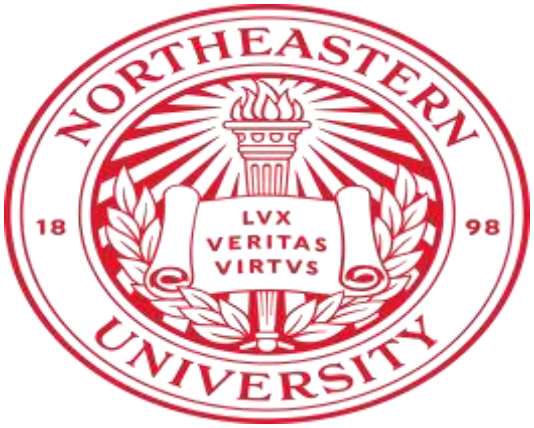

Application Engineering and Development – University Model

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MODEL PURPOSE:

Performance Measurement Solution enables the Universities to track and measure the quality of education they provide to their students. Keeping courses fresh and aligned to industry trends falls under quality category and approach here will rely on an educational system that includes faculty, courses and employers who contribute to the professional growth of the student.

BUSINESS PROBLEMS ADDRESSED:

This model associates a relation between professors, student, course and alumni data. By tracing the relation of course metrics and alumni data, we can get the professional growth of the student. This can be carried out by using following performance metrics:

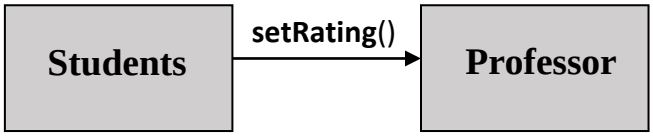
1. Professor Performance Metric
2. Student Performance Metric
3. Courses Performance Metric
4. Professional Growth Performance Metric
5. Career Success Metric

Performance measurement metrics has been applied for a student during their undergraduate or graduate program at the university. Even after graduation, the student's performance is tracked through Professional performance measurement from the employer throughout a period of time. By the proposed solution, relevant courses can be tracked by which the university can refine existing courses or introduce new courses.

PERFORMANCE METRICS :

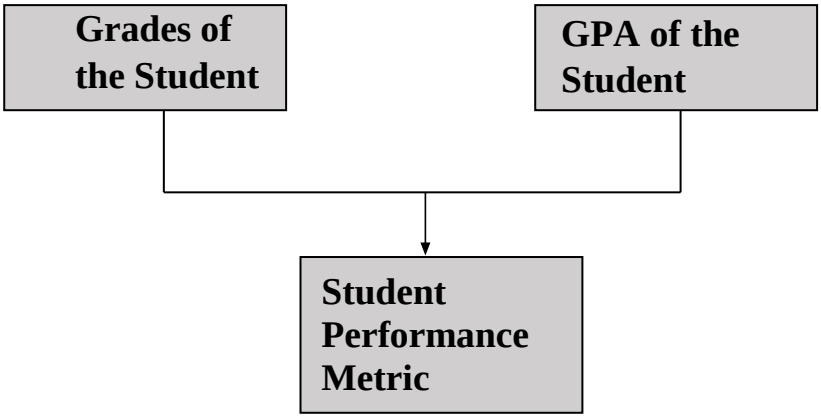
- **PROFESSOR PERFORMANCE METRIC (PPM) :**

  This metric will help us in measuring professor's performance in the university based on reviews and ratings that student provide. And based on the Students ratings we sort and Rank the professor accordingly.



- **STUDENT PERFORMANCE METRIC (SPM) :**

  This assesses a student's academic success at the university, based on grades, research papers published, and projects completed



The student's performance is mainly based on the following factors:

1. GPA
2. Grades

Grade	Percentage	GPA
A	95-100%	4.0
A-	90-94.9%	3.5
B+	87-89.9%	3.25
B	84-86.9%	3.0
B-	80-83.9%	2.75
C+	77-79.9%	2.5
C-	74-76.9%	2.25
C	70-73.9%	2.0
F	69.9% or below	1.9 or below

Calculation of SPM:

The Student Performance Metric is calculated on the scale of 10

SPM = (GPA*2 + 2)

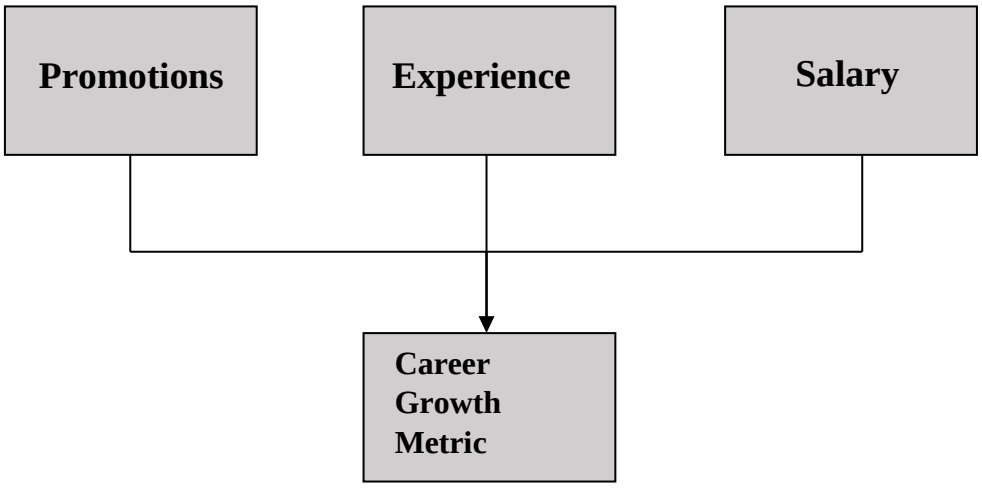
Grade	GPA	SPM
A	3.6	**3.6 * 2 + 2 = 9.2**

- **COURSES PERFORMANCE METRIC (CPM):**

This metric compares the employer's courses to the relevant courses that his employees are required to take. This informs employers about the courses that their employees have taken and also allows them to rate them.
We use a custom sort to rank the courses listed to the corresponding employees based on the ratings provided by the employer.

- **PROFESSIONAL GROWTH METRIC (PGM):**

The professional growth metric assesses the importance of a student's professional experience in determining how well the institution has aided student achievement at work.



i. **Years of Experience:**

No of Years	Points
0-3 years	2 Points
4-6 years	4 Points
7-9 years	6 Points
10-12 years	8 Points
Over 12 years	10 Points

ii. **Promotions:**

No of Promotions	Points
0 promotions	2 Points
1 promotions	4 Points
2 promotions	6 Points
3 promotions	8 Points
4 promotions	10 Points

iii. **Salary:**

Salary	Points
40k – 60k	2 Points
60k – 80k	4 Points
80k – 100k	6 Points
100k – 120k	8 Points
120k+	10 Points

Calculating Professional Growth Metric:

By taking average of Years of experience, Promotions, and Salary metrics we can calculate the Professional Growth Metric on the scale of 10

Years of Experience	2 years	4
Promotions	0 promotion	4
Salary	65k	6
Overall Career Growth Metric (CGM)	Average of all metrics	(4+4+6)/3 = 4.66

