University Performance Evaluation System

INFO 5100: Application Engineering and development

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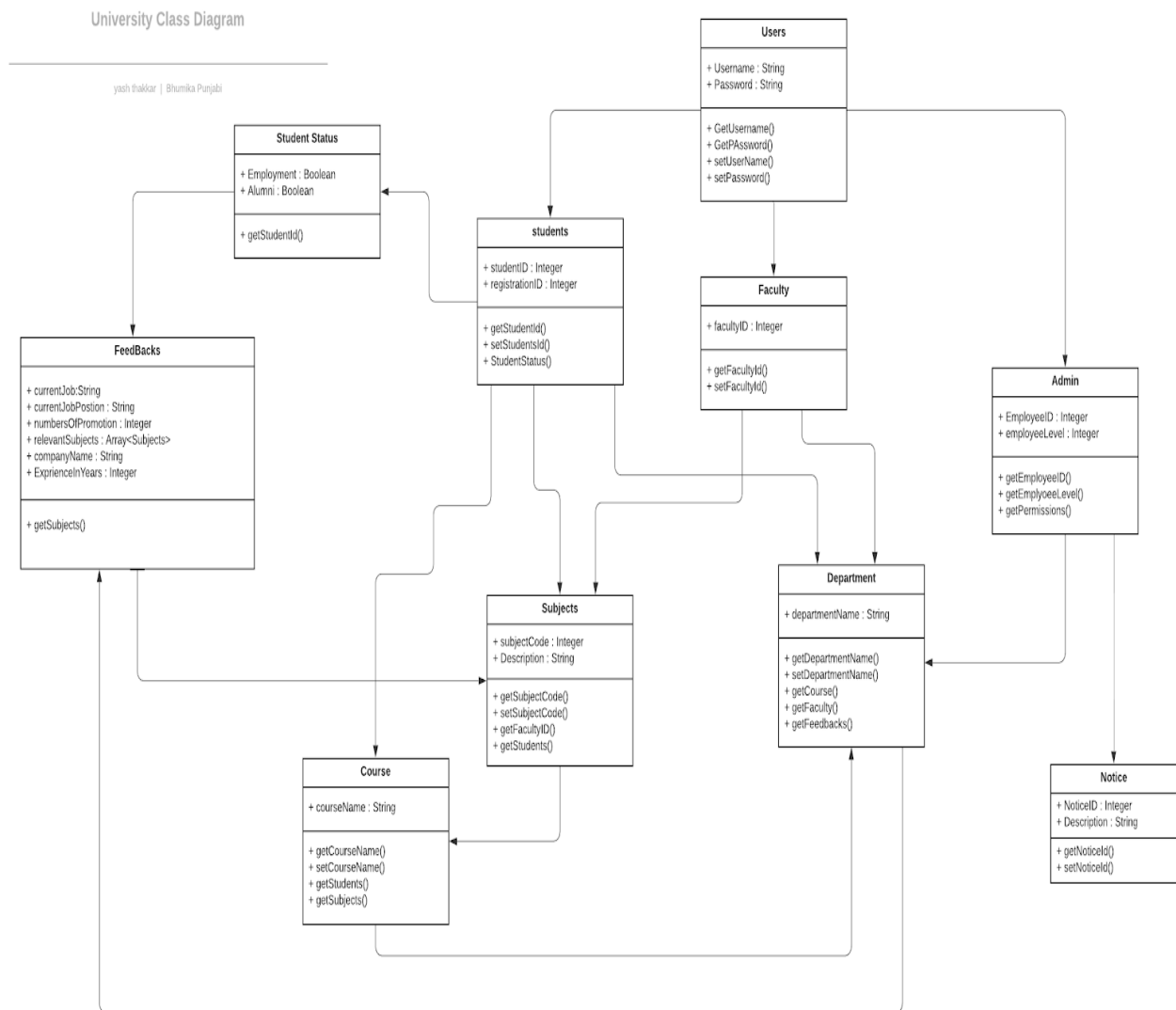
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INTRODUCTION

The aim of this project is to create a performance measurement solution to enable universities to measure the quality of the education they deliver to their students.

In the proposed effort a Feedback Model is created to generate a survey questionnaire for current enrolled students and alumni students of the university. The responses are recorded and analysed to return a rating of the faculty and the ranking of the course respectively.

The faculty and courses offered are the backbone of any University, hence it is important that they are monitored and managed effectively. The factors used to evaluate the performance of any university are ranking of teaching faculty based on the feedback from the current students and ranking of relevant courses which is in accordance to the jobs secured and promotions of the alumni students.

