

University Model: Performance measurement

TEAM MEMBERS:

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INTRODUCTION

The ranking of universities and the quality of course offered by it is center to any student's aspirations. The rankings of education programs will assist you in finding the right classroom.

PROBLEM STATEMENT

One of the most important determinants of any organization and educational institution's performance is its university recognition. Looking at the ongoing competition between the universities, it has become necessary for every university to have unique courses along with varied course options to stand out amongst the rest. The courses offered by the university should be updated according to the current industry trends which is necessary as everything around us is getting advanced day by day and being updated is a major task.

PROBLEM SOLUTION

The primary goal of the model is to create a system that allows students to get a preview of the courses as well as choose courses that are tailored to their interest and research preferences. The procedure of the model will track each course's feedback within the system which will automatically determine the course's rating. The model will also keep a track of faculty feedback and assist the administrators in ranking courses and implement innovative course structures for better results. The model measures each student's overall achievement over a 5 year period as well as data on which courses affected their progress in order to rate courses based on the satisfaction of the students who took that particular subject. Hence, with proper statistics such as popularity of course, employment prospects, faculty rating, alignment of courses with industry trends, professional growth of an individual over a span of 5 years after taking this course etc can help in performance measurement.

To calculate course ranking:

Course Ranking can be determined by class course offer and seat assignment. `getcourseRanking()` is a method in class course offer which ranks the course offered according to course feedback and faculty rating.

Course score = (sum of all graduate scores in the course) / (number of graduates in the course * ((Course_Rating + Relevant_CourseRating + Helpful_Course / 3));

To calculate faculty rating :

The attribute for faculty evaluation can be added in course offer class where we are assigning a seat to a student in course through `assignemptySeat()`. Course offer class contains details of faculty assigned for that particular course. Whenever, we will assign seat to student in course offer class, the student gets to evaluate the faculty. Afterwards, the final faculty rating can be calculated by iterating over rating given by all the students and taking the average.

To calculate growth of student over 5 year period:

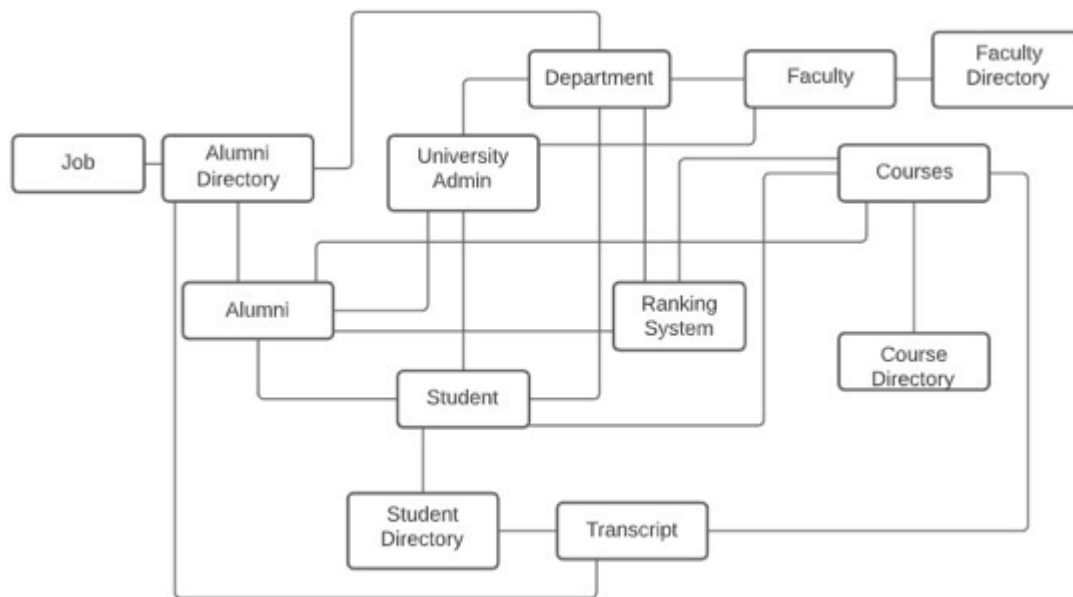
Get the GPA of student : Transcript class has a record of all the courses taken by the student. We can retrieve all course load objects to find GPA. For this, define a method named `calculateGPA()` in transcript class which will iterate through all `CourseLoad` objects and get the seat assignment. For a given seat assignment get course grade. Total all the grades and take average. In the student profile class create a reference to transcript instance and define a method named `getGPA()` which will call the `CalculateGPA` method.

Alumni Information : We can create a function named `sendGoogleForm()` for Admin to track the progress of student and get feedback after students' graduated in which every year admin can send a google form to aluminis in bulk which will include information such as current employee status, number of promotions received, job satisfaction, current salary, rate the courses based on relevance of the job.

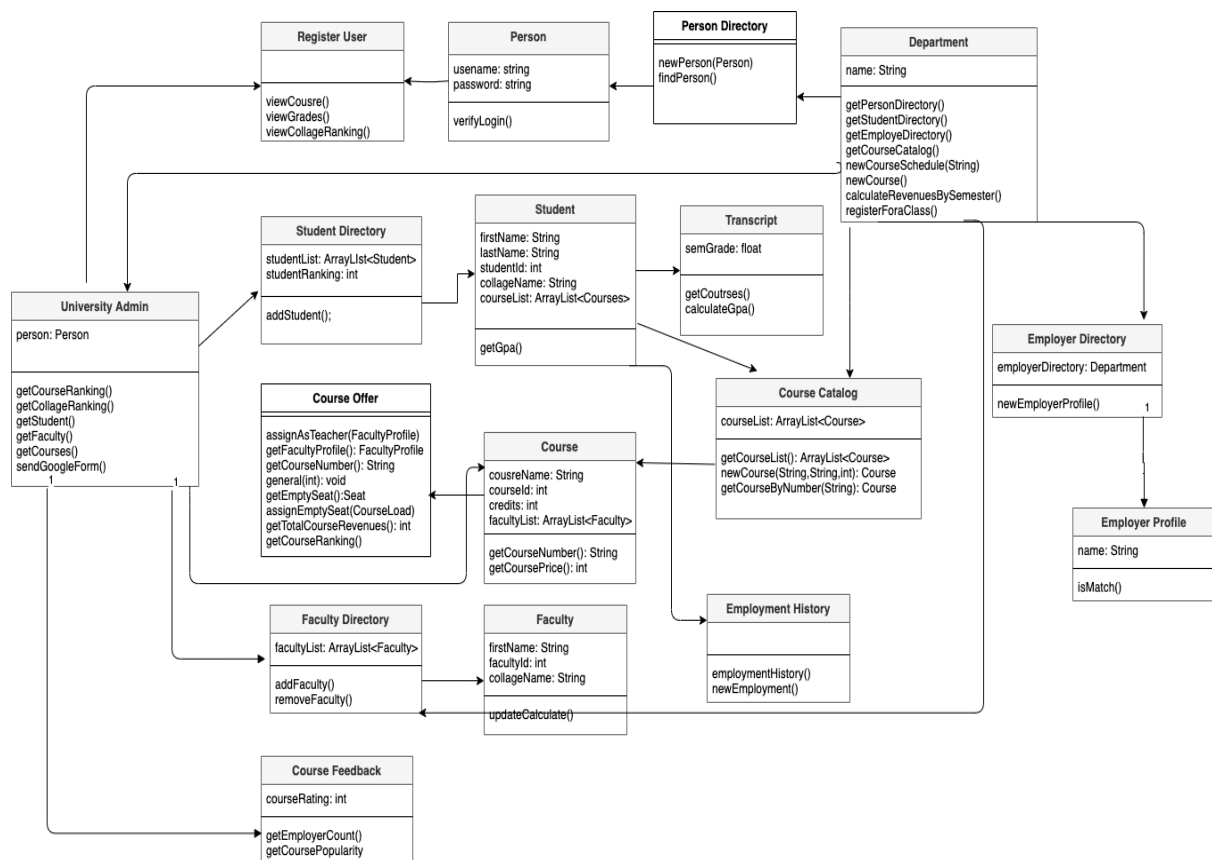
DEFINED METHODS AND ATTRIBUTES:

createDepartment()	Admin function to create a new department.
createStudent()	Admin function to create a new student
createFaculty()	Admin function to create a new faculty
createCourse()	Admin function to create a new course
createCollege()	Admin function to create a new college
updateStudent()	Admin function to update student details
updateCourse()	Admin function to update course details
updateFaculty()	Admin function to update faculty details
updateDepartment()	Admin function to update department details
updateCollege()	Admin function to update student details
deleteStudent()	Admin function to delete student detail
deleteCourse()	Admin function to delete a course
deleteFaculty()	Admin function to delete faculty detail
deleteDepartment()	Admin function to delete a department
deleteCollege()	Admin function to delete a college
getGraduateStudentScore()	To calculate student rank based on student score
getCourseRanking()	Calculate course score based on studentfeedback
getFacultyRanking()	Calculate faculty score based on student feedback and course score