- **CAREER SUCCESS METRIC (CSM):**

  This assesses the student's academic and professional development. This represents the student's overall performance during his or her college years and over a five-year period.
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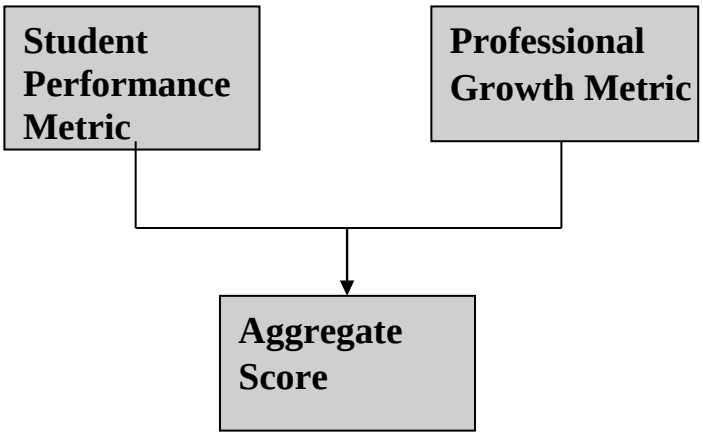


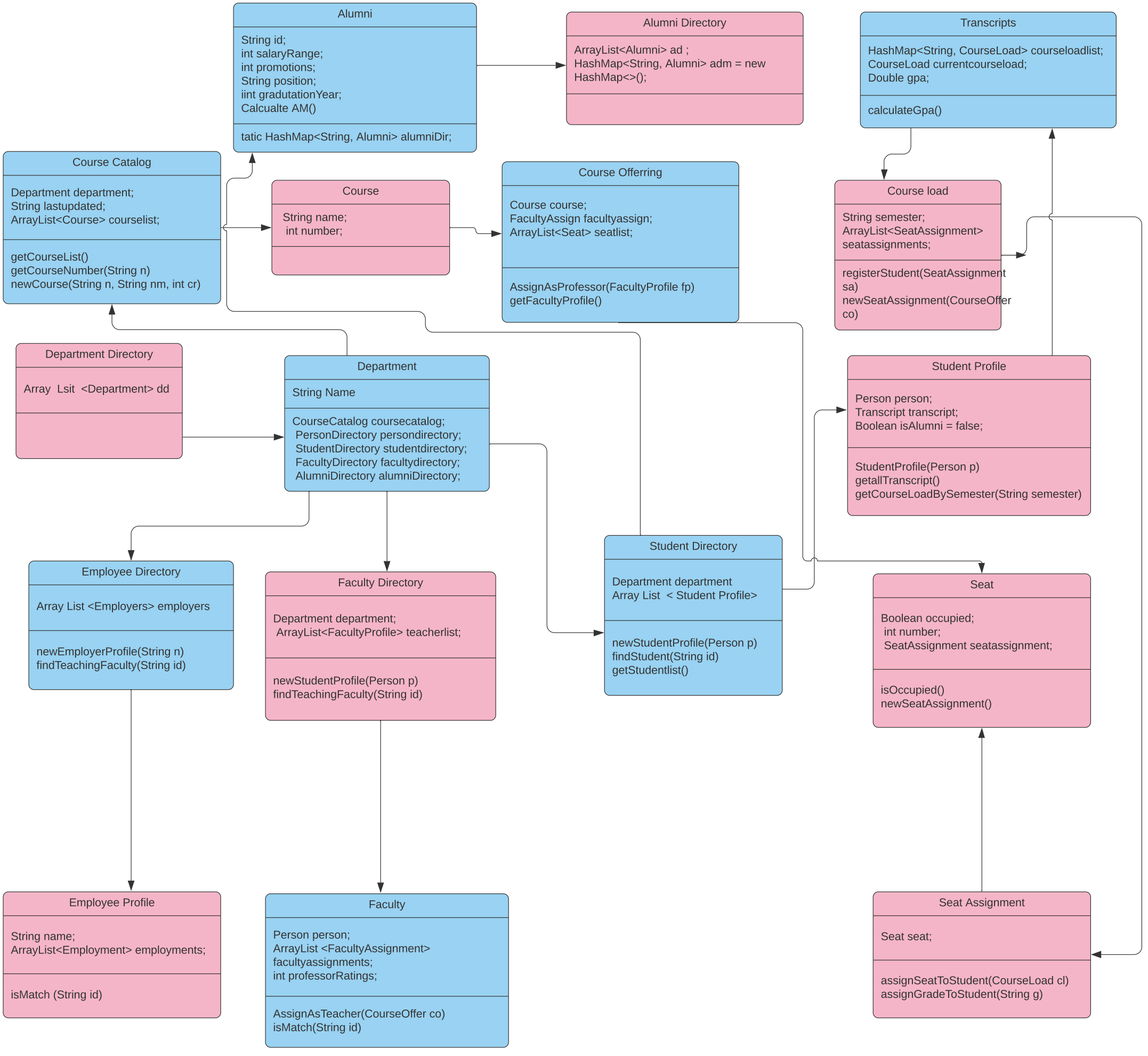
$$\textbf{Career Success} = \frac{\text{Student Performance Metric + Professional Career Growth}}{2}$$

