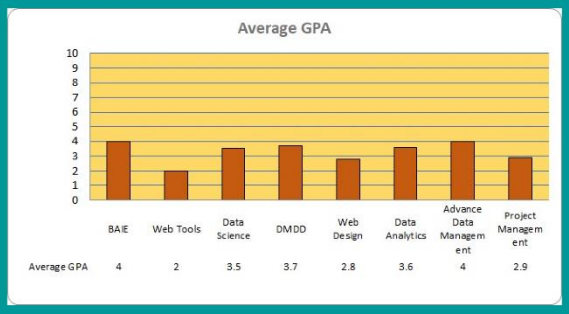
Course Job Rating

Faculty Rating

Salary Growth Rating

Average GPA



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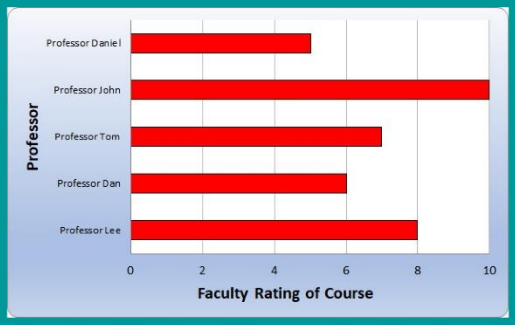
Course Job Rating

Faculty Rating

Salary Growth Rating

Average GPA



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ANALYTICS

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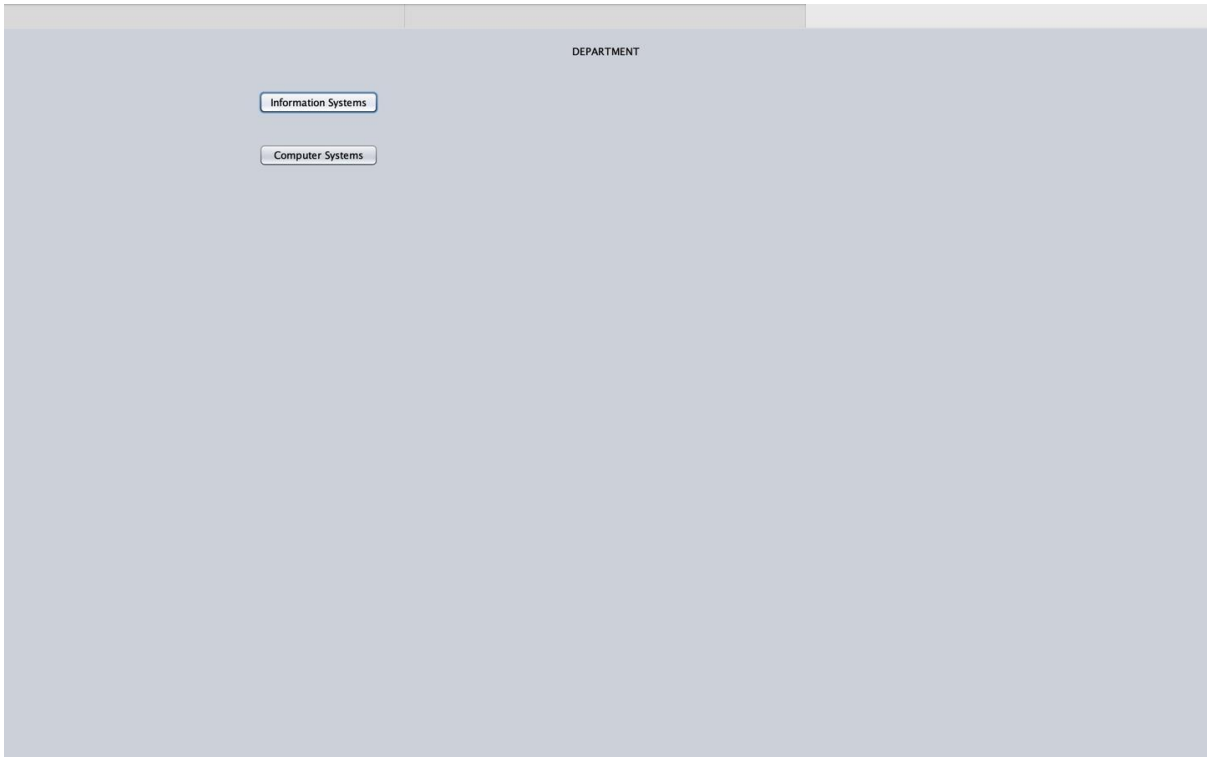
Course Job Rating