OBJECT MODEL

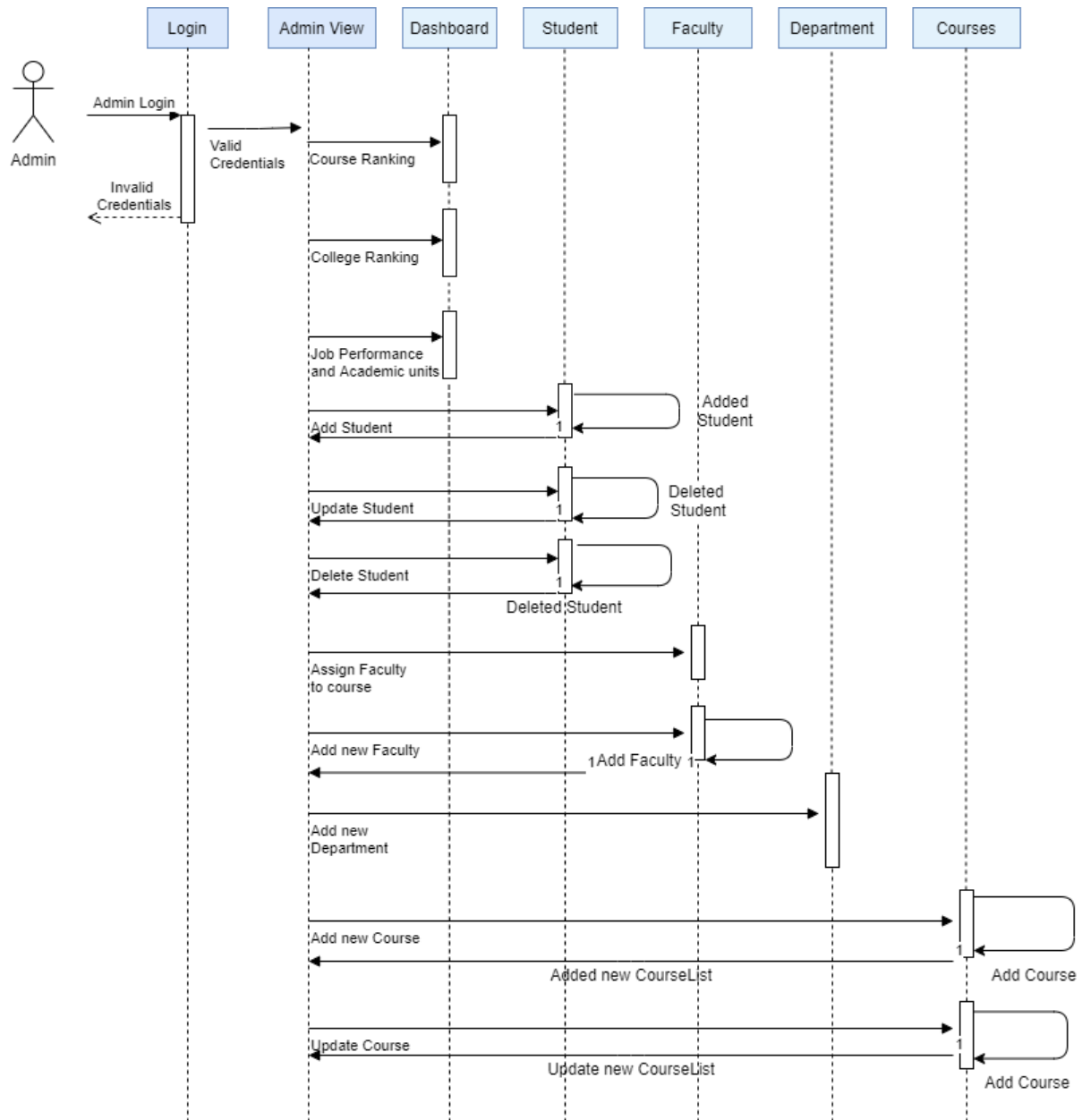


CLASS DIAGRAM