$$= \frac{(3.6 * 2 + 2) + 4.0}{2} = 6.60 \text{ out of } 10$$

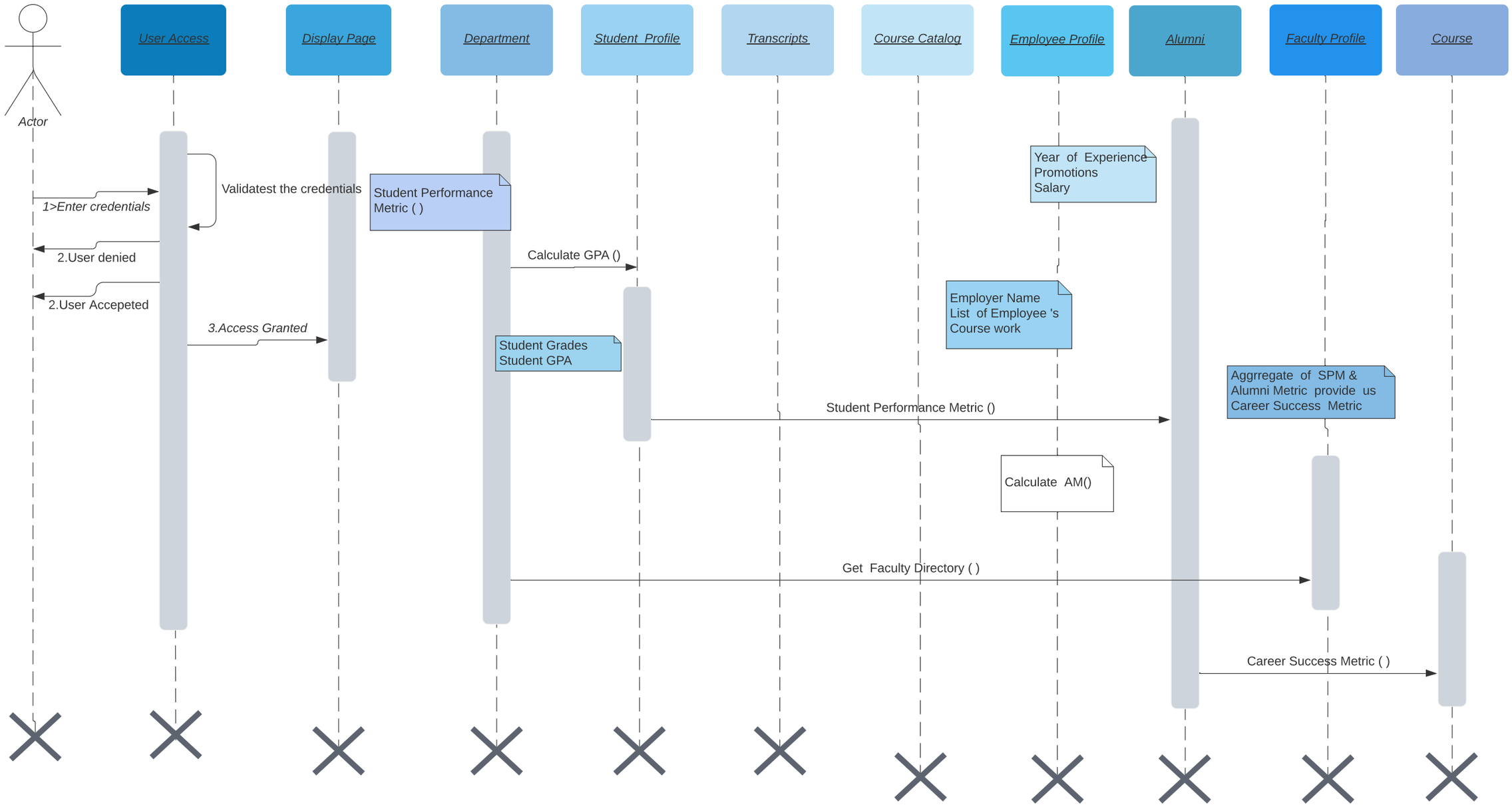
- **CONCLUSION:**

  Career Success is determined on the size of 10. In any event, when the GPA Metric is high i.e. 9.2 and since the Professional Growth Metric is at 4.0 it decreases the general Career Success esteem. This gives us the clear thought that GPA doesn't make any difference for a fruitful Professional development Success. Developing Nations ought to give quality schooling which adjusts to the current business patterns which contains every one of the measurements referenced above and furthermore giving applicable Job openings.