The performance analysis dashboard is created which is monitored by college administration to examine the survey results and make respective changes to the courses to improve the quality of education to foster growth of students. Thereafter making the course work align with the current job market.

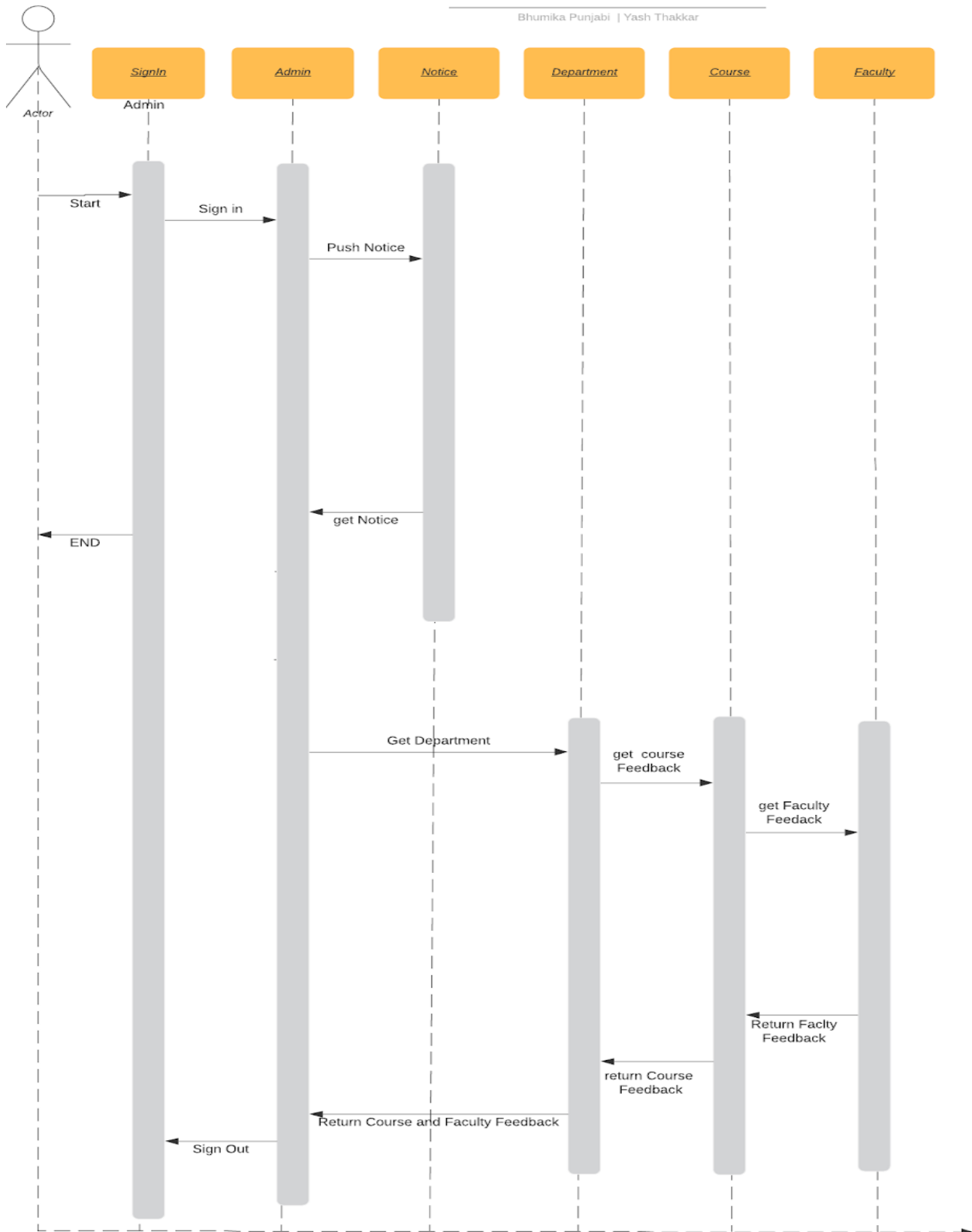## Class Diagram UML: University Performance Evaluation System

University Class Diagram

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Users
+ Username : String
+ Password : String

+ GetUsername()
+ GetPAssword()
+ setUserName()
+ setPassword()

