Ranking System

- **Introduction**

In order to allow universities to better measure the quality of the education they provide to students, a ranking system has been raised. This system counts the life of graduates over the next five years, including their jobs and promotions, and uses these to rank the academic units of universities. The system enables universities to assess the quality of education that they provide to their students and the performance of their academic units.
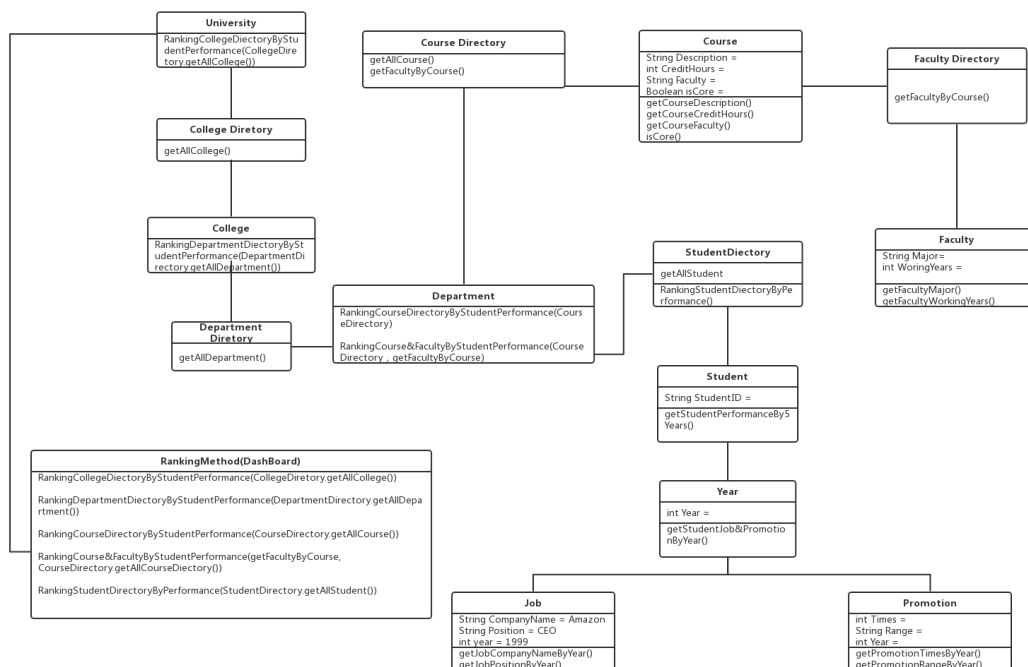
- **Object Model**

Figure　1　Object Model of the Ranking System

1. University:
   Responsible for colleges and college ranking.

2. College:
   Responsible for departments and department ranking.

3. Department:
   Responsible for courses, students, rankings of course, and ranking of courses and faculties. Also responsible for maintain course directory and schedule courses and faculties. They receive students' reports and add them to students' profiles according student ID, preparing for ranking.

4. Course:

Every course has a different teacher, number of credit and course description.

5. Faculty:

Faculties have their major and working years.

6. Student:

Students have student ID. They need to report their life at least once a year. Report should include jobs and promotions.

7. Job:

Job part should include companies, positions and working years.

Better job means higher ranking. Famous companies, like Google, will definitely means good jobs. Because companies of this size, employees are strictly screened and only the out-standings can get in. High quality of education is one of the most important factors that can help students get jobs.

Also, high salary can also improve ranking. Salary represents the contribution a student makes to the company. Only when the work is done well and the contribution and value to the company is high will the students receive higher salary. In addition to what students learned after entering the company, the education provided by the universities is also important here.

Finally, if positions and students' major are more relevant, this will lead to higher ranking. Most of the education students receive at universities is highly relevant to their major. Therefore, getting a position with a high relevance of major shows that the education provided by the school plays a leading role.

8. Promotion:

Promotion part should include how many times they were promoted, and time and the extent of promotions.

Promotions indicate that students' ability of learning and working exceeds the requirements of current positions. The more promotion times, the stronger the student's ability. And the extent of promotions can also indicate the strength of students' ability. System take this into concern because students' ability can be well cultivated and improved in universities.

● **Sequence Diagram**

Ranking system are updated once a year according reports that students sent in this year. Better jobs and promotions will lead to a higher ranking of the department and college. Here are sequence diagrams of view different ranking.
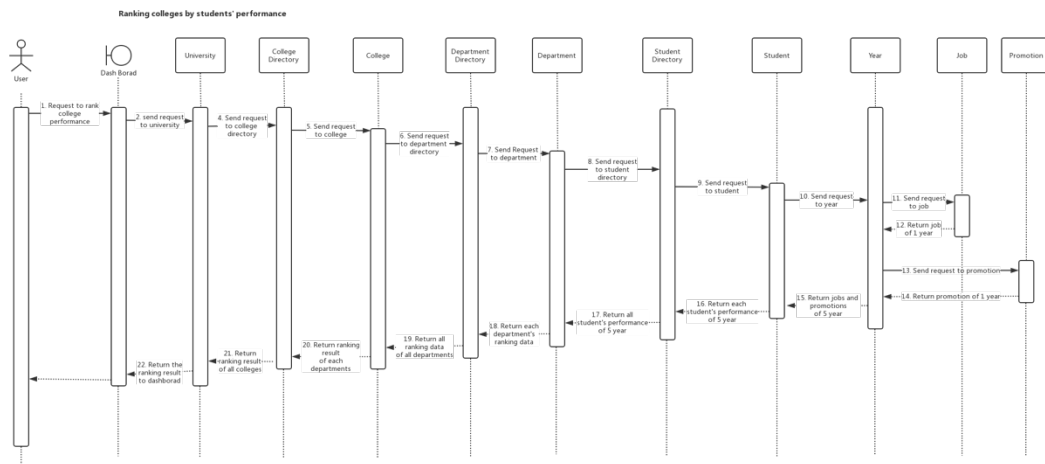
Figure 2 Sequence Diagram of College Ranking

First is requesting the college ranking. It starts when user requests. Requests will be passed from the top to the bottom. Bottom is always students' jobs and promotions, since the ranking system depend on students' performance. Top is different, depend on which ranking users are requiring. In this diagram, Top is universities, since college ranking is viewed by universities. When request reach bottom, system will first response with students' performance of every year, and then integrate them to get the ranking of departments. Ranking of high level is depend on ranking of low level, so it starts from department ranking, and ranks the college based on it. And finally return college ranking to users.
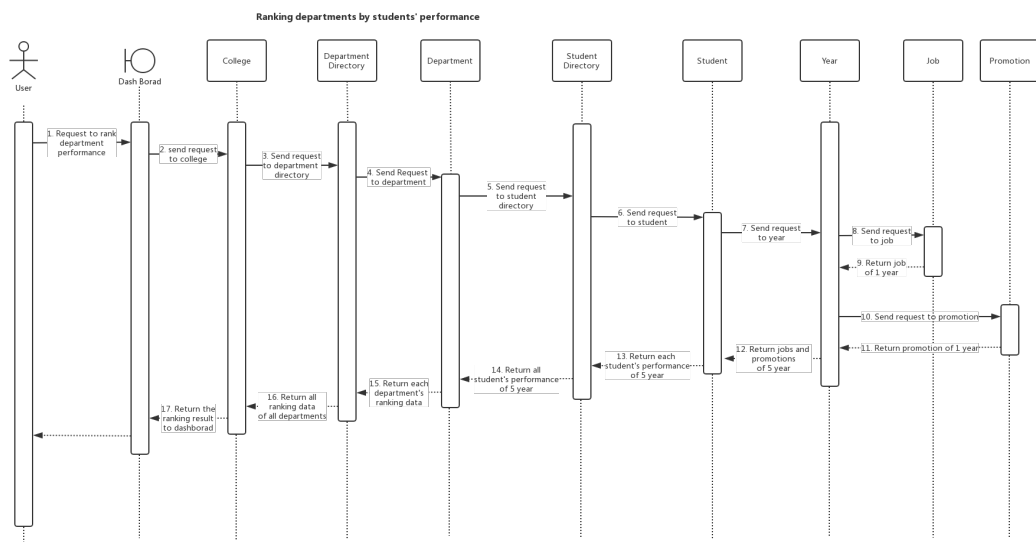

