

# Software Engineering Project – Documentation

## Egyptian Universities Guide

### 1. Software Requirements Specification (SRS)

#### 1. Introduction

##### 1.1 Purpose

The Egyptian Universities Guide is designed to provide a comprehensive and centralized platform for students to explore universities in Egypt. It streamlines the decision-making process by offering features such as university search, program comparisons, scholarship listings, housing resources, and transportation details. The platform is tailored to support both local and international students in finding suitable academic opportunities in Egypt.

##### 1.2 Scope

This platform addresses the lack of accessible and consolidated information by integrating details about universities, programs, scholarships, housing, and transportation into one intuitive system. By doing so, it ensures students can make informed decisions efficiently and effectively.

#### 2. Overall Description

##### 2.1 Product Perspective

The Egyptian Universities Guide is a standalone web application designed for seamless use across desktop and mobile devices. It combines powerful tools for searching, comparing, and reporting, while providing an interactive map for navigating university locations and nearby housing options.

##### 2.2 Product Features

Secure user authentication for login, registration, and profile updates.

Advanced search functionality with filtering options such as location, tuition fees, and programs.

Tools to compare universities and programs with visual highlights for differences and similarities.

An interactive map displaying university locations, housing options, and transport routes.

##### 2.3 User Classes and Characteristics

Students: Local and international students seeking comprehensive guidance on Egyptian universities.

Administrators (Admins): Responsible for managing and updating the platform's data on universities, programs, and scholarships.

### **3. Functional Requirements**

#### **3.1 User Features**

Authentication: Users can securely log in, register, and log out.

Personal Preferences: Users can set notifications for new scholarships or updated programs.

Feedback: Users can report inaccuracies or missing information and request communication with alumni or current students for advice.

#### **3.2 University Information**

Comprehensive search and filter capabilities for universities, programs, and scholarships.

Comparison functionality to analyse programs and universities side by side.

Detailed views of individual universities, programs, and scholarships.

#### **3.3 Interactive Map**

Display university locations throughout Egypt with filtering capabilities.

Provide detailed housing options near universities, including transportation routes, costs, and estimated travel times.

#### **3.4 Admin Features**

Add, update, and delete data related to universities, programs, scholarships, and user accounts.

### **4. Non-Functional Requirements**

#### **4.1 Performance and Reliability**

The platform's homepage should load within 3 seconds under standard traffic conditions.

Ensure 99.9% uptime with a maximum recovery time of 30 minutes for system failures.

#### **4.2 Maintainability**

The platform's architecture should include clear documentation to facilitate quick updates and bug fixes.

#### **4.3 Compatibility**

Fully compatible with major web browsers including Chrome, Firefox, Safari, and Edge.

Optimized for use on both desktop and mobile devices.

## 2. Tools and Technologies

### Languages:

HTML, CSS, JavaScript, Python.

### Frameworks and Libraries:

Django , SQL

### Development Tools:

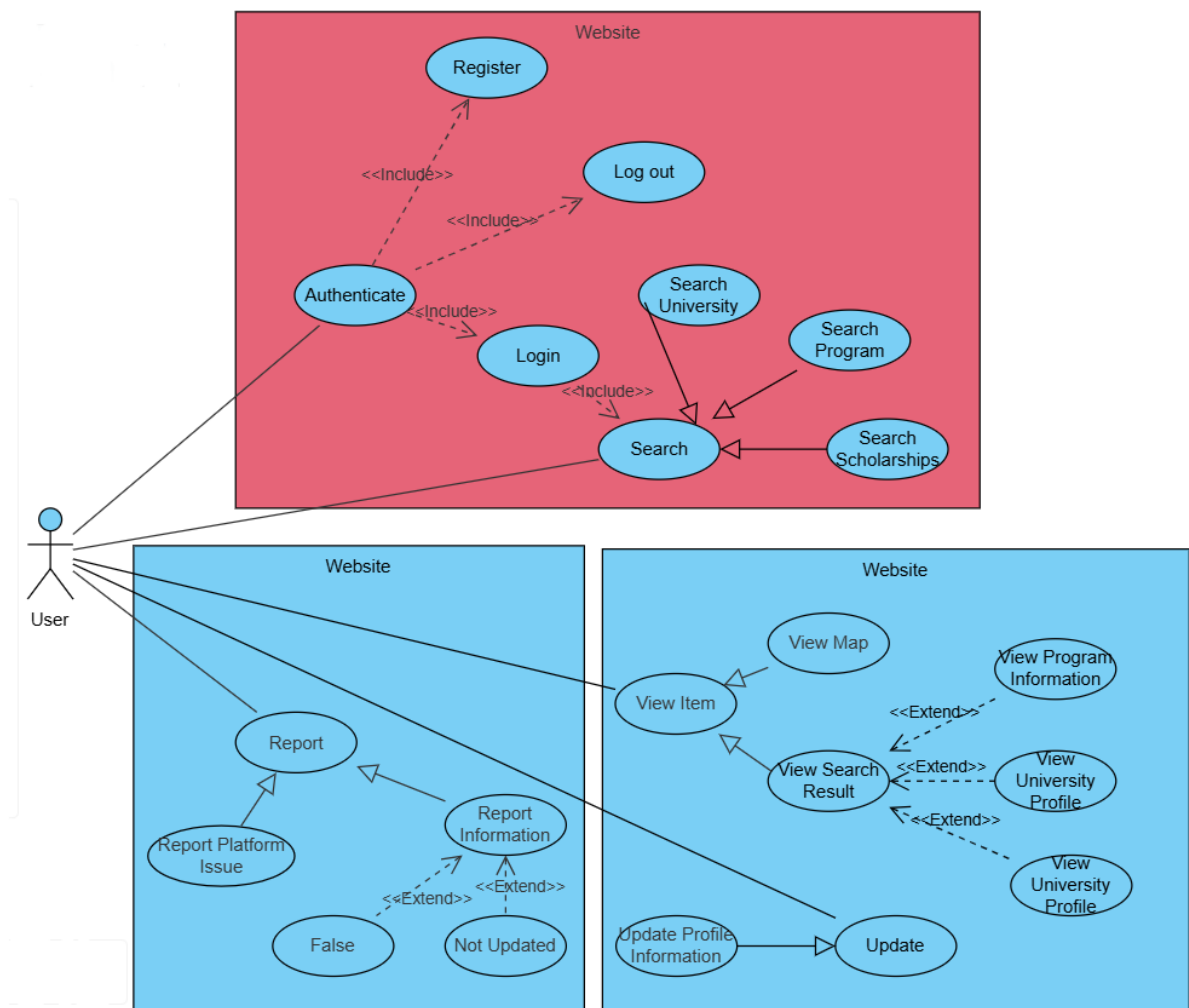
Visual Studio Code.

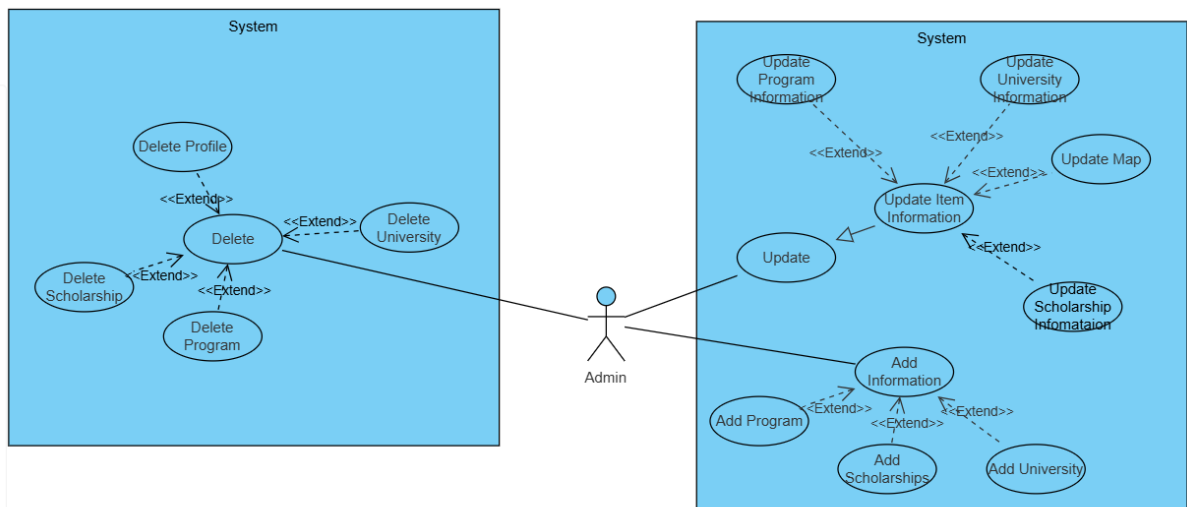
Browser Developer Tools.

### Version Control:

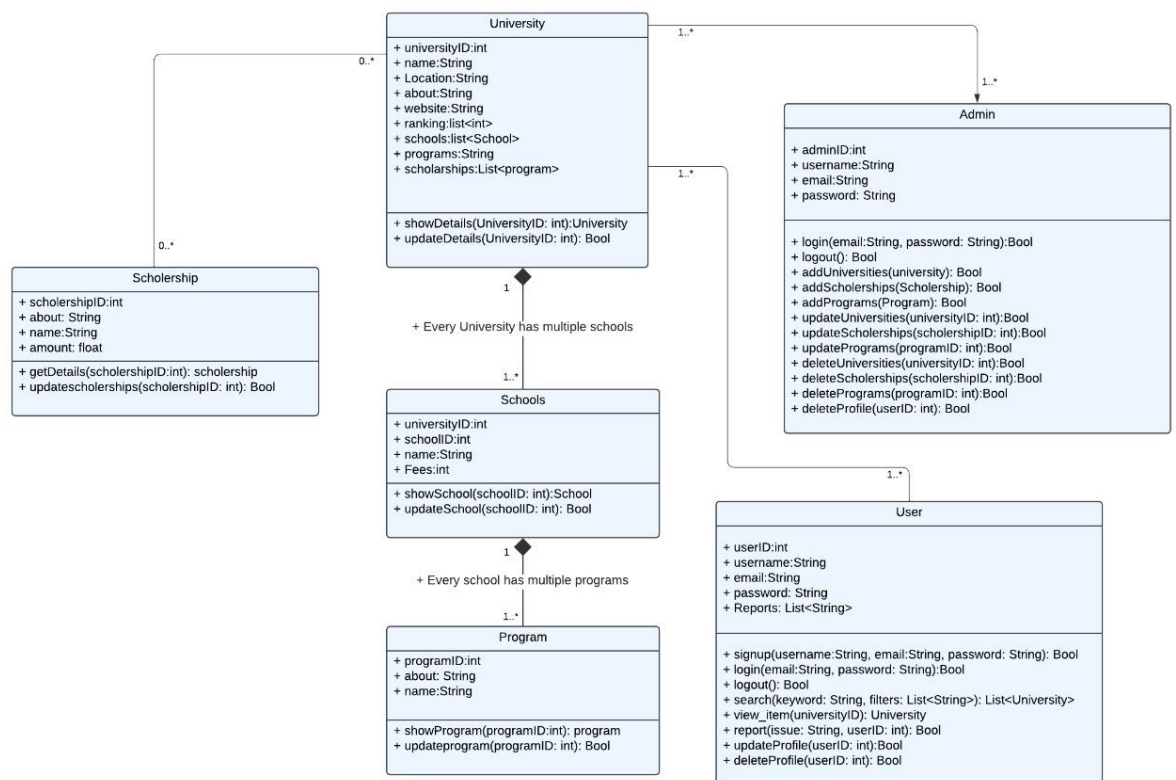
Git and GitHub.

## 3. Use case Diagram

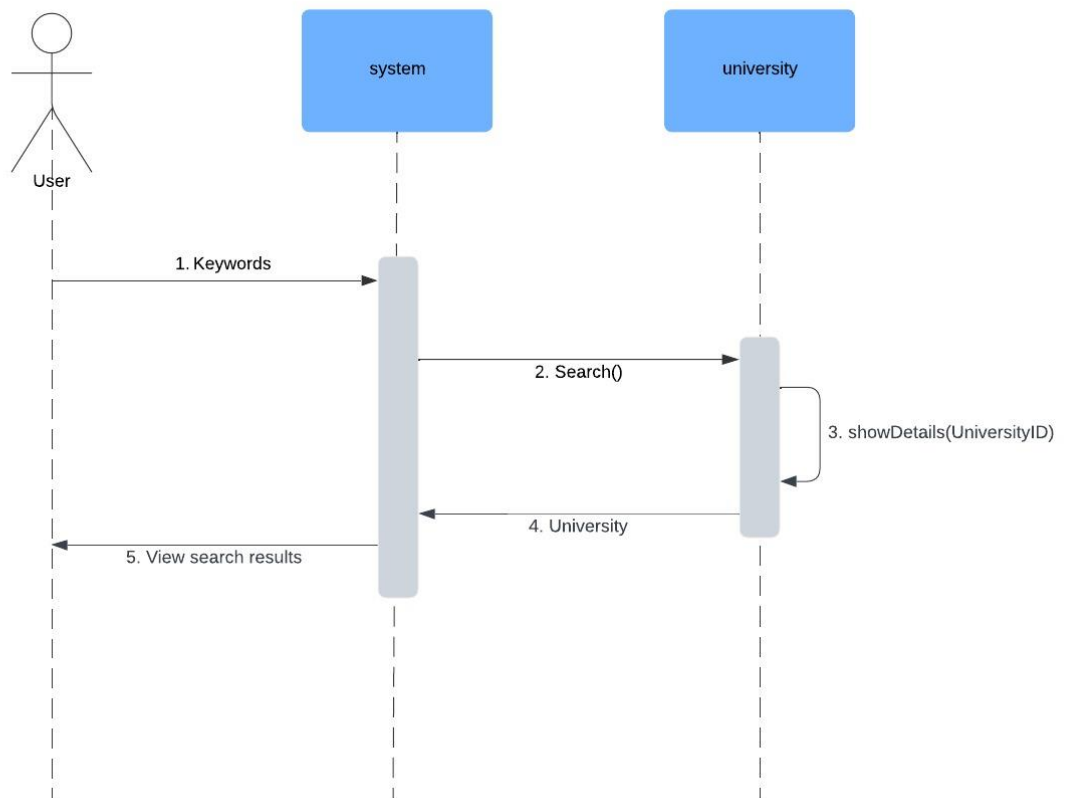


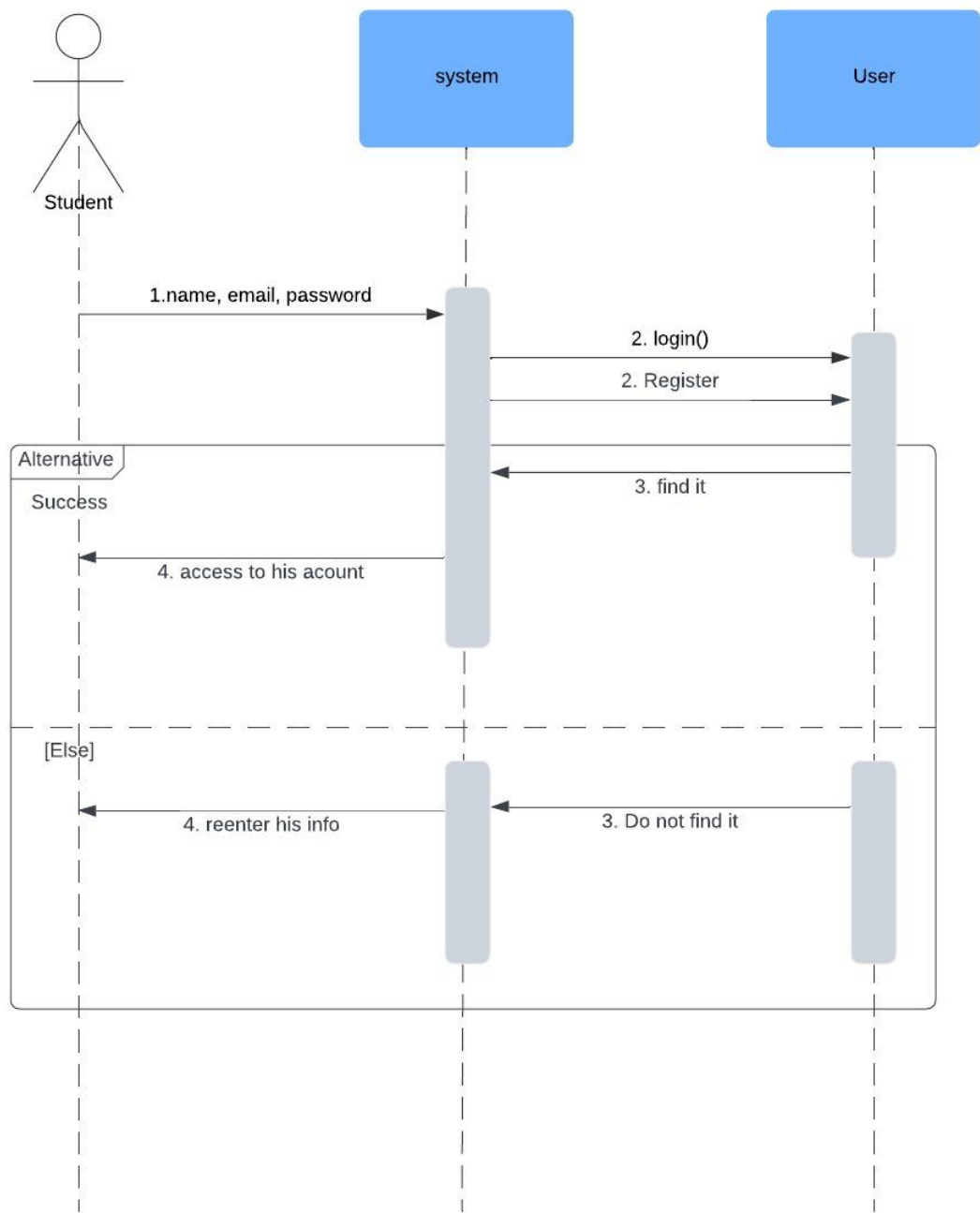


