UNIVERSITY DESIGN REPORT

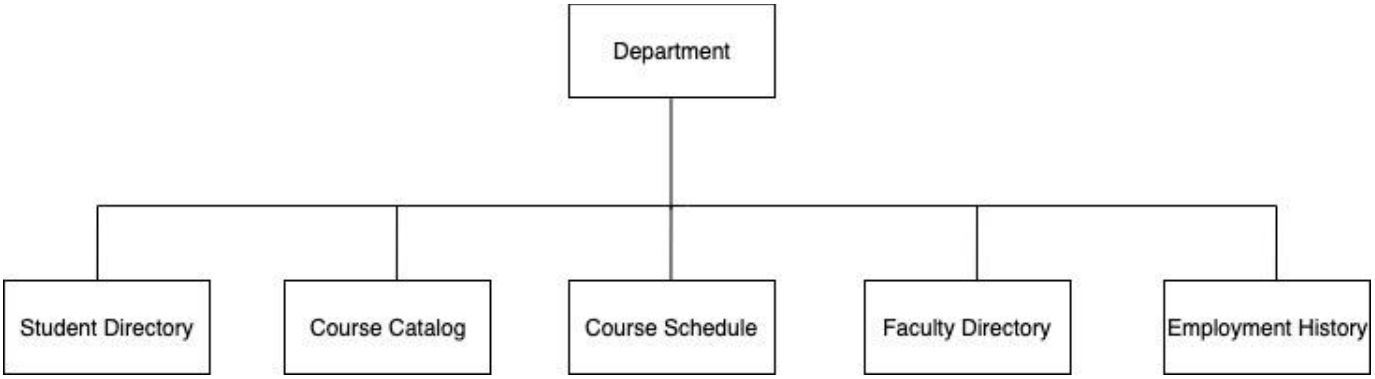
1. PROBLEM STATEMENT

Build a performance measurement system for universities to measure the quality of education they provide and its impact on student's professional growth.

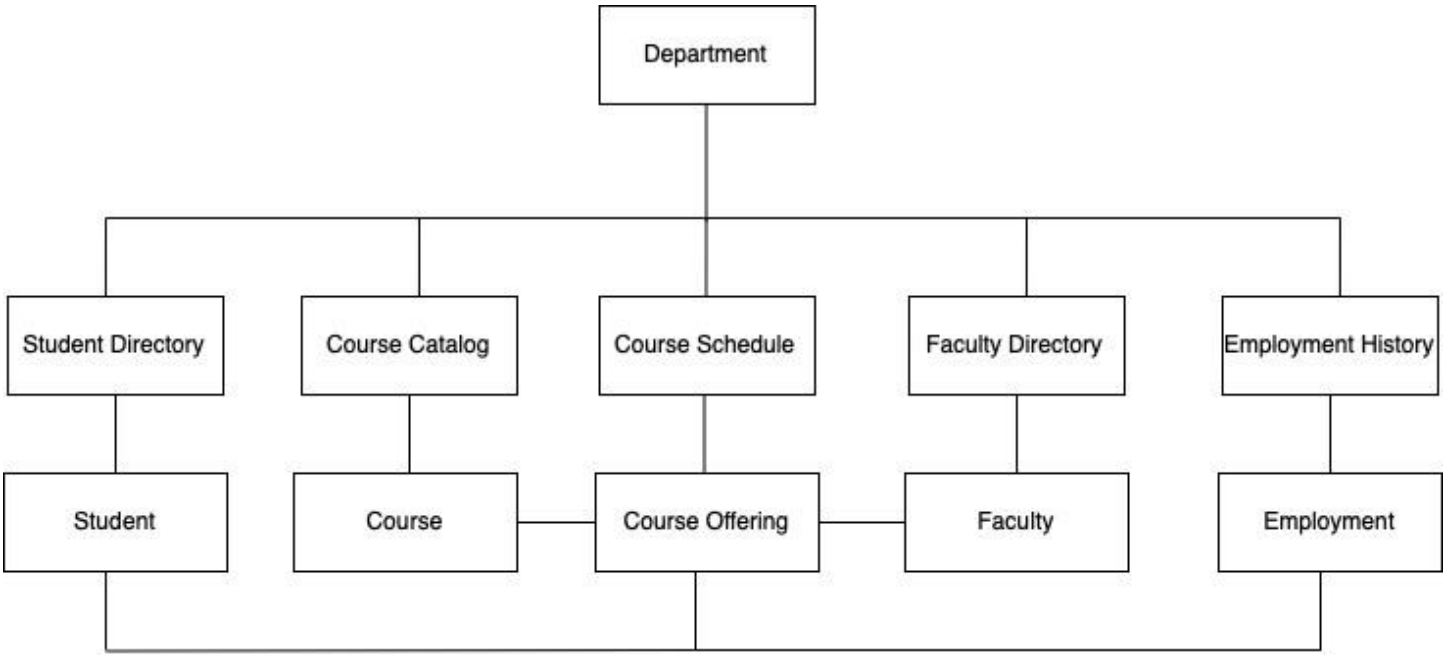
The factors taken into consideration are:

1. How well the graduates are performing in their respective jobs?
2. The impact of student's professional growth on the ranking of a course and a professor.
3. What are the courses contributing towards the growth of graduates?

2. DEPARTMENT STRUCTURE



2.1. DEPARTMENT OBJECT MODEL



Department will be concerned about ranking different courses it offers and the faculty teaching those courses. The ranking mechanism for a course will be as follows:

Ranking Course-Offering: rankCourseOffering()

- Course Schedule will have all the course offerings and Employment History will have all the employments (Full-Time, Co-op and number of promotions).
- Course Offering will traverse through all the employment objects and it will calculate points based on number of coops, number of full time and number of promotions.
- This sum of points calculated will be specific to a course-offering.

Ranking Course: rankCourse()

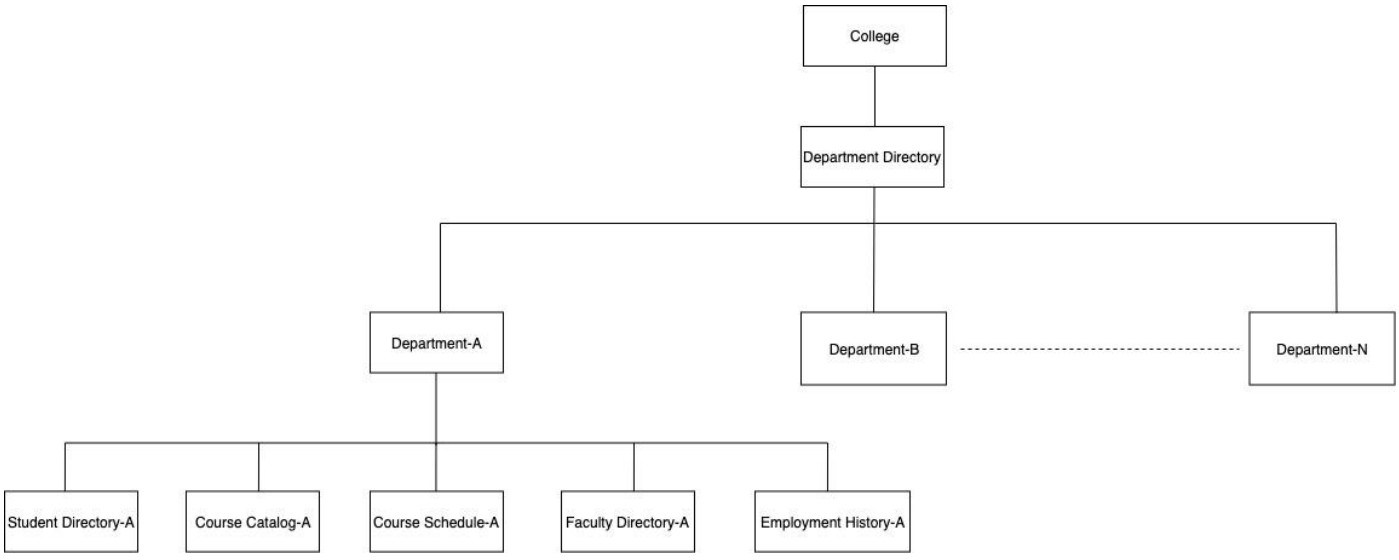
- Course-offerings is related to a particular course.
- Course will add up all the points associated with its course-offering instances.
- This sum of points calculated will be specific to a course.

Therefore, all the courses will have different points and based on these points the department can rank its courses.

Faculty Ranking: rankFaculty()

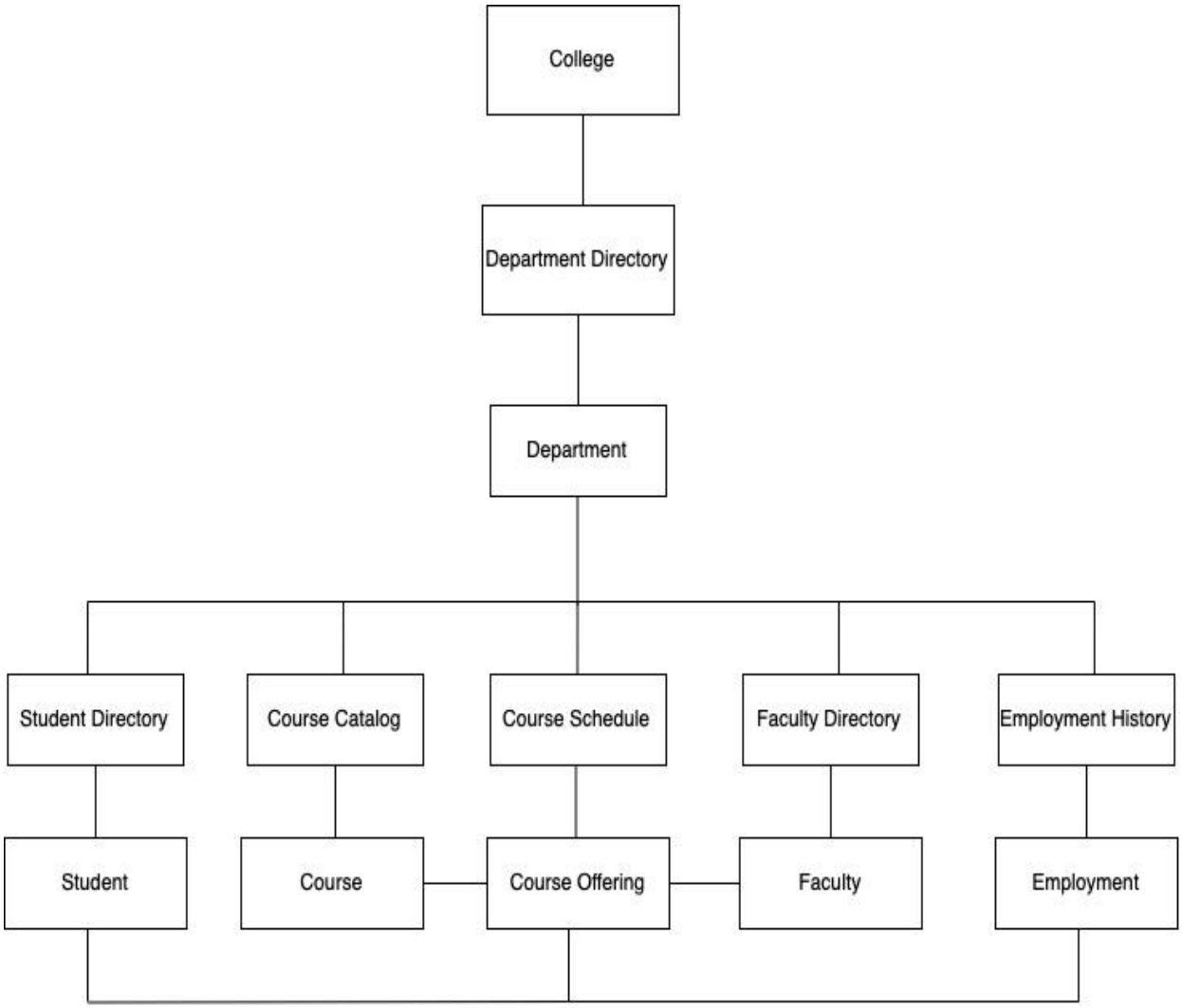
- Each faculty is associated with a particular course offering.
- The number of points calculated, based on student employments (co-op, full-time and promotions), will be used to rank the faculty teaching the course offering.

3. COLLEGE STRUCTURE



- Each college will have its own set of departments under it.
- College will be concerned about the performance of its departments.
- The college will rank each department based on the rank of the courses.

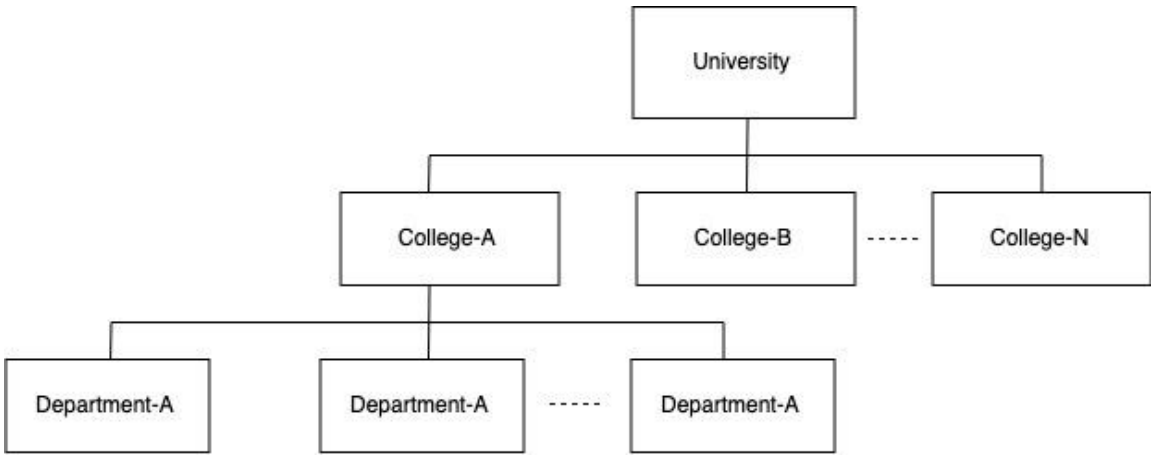
3.1.COLLEGE OBJECT MODEL



rankDepartment()

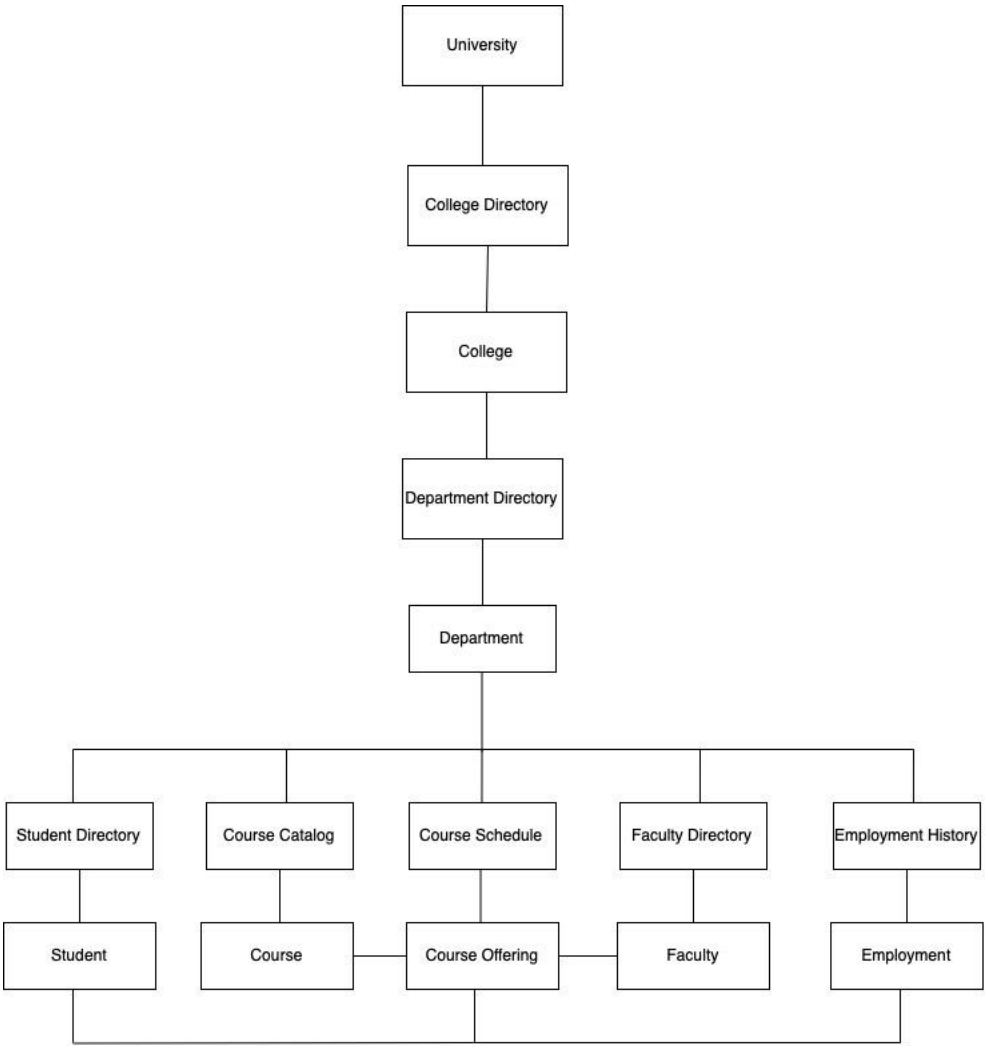
- This method will go through each department object.
- In each iteration the total points for a department is calculated based on the points earned by its respective courses.
- Later, college ranks each department based on the points earned by it, in comparison to the rest.

4. UNIVERSITY STRUCTURE



4.1. UNIVERSITY OBJECT MODEL

UNIVERSITY DESIGN REPORT

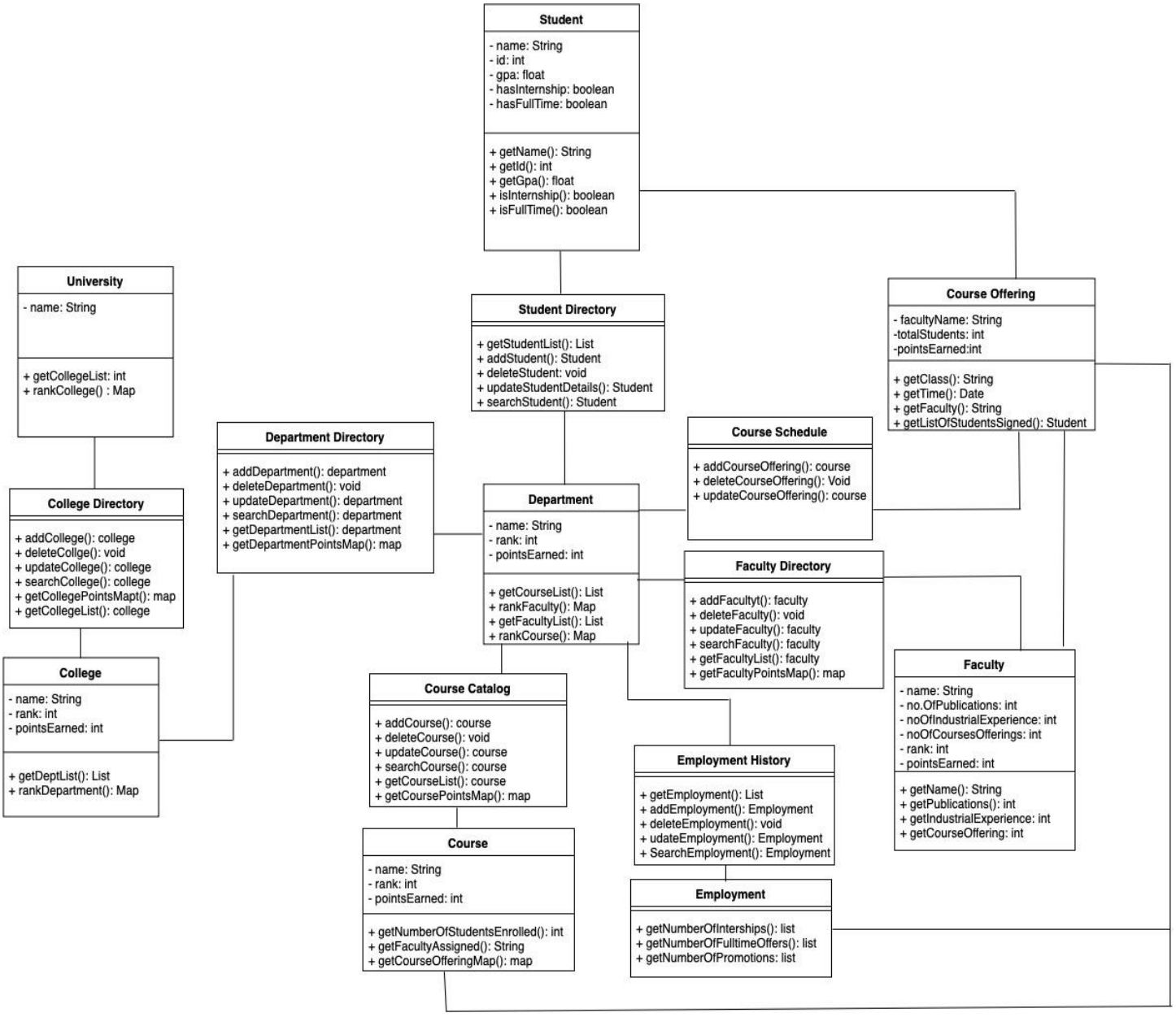


rankCollege():

- University will iterate over all college objects to rank each of them.
- In each iteration the total points for a college is calculated based on the points earned by its respective colleges.
- Later, University ranks each college based on the points earned by it, in comparison to the rest.

5. CLASS DIAGRAM

The following diagram provides the classes and their relationship to each other. Each class has its own set of methods and attributes that used to provide a solution.



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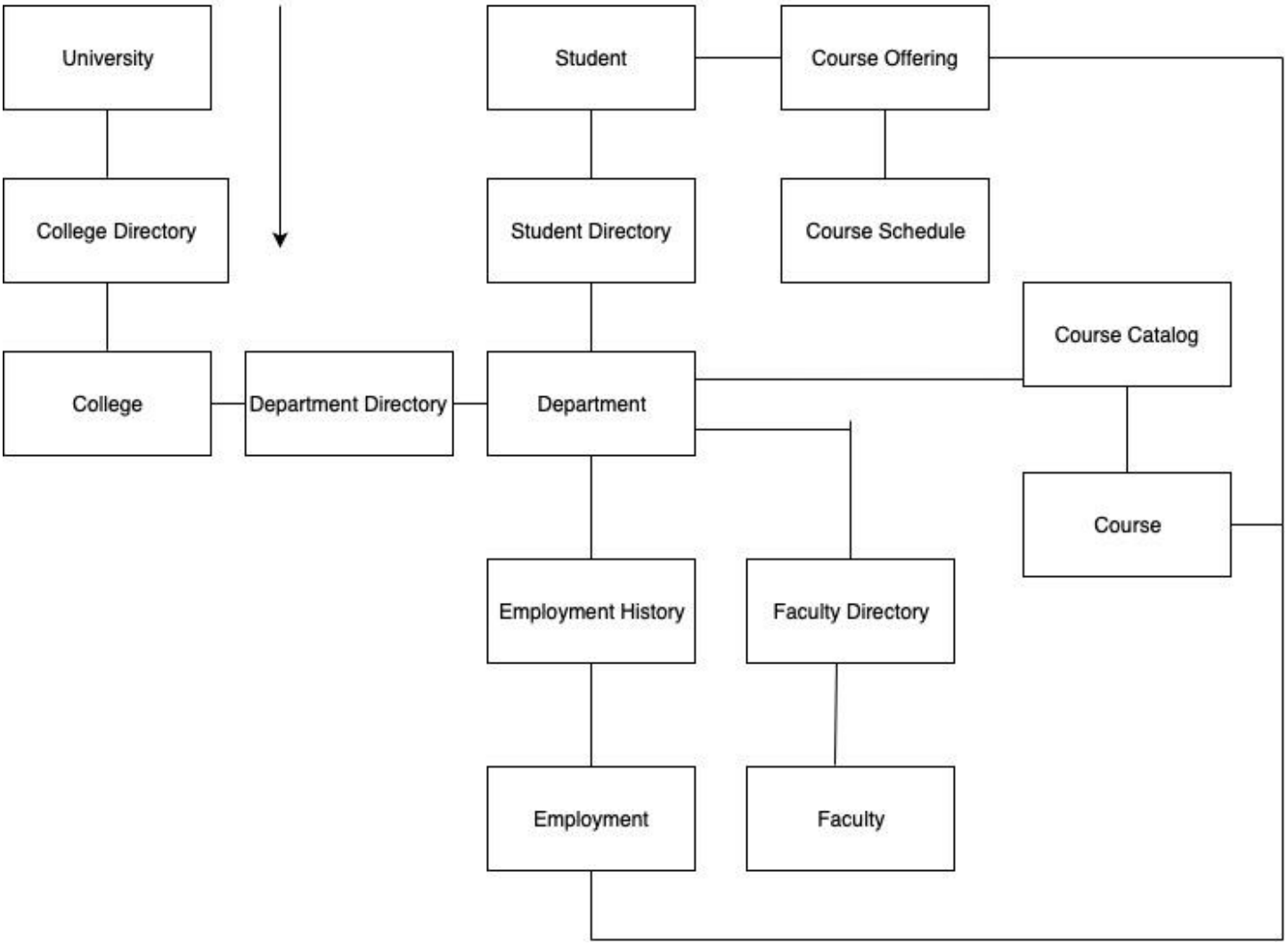
Sequence Diagram



Uses Cases

1. **University Management** – The designed system can be used by the University Management team to assess the performance of their education system to the granular level.

2. **Department Management** – The designed system can be used by the department heads to find out the performance of their departments and use the data to bring about changes through feedback and necessary changes in faculty and courses.

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DashBoard