INFO5100 33287 Application Engineering &Dev SEC 04 Spring 2022

Instructor: Professor Kal Bugrara

Report: The Design of a Digital Platform for "Professor-As-A Service"

Submitted By: GLORIA SINGH-002960072

SREYOSHI GHOSH-002924715
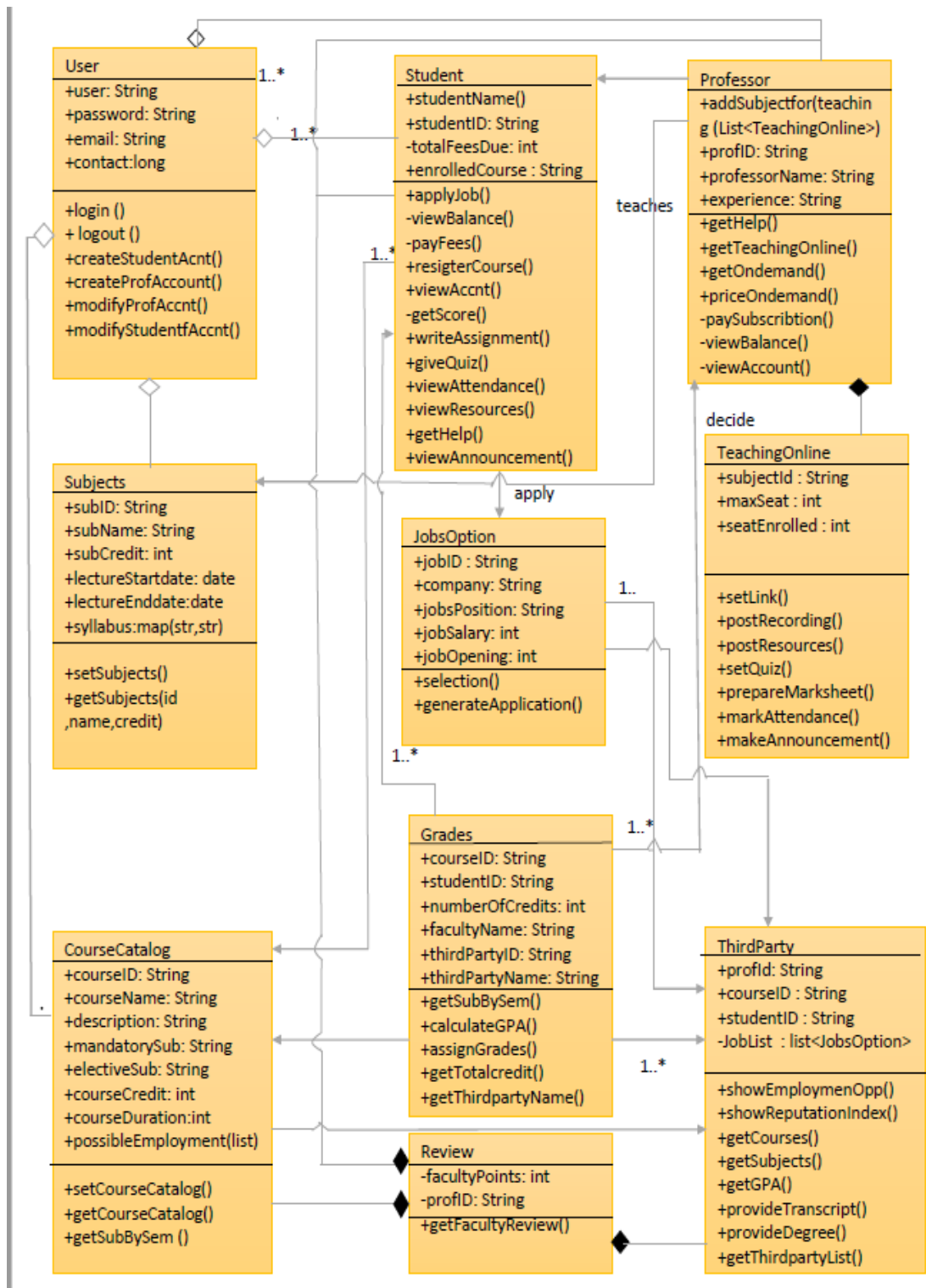
TRISHA GHORPADE-002920687

Objectives:

- The professor manages their own courses as well as what they want to teach and when to teach them. Students sign up as they please.
- The professor has full autonomy. Likely the professor will be offering courses in their specialty. A reputation index will be available to help aspiring students decide which courses fit best.
- A professor will join the service and operate remotely from anywhere in the world.
- Professor services are visible and accessible from anywhere in the world, using tablets, browsers, smart devices, etc.
- To earn their degree, students must fulfil course requirements which means courses must be taken from many professors (residing anywhere in the world)
- The underlying digital platform offers third party certification authority to approve the degree. You might want to consider different certification authorities. One third party might have better access to employers for example.
- Course prices are set by the professor and can vary and easy to adjust depending on demand
- Tuition for courses go directly to the professor. The professor will pay subscription fees for use of the digital platform.