Student Status
+ Employment : Boolean
+ Alumni : Boolean

+ getStudentId()

students
+ studentID : Integer
+ registrationID : Integer

+ getStudentId()
+ setStudentsId()
+ StudentStatus()

Faculty
+ facultyID : Integer

+ getFacultyId()
+ setFacultyId()

Admin
+ EmployeeID : Integer
+ employeeLevel : Integer

+ getEmployeeID()
+ getEmployeeLevel()
+ getPermissions()

FeedBacks
+ currentJob:String
+ currentJobPostion : String
+ numbersOfPromotion : Integer
+ relevantSubjects : Array<Subjects>
+ companyName : String
+ ExprienceInYears : Integer

+ getSubjects()

Department
+ departmentName : String

+ getDepartmentName()
+ setDepartmentName()
+ getCourse()
+ getFaculty()
+ getFeedbacks()

Subjects
+ subjectCode : Integer
+ Description : String

+ getSubjectCode()
+ setSubjectCode()
+ getFacultyID()
+ getStudents()

Course
+ courseName : String

+ getCourseName()
+ setCourseName()
+ getStudents()
+ getSubjects()

Notice
+ NoticeID : Integer
+ Description : String

+ getNoticeId()
+ setNoticeId()

Sequence Diagram UML: Admin (User) displays the Course Rank and Faculty Rank as per the feedback from Alumni
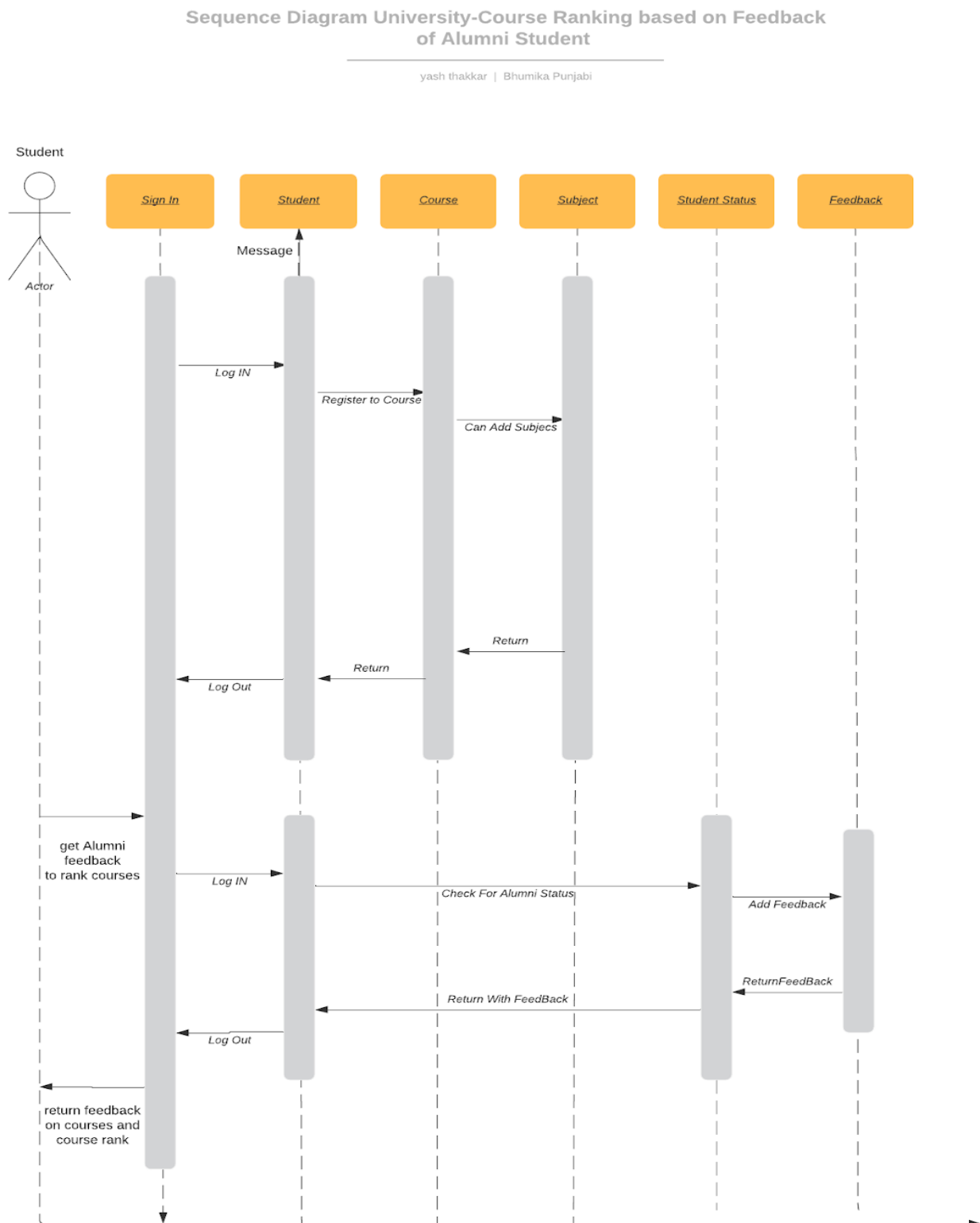
This UML(Sequence) diagram explains how a admin(user) can retrieve the feedback about the faculty as well as of the course. The ranking of a faculty can be calculated based on the alumni feedback i.e. the courses relevant to their job and the faculty rank which is calculated based on the student feedback survey on the courses. This diagram also returns the faculty ranking and course ranking which is computed by the average ranking of all the departments.

