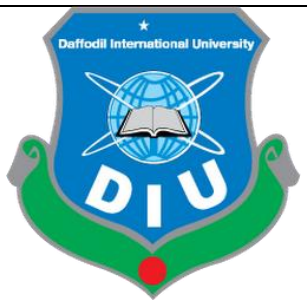


COURSE PROJECT

# Employment Application Review System(EARS)


| | |
|---|---|
| NAME | Faisal Ahmed Tusar |
| ID | 151-35-867 |
| Supervisor Name | Md. Alamgir Kabir |
| Department | Software Engineering |
| Faculty of Science and Information Technology | |


6th December, 2017

# Table of Contents

# Chapter 1

# **Introduction**

# 1. Introduction

The name of the system is Employment Application Review System(EARS). Where applicants will apply for the job and faculty members will list and review the applications of applicants, by doing that they can find the best applicant. This system can reduce a lot of workload from faculties.

## 1.1 About the System

This system is for International School of Software so that school faculty members can find applicant for a given job opening. This system will have the following features:

- Log In
- Add New Accounts
- Faculty Search
- Add New Faculty
- List All the applications
- Review Applications
- Account's Setting

## 1.2 Purpose

The purpose of the system is reducing the overhead of the process and lightens the workload from the faculty members. Because when they have to choose any applicant for the job, it becomes so difficult and they feel like extra pressure on them. But by the help of this system they can reduce their pressure a lot and it will become easier to find the perfect candidate. Because all the faculty members can list all the users and review their applications after applicants submitted their applications for the job. They can do this any time they want by use of this system but first obviously they have to create an account as a faculty member. They can also search for other faculty members and add them.

## 1.3 Scope

Project scope is the part of project planning that involves determining and documenting a list of specific project goals, deliverables, features, functions, tasks, deadlines, and ultimately costs. In other words, it is what needs to be achieved and the work that must be done to deliver a project.

Scopes of EARS are given below:

- All the faculty members can check the applicant's applications.
- All faculty members can review the applications.
- Managing

## 1.4 Vision

The vision of this system is to choose an applicant with every faculties review so that they can find the perfect applicant for the job and reducing the workload.

## 1.5 Why this system is necessary?

This system is needed to choose a perfect applicant for the job. Another positive side is all the faculty members can participate on choosing that perfect applicant by reviewing their applications. It can reduce the pressure from few specific persons to choose the perfect applicant.

## 1.6 Proposed Solution

If EARS is not used, then it will become very difficult to find the best applicant for the job. Because then all applications have to be manually reviewed by faculty and it's also not possible for every faculty to review all the applications. That's why a solution has been given to develop this system for overcome this difficulties.

For EARS, proposed solutions are given below:

- All faculty members can see the applications and review those applications as well.
- Faculty will be able to add other faculty.
- Faculty will be able to manage accounts.
- Faculty will be able to list all the applications.

# Chapter 2

# System Analysis

# 2. System Analysis

## 2.1 Actor Goal List

| **Actor** | **Goal** |
|---|---|
| Faculty | Manage Applications<br>Manage Faculty<br>Manage Accounts |
| Applicant | Manage Accounts<br>Submit Job Application |

**Table 2.1: Actor Goal List**

## 2.2 Use Case Model

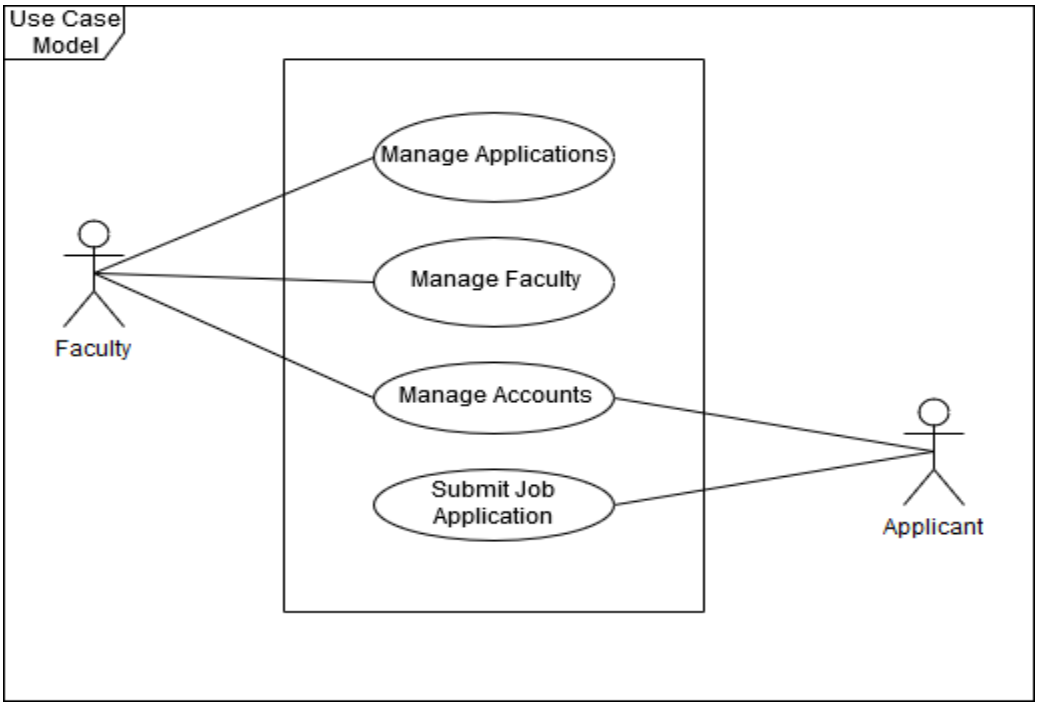


**Figure 2.1 Use Case Model for EARS**

## 2.3 Use Case Description (Brief)

### 2.3.1 Manage Applications

All applications will be managed by faculty and they can list and review those as well.

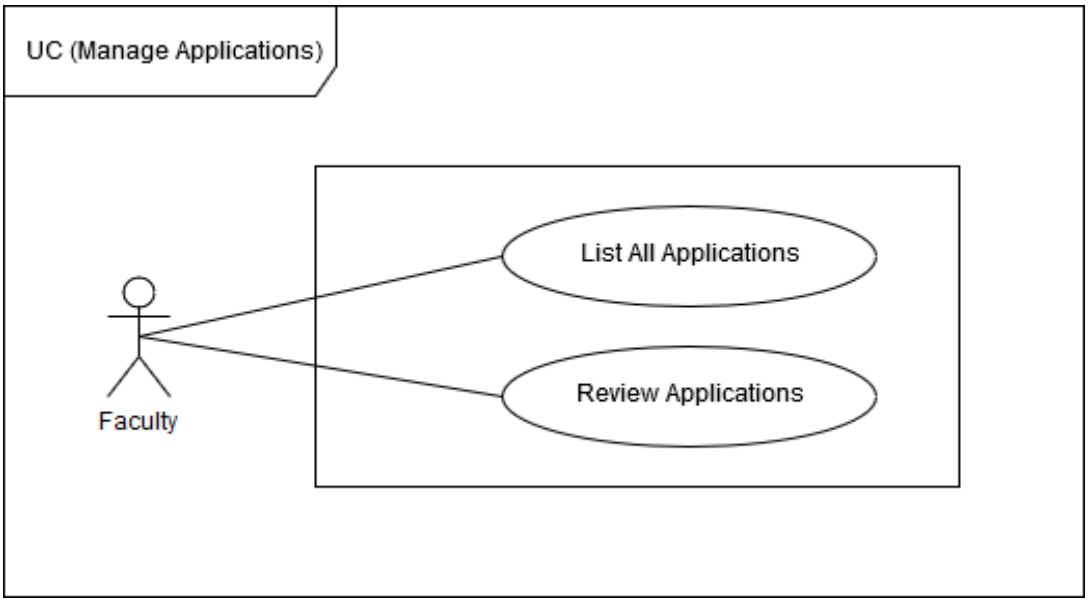


**Figure 2.2 Use Case Diagram to Manage Application**

### 2.3.2 Manage Faculty

Faculty can search for another faculty and add them.

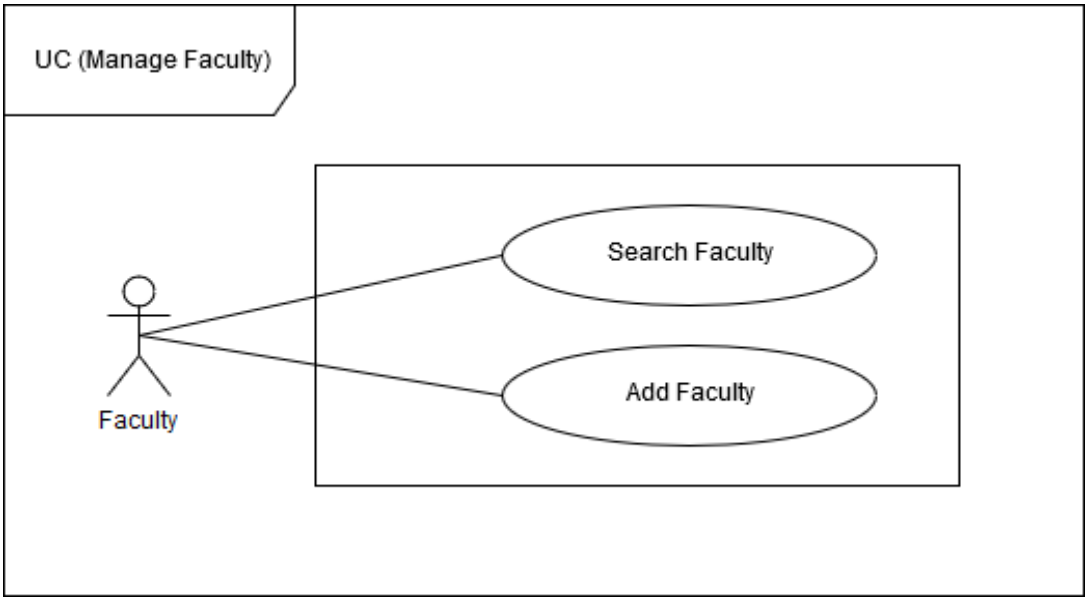


**Figure 2.3 Use Case Diagram to Manage Faculty**

### 2.3.3 Manage Accounts

Faculty and applicant both have to log in to use the system and they can change their account setting anytime.

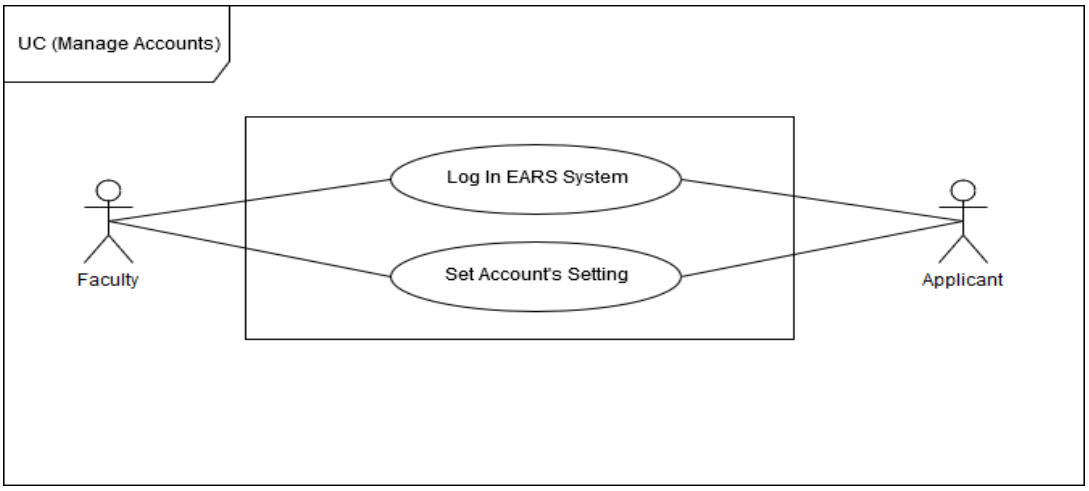


**Figure 2.4 Use Case Diagram to Manage Accounts**

### 2.3.4 Submit Job Application

Applicant can view the job details, then he/she finds it suitable for his/her they can apply for the job.

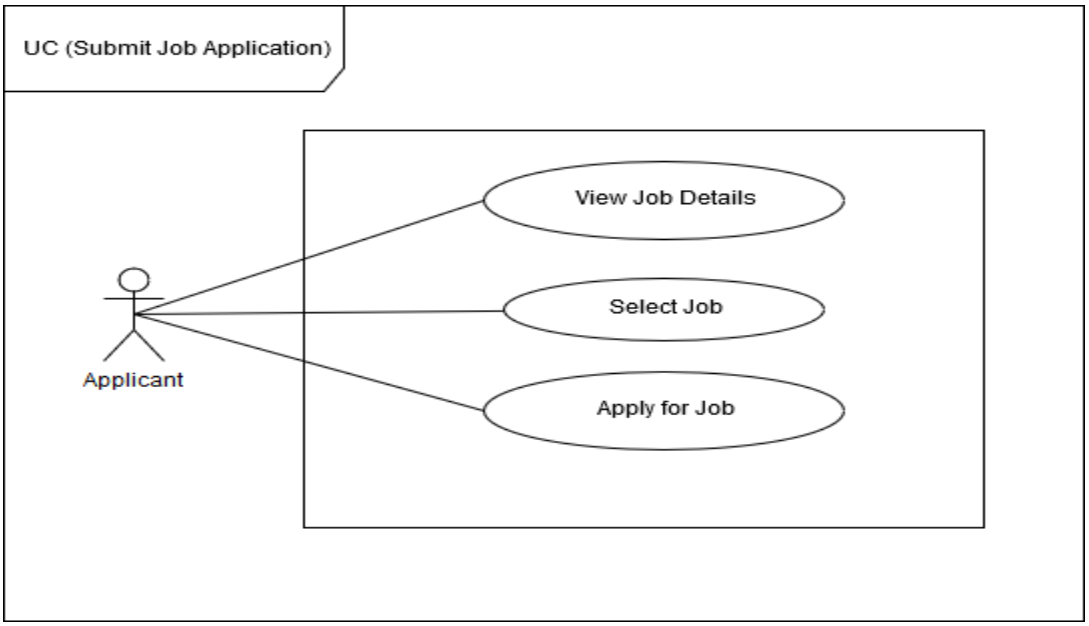


**Figure 2.5 Use Case Diagram to Submit Job Application**

## 2.4 Use Case Description (Detailed)

Here a detail is given for every single use cases. Because of these use cases everyone can understand for what purpose these use cases have been used and for which actor these use cases have been used.

### 2.4.1 Manage Application

| | | |
|---|---|---|
| **Use Case Name:** | Manage Applications | |
| **Scenario:** | List and review applications | |
| **Brief Description:** | When applicants will submit their application for a job, faculty will list all the applications and all the faculties can review their application like view profile, post comments on applicants, change applicants' status, perform a faculty review, assign faculty review. | |
| **Actors:** | Faculty | |
| **Stakeholders:** | Human Resource(HR) Department: To accept the applications. | |
| **Preconditions:** | Applicants must submit applications. | |
| **Postconditions:** | All the applications must be related to the job. | |
| **Flow of Events:** | **Actor** | **System** |
| | 1. HR accepts the application.<br>2. Faculty can list all applications.<br>3. Faculty can view applicant's profile.<br>4. Faculty can review applicant's application.<br>5. Faculty can post comments on applicants.<br>6. Faculty can change applicant's status.<br>7. Faculty can assign faculty review. | 2.1 Create a new order.<br><br><br><br>5.1 Add a new comment.<br><br>7.1 Add a new review. |
| **Exception Conditions:** | 1.1 If HR does not accept any application then faculty would not have to do anything. | |

### 2.4.2 Manage Faculty

| | |
|---|---|
| **Use Case Name:** | Manage Applications |
| **Scenario:** | List and review applications |
| **Brief Description:** | When applicants will submit their application for a job, faculty will list all the applications and all the faculties can review their application like view profile, post comments |

| | | |
|---|---|---|
| | on applicants, change applicants' status, perform a faculty review, assign faculty review. | |
| **Actors:** | Faculty | |
| **Stakeholders:** | Human Resource(HR) Department: To accept the applications. | |
| **Preconditions:** | Applicants must submit applications. | |
| **Postconditions:** | All the applications must be related to the job. | |
| **Flow of Events:** | **Actor** | **System** |
| | 1. HR accepts the application.<br>2. Faculty can list all applications.<br>3. Faculty can view applicant's profile.<br>4. Faculty can review applicant's application.<br>5. Faculty can post comments on applicants.<br>6. Faculty can change applicant's status.<br>7. Faculty can assign faculty review. | 2.1 Create a new order.<br>5.1 Add a new comment.<br>7.1 Add a new review. |
| **Exception Conditions:** | 1.1 If HR does not accept any application then faculty would not have to do anything. | |

### 2.4.3 Manage Account

| | |
|---|---|
| **Use Case Name:** | Manage Applications |
| **Scenario:** | List and review applications |
| **Brief Description:** | When applicants will submit their application for a job, faculty will list all the applications and all the faculties can review their application like view profile, post comments on applicants, change applicants' status, perform a faculty review, assign faculty review. |
| **Actors:** | Faculty |
| **Stakeholders:** | Human Resource(HR) Department: To accept the applications. |
| **Preconditions:** | Applicants must submit applications. |
| **Postconditions:** | All the applications must be related to the job. |

| **Flow of Events:** | **Actor** | **System** |
|---|---|---|
| | 1. HR accepts the application.<br>2. Faculty can list all applications.<br>3. Faculty can view applicant's profile.<br>4. Faculty can review applicant's application.<br>5. Faculty can post comments on applicants.<br>6. Faculty can change applicant's status.<br>7. Faculty can assign faculty review. | 2.1 Create a new order.<br>5.1 Add a new comment.<br>7.1 Add a new review. |
| **Exception Conditions:** | 1.1 If HR does not accept any application then faculty would not have to do anything. | |

### 2.4.4 Submit Job Application

| **Use Case Name:** | Manage Applications | |
|---|---|---|
| **Scenario:** | List and review applications | |
| **Brief Description:** | When applicants will submit their application for a job, faculty will list all the applications and all the faculties can review their application like view profile, post comments on applicants, change applicants' status, perform a faculty review, assign faculty review. | |
| **Actors:** | Faculty | |
| **Stakeholders:** | Human Resource(HR) Department: To accept the applications. | |
| **Preconditions:** | Applicants must submit applications. | |
| **Postconditions:** | All the applications must be related to the job. | |
| **Flow of Events:** | **Actor** | **System** |
| | 1. HR accepts the application.<br>2. Faculty can list all applications.<br>3. Faculty can view applicant's profile. | 2.1 Create a new order. |

| | | |
|---|---|---|
| | 4. Faculty can review applicant's application.<br>5. Faculty can post comments on applicants.<br>6. Faculty can change applicant's status.<br>7. Faculty can assign faculty review. | 5.1 Add a new comment.<br>7.1 Add a new review. |
| **Exception Conditions:** | 1.1 If HR does not accept any application then faculty would not have to do anything. | |

## 2.5 System Sequence Diagrams

### 2.5.1 Manage Application

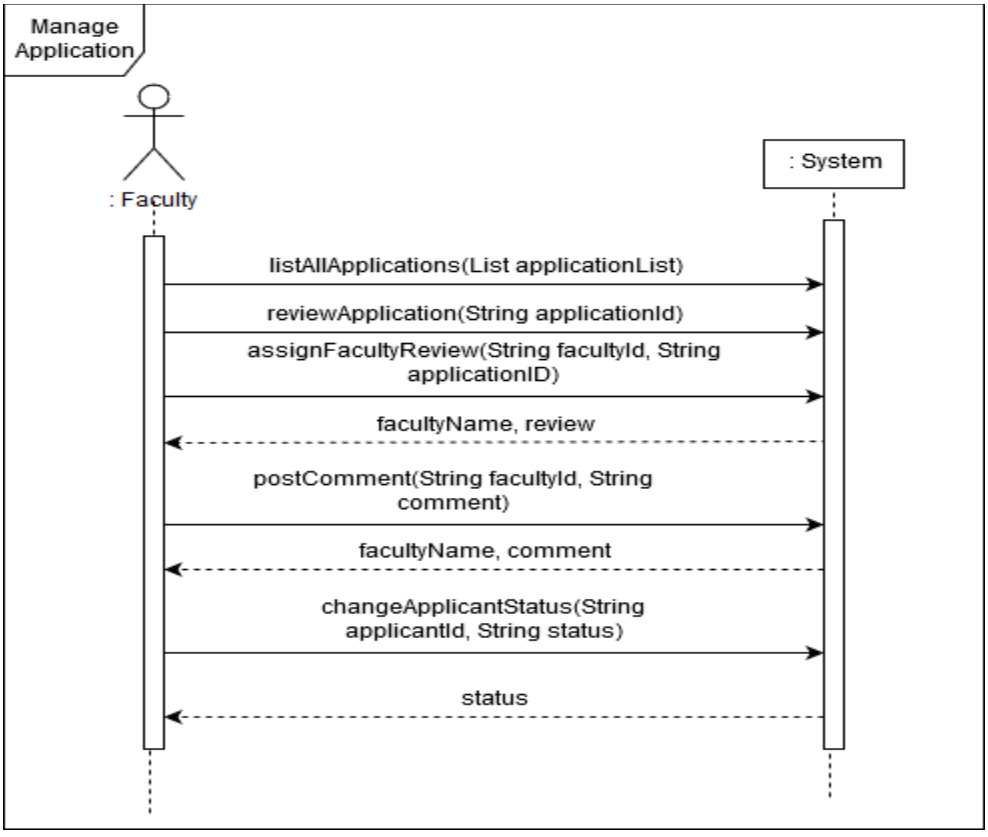


**Figure 2.6 SSD to Manage Application**

### 2.5.2 Manage Faculty

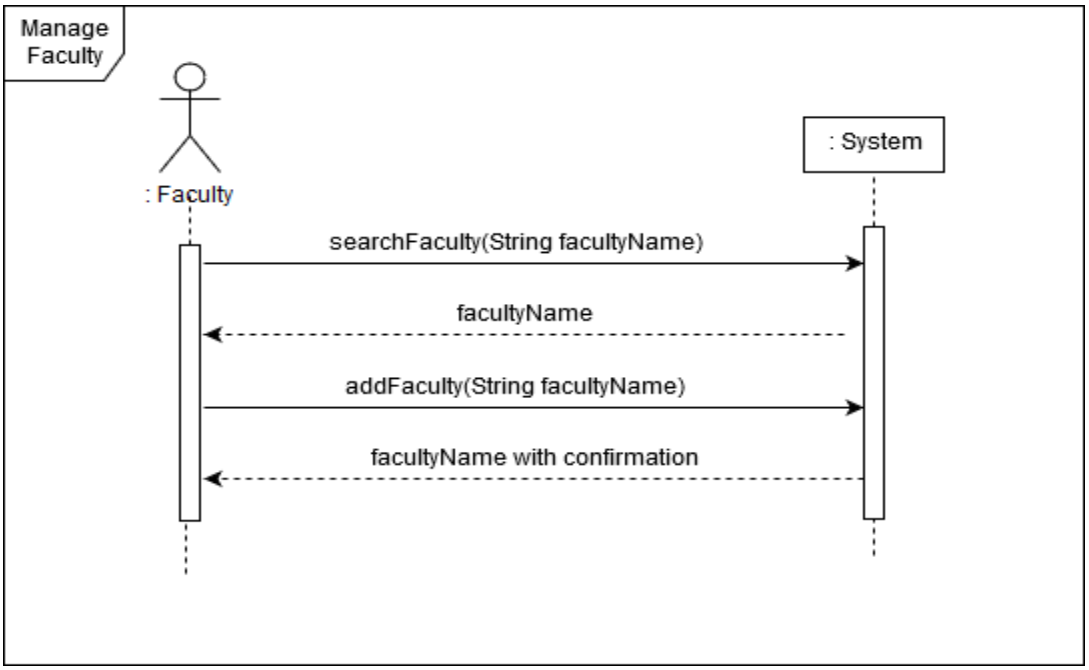


**Figure 2.7 SSD to Manage Faculty**

### 2.5.3 Manage Account

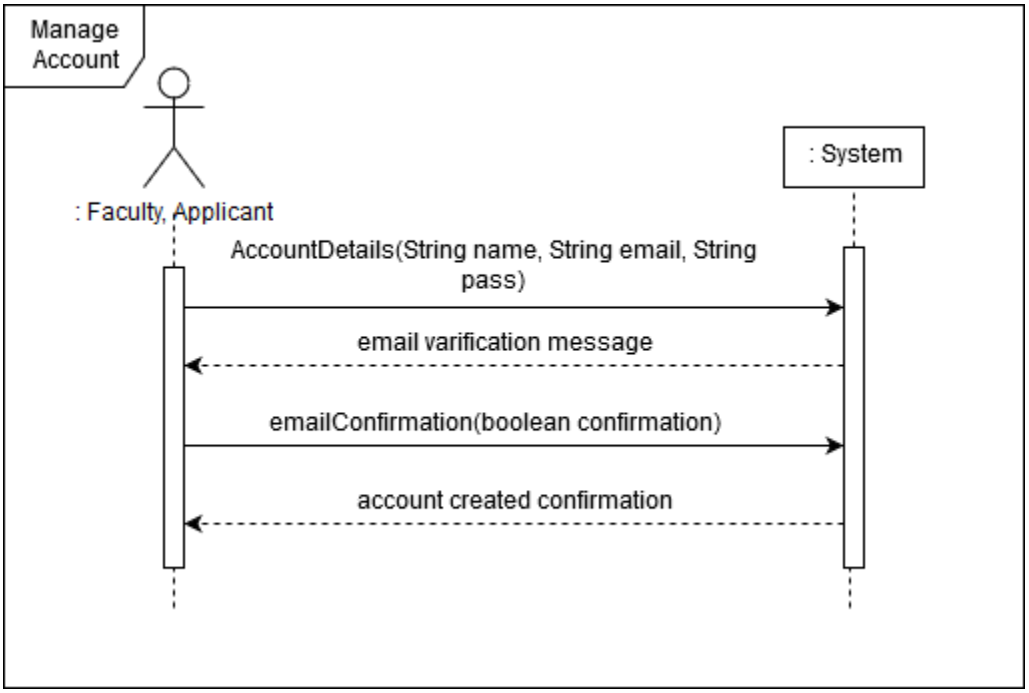


**Figure 2.8 SSD to Manage Account**

### 2.5.4 Submit Job Application

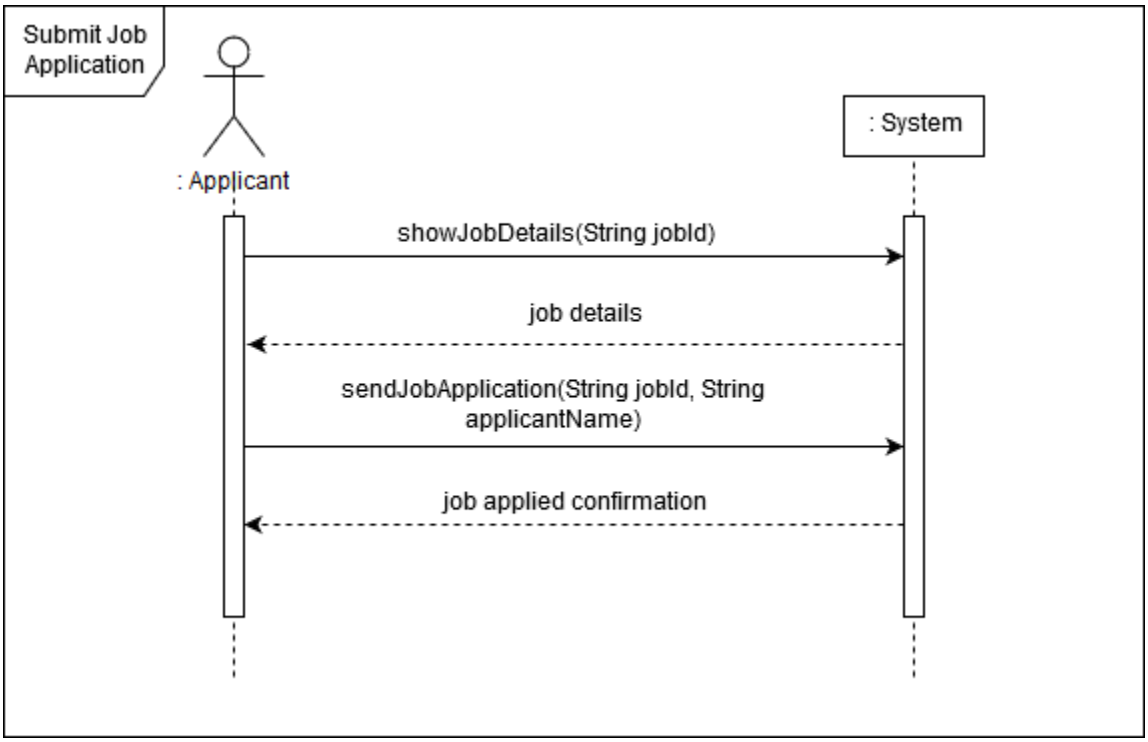


**Figure 2.9 SSD to Submit Job Application**

## 2.6 Domain/Conceptual Model

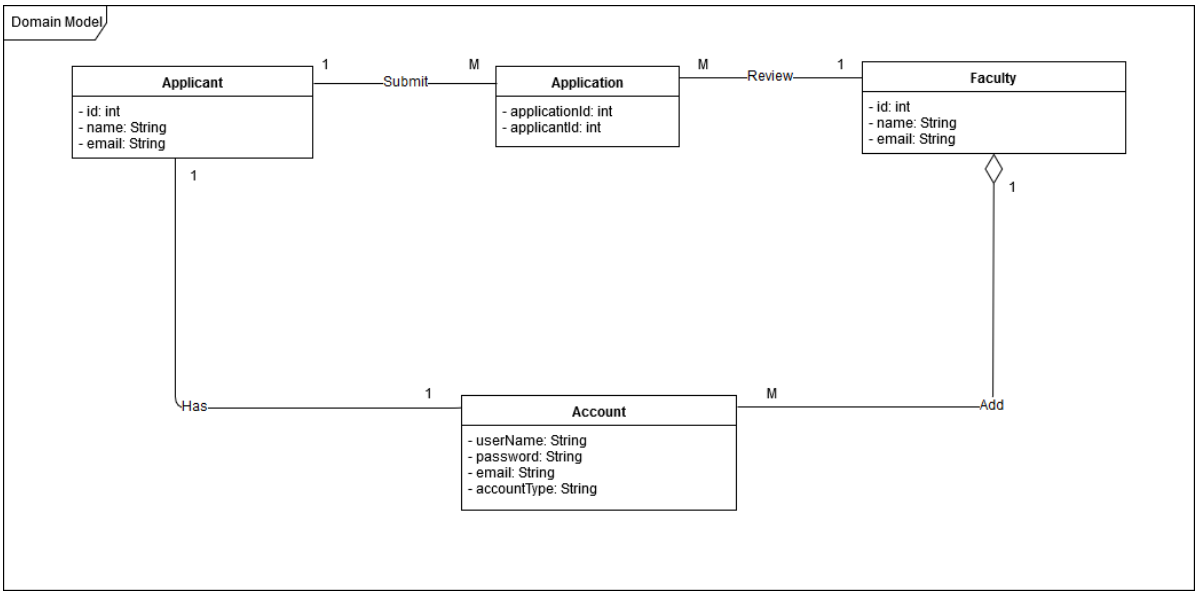


**Figure 2.10 System Domain Model**

## 2.7 Activity diagram

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency.

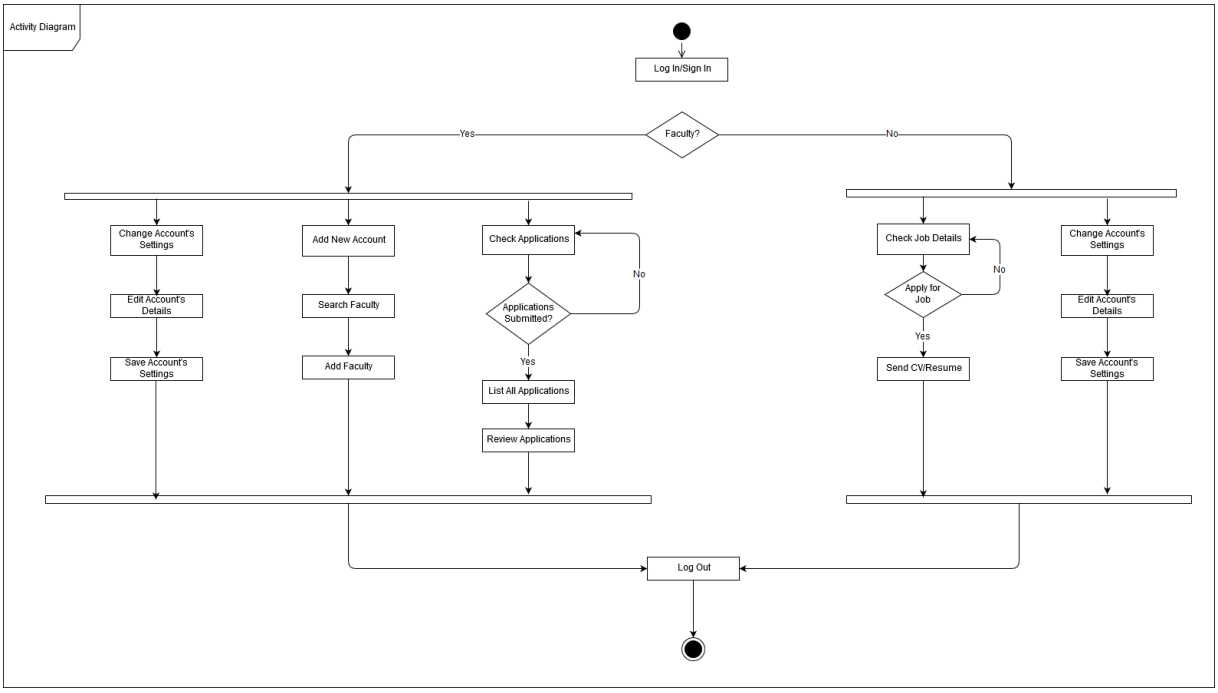


**Figure 2.11 Activity Diagram of the system**

# Chapter 3

# System Design

# 3. System Design

Design is a process that uses the product of analysis to produce a specification for implementing a system. Design is the logical description of how a system will work.

## 3.1 Sequence Diagrams

The UML includes interaction diagrams to illustrate how objects interact via messages. They are used for dynamic object modeling. The term interaction diagram is a generalization of two more specialized UML diagram types:

### 3.1.1 Manage Applications

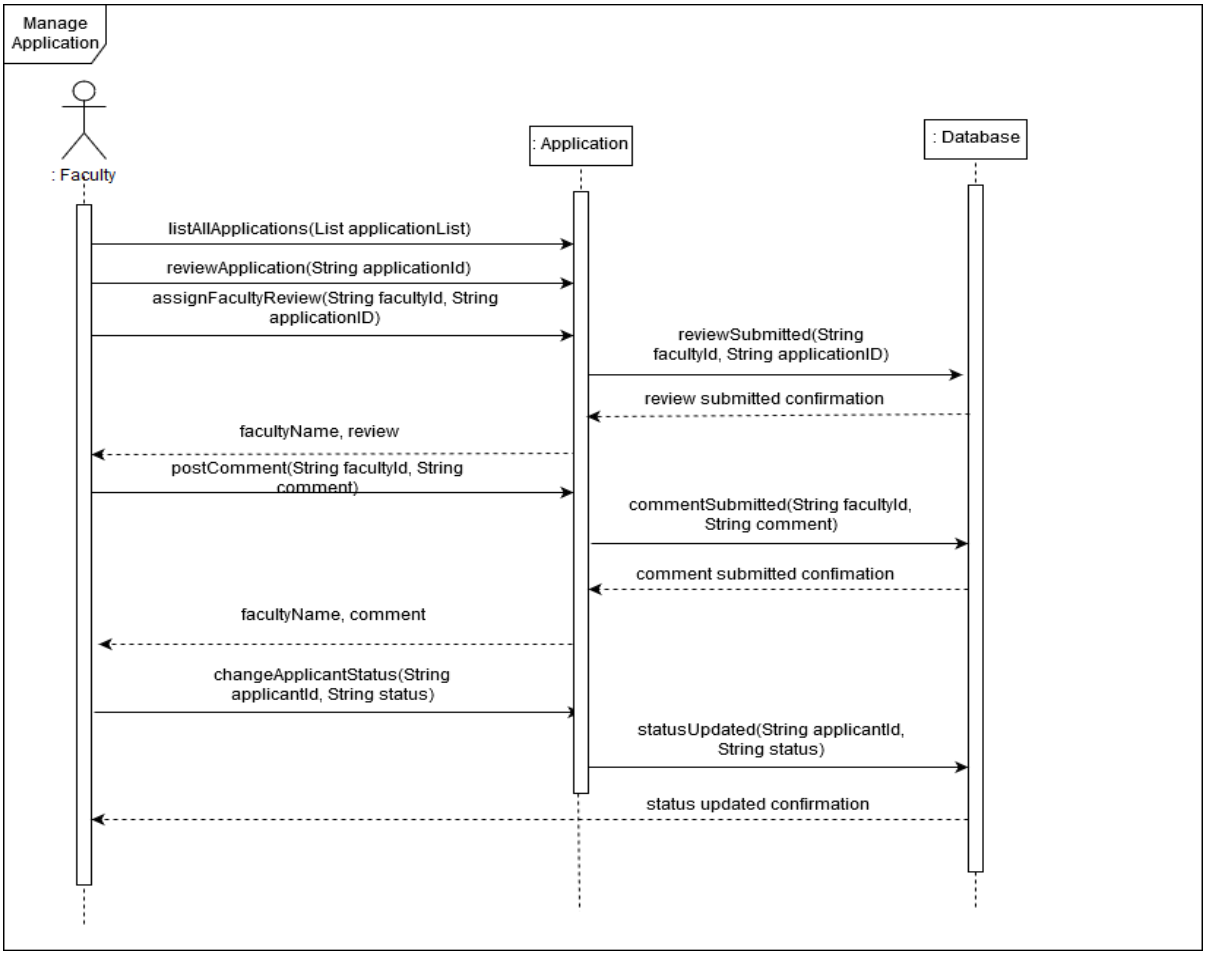


**Figure 3.1 SD to Manage Application**

### 3.1.2 Manage Faculty

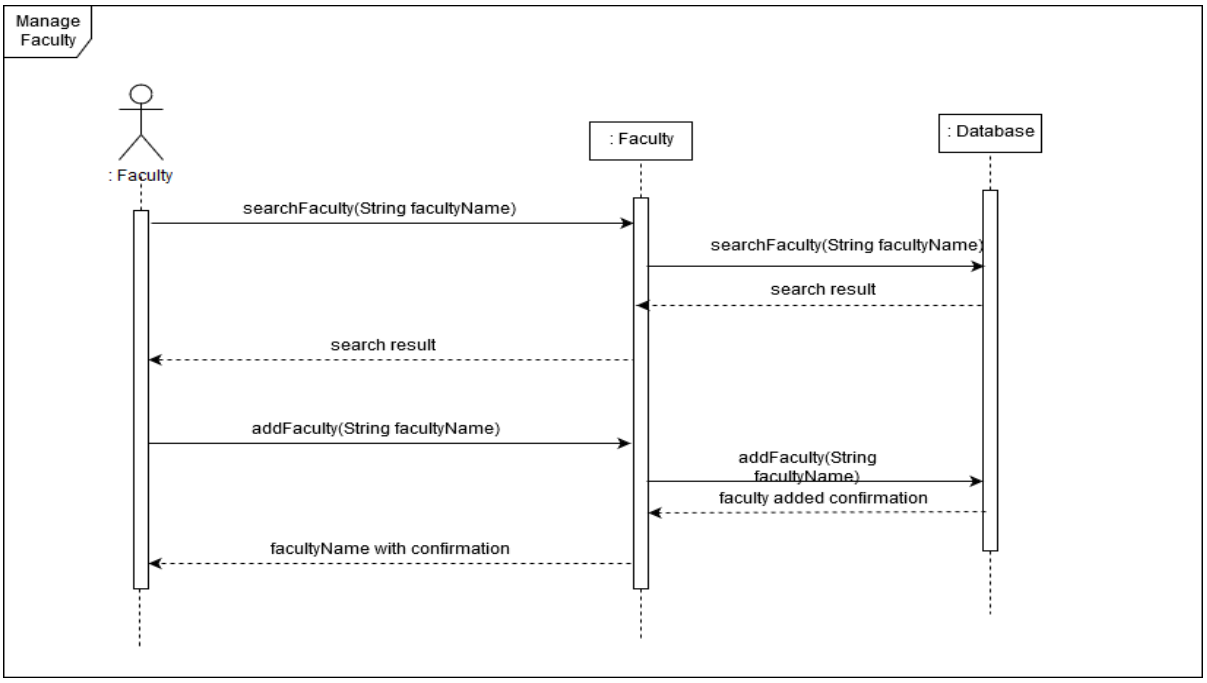


**Figure 3.2 SD to Manage Faculty**

### 3.1.3 Manage Account

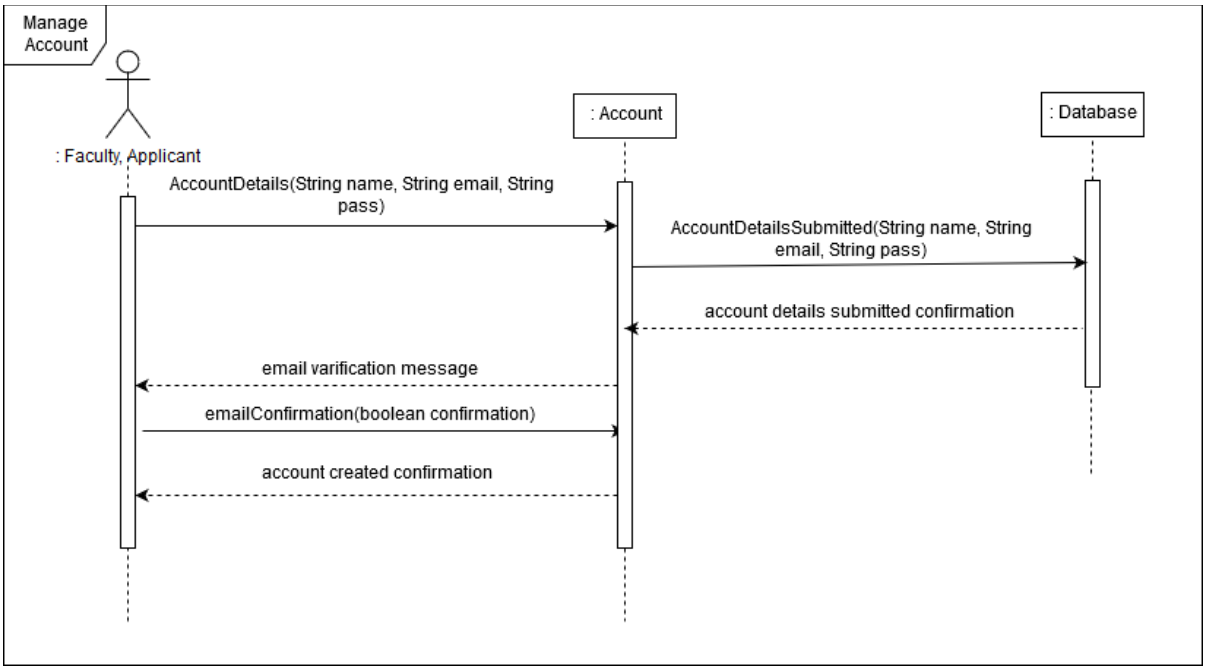


**Figure 3.3 SD to Manage Account**

### 3.1.4 Submit Job Application

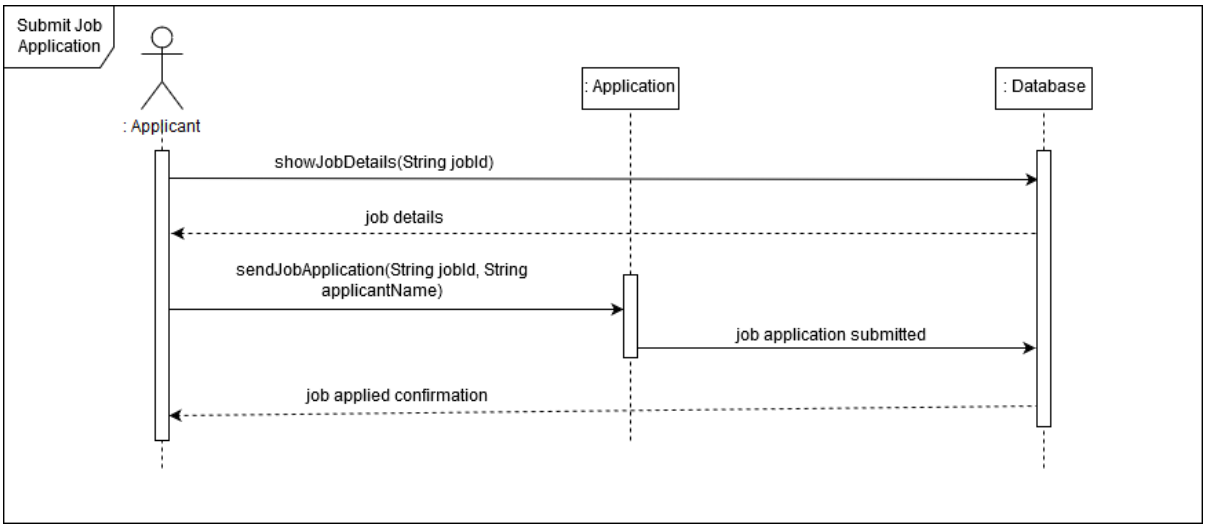


**Figure 3.4 SD to**

## 3.2 Class Diagram

Class or structural diagrams define the basic building blocks of a model. They are used for static object modeling, describing what attributes and behavior it has rather than detailing the methods for achieving operations.

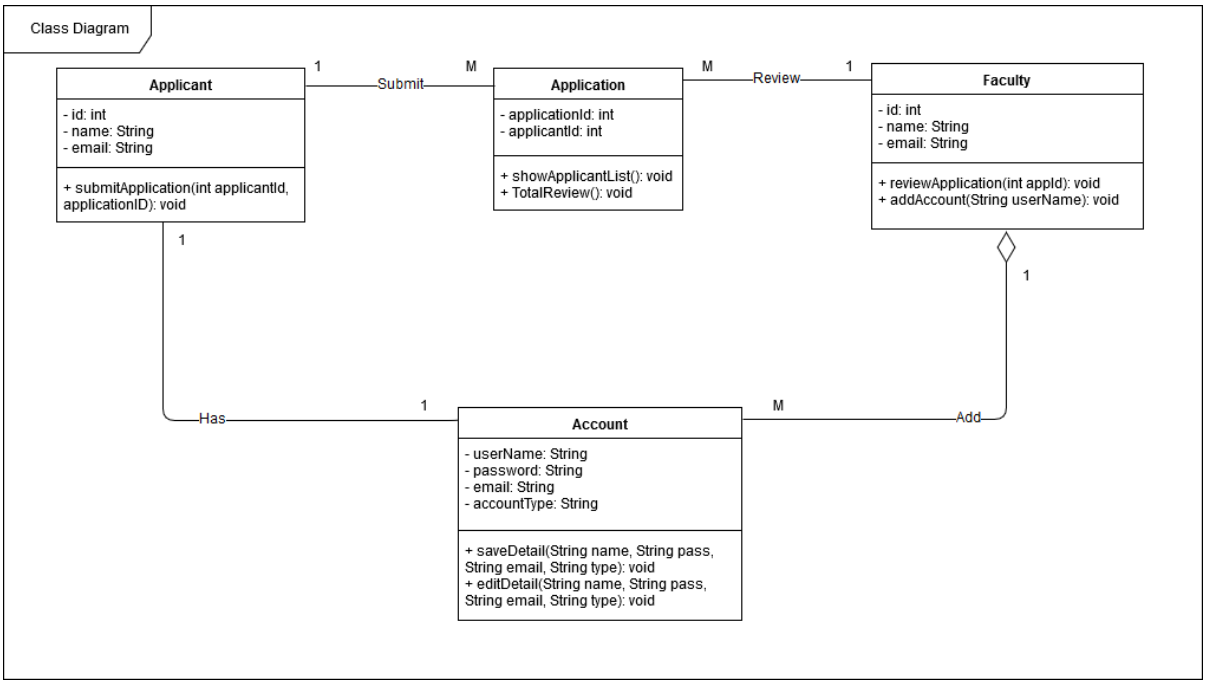


**Figure 3.5 Class Diagram of System**

# Chapter 4

# Implementation

# 4. Implementation

Implementation (software) perspective describes software implementations in a particular technology (such as C#). In the UP, Implementation means programming and building the system, not deploying it.

In the implementation phase, the developer builds the components either from scratch or by composition given the architecture document from the design phase and the requirement document from the analysis phase. The architecture document should give guidance. Sometimes, this guidance is found in the requirement document. The implementation phase deals with issues of quality, performance and debugging. The end deliverable of implementation phase is the product itself.

## 4.1 Tools &Technologies

For developing this system what tools and technologies will be used are given below:

**Framework:** Android Studio 2.3.3

**Programming Language:** Java

**Server:** Firebase

**Platform:** Support on Android Device

## 4.2 Project Link

https://github.com/Tusar0003/EARS