University Model UML Diagram

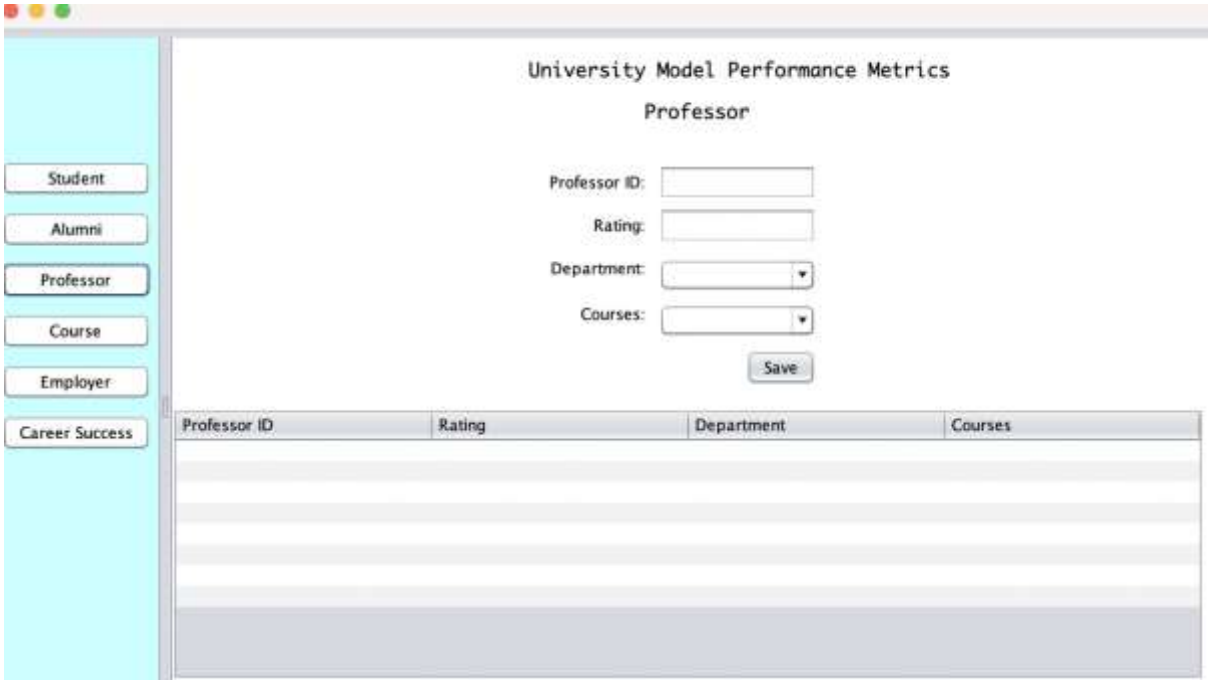


University Sequence diagram

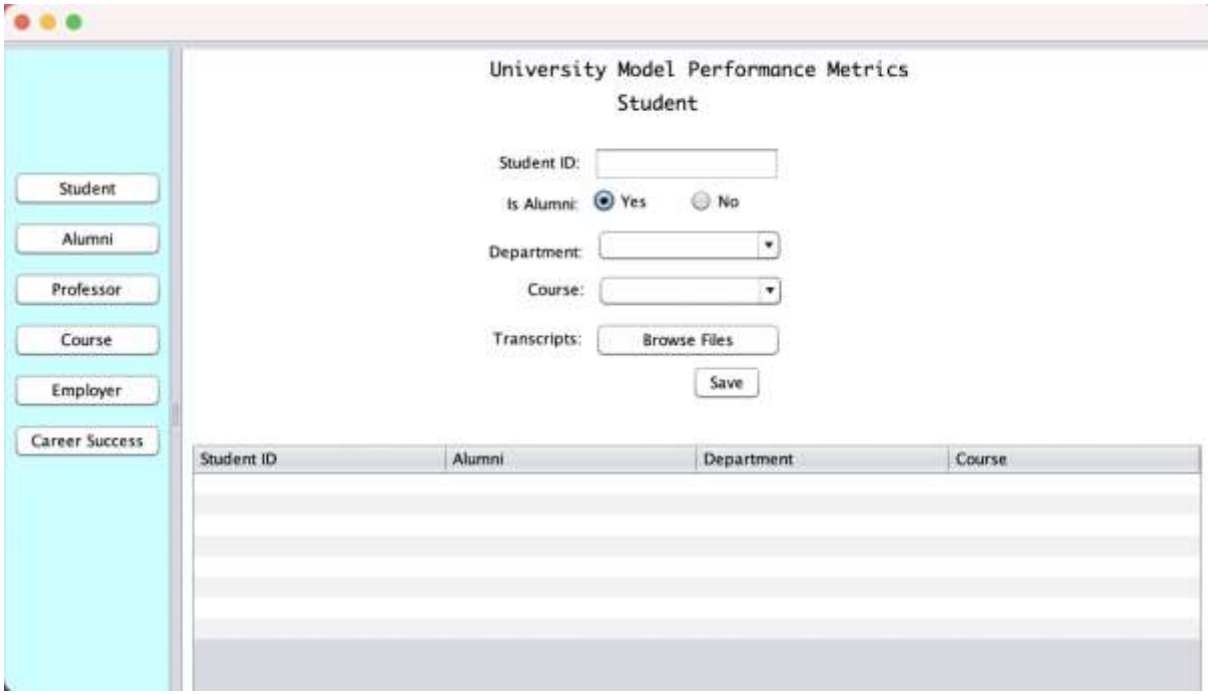


SCREENSHOTS OF THE DASHBOARD (UI DESIGN):