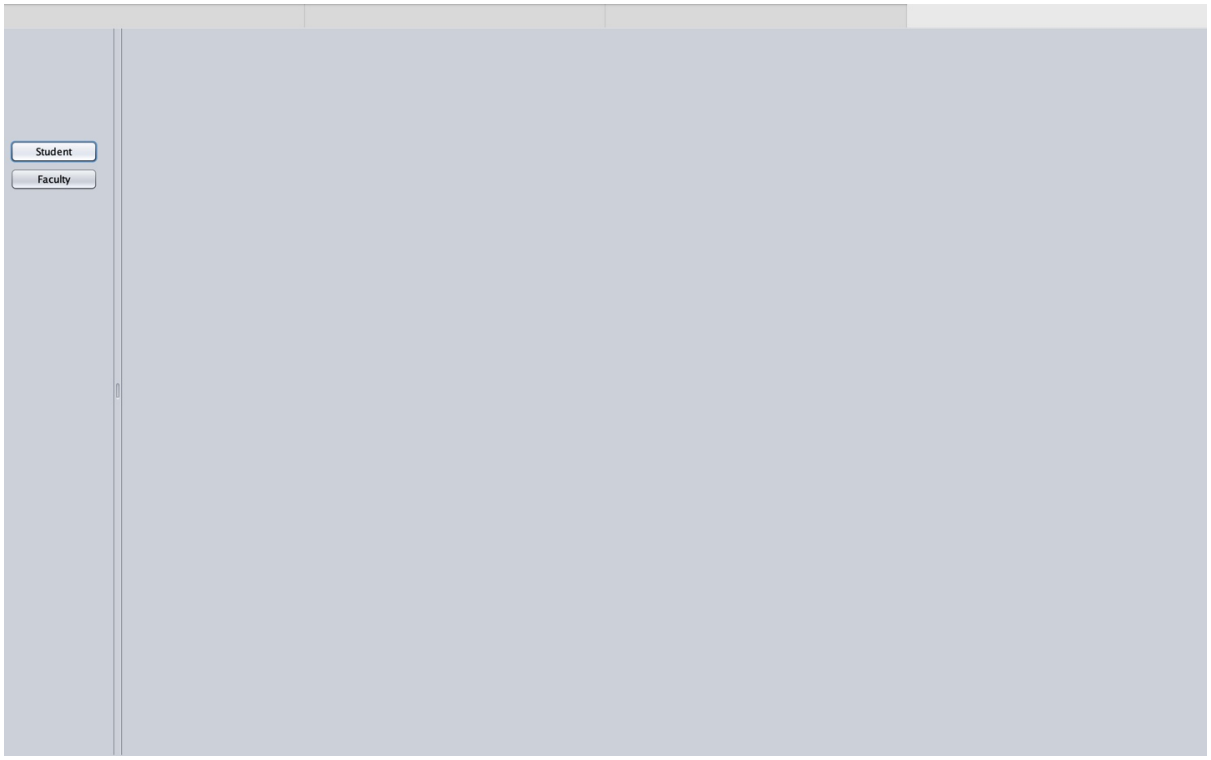
Faculty Rating

Salary Growth Rating

Average GPA

Create and Delete Functions for Student And Faculty:

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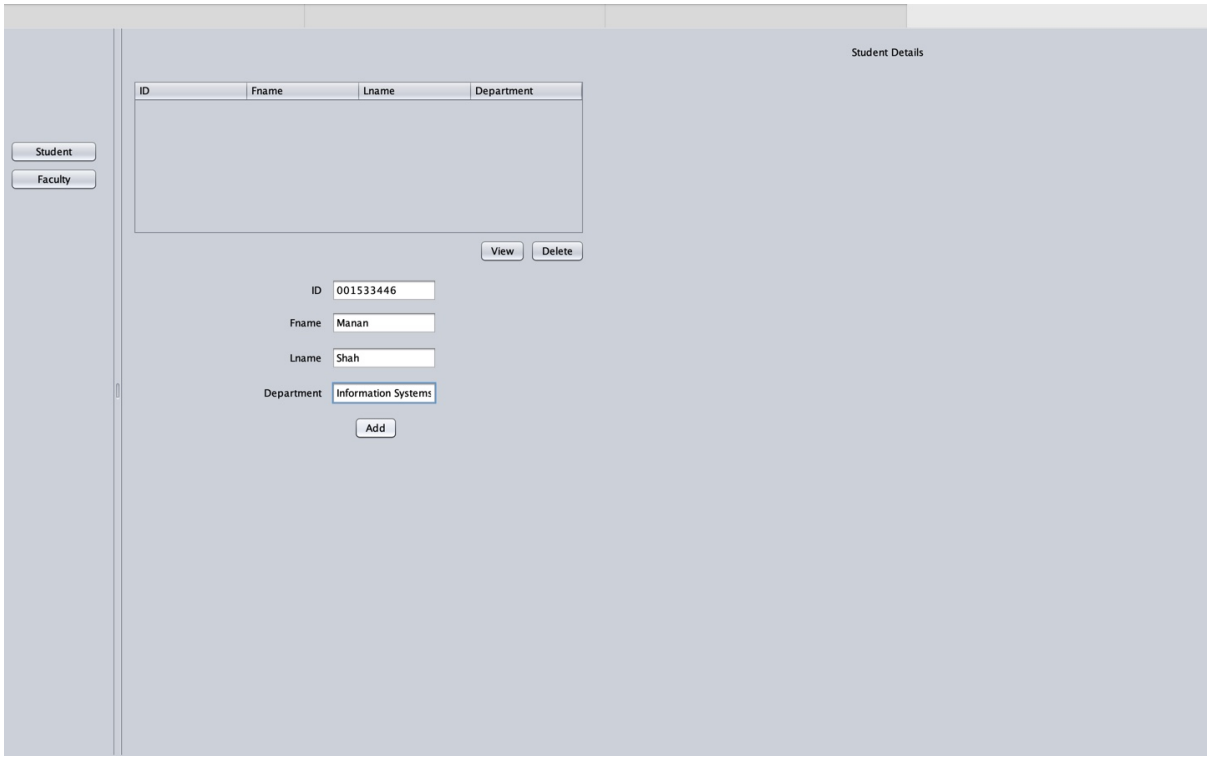
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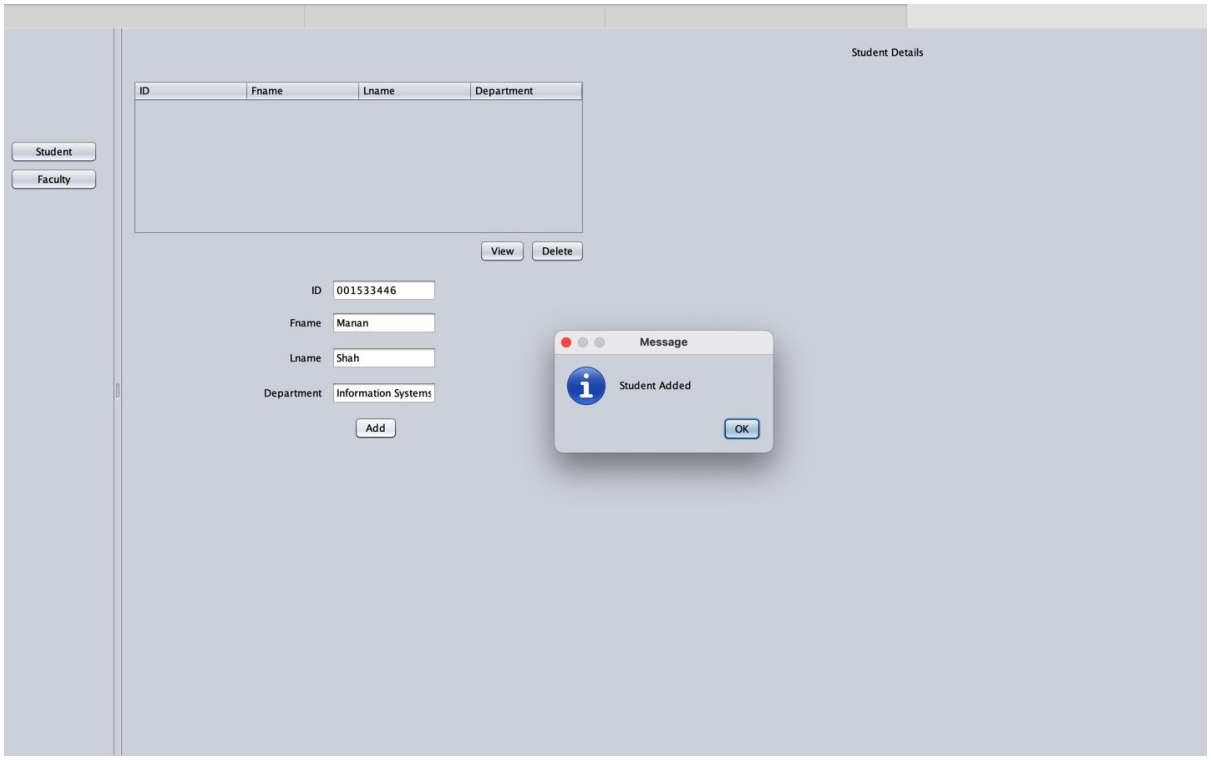
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