

ASSIGNMENT 3

UNIVERSITY MODEL

Prof: Kal Bugarara

Team Members:

Aniruddha Tambe - 002101113

Sangram Vuppala - 002958963

Sudhiswar Elugam - 002124303

Problem Statement:

To provide career-oriented students with high-quality education that is tailored to current industry needs and trends by analyzing the impact of the courses on their careers and enhancing real-time with input from the university's alumni, employers & current students.

Proposed Solution:

The department must track a student's progress over time in a corporate environment in order to create a performance assessment solution that analyzes how the students' courses contribute to their professional advancement in the industry. The university will be able to alter their educational courses and deliver the best quality education to students in order for them to flourish in their professional jobs based on the data collected (student's GPA, faculty rating, student rating, promotions, job quality, job weight).

University Ranking System

We have developed a university ranking model which enables us to map University rankings based on our framework using

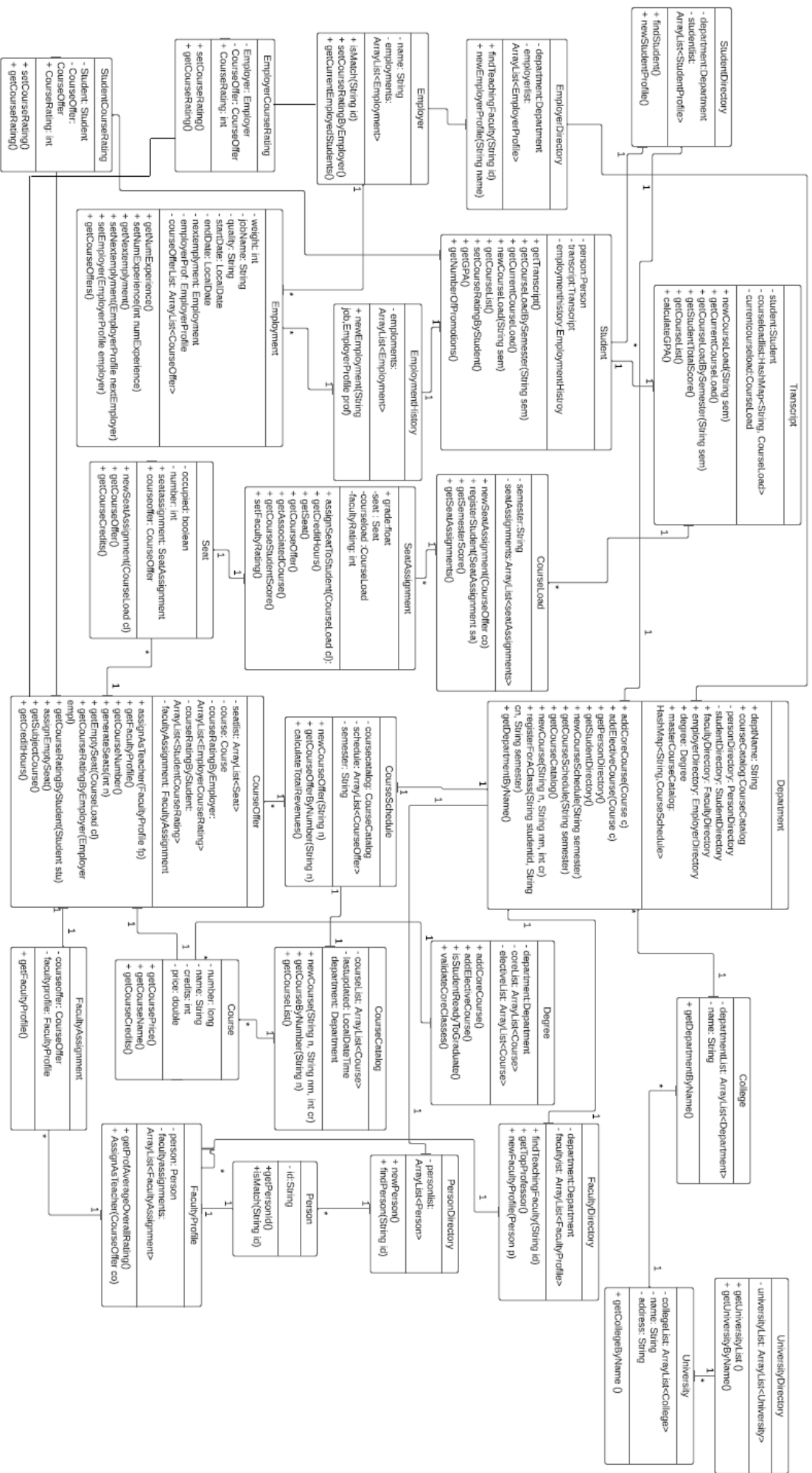
1. CGPA
2. Student rating
3. Employer rating
4. Salary of the job
5. No of promotions(since the start of job)
6. Quality of the Job

Formula

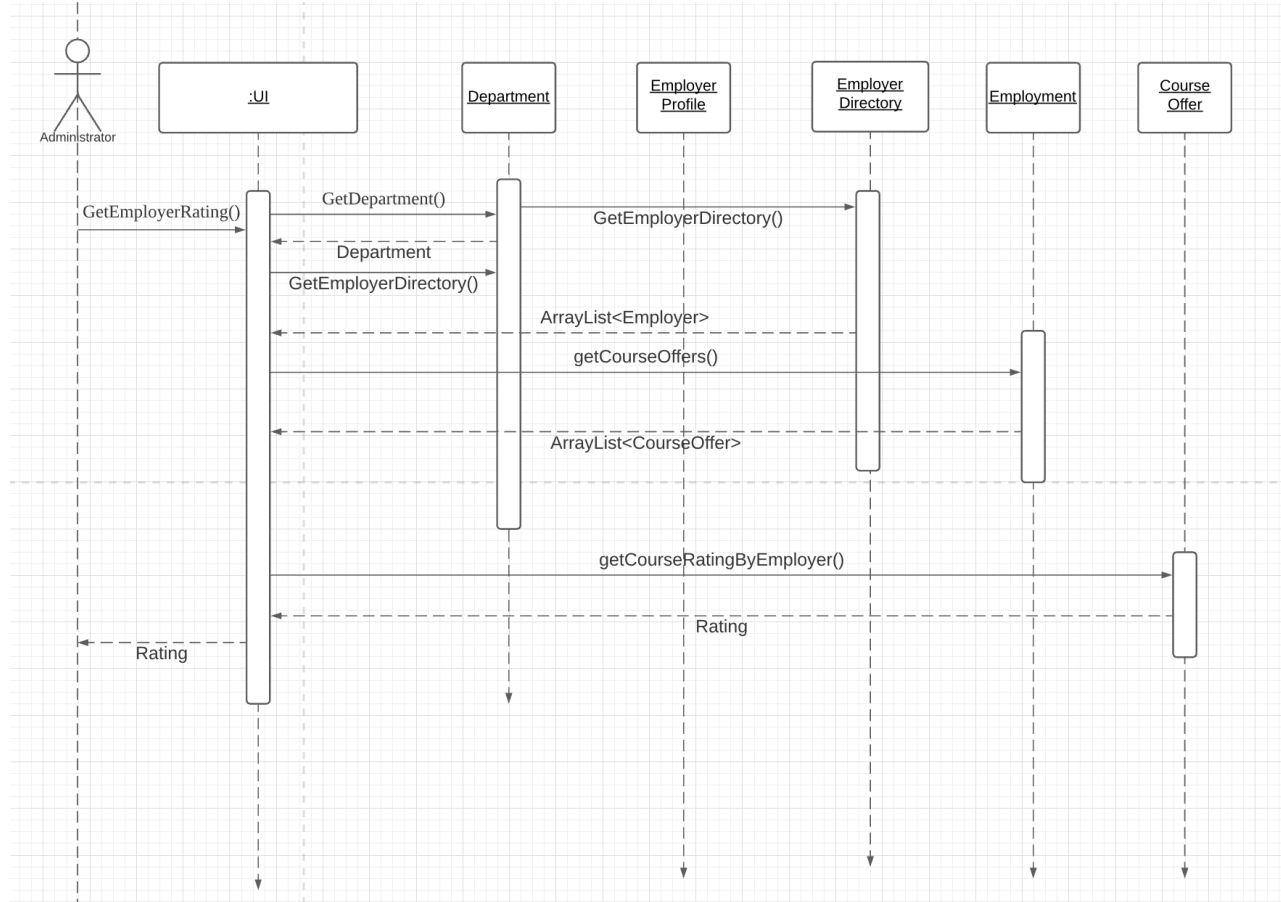
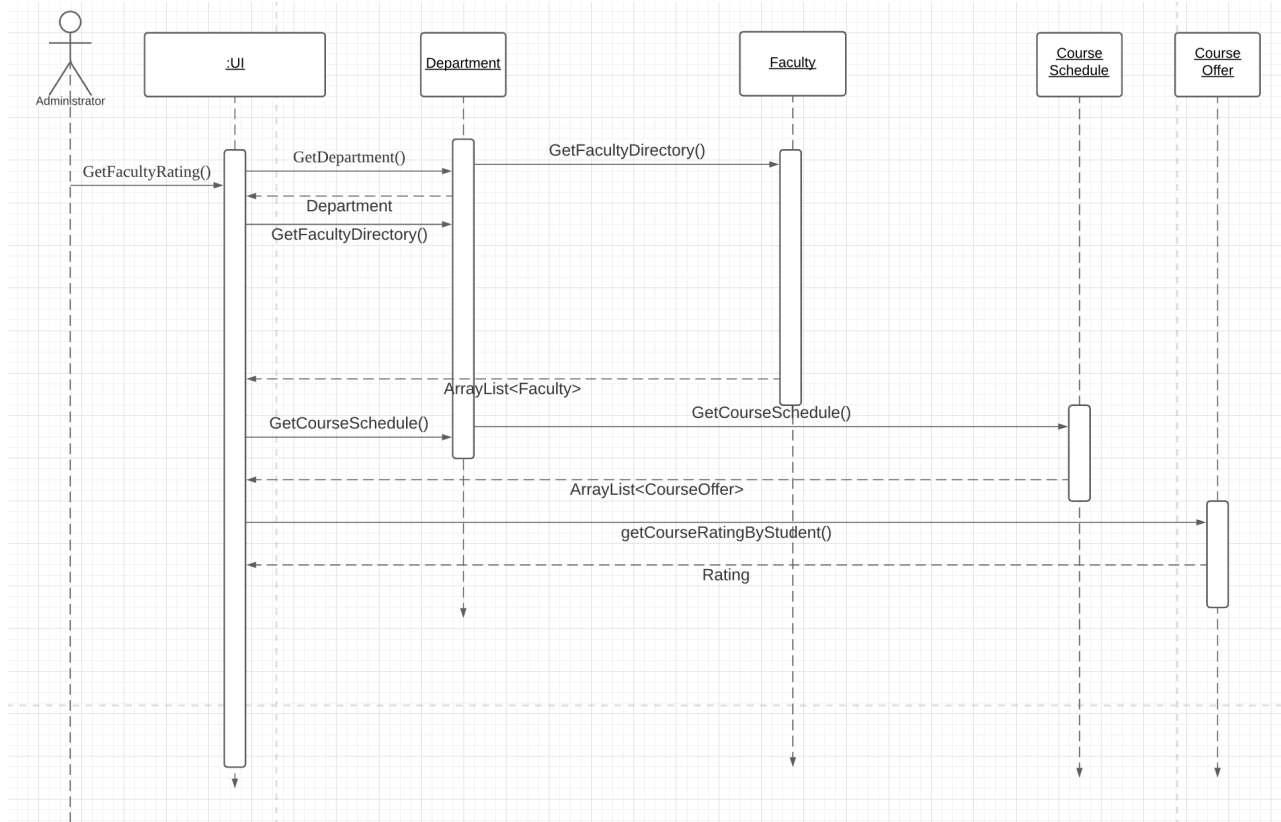
$$\{cgpa + 2*avg(student\ rating + employer\ rating) + 0.375* [salary\ (promotions + quality)]\} / 6$$

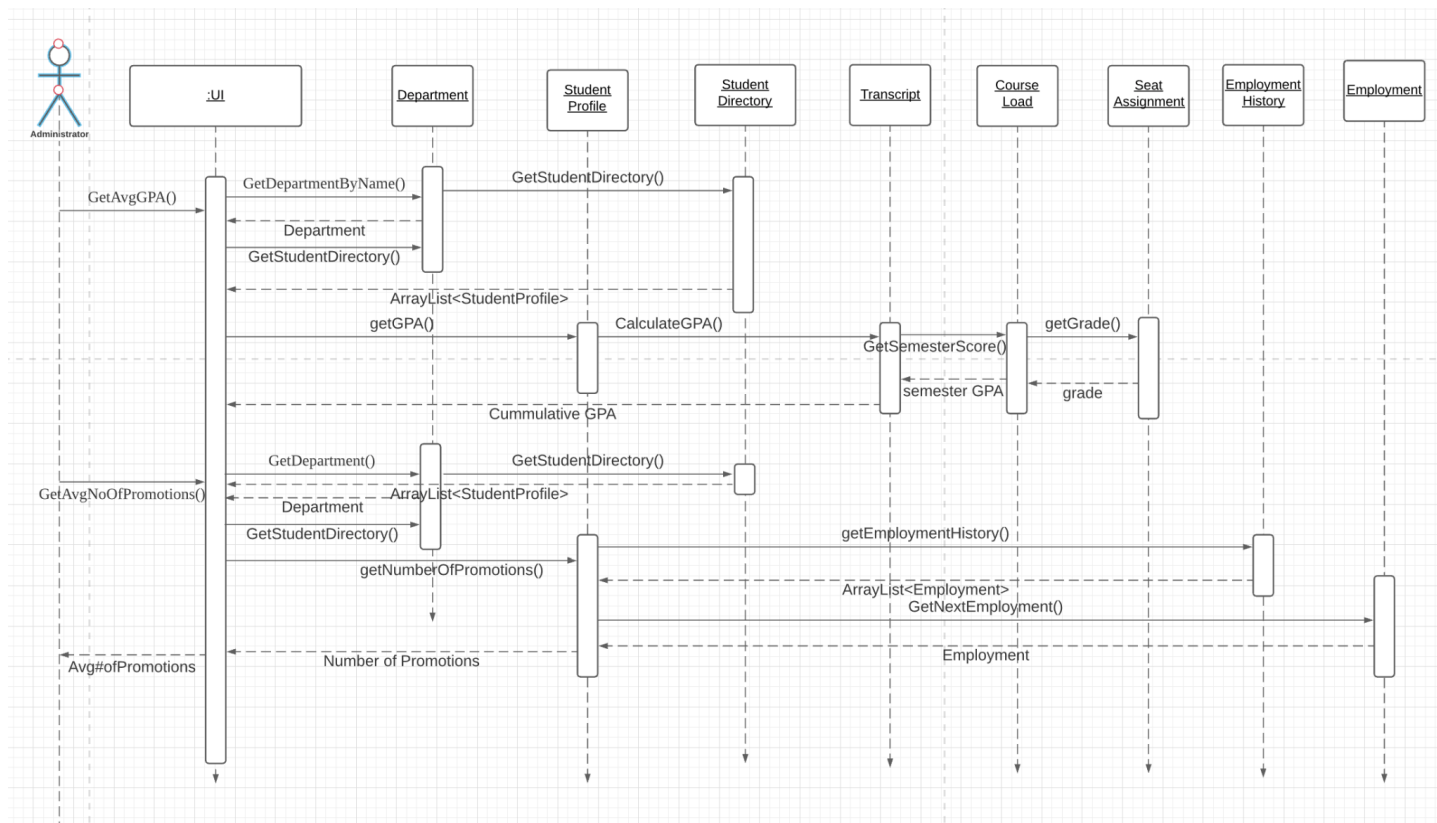
Here,

1. CGPA is scaled to 10
2. Student rating and employer rating are given for the max score of 10
3. Salary is categorised between 10 and 5
 - a. $x \geq 150k$ - score 10
 - b. $150k > x \geq 130k$ - score 9
 - c. $130k > x \geq 115k$ - score 8
 - d. $115k > x \geq 100k$ - score 7
 - e. $100k > x \geq 85k$ - score 6
 - f. $85k > x \geq 70k$ - score 5
4. The max promotions possible in 5 years of experience is 4
5. quality of the job is categorised into 4 parts
 - a. Manager and above - score 4
 - b. Lead of a team - score 3
 - c. Associate level - score 2
 - d. Trainee level - score 1



SEQUENCE DIAGRAMS:





UI Screenshots

1. Login Screen



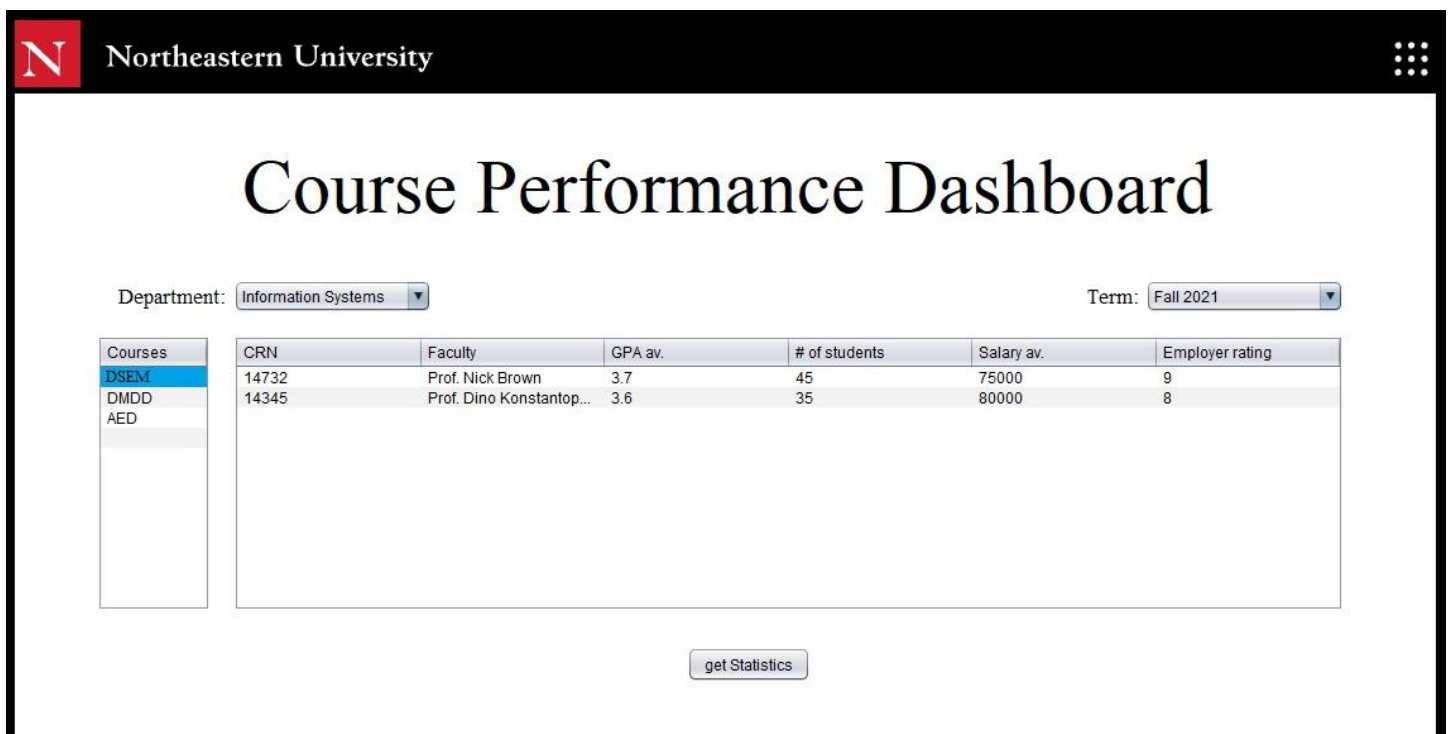
The login screen features a black background on the left with the Northeastern University logo (a large red 'N') and the text 'Northeastern University' in white. The right side has an orange background with a login form. The form includes labels for 'Login', 'Password', and 'Role', each followed by a text input field. The 'Role' dropdown menu is currently set to 'University Admin'.

Login :

Password :

Role :

2. Login with University Admin role > Course Performance Dashboard



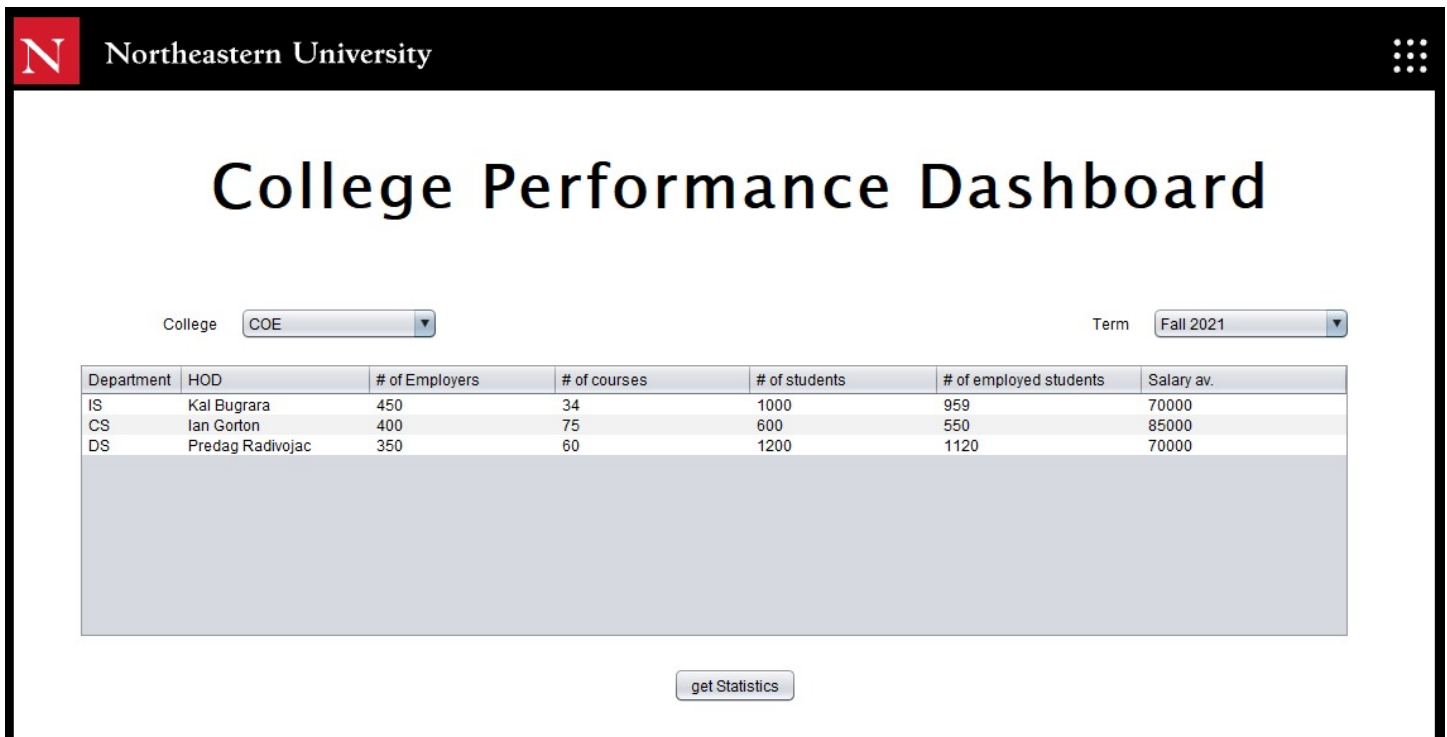
The dashboard header includes the Northeastern University logo and name on the left, and a grid icon on the right. The main title is 'Course Performance Dashboard'. Below the title, there are two dropdown menus: 'Department' set to 'Information Systems' and 'Term' set to 'Fall 2021'. A table displays course performance data with columns: Courses, CRN, Faculty, GPA av., # of students, Salary av., and Employer rating. The table lists two courses: DSEM (CRN 14732, Prof. Nick Brown, GPA 3.7, 45 students, Salary 75000, Rating 9) and DMDD (CRN 14345, Prof. Dino Konstantop..., GPA 3.6, 35 students, Salary 80000, Rating 8). A 'get Statistics' button is located at the bottom center.

Department:

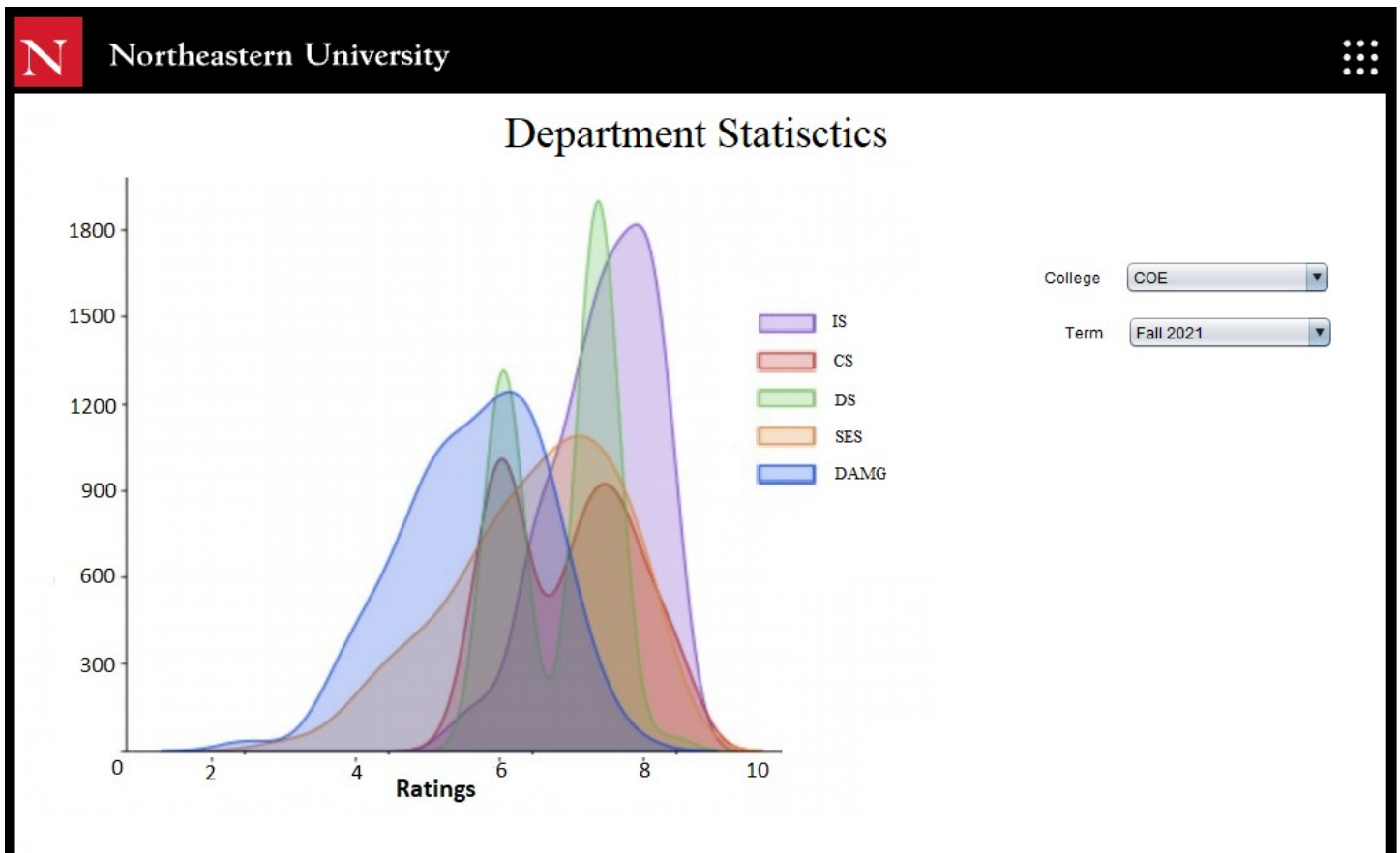
Term:

Courses	CRN	Faculty	GPA av.	# of students	Salary av.	Employer rating
DSEM	14732	Prof. Nick Brown	3.7	45	75000	9
DMDD	14345	Prof. Dino Konstantop...	3.6	35	80000	8
AED						


3. Login with University Admin role > College Performance Dashboard




4. After clicking on get Statistics



5. Login with Student role

**Northeastern University**



00210113

Name: Aniruddha Tambe(he/him/his)

Address: 146 Bolyston St. ,
Jamaica Plain,Boston, MA.

DOB: 10/31/1996

✉ tambe.ani@northeastern.edu
☎ +1-(857)-376-8193

Description:

Student at **Northeastern University** in the course **Masters in Information Systems** in **College of Engineering**.


Expected Graduation: May 2023


Course Load: **Current Semester:** Fall 2021

Title	Course Number	Credits	CRN
Application Engineering and Development	INFO 5100	4	12653
Career Management for Engineers	ENCP 6000	1	13841
Data Science Engineering Methods and Tools	INFO 6105	4	14732

Total Hours | Registered: 9

6. Clicking on Course Feedback

**Northeastern University**



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Course Feedback

Course Load: **Semester:** Fall 2021

Title	Course Number	Credits	CRN
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Career Management for Engineers	ENCP 6000	1	13841
Data Science Engineering Methods and Tools	INFO 6105	4	14732

Search by:

Semester Course Name CRN

Rating:

Comments: