University Management System

Problem Statement –

Propose a real-time performance assessment and measurement system with respect to quality of education, academic performance, jobs, promotions over a period of 5 years; to track a student's growth based on academic units.

Proposed Solution –

The proposed solution supplies a career-centered system where students can track their performance as well as the present market trends to be on their way to a successful career. This analysis is provided by conducting surveys and collecting statistical feedback from alumnus and displaying it in real-time graphical format for ease of understanding.

For calculating the performance measures, the department should track performance of the students after completing graduation as a professional over a period of 5 years — make observations of the courses and certifications that helped students succeed in that particular field. Calculation is made of the success scores based on their academic records and responses of the survey made by the alumnus. The university can make necessary changes in the course structure to improve the quality of education and help students succeed in their careers through the survey. For this assignment, we have considered Northeastern University as an example.

Multiple conclusions can be drawn from this calculation –

- For a particular job, which courses helped them obtain it?
- Did the student complete any certifications apart from the ones offered at the university for that particular job? Can the university add these courses to its catalog to help students succeed and improve the quality of education?
- Which domain of companies are the students recruited for? This information can be used for prospective students who are looking into the university
- Irrelevant courses can be replaced by the ones required by the recruiting companies and industries
- Is there any updating or change required to the ongoing course syllabus?

University ranking can be determined in multiple ways. The best way to determine the ranking of the university is by -

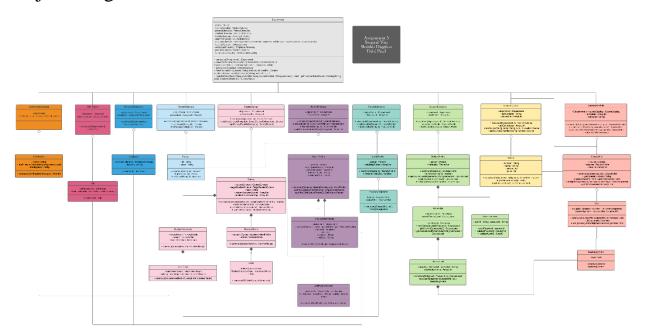
- How diverse is the course structure when compared to different universities?
- Are current market requirements included in the course syllabus taught at the university?
- Which job opportunities offered by which companies are available at the university?
- What is the performance of students at the university? This rating can be obtained from the companies who have hired the students at the university?
- What is the ratio of student to faculty?
- Is the university inclusive of all students and faculty?

This system is also be used at high school level by including the following points which are important at that level –

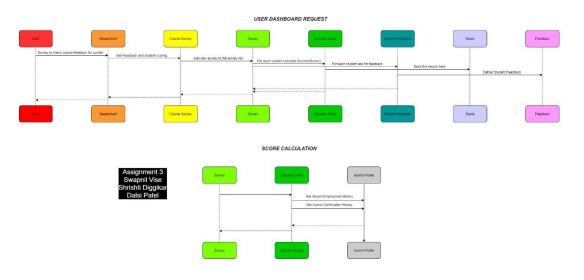
- Since high school students may or may not be attending college, we can include 2 different opportunities systems

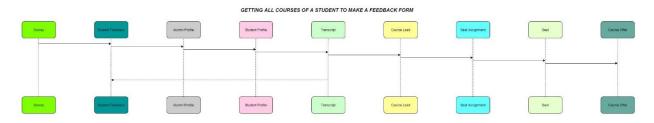
- We can create two different dashboards to meet this requirement
- A separate dashboard can be created for parents to monitor the student's performance, tuition fees, track parent-teacher meets. This way parents can track their child's progress
- Conduct a survey with the parents to get to know the interests of the students better and make changes or add new courses to the existing curriculum.

Object Diagram –

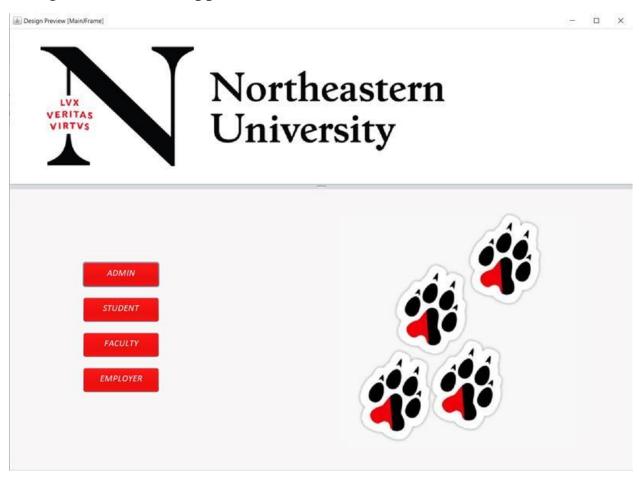


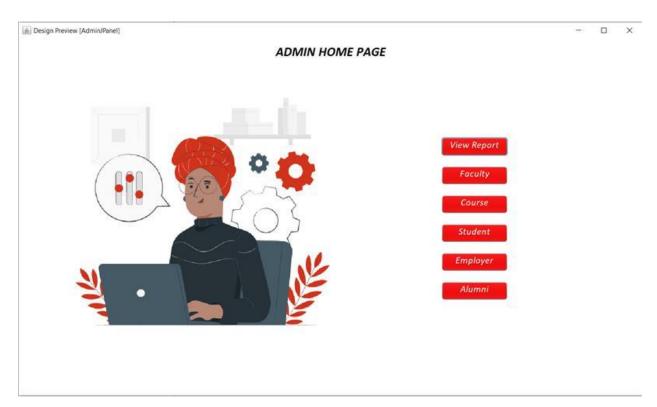
Sequence Diagram –

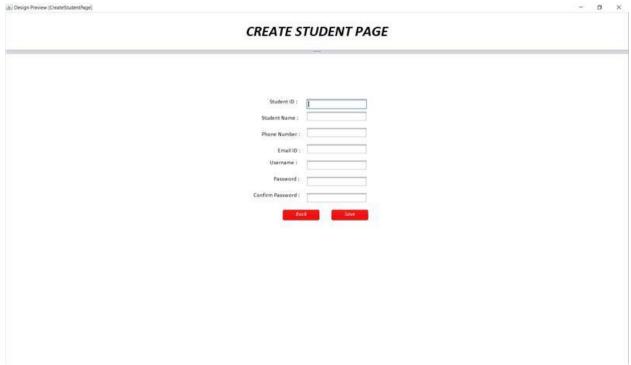


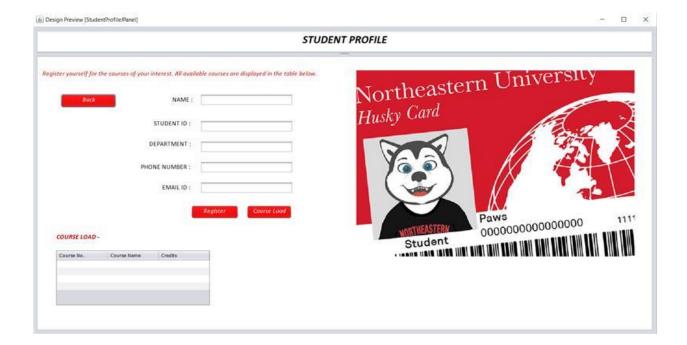


Design Preview for Application –









Performance Visualization –

