**Assignment 3: University Model**

**Objective**: To study different ways to improve the quality of education and hold people accountable for improving the quality of life through education, learning to learn, and feedback.

**Components:**

The different components involved in this university model are:

1. Student
2. Faculty
3. Department

**Student:**

* Student is divided into 2 categories: Current and Alumni.
* Current students are responsible for registering a course, completing a course and giving faculty course feedback.
* Alumni are responsible for giving course relevancy feedback based on their job profile and history.

**Faculty:**

* One faculty can be associated with multiple departments and multiple courses.
* Faculty has access to the grades of all the students registered under him/her.

**Department:**

* Each department has a number of course offerings, faculties and students associated with them.
* Department can manage the students, courses and faculties under them.

**Performance Measurement Techniques:**

1. Current student’s performance(getGPA()) will be measured based on the running GPA which will be accessed by the department(getAllStudents()) .
2. We can maintain a list for all the alumni consisting of his previous and current job profile which will include the company name, designation and his skillsets (List<Job> jobList).
3. The department can access the alumni’s skillsets involved in his job profile and can increment/decrement the course relevancy of the concerned subject which will help them to map the subjects with the industry needs. They could also add/ modify courses based on the alumni’s and faculties feedbacks (manageCourseRating()).
4. The department can also access the alumni’s job positions over period of time based on which they can calculate the overall performance of the alumni till date. We can assign ratings to each positions and sum up the ratings to list the best performing alumni’s who can further guide/mentor the current students(manageStudents()).
5. Current students can provide faculty rating and feedbacks which can be accessed by the department to check the performance of faculties and the improvement areas(manageFacultyRating()).
6. To study the relationship between GPA’s and industrial success, we can divide the students into categories (e.g. 3.8-4, 3.5-3.8,3-3.5, etc) and track the student’s job history and take the average of each category based on their positions. We can also take alumni’s feedbacks based on their interviews, company requirements etc, to study how much GPA affects the industry needs.

**Departmental Rating Criteria:**

1. Job Placements – 35%
2. Student’s Performance – 25%
3. Faculty Performance – 25%
4. Course Relevancy – 15%

**Rating based on performance:**

1. Faculty Performance - We can take the average marks of students under the faculty and compare it with other faculties teaching the same subject. If the performance is in high range, we can apply the teaching methods/techniques of the respective faculty to the other sections where improvement is needed.
2. Student Performance – We need to consider student’s academic as well as extra-curricular performance. We can keep a score for both factors and sum up to define the total student’s performance (eg: 70% for academics and 30% for extra-curricular. Using student’s performance score, we can manage the overall rating both in terms of academics and extra-curricular activities.
3. School/High-School Performance – We can maintain the list of alumni students as we have done in our university model. The information of alumni students play an important role as they reflect the level of teaching. Example: we could monitor how many students have joined tier-1 colleges, tier-2 colleges etc which further affects the school/high-school rating.

**Dashboard JPanels:**

1. **Main JPanel:**

Graphical user interface, application

Description automatically generated

***Note:*** *Admin JPanel is not displayed as it manages the University based on the colleges, which is not in scope of this assignment.*

1. Click on **Department Button** to view DepartmentJPanel

Graphical user interface, text, application

Description automatically generated

* Click on **Manage Students Button** to view Current and Alumni student information:

Table

Description automatically generated

* Click on **Manage Faculty Button** to view faculty information:

Table

Description automatically generated

* Click on **Manage Course Relevancy Button** to view Course ratings and its relevancy from industrial point of view.

Graphical user interface, text, application

Description automatically generated

1. **Click on Faculty Button to view FacultyJPanel:**

Graphical user interface, text, application

Description automatically generated

* Click on **Faculty General Information button** to view general information of faculty:

Graphical user interface, application, Word

Description automatically generated

* Click on **View Details Button** to see Course details and student details under faculty:

A picture containing table

Description automatically generated

1. **Click on Student button to view StudentJPanel:**

Graphical user interface, application

Description automatically generated

* Click on **Current Student Button** to view details of Current Student:

Graphical user interface, application

Description automatically generated

* Click on **Alumni Student Button** to view Alumni student information:

Graphical user interface, text

Description automatically generated

* Click on **View Job Details Button** to view the Current job and job History:

Graphical user interface

Description automatically generated with medium confidence

Object Diagram of University Model