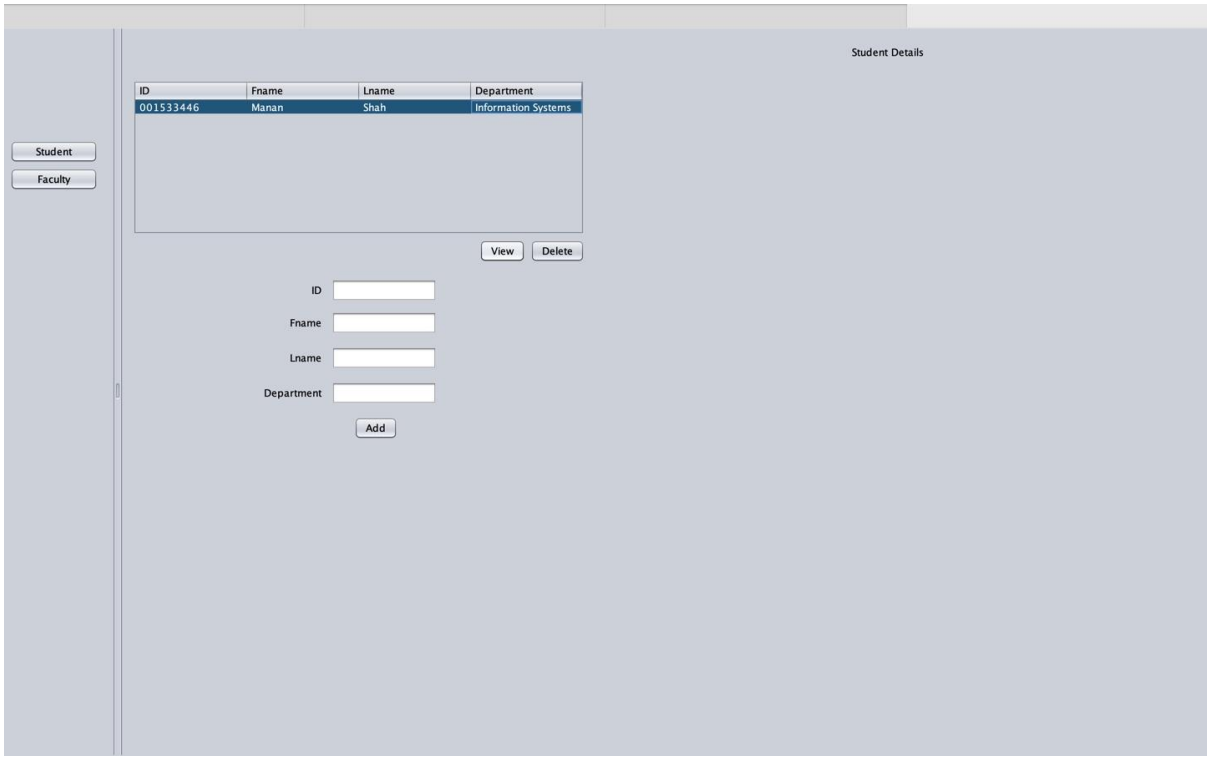
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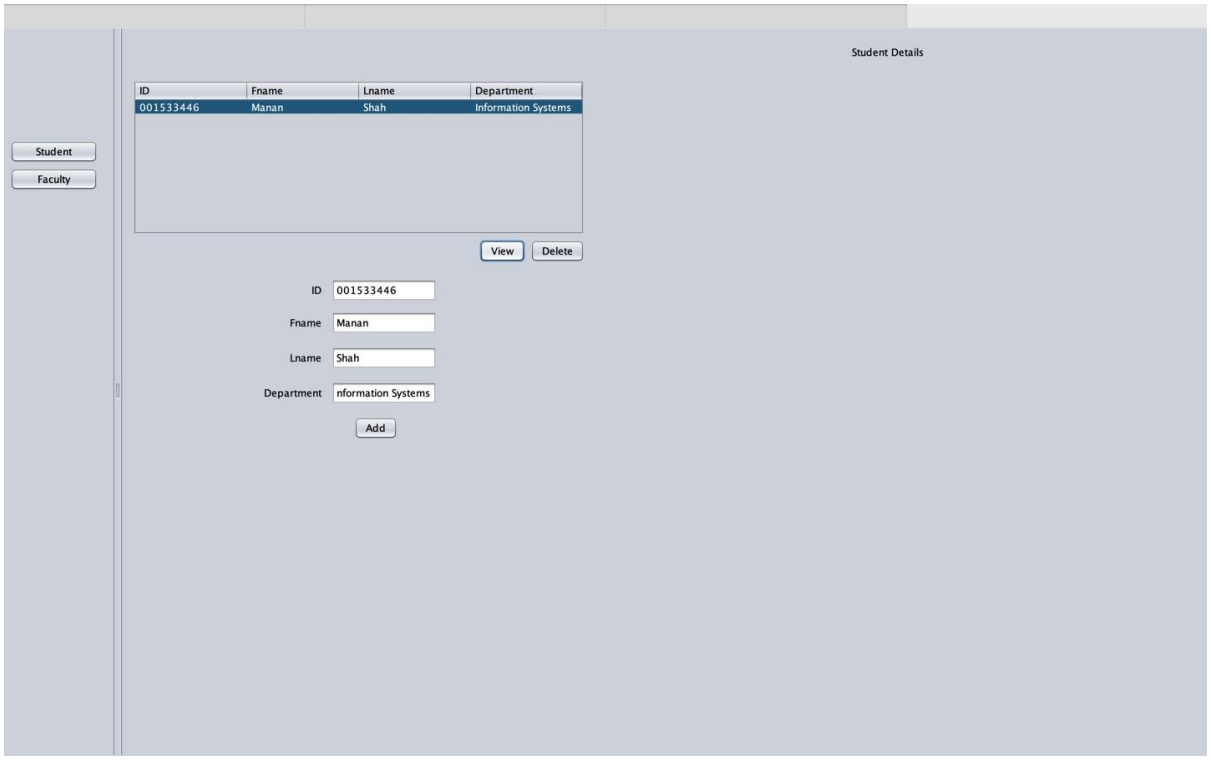
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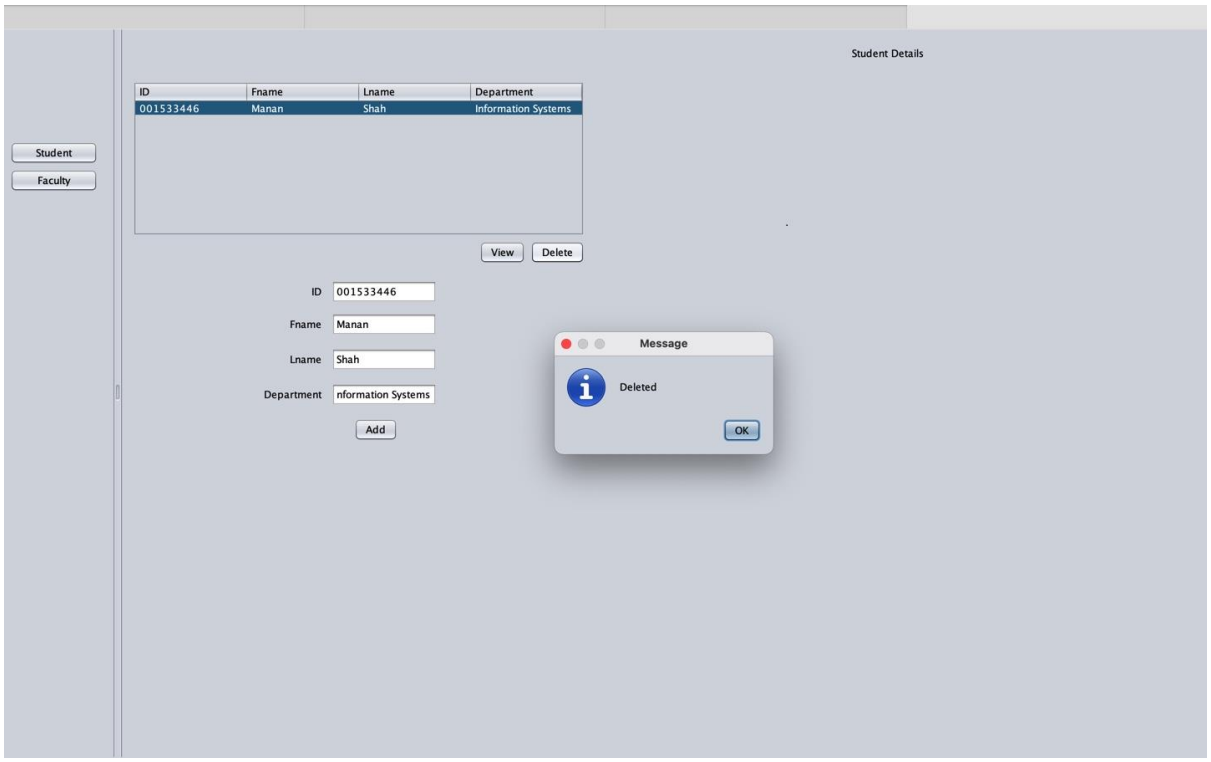
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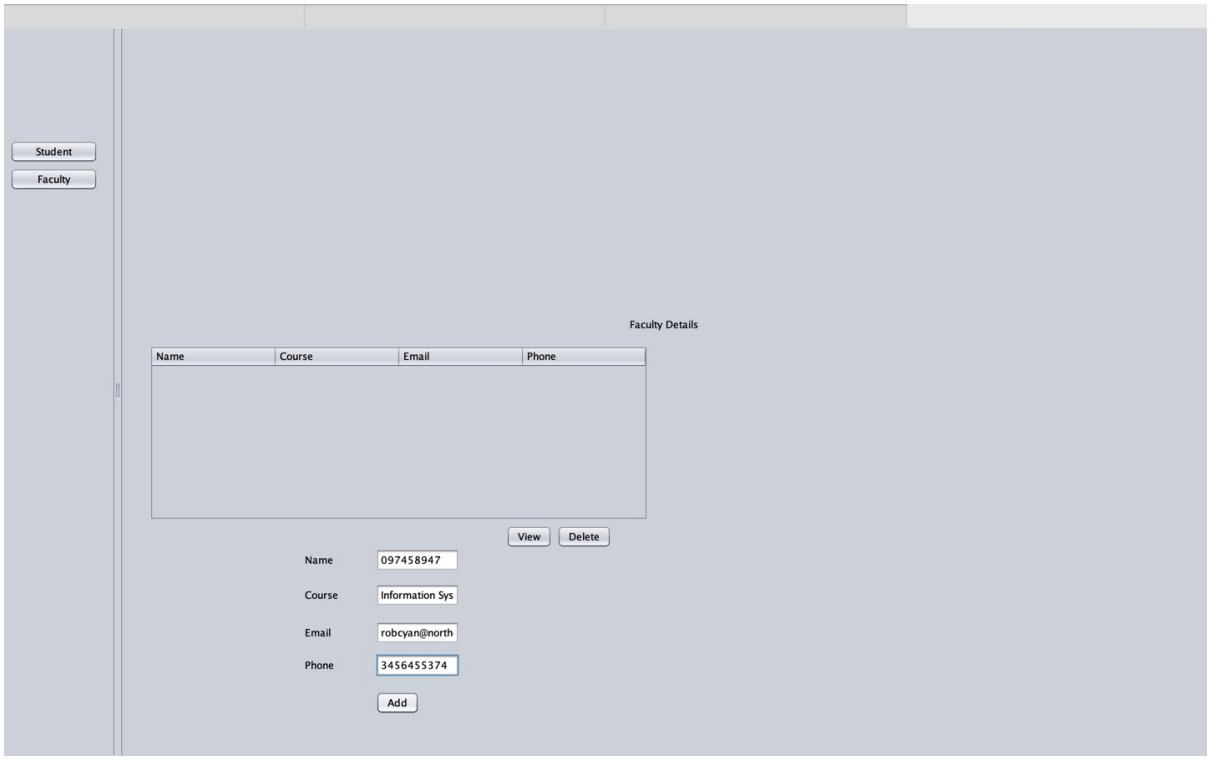
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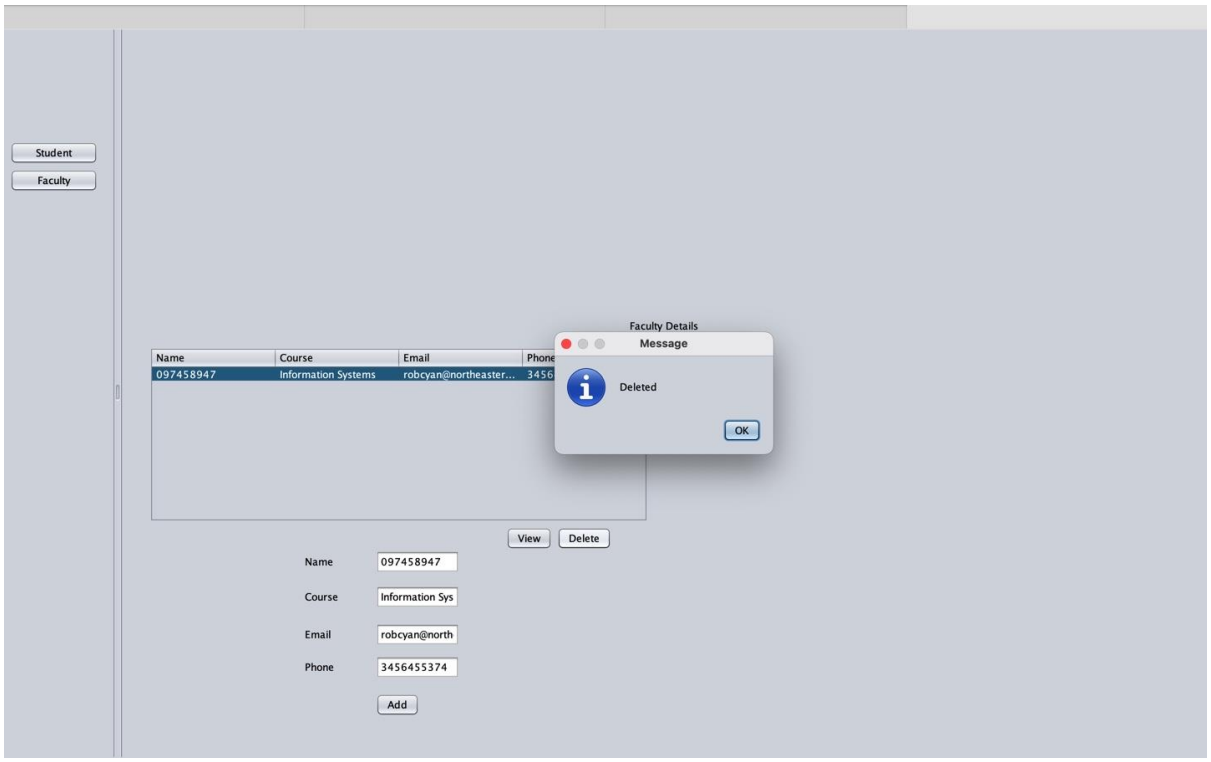
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Object Model:

In the object model illustrated below, the relationship between different work area for a student, employment, faculty and alumni is indicated. Some major components are explained below.

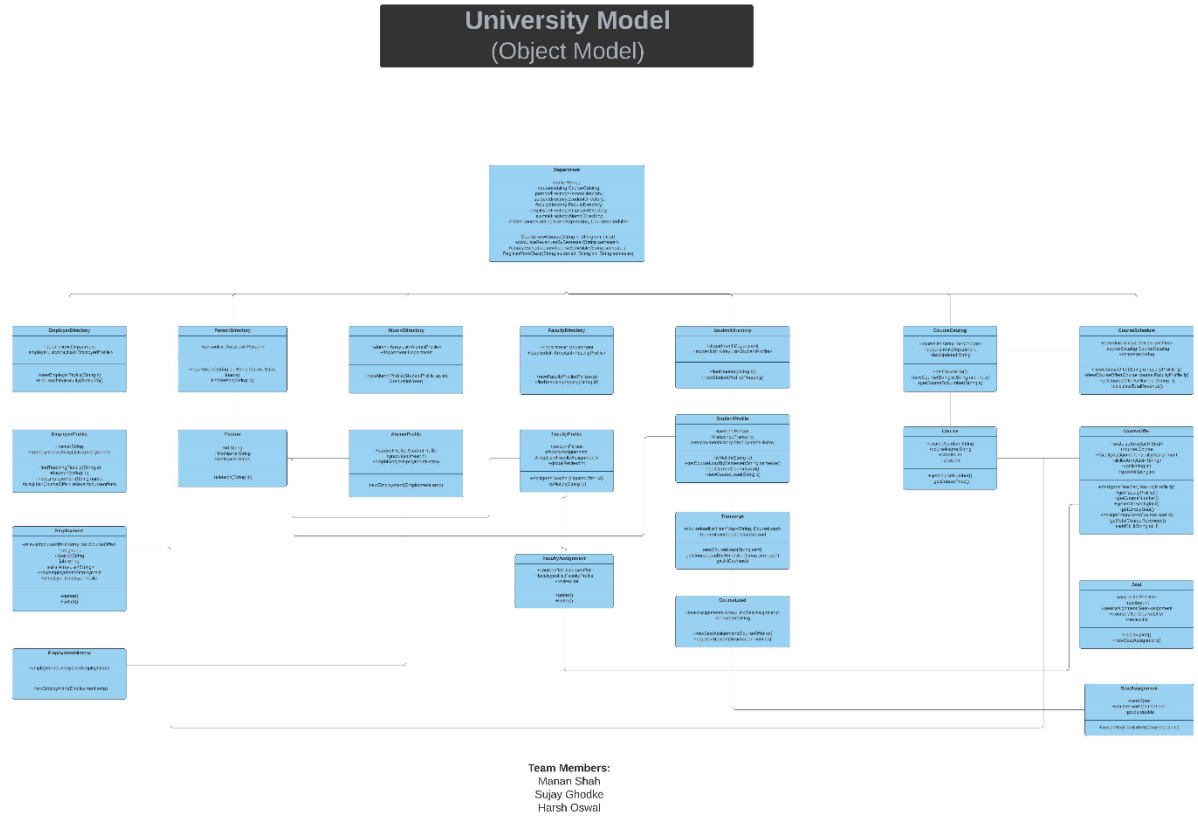
Faculty: The faculty consists of professors who conduct lectures for educating the students.