Admin(User) displaying the Course Rank and Faculty Rank as per the feedback from Alumni

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SignIn Admin Notice Department Course Faculty

Actor

Admin

Start

Sign in

Push Notice

get Notice

END

Get Department

get course Feedback

get Faculty Feedack

Return Faclty Feedback

return Course Feedback

Return Course and Faculty Feedback

Sign Out

Sequence Diagram UML: Course Ranking based on Feedback of Alumni Student

Sequence Diagram University-Course Ranking based on Feedback
of Alumni Student

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Student

| Sign In | Student | Course | Subject | Student Status | Feedback |

Actor

Message

Log IN

Register to Course

Can Add Subjecs

Return

Return

Log Out

get Alumni
feedback
to rank courses

Log IN

Check For Alumni Status

Add Feedback

ReturnFeedBack

Return With FeedBack

Log Out

return feedback
on courses and
course rank

This UML(sequence) diagram depicts the flow of processing data to show the user relevant courses that are important for the job, where the current students can register for the courses and add subjects as per the relevant course. In the survey alumni students are asked to give feedback on subjects based on their current work in the job. The feedback helps in determining the ranking of courses based on the survey results. These courses are displayed in descending order of the rank.

Sequence Diagram UML: Faculty(user) Interaction

This UML (sequence) diagram helps faculty(user) who can run the application and see all the allocated departments, with the relevant courses and subject and list of all the students taking course under them.

