

Report

Performance Measurement Solution For University

Submitted By:

Shivani Chavan - 001582611

Divyesh Darji - 001568627

Aditya Mulik - 002127694

18th October, 2021



TABLE OF CONTENTS

Sr. No	Contents
1.	Introduction
2.	Class Diagram
3.	Sequence Diagram
4.	Application Functionality
5.	UI Interface

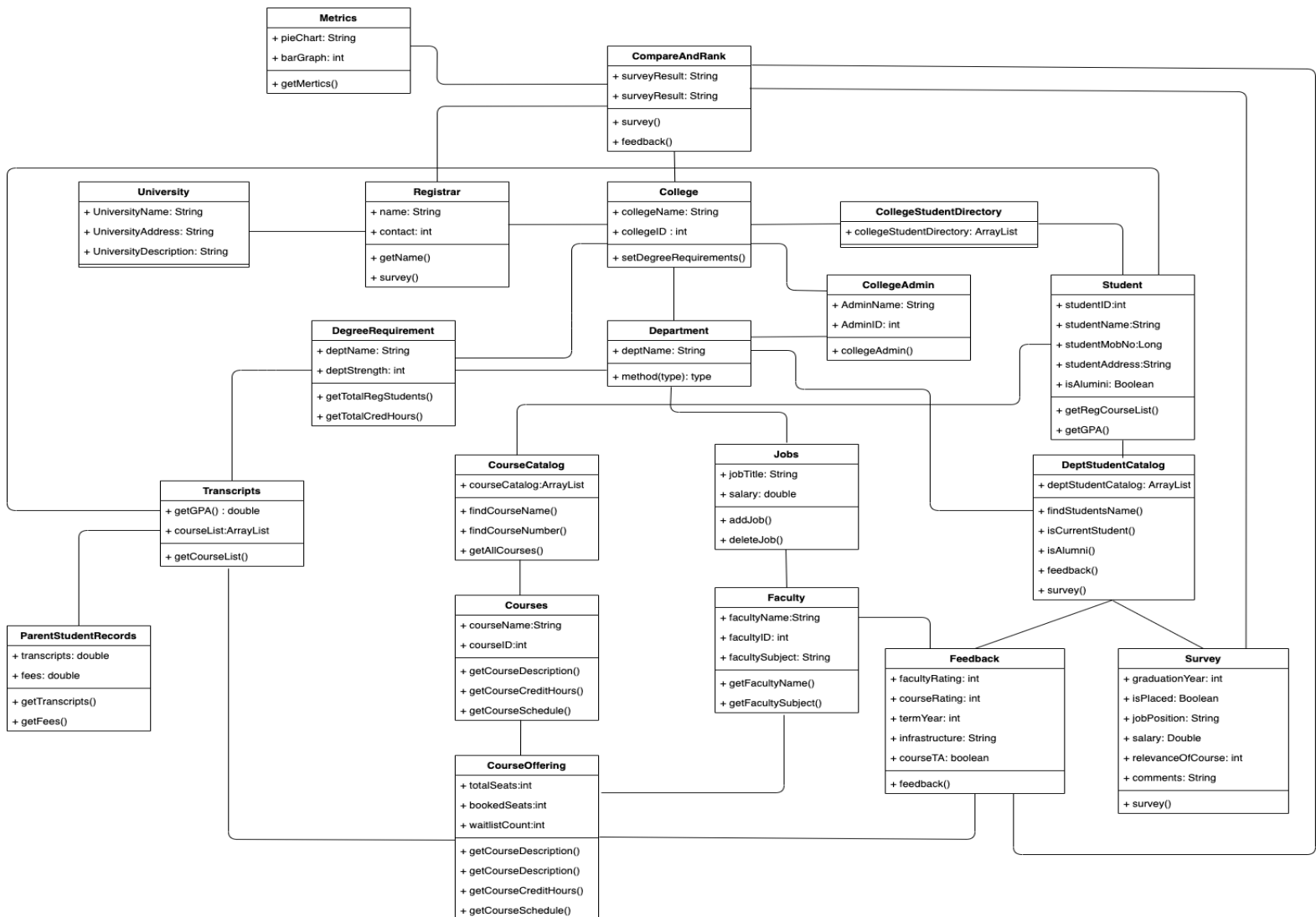
1. Introduction

Objectives:

- The main goal is to identify the shortcomings or gaps in the education system which can be done by applying software engineering principles to enhance education quality everywhere.
- A Performance Evaluation system will be used by institutions to assess the quality of education they give to their students. Several methodologies can be applied to retrieve key insights.
- Various surveys and feedback can be vital information to judge how a course progresses, the quality of education, the impact a course has on a student's career.
- Other metrics such as a student's GPA score, transcripts can be a vital way to identify how a student is performing in his/ her classes.

2. Class Diagram

- Multiple units, such as students, departments, colleges, and universities, are represented in the suggested class diagram.
- The suggested rating, or (custom ranking), is based on different characteristics and works as a filter when retrieving all of the university's alumni information.
- Transcripts are used to determine the university's usual ranking, which is purely based on GPA.
- Metrics are used to identify the shortcoming in the university model where data is collected from various sources and segregated for insightful information.



3. Sequence Diagram

- Alumni or current students have the access to the form to provide feedback on various courses, faculty, infrastructure related information.
- The data entered by each alumni or student about the university, college, course and other relevant details are stored and evaluated to improve the education system based on trends or patterns derived from it.

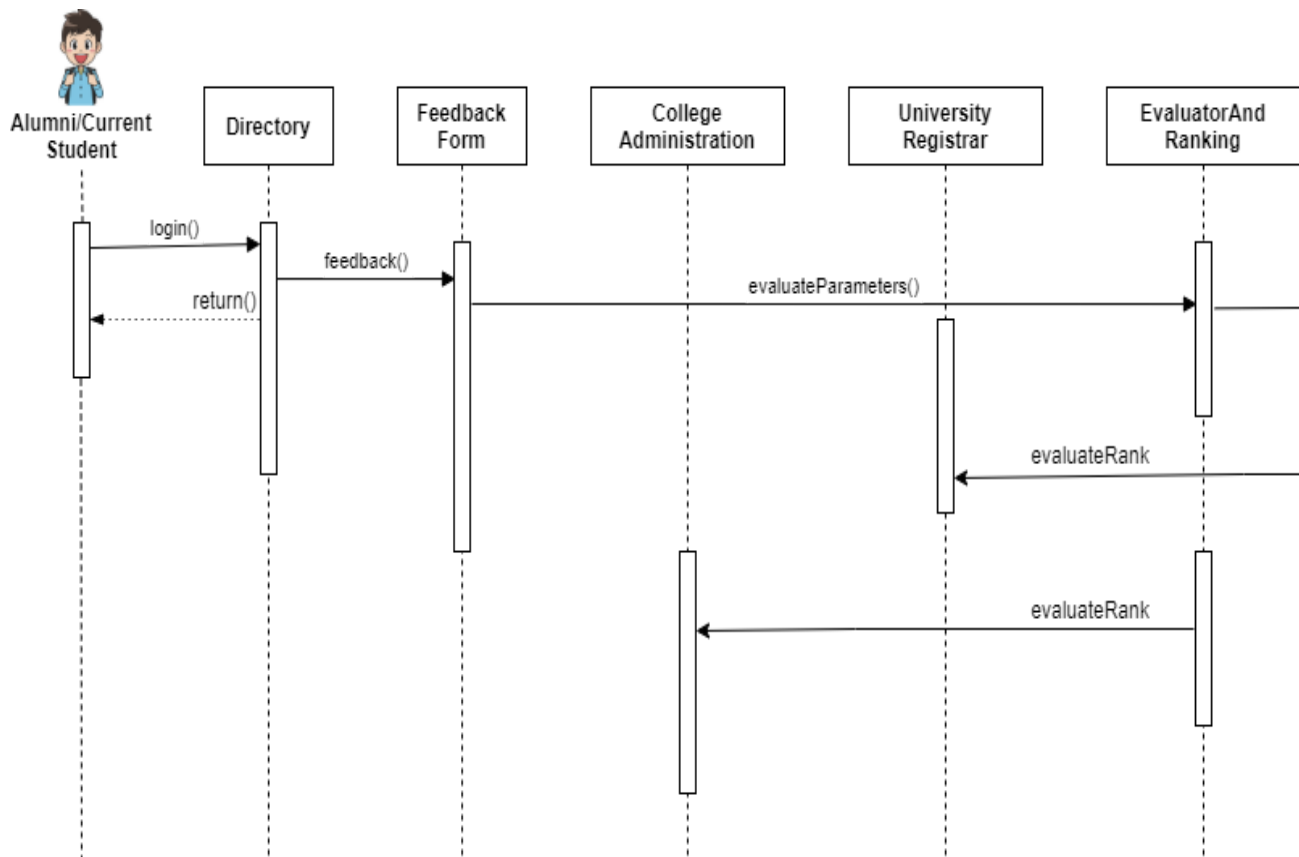


Fig: The Sequence diagram depicting the flow of feedback form.

- Alumni survey form filled by the graduated students.
- All data is recorded and the generated trends or patterns from the data is evaluated to improve the education system based on inputs of the input data of alumni.
- The patterns are used to detect employment post graduation, the overall GPA of students and various other factors for enhancing the education system.

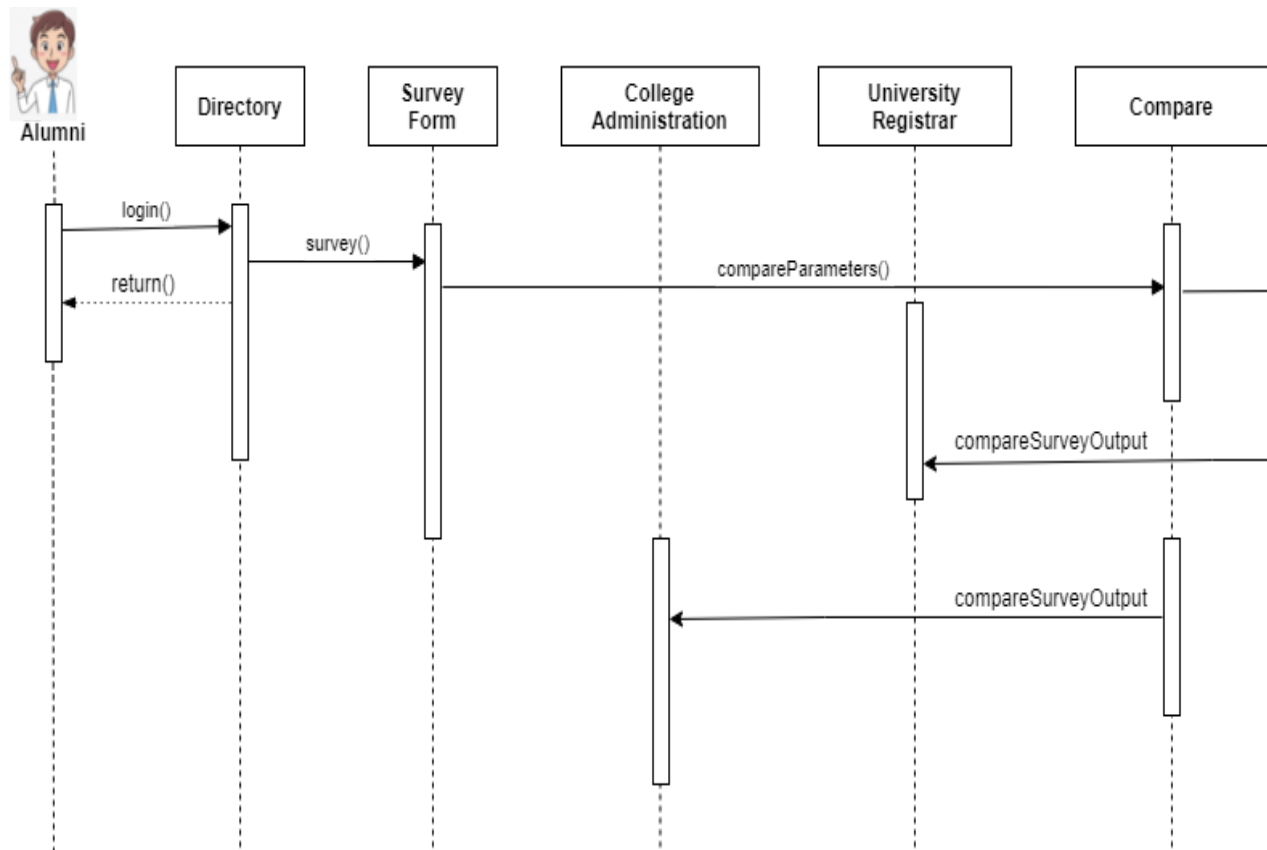


Fig: The Sequence diagram depicting the flow of survey form.

4. Application Functionality

Metrics are gathered from various sources such as student feedback forms for the courses being taken by them and surveys which are carried out by the university's alumni. Data gathered can be aggregated and pitfalls in the current education system can be identified and remediated up.

Modules Used:

1. University
2. Registrar
3. College
4. College Student Directory
5. College Admin
6. Student
7. Department
8. Degree Requirements
9. Transcripts
10. Course Catalog
11. Courses
12. Course Offering
13. Faculty
14. Jobs
15. Department Student Catalogue
16. Feedback
17. Surveys
18. Metrics
19. Compare And Rank



5. User Interface

5.1: Student/Alumni/Faculty Login Page.

A common login page created using Swing Application for Students/ Faculty/ Alumni to login.

The image shows a design preview of a login page for the Northeastern University Student Survey Portal. The window title is "Design Preview [StudentSurveyForm]". The background is a solid teal color. At the top, it says "Welcome To" in italics, followed by "Northeastern University Student Survey Portal" in a large, bold, black font. Below this is a horizontal white line. In the center, the word "Login" is displayed in a large, bold, black font. Underneath "Login" are two input fields: "Username:" followed by a white rectangular box, and "Password:" followed by a white rectangular box. Below the password field is a white button with the text "Login". To the right of the button is a link that says "Forgot Password?". At the bottom, there is another horizontal white line.

5.2: Course feedback form for currently enrolled student

A feedback form available for students wherein they report the course related feedback which returns the feedback which can be aggregated and viewed for performance of the course.

Design Preview [CourseFeedbackSurveyForm]

Course Feedback Form

Student Name:

Jack Harris

University:

Northeastern University

College:

College of Engineering

Term:

Fall 2021

Subject:

Application Engineering & Development

Registering for class courses:

10

Scale of 1 to 10 – 1 being lowest and 10 highest

Infrastructure:

10

Scale of 1 to 10 – 1 being lowest and 10 highest

TA for course:

☐ Yes ☐ No

Course Rating:

10

Scale of 1 to 10 – 1 being lowest and 10 highest

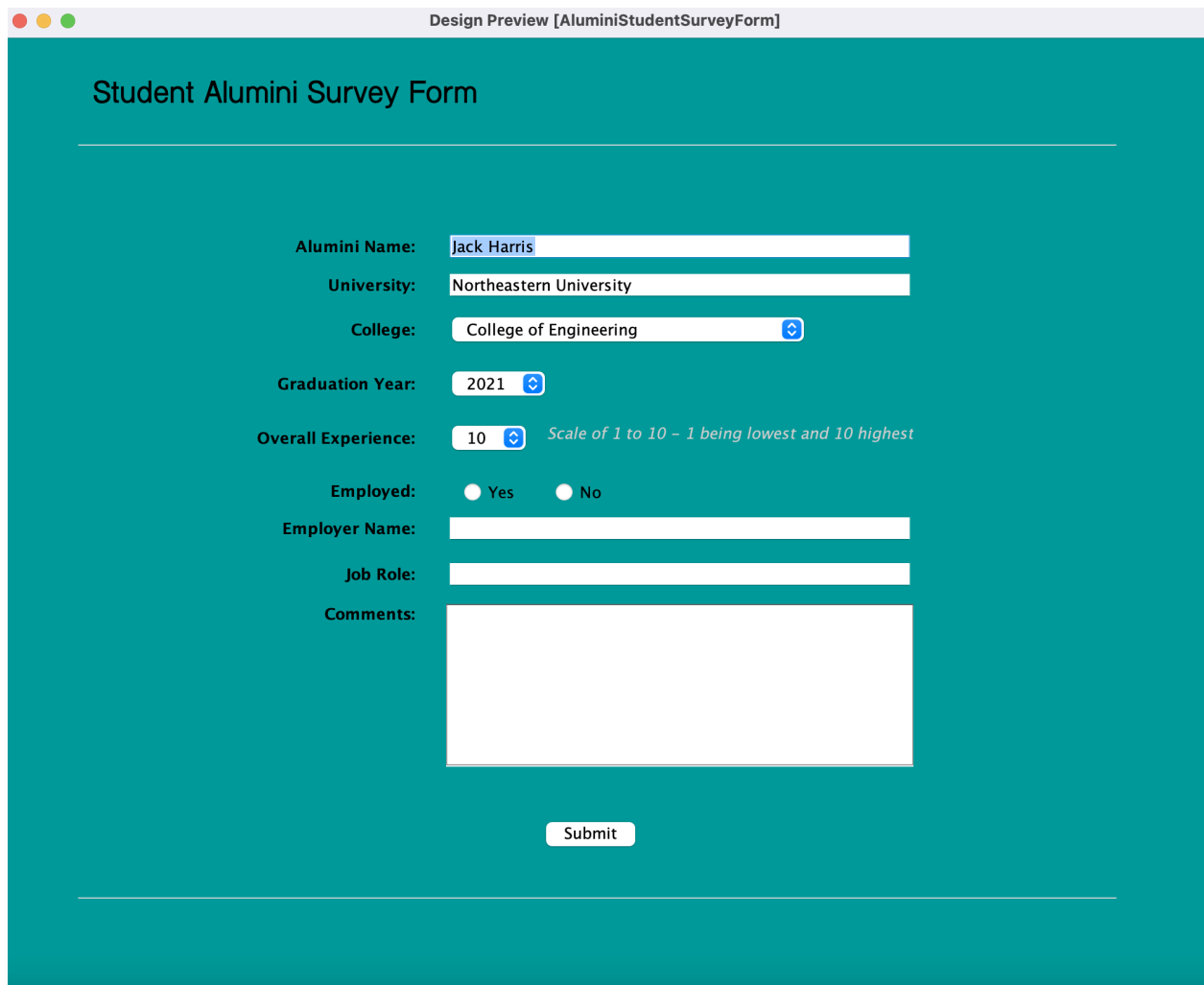
Comments:

Submit



5.3: Survey form for the alumni of University

A profile would be generated for each alumnus. Alumni might work for themselves or for a firm. His performance will be evaluated using a variety of measures provided by the Alumni. Alumni who are self-employed must meet the following criteria:



The image shows a design preview of a web form titled "Student Alumni Survey Form". The form is set against a teal background. It includes several input fields: "Alumini Name" (text input with "Jack Harris"), "University" (text input with "Northeastern University"), "College" (dropdown menu with "College of Engineering"), "Graduation Year" (dropdown menu with "2021"), "Overall Experience" (dropdown menu with "10" and a note "Scale of 1 to 10 – 1 being lowest and 10 highest"), "Employed" (radio buttons for "Yes" and "No"), "Employer Name" (text input), "Job Role" (text input), and "Comments" (a large text area). A "Submit" button is located at the bottom center of the form.

Design Preview [AluminiStudentSurveyForm]

Student Alumni Survey Form

Alumini Name:

University:

College:

Graduation Year:

Overall Experience: *Scale of 1 to 10 – 1 being lowest and 10 highest*

Employed: ☐ Yes ☐ No

Employer Name:

Job Role:

Comments:

5.4: University Database consisting of all students, alumni data.

A profile would be generated for each student and alumnus. All records are stored in a single table which can be added, updated or deleted.

Design Preview [UniversityStudentDirectory]

University Student Database

No	Student Name	Email	College	Courses Enrolled	Alumni
1	Jack Harris	harris.j@northeastern.edu	College Of Engineering	2	<input type="checkbox"/>
2	Jennifer Lawrence	lawrence.j@northeastern.edu	College of Media & Arts	3	<input type="checkbox"/>
3	Kylian Mbappe Mbap...	mbappe.k@northeastern.edu	Northeastern Huskies	0	<input checked="" type="checkbox"/>

Add Student

Update

Delete