Each faculty has a set of students enrolled under the classes they host.

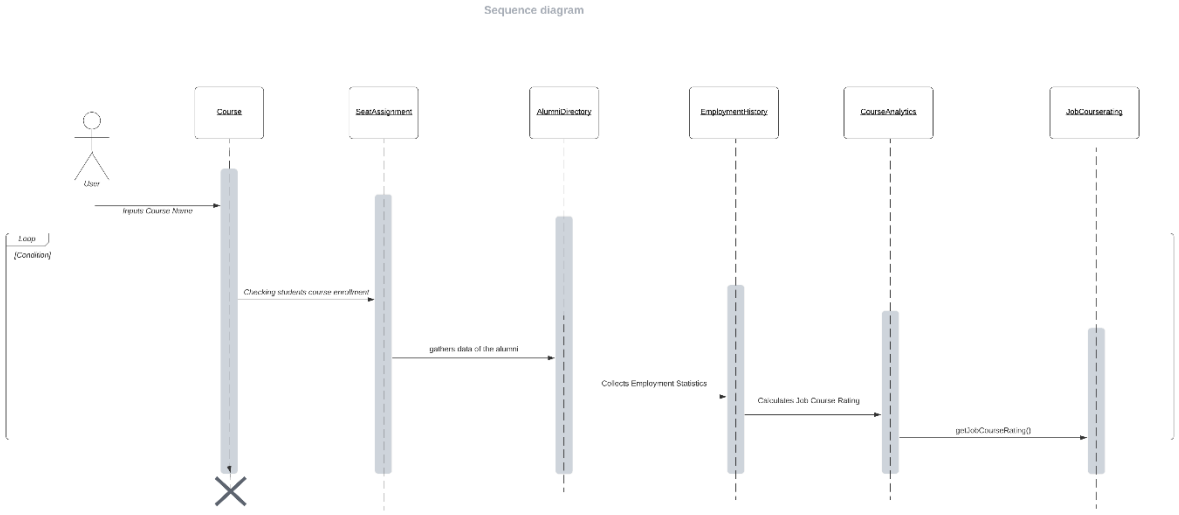
Students: Students enrolled at the university are registered for courses and have transcripts indicating their grades for each course across semesters.