Class Diagram:

- The model diagram proposed has multiple units like: student, professor, e-learning platform as a third party, courses etc.
- Tuition for courses go directly to the professor. The professor will pay subscription fees for use of the e-learning platform.
- The professor will be able to see all the subjects that he/she has to teach along with managing his account.
- The professor will be able to give all the facilities required for remote learning like: video recording, assignments, quizzes, lecture links, schedule
- The degree and transcripts will be generated by the e-learning platform after comparing the course criteria and GPA. The e-learning platform will have a list of job opportunities, it can be more than one.

- Student will be paying the fee for the subject directly to the professor. The professor will have the authority to change the prices of the subjects according to the demand.
- E-learning platform will show the reputation index for each professor after observing the feedback and strength of students.
- E-learning platform which is a third party will have its control panel.

User 1..*
+user: String
+password: String
+email: String
+contact:long

+login ()
+ logout ()
+createStudentAcnt()
+createProfAccount()
+modifyProfAccnt()
+modifyStudentfAccnt()

Student
+studentName()
+studentID: String
-totalFeesDue: int
+enrolledCourse : String
+applyJob()
-viewBalance()
-payFees()
+resigterCourse()
+viewAccnt()
-getScore()
+writeAssignment()
+giveQuiz()
+viewAttendance()
+viewResources()
+getHelp()
+viewAnnouncement()

teaches

Professor
+addSubjectfor(teaching (List<TeachingOnline>)
+profID: String
+professorName: String
+experience: String
+getHelp()
+getTeachingOnline()
+getOndemand()
+priceOndemand()
-paySubscribtion()
-viewBalance()
-viewAccount()

decide

TeachingOnline
+subjectId : String
+maxSeat : int
+seatEnrolled : int

+setLink()
+postRecording()
+postResources()
+setQuiz()
+prepareMarksheet()
+markAttendance()
+makeAnnouncement()

Subjects
+subID: String
+subName: String
+subCredit: int
+lectureStartdate: date
+lectureEnddate:date
+syllabus:map(str,str)

+setSubjects()
+getSubjects(id ,name,credit)

apply

JobsOption
+jobID : String
+company: String
+jobsPosition: String
+jobSalary: int
+jobOpening: int

+selection()
+generateApplication()

1..

Grades
+courseID: String
+studentID: String
+numberOfCredits: int
+facultyName: String
+thirdPartyID: String
+thirdPartyName: String
+getSubBySem()
+calculateGPA()
+assignGrades()
+getTotalcredit()
+getThirdpartyName()

CourseCatalog
+courseID: String
+courseName: String
+description: String
+mandatorySub: String
+electiveSub: String
+courseCredit: int
+courseDuration:int
+possibleEmployment(list)

+setCourseCatalog()
+getCourseCatalog()
+getSubBySem ()

Review
-facultyPoints: int
-profID: String
+getFacultyReview()

ThirdParty
+profId: String
+courseID : String
+studentID : String
-JobList : list<JobsOption>

+showEmploymenOpp()
+showReputationIndex()
+getCourses()
+getSubjects()
+getGPA()
+provideTranscript()
+provideDegree()
+getThirdpartyList()

Sequence Diagram:

- User can be a Student, Professor or an Administrator (Third party E-learning platform).
- User login using user id and password.
- Student can see courses and underlying subjects, can register subjects under any professor. Student have to pay registration fee to the professor.
- Professor can add subject that he/she wants to teach from his/her dashboard. Professor need to pay subscription fee to all E-learning platforms he/she opted for. Professor have to share lecture and subject related information to the students who have opted for their subject.
- E-learning platforms are liable to provide degree certificates and transcripts to the students who have taken and successfully completed their course.

Sequence Diagram
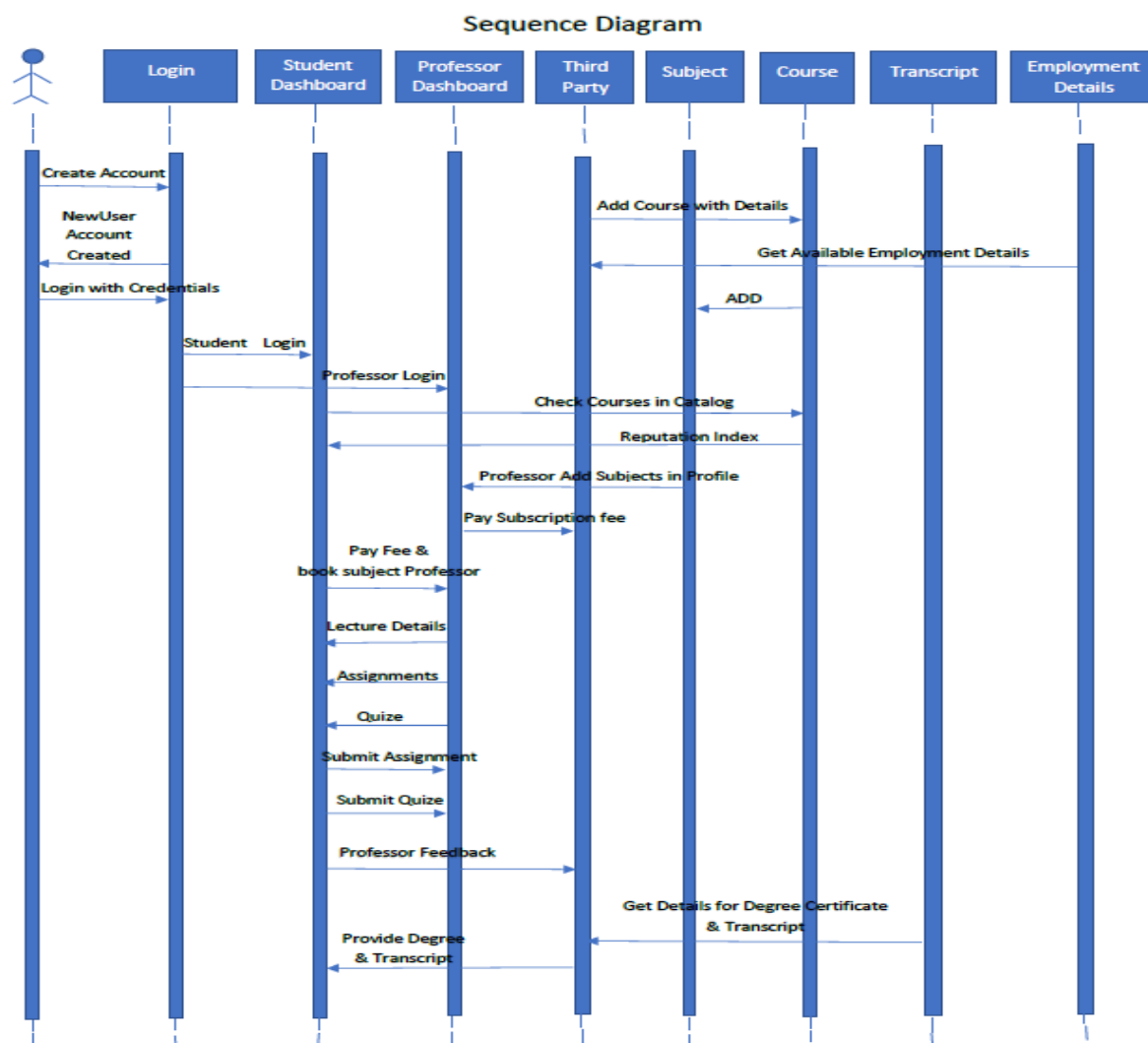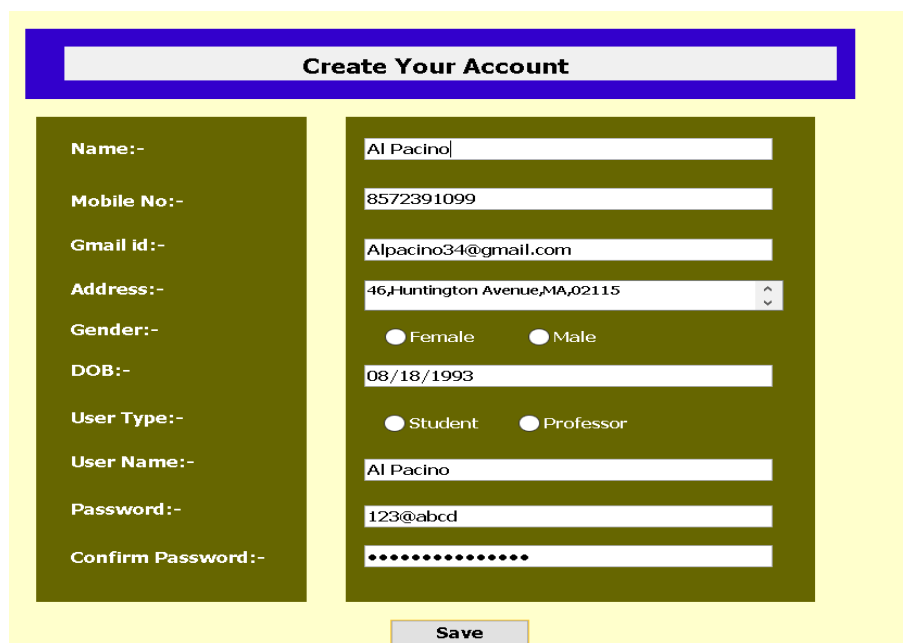
User Interface:

- E-learning platform is a page where an user can choose whether he/she is a student or a professor.
- An user can create his/her profile if he/she is a first time user.

- An user should fill all the fields in order to create his/her account newly into the e-learning platform.

- On this admin control panel, an admin can select e-learning platform
- For the selected e-learning platforms admin can add new courses to the portal as well as can list down available job positions.
- Secondly, on this page, new platform can be registered.

- If an existing user is a student or a professor, they will login here by putting username and password which they have already created before.
- Also, forgot your password option will help any user to reset their password.

- If an user is a student, they will view this student portal.
- Student can see the courses where all the details will be enlisted.
- Account button:- help student to manage their accounts(ex: phone no, email, name, password etc.)
- Announcement button:- student can see professor's latest and previous announcements (ex: lecture times changes, exam declaration date)
- Calendar button:-student can see the scheduled class timings.
- Attendance button:- student can see the attendance of each classes they have attended.
- Regist. Fee button:- student can view their payments details of each subjects.
- Prof. rating button:- student can see the ratings of professors, so that they can choose their professor as per the reputations.
- Transcript button:- student can see and download their transcript after the course has finished.
- Avl. Jobs button:- student can see job opportunities
- Feedback button:- student can give their feedback on the professors.
- Help button:- technical glitch is handled here.Student can ask for the help from admin if they stuck anywhere(ex: payment process on hold, course was not registered properly)

- If an user is a professor, they will view this professor portal.
- Add Subject button:- professor will be able to his subjects which he wants to teach students.
- Balance button:- Professor can see the details of his/her subscription payment details for a particular e-learning platform.
- E-Learning Platforms:- professor can choose multiple or one platform for teaching.
- Make your Announcement button: professor can declare any important announcement for the students.
- Account button:- help professor to manage their accounts(ex: phone no, email, name, password etc.)
- Help button:- technical glitch is handled here. Professor can ask for the help from admin if they stuck anywhere(ex: payment process on hold, links unable to add
- List of all subjects already added option:- professor can see the existing coursed added by him previously.

Professor Portal

Add Subject

Balance

E-learning Platforms

Make your Announcement

Account

Help?

List of all subjects already added

You have paid 1000$ for Udemy

○ Udemy   ○ Upgrad   ○ Geeksforgeeks

Subject ID	Max Seat	Seat Enrolled	Lecture Link	Quiz	Assignment	Video Recordings	Lecture Timings
0012	40	35	https://northeast...	https://northeast...	https://northeast...	https://northeast...	03/04/2022 10:...
0025	30	20	https://northeast...	https://northeast...	https://northeast...	https://northeast...	03/23/2022 9:3...
0067	50	44	https://northeast...	https://northeast...	https://northeast...	https://northeast...	04/08/2022 6:3...
0033	40	29	https://northeast...	https://northeast...	https://northeast...	https://northeast...	05/10/2022 09:...
0091	70	64	https://northeast...	https://northeast...	https://northeast...	https://northeast...	06/14/2022 11:...

- Professor can add a new subject along with the maximum capacity of students.
- Professor can add all the lecture links & timings, assignment and quiz links.
- Professor can choose the e-learning platform and pay the subscription fee to the digital platform.

Add Your Subject

Subject id:-	0025
Max Seat:-	30
Lecture link:-	ortheastern.instructure.com/courses/103606
Quiz:-	ortheastern.instructure.com/courses/103606
Assignment:-	ortheastern.instructure.com/courses/103606
Video Recordings:-	ortheastern.instructure.com/courses/103606
Lecture Timings:-	03/23/2022 09:30am
Resources:-	ABC book
3rd party Platforms:-	Udemy
Pay Subscription:-	● Yes ● No

Save & Continue

- On the payment page, professor will put all his card related documents to pay the amount.

Pay Your Subscription Fee

Type of Your Card:-	● Master ● Visa
Card Number:-	456789016782
Valid Till:-	03/2026
CVV No:-	673
Name on Card:-	Al Pacino
Amount:-	1000$

Proceed   Cancel