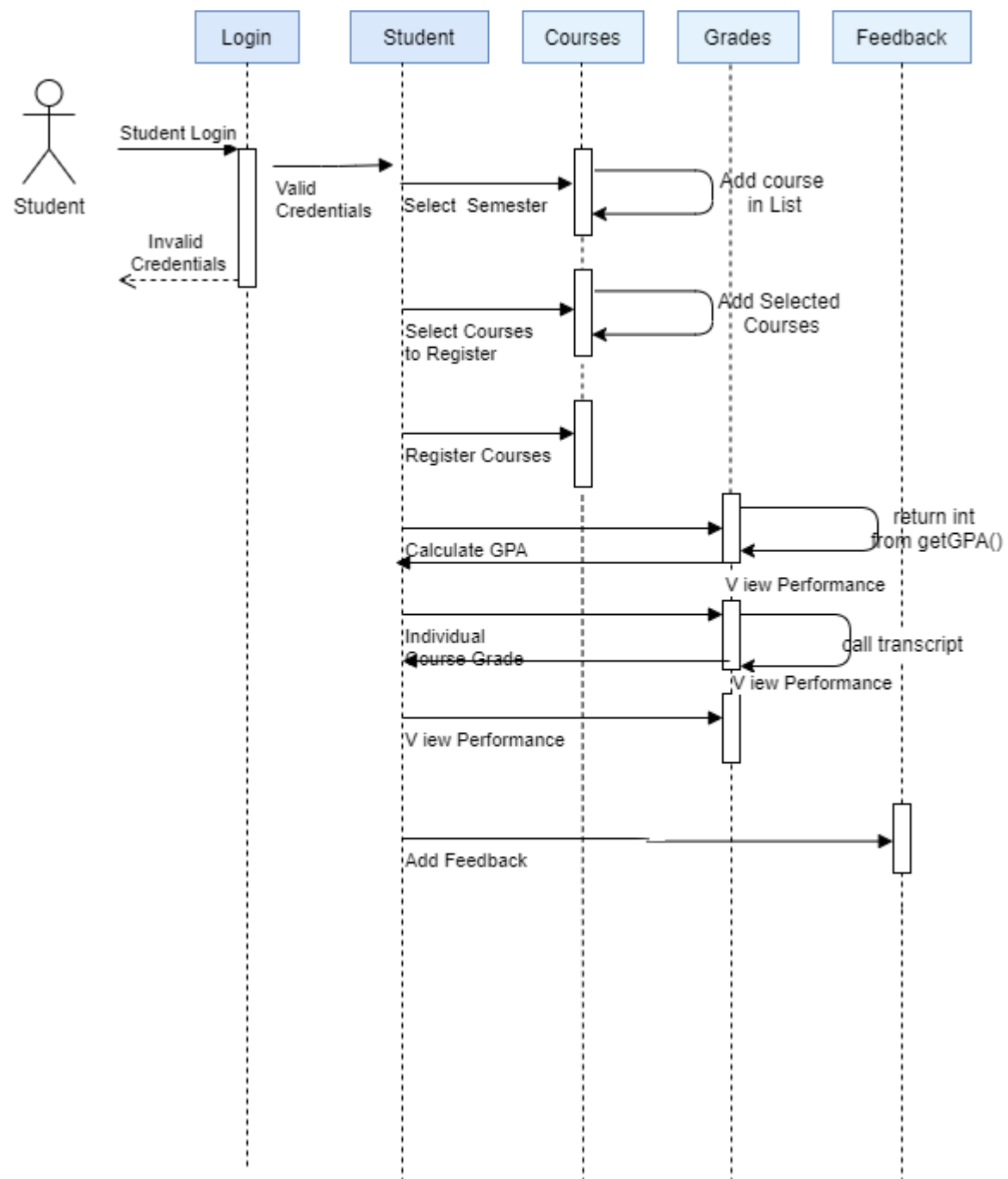


SEQUENCE DIAGRAM

Admin :



Student:

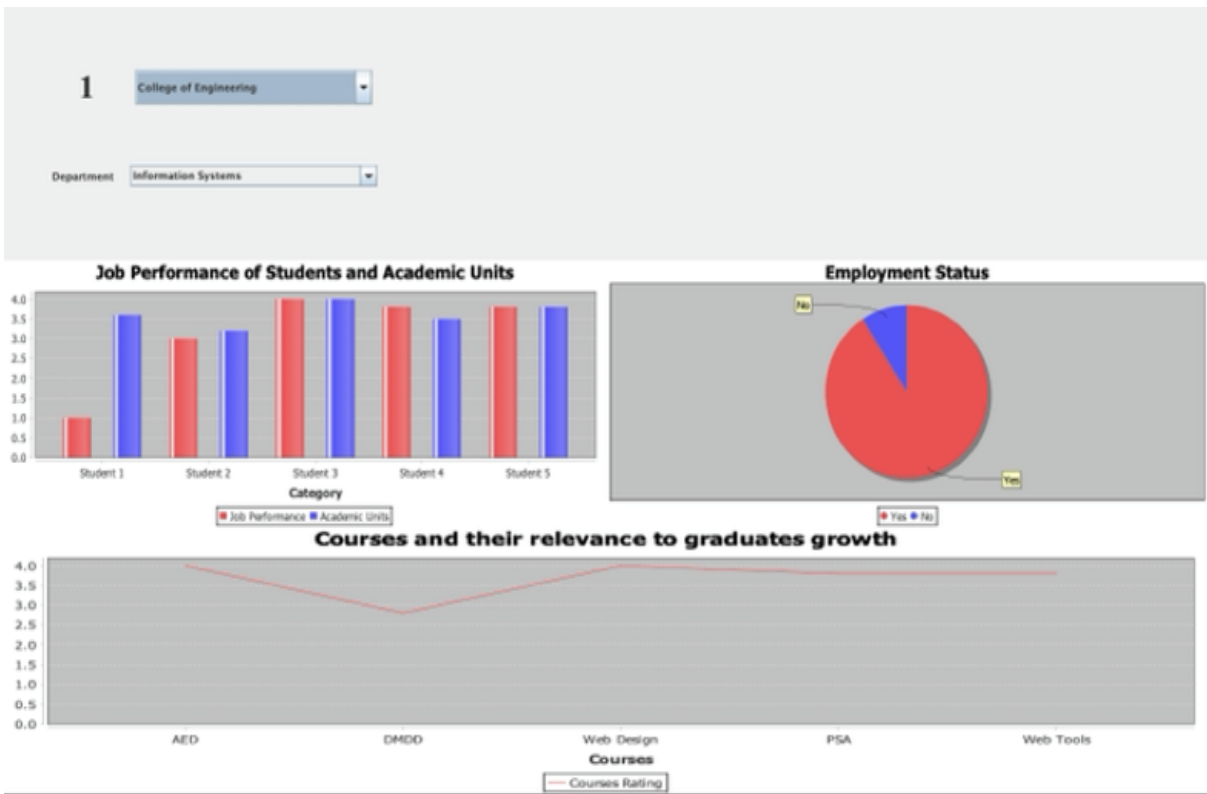


GUI REPRESENTATION

Main Page:



Admin Dashboard:



Admin- Student View

Hello Admin

Home

Dashboard

Student

Faculty

Department

Courses

Student Information

Name

DOB

Address

Student Id

Department:

Add

Update

Delete

Student View - Register for courses

Hello Student

Courses

Grades

FeedBack Form

Select Term

Spring 2021

Course Title	Description	Credits Per Hour	Lecturer
AED 5100		4	Kal Bugrara
Web Design 6120		4	Amuthan Arulraj
DMDD 1000		4	Wuping Wyang
PSA 4352		4	Robert Hillyard

Select Course

Course Title	Description	Register Course	Title 4

Register Course

Student View- Feedback

FEEDBACK FORM

Student Details

Name	Chandler
GPA	3.7
Department	Information Systems

Feedback

PSA 4352	Good
Web Design 6120	Good
AED 5100	Good
DMDD 1000	Good

Submit

CONCLUSION:

Universities lack a performance measurement solution to assess the quality of education they provide to their students. One criterion was to examine the educational system in terms of faculty and courses, as well as how they contributed to the growth of their graduates over a 5-year period. Tracking the graduates' jobs and promotions also provided insight into their development. We were able to provide a solution for the performance measurement solution and define the ranking system of educational institutions, particularly for the developing world, by keeping all of this data and criteria in mind.