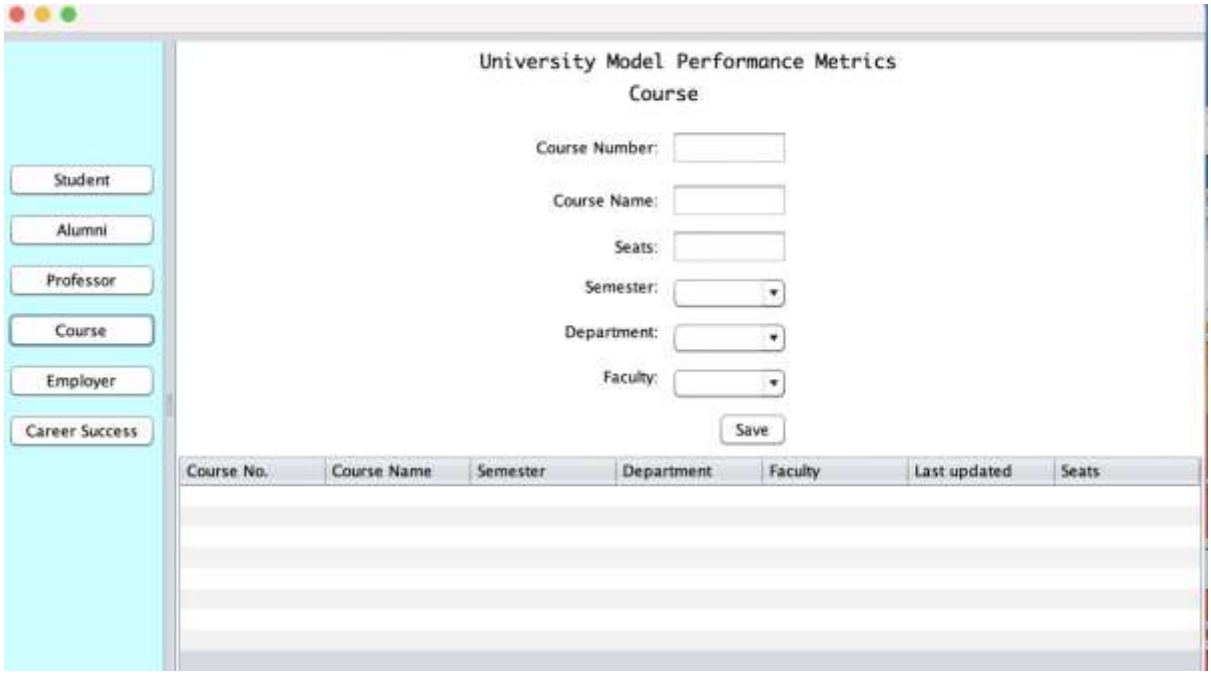
- **PROFESSOR PERFORMANCE METRICS:**



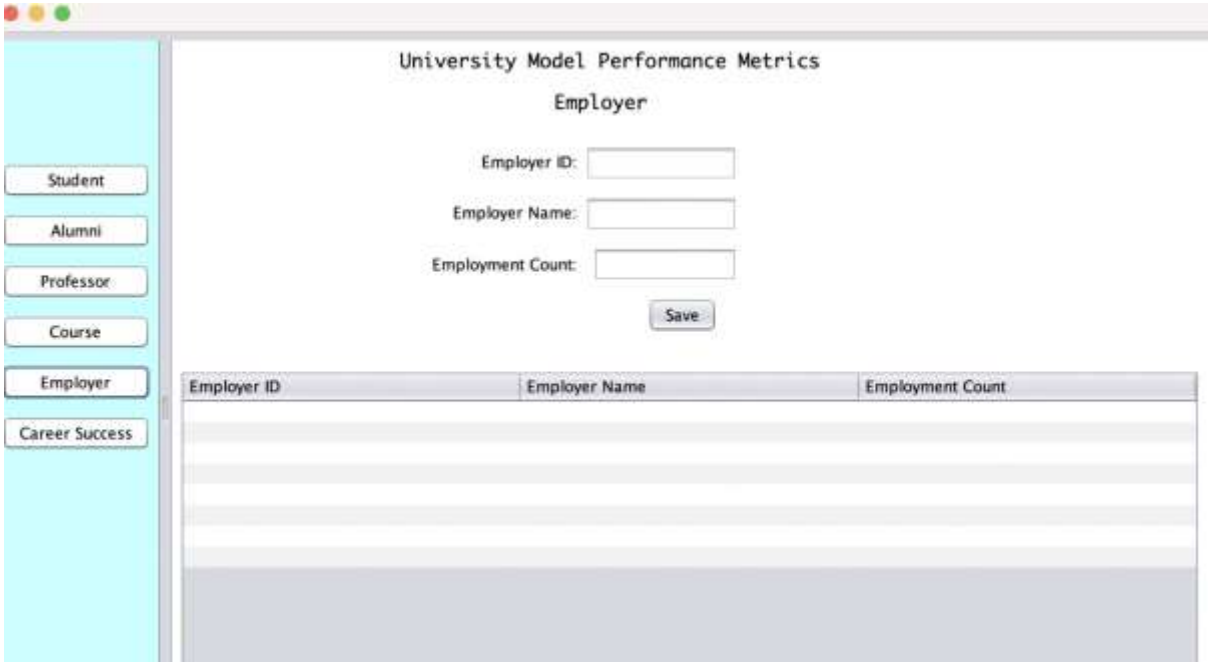
- **STUDENT PERFORMANCE METRICS:**



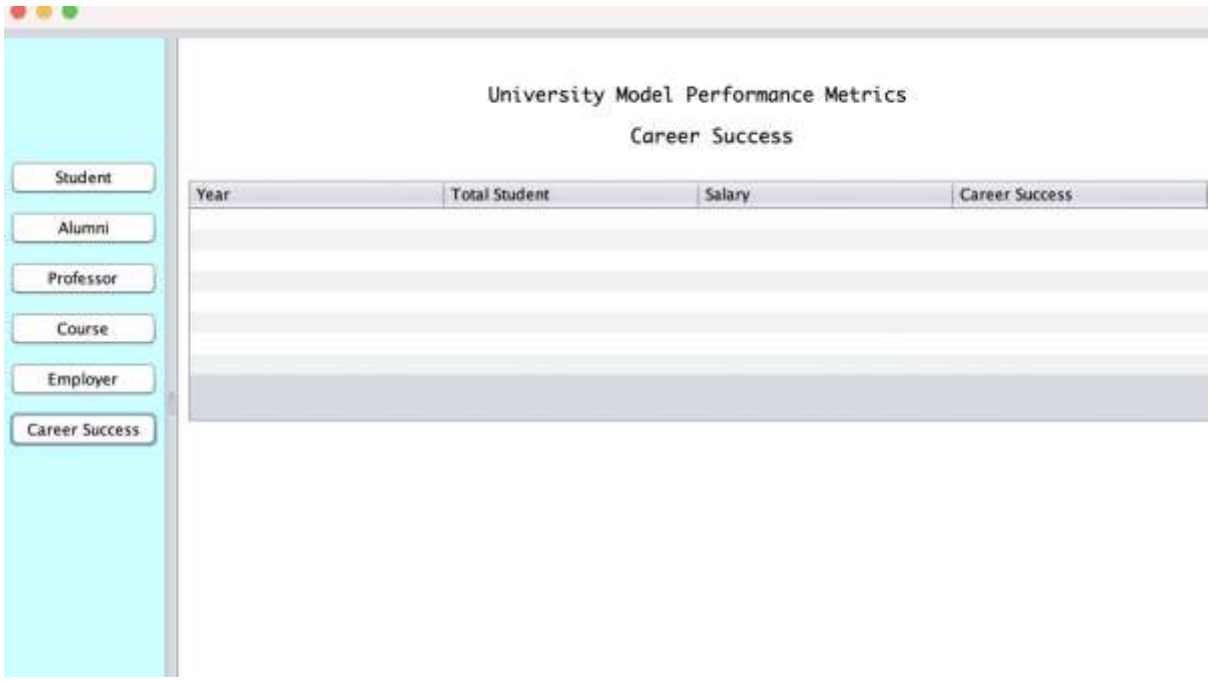
- **COURSE PERFORMANCE METRICS:**



- **PROFESSIONAL GROWTH METRICS:**



- **CAREER SUCCESS METRIC:**



- **ALUMNI DETAILS:**