1. Conceptual Model

The main modeling elements used in the conceptual model are:

- Classes
- Associations

Contents:

1.1 Classes

1.1.1 Define and Analyze your project

In our project, we have the following scenarios:

- University Management System
- Students who take admissions
- Faculty members who apply for jobs
- Students & Faculty members who are given access to Quiz Management System

The main focus and aim of our project is to:

1) Admission Management System

Make a website of university.

User uses that website, and can perform two functions:

- Take Admissions
- Apply for Jobs

This means user is of two types:

- Student
- Faculty member

This admission into university of a user can be done through admission management system.

2) Quiz Management System

Now the user that is admitted to university is either a faculty member or a teacher.

The next step is to give the user access to Quiz Management System.

Both type of user will be given access to Quiz Management System.

The difference is in the work of both types of user:

Faculty Member:

- Publishes Quiz
- Checks Quiz
- Submits Marks

Student:

- Solves Quiz → Submits Quiz

1.1.2 Derive necessary classes of your project from discussion

From the above discussion, we are here now to discuss and identify the necessary classes in our project.

Class 1:

University

University is our first class with following attributes and functions:

Attributes:

- Name
- Location
- YearOfFound
- ListOfStudents
- ListOFFacultyMembers

Functions:

- addStudent()
- addFaculty()
- removeStudent()
- removeFaculty()
- getStudents()
- getFaculty()

Class 2:

Student

Student is our second class with following attributes and functions:

Attributes:

- Name
- Address
- Enrollment
- Department
- Semester

Functions:

- enroll()
- takeAdmission()
- performQuiz()
- getCourses()

Class 3:

Faculty Member

Faculty is our third class with following attributes and functions:

Attributes:

- Name
- Address
- ID
- Department

Functions:

- getJob()
- postQuiz()
- submitMarks()

Class 4:

Admission Management System:

Attributes:

- Admission Form
- Admission Fee
- Documents

Functions:

- documentSubmission()
- FormFilling()
- FormSubmission()
- FeeSubmission()

Class 5:

Quiz Management System

Attributes:

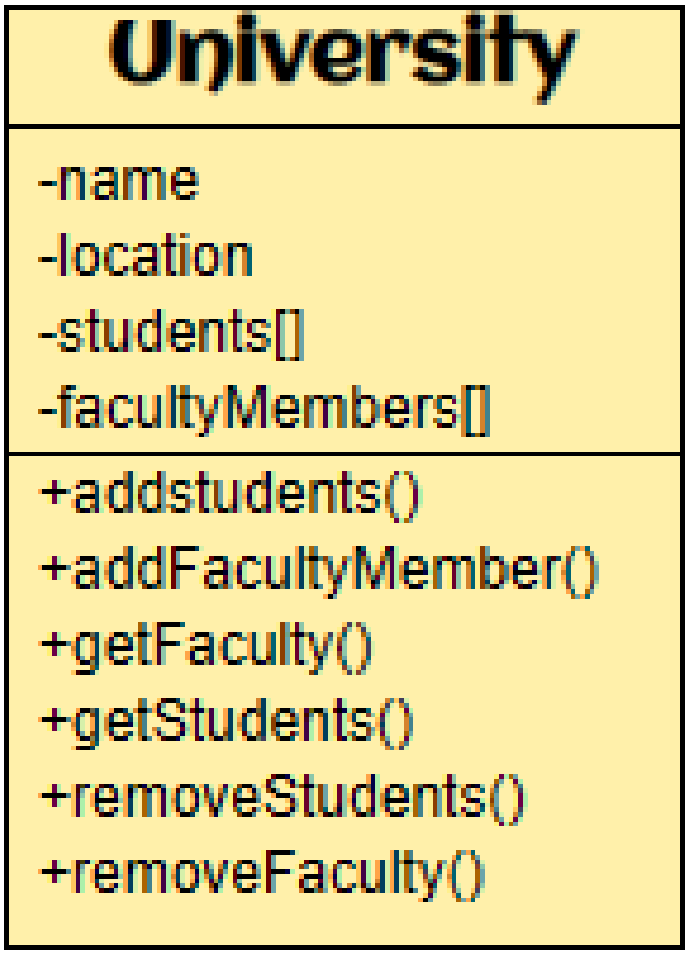
- Subject
- Number of MCQs

Functions:

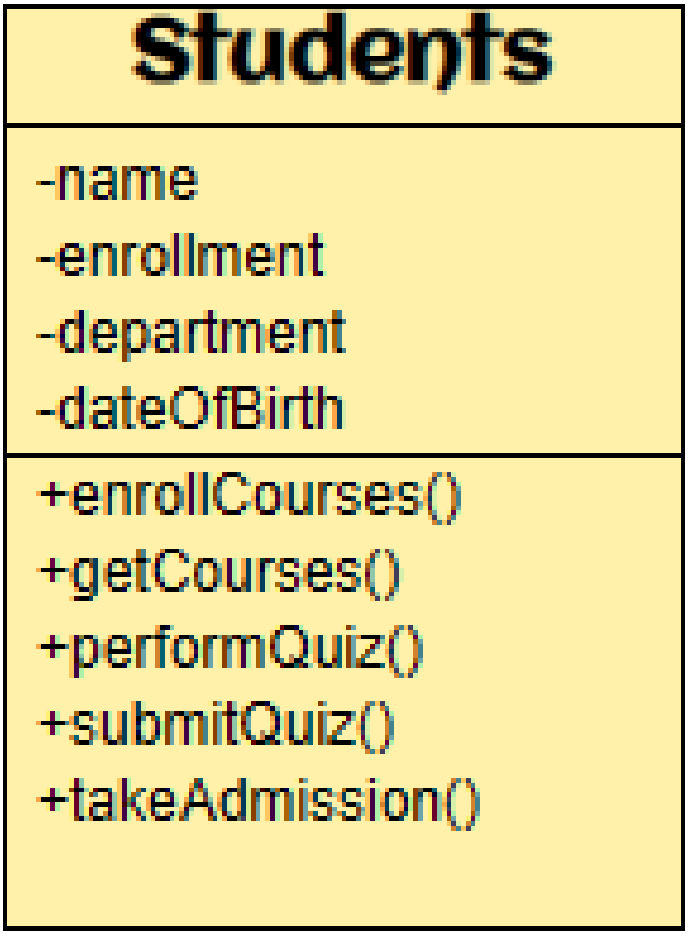
- downloadQuiz()
- quizSubmission()
- performQuiz()
- postQuiz()

1.1.3 Draw classes using class diagram

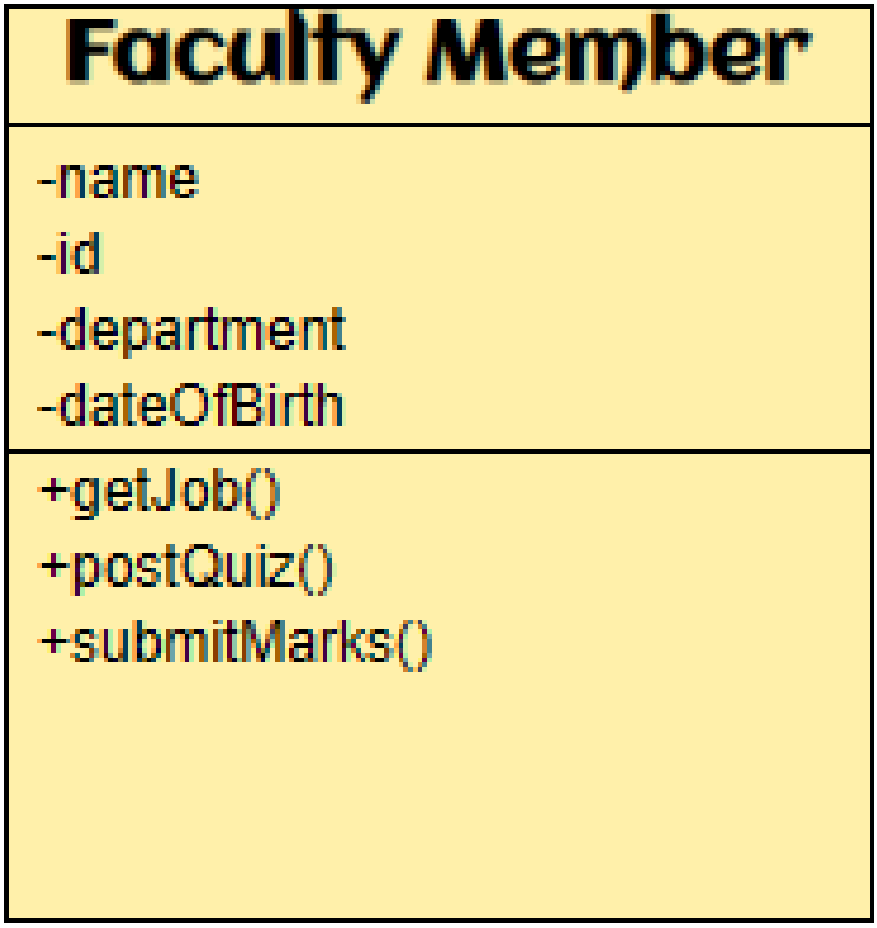
Class 1:



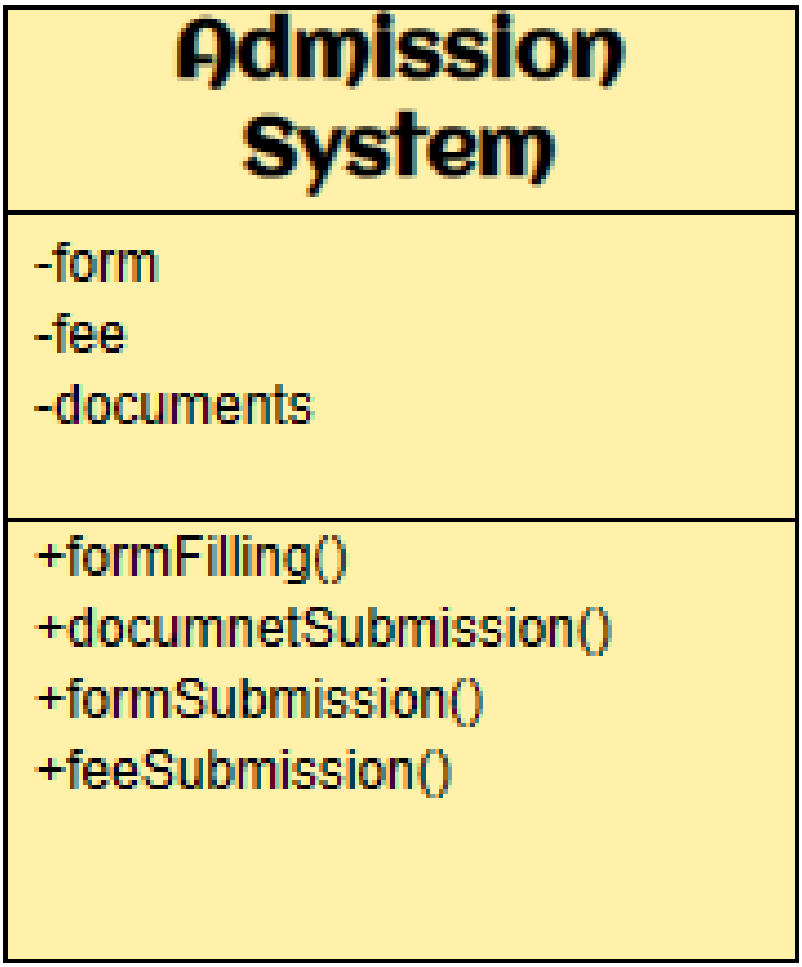
Class 2:


Students
-name
-enrollment
-department
-dateOfBirth
+enrollCourses()
+getCourses()
+performQuiz()
+submitQuiz()
+takeAdmission()

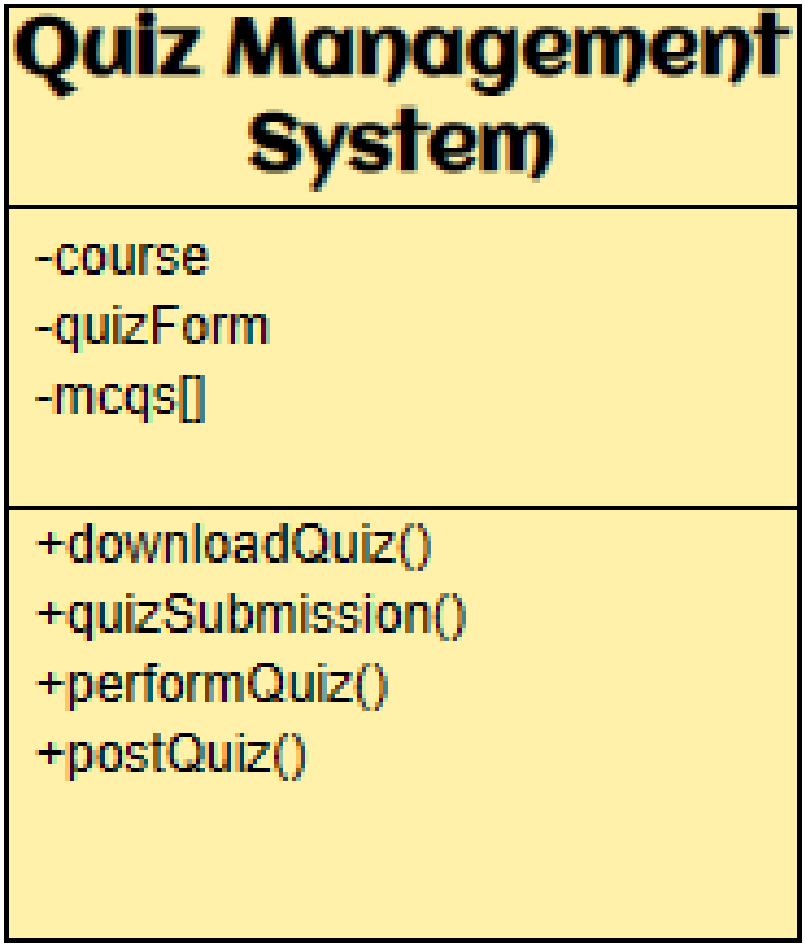
Class 3:


Faculty Member
-name
-id
-department
-dateOfBirth
+getJob()
+postQuiz()
+submitMarks()

Class 4:

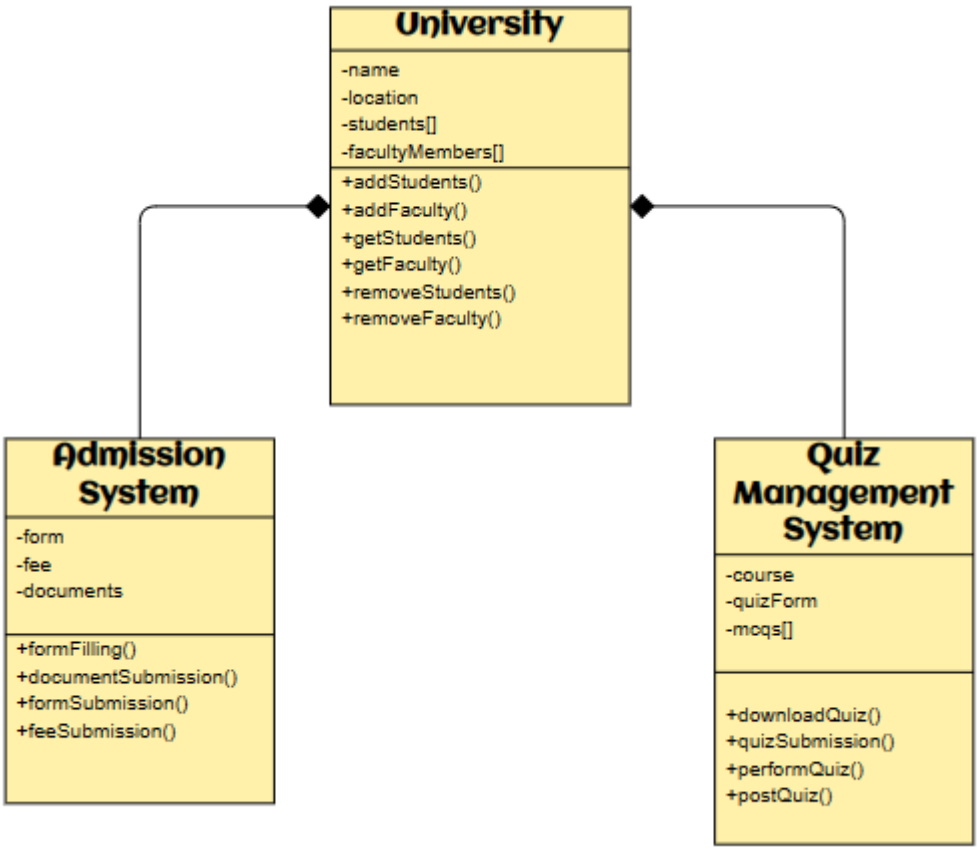

Admission System
-form
-fee
-documents
+formFilling()
+documnetSubmission()
+formSubmission()
+feeSubmission()

Class 5:


Quiz Management System
-course
-quizForm
-mcqs[]
+downloadQuiz()
+quizSubmission()
+performQuiz()
+postQuiz()

1.2 Associations:

1.2.1 Define the relationship between various classes



The figure describes the relationship between classes:

- University
- AdmissionSystem
- QuizManagementSystem

Figure describes the relation of University class with the Admission class and Quiz Management class, and it states that **QuizManagementSystem** and **AdmissionSystem** classes cannot exist without **University** class, as they have a 'owns a' relationship with main class(composition).

Now let's see the relation of Students and Faculty class with University class.

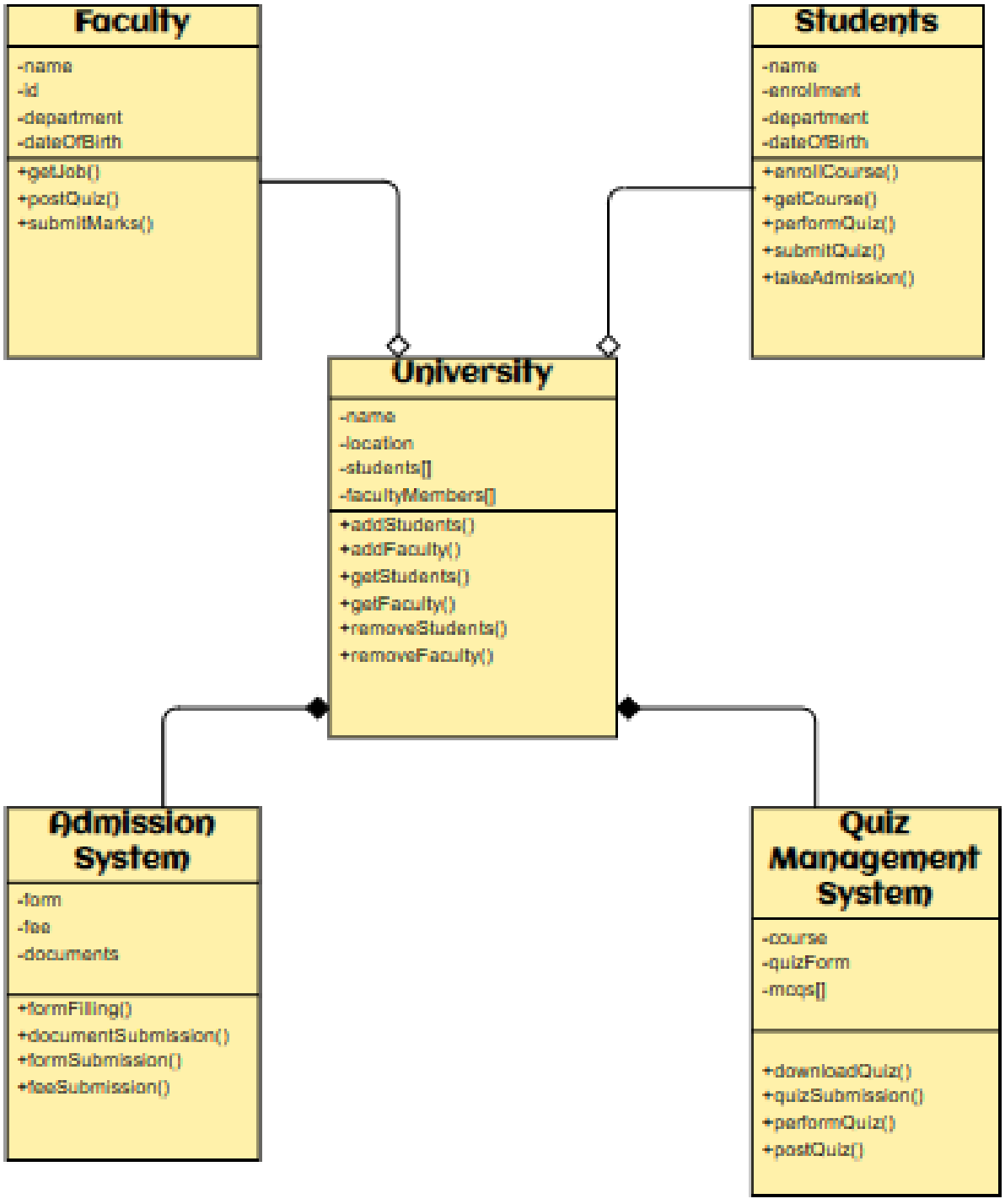


Figure illustrates that Students and faculty classes have a 'has a' relationship with university class.

1.2.2 Define the multiplicity between various classes:

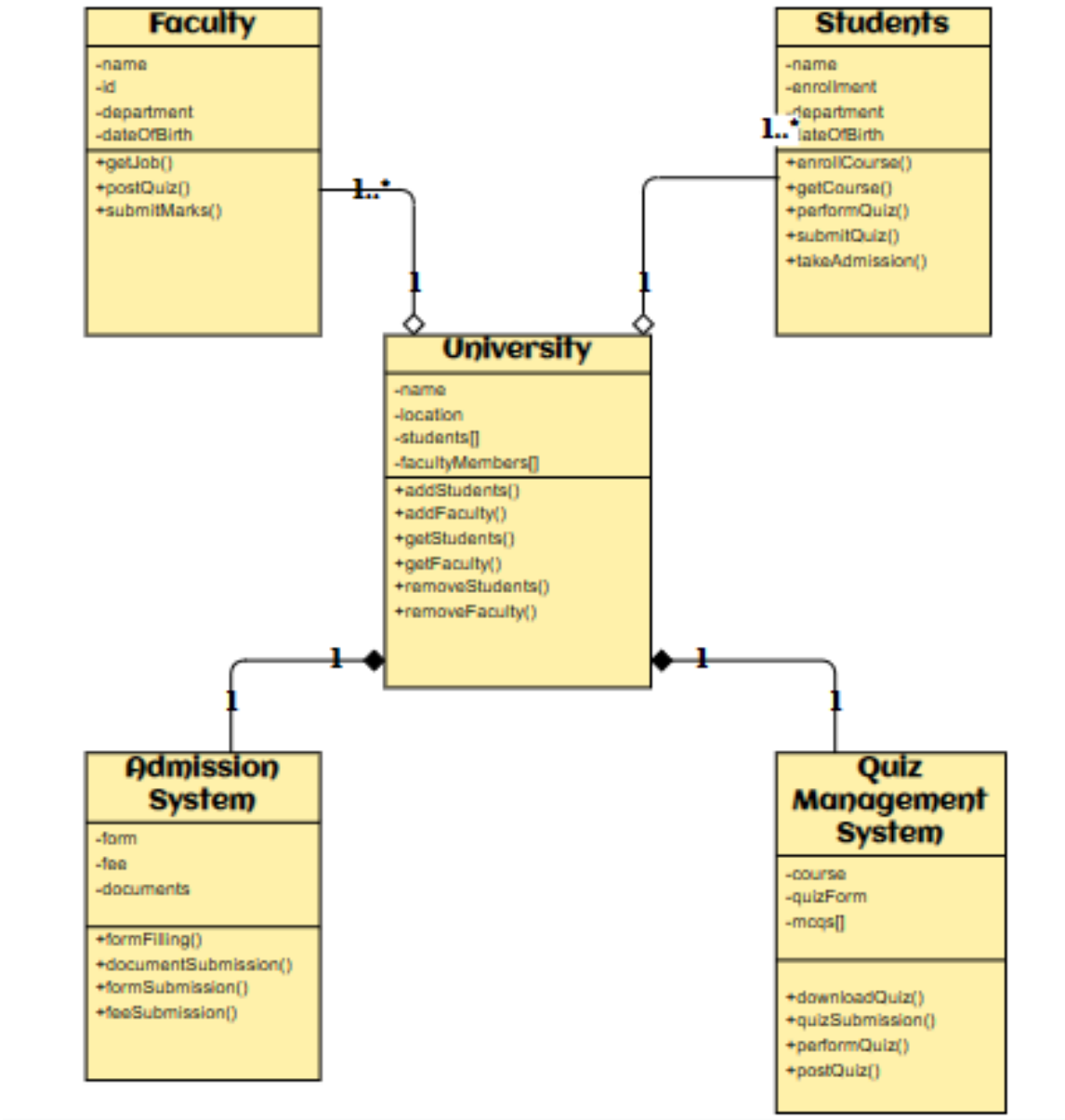
Now let's define the multiplicity.

A university has at least one Admission System

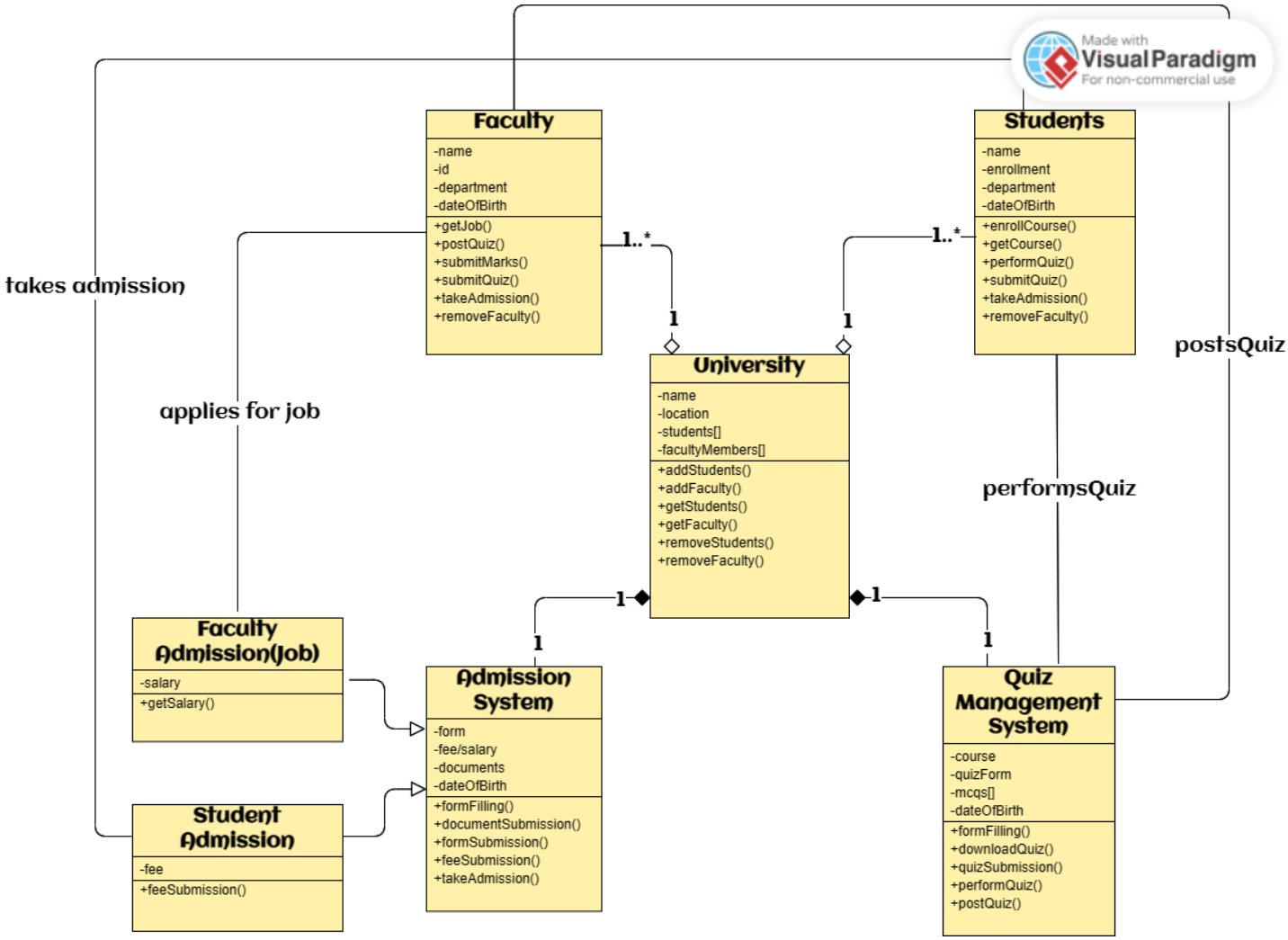
A university has at least one Quiz Management System

A university can have multiple Students or has at least one Student

A university can have multiple Faculty members or has at least one Faculty member



Let us now define the relation of Student and admission management system and quiz management system and define the relation of Faculty member and admission management system and quiz management system.



Final Conceptual Model:

After some more refinement, we have derive final conceptual model.