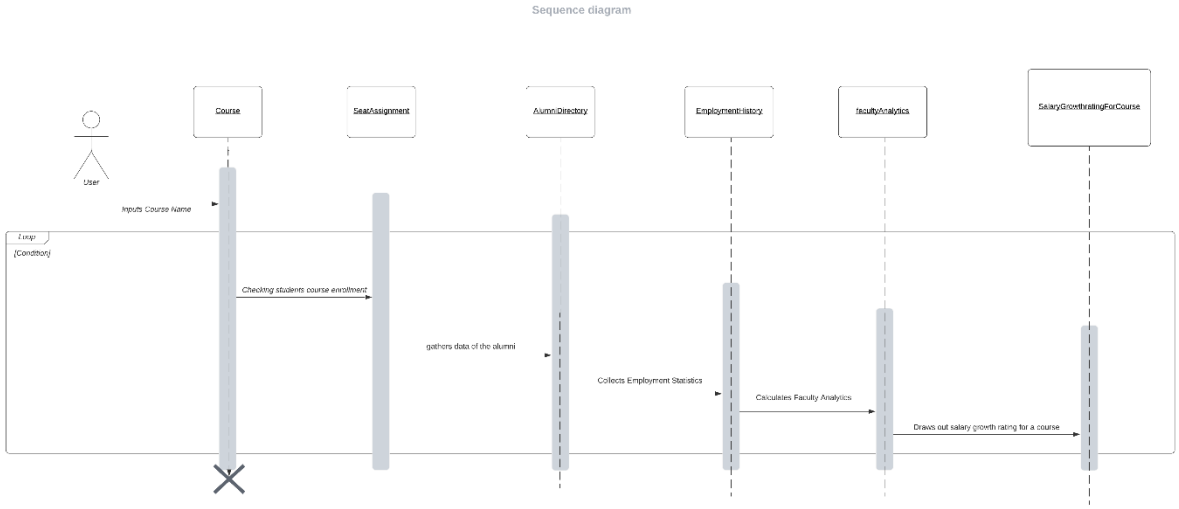
Alumni: The students who have completed their university education/ have graduated and may now be working in a job. Their job designation and salary can be a measure to indicate the universities success in imparting education.

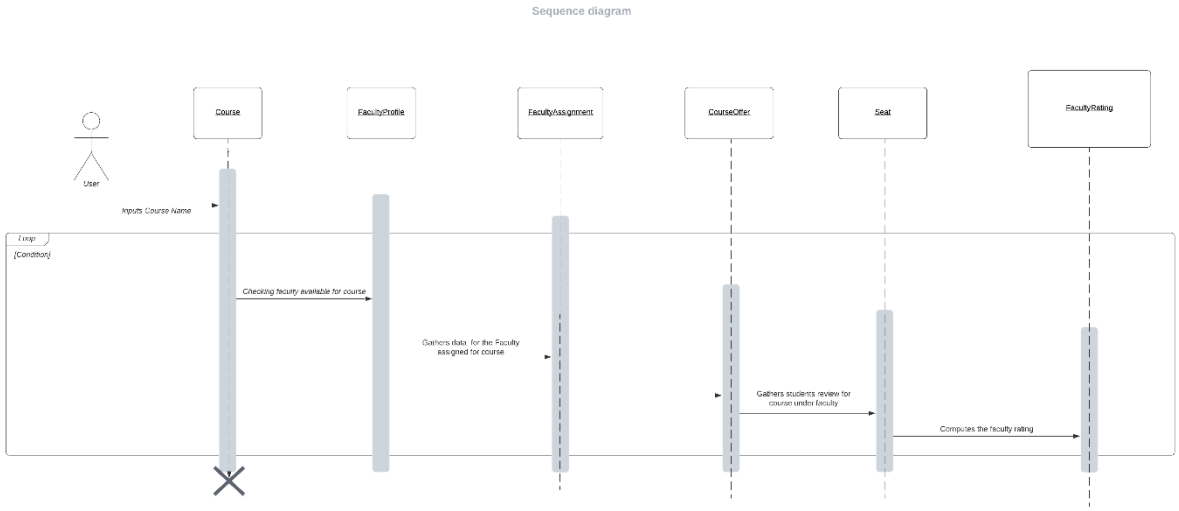
Employment: The Employment has all information about the relevant courses that a student (referred to as Alumni after graduating) took, student's job and employment information and skills. The alumni's current and previous job information and promotions is also indicated.



Sequence Diagram:







Sequence diagram