Faculty-Basic Sequence Diagram-Faculty (user) Interaction

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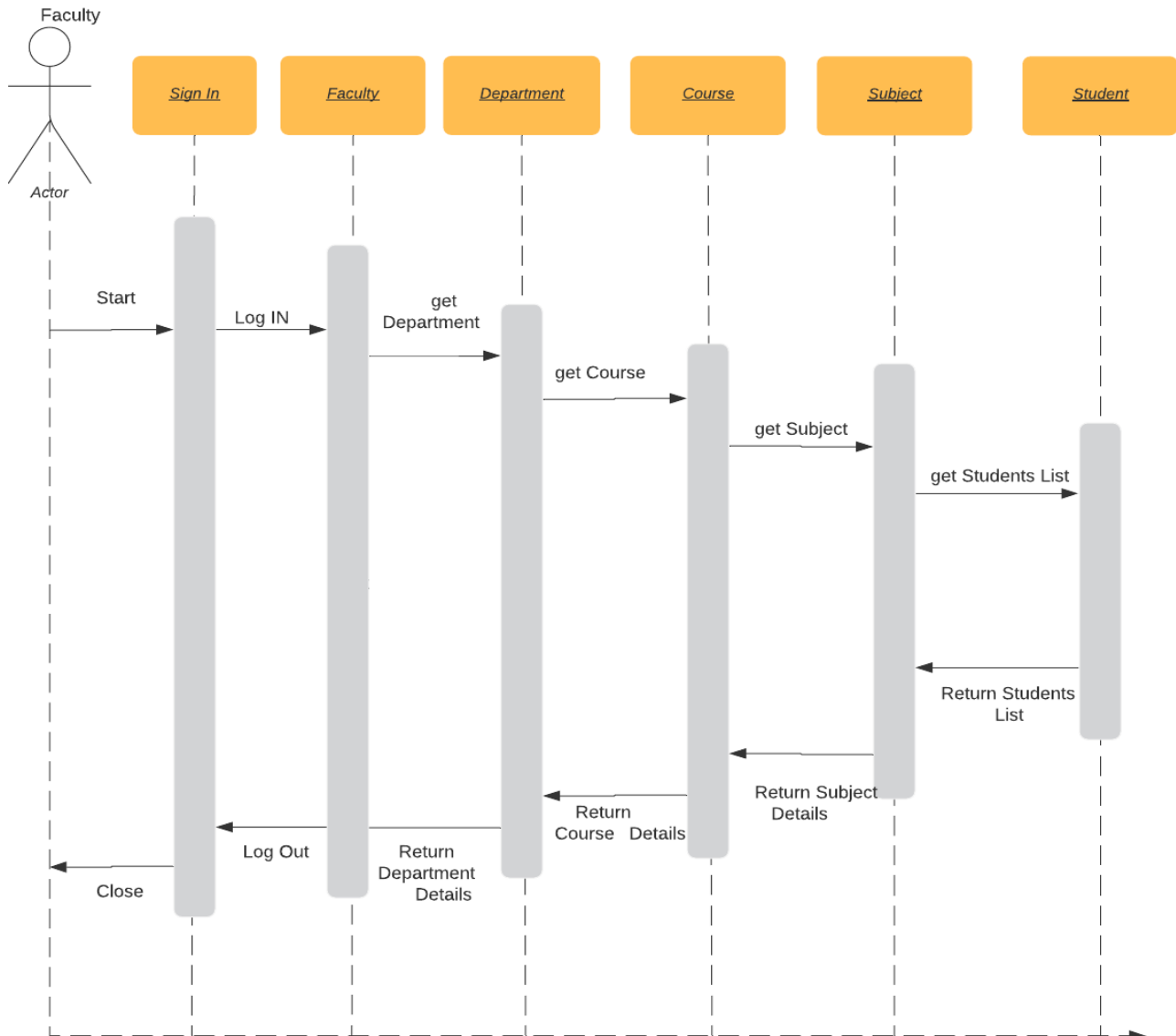
METHOD EXPLANATION
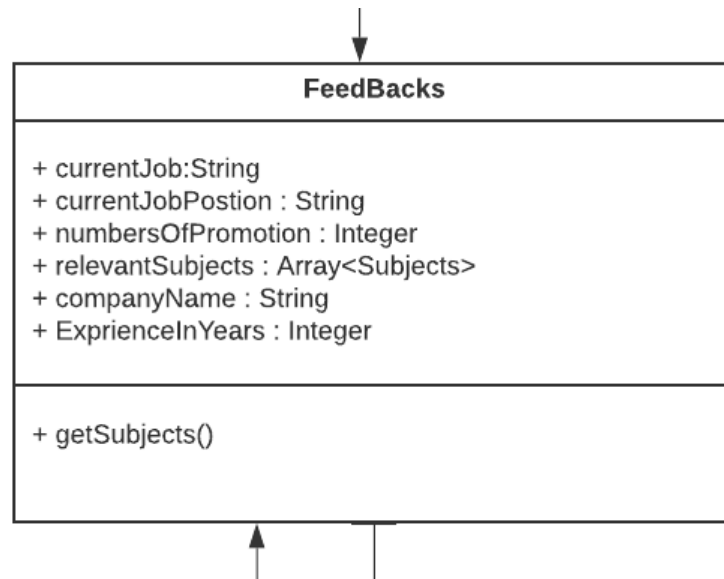
Alumni students are giving the feedbacks of the subject relevant to their job work and can rank the courses and the faculties associated with the course. This survey is giving the information about their current job position, company name, years of experience and the number of promotions received in their entire job tenure. Admin can get the course rank and the relevant faculties taking that course.

DASHBOARD

LOGIN PANEL

VIEW LISTS PANEL

VIEW GRAPHS PANEL-1

VIEW GRAPHS PANEL-2

CONCLUSION

In the proposed solution we have designed a performance measurement evaluation system which would enable universities to measure the quality of education they deliver to their students. The solution takes into account the feedback of the alumni on the relevant courses and provides a rank to the courses that have been beneficial to the them in terms of jobs, promotions and salary hikes. The system also measures the rank of a faculty based on a survey that is taken by the current students. These rankings would in turn help an individual to figure out the ranking of any department and college, which will act as a guide for future students trying to select a college, department or course. Furthermore, the scope of this project can be expanded by taking into account the feedback of a recruiter which would help the administrator to rank a particular university based on the performance of students in the company.