Figure 3 Sequence Diagram of Department Ranking

Second is requesting the department ranking. This is almost the same with requesting the college ranking. The only difference is that this stop at department level and return the ranking to users.
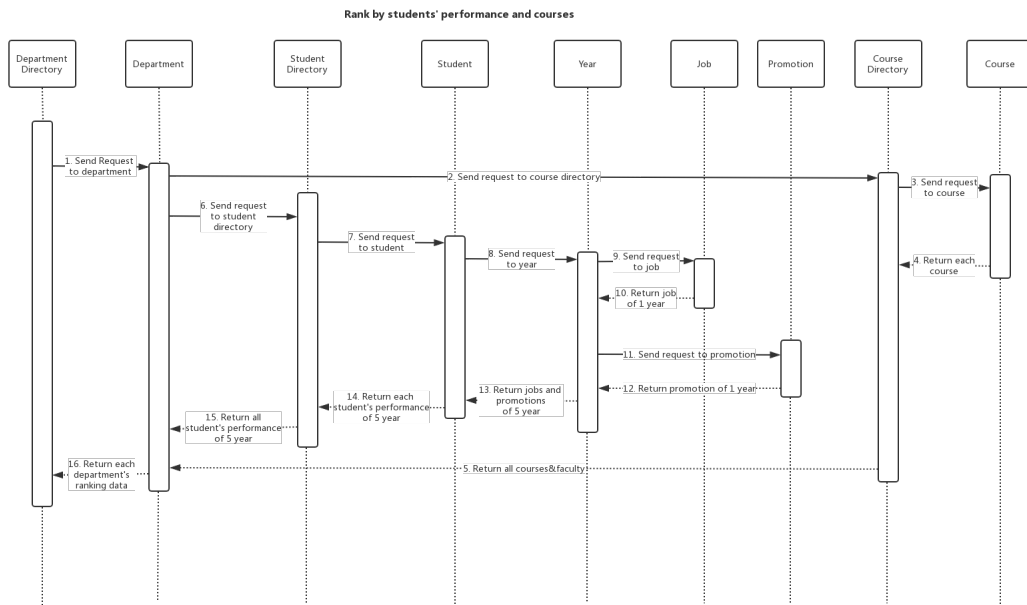
Figure 4 Sequence Diagram of Ranking of courses by Students' Performance

Third is a different ranking system. It ranks colleges and departments not only by students' performance but also course information. Since students and courses are both responsible by departments, request will be sent both to courses and students by department level. Then the data of students' performance and courses will return to department level and rank departments and courses.
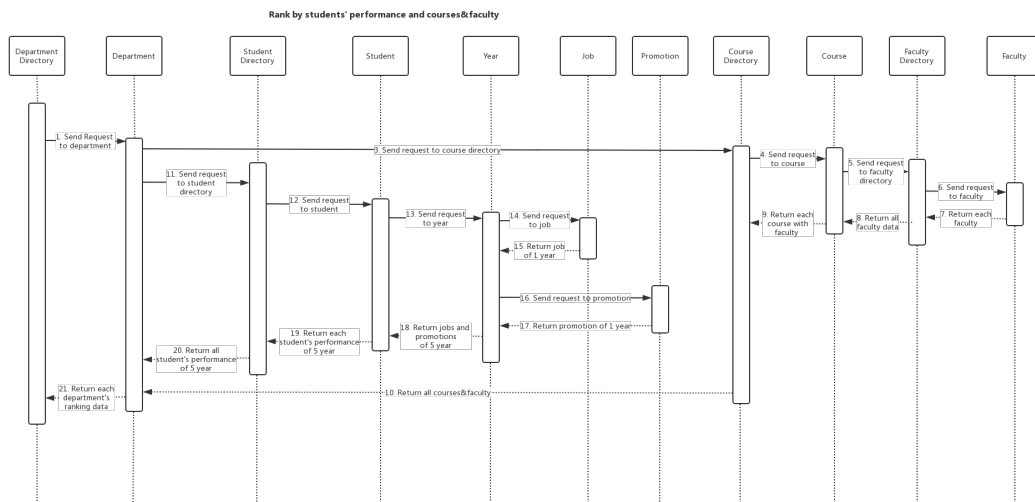

Figure 5 Sequence Diagram of Ranking of courses and faculties by Students' Performance

Finally, rank by courses and faculties. In this rank, course information which is used includes teacher information. That is the same course but taught by different teachers. When department level sends the request to student and course, course will continue to send the request to faculty directory and get the information of faculties. Then course returns information of both courses and faculties. Department level will

combine students' performance and information of courses and faculties, and decide the ranking of departments and colleges.

- **Summary**

According this system, universities can view ranking in different level. This will help them to find where the problem is and solve it directly. The system provides a way for universities to improve their quality of education, develop plan of future education and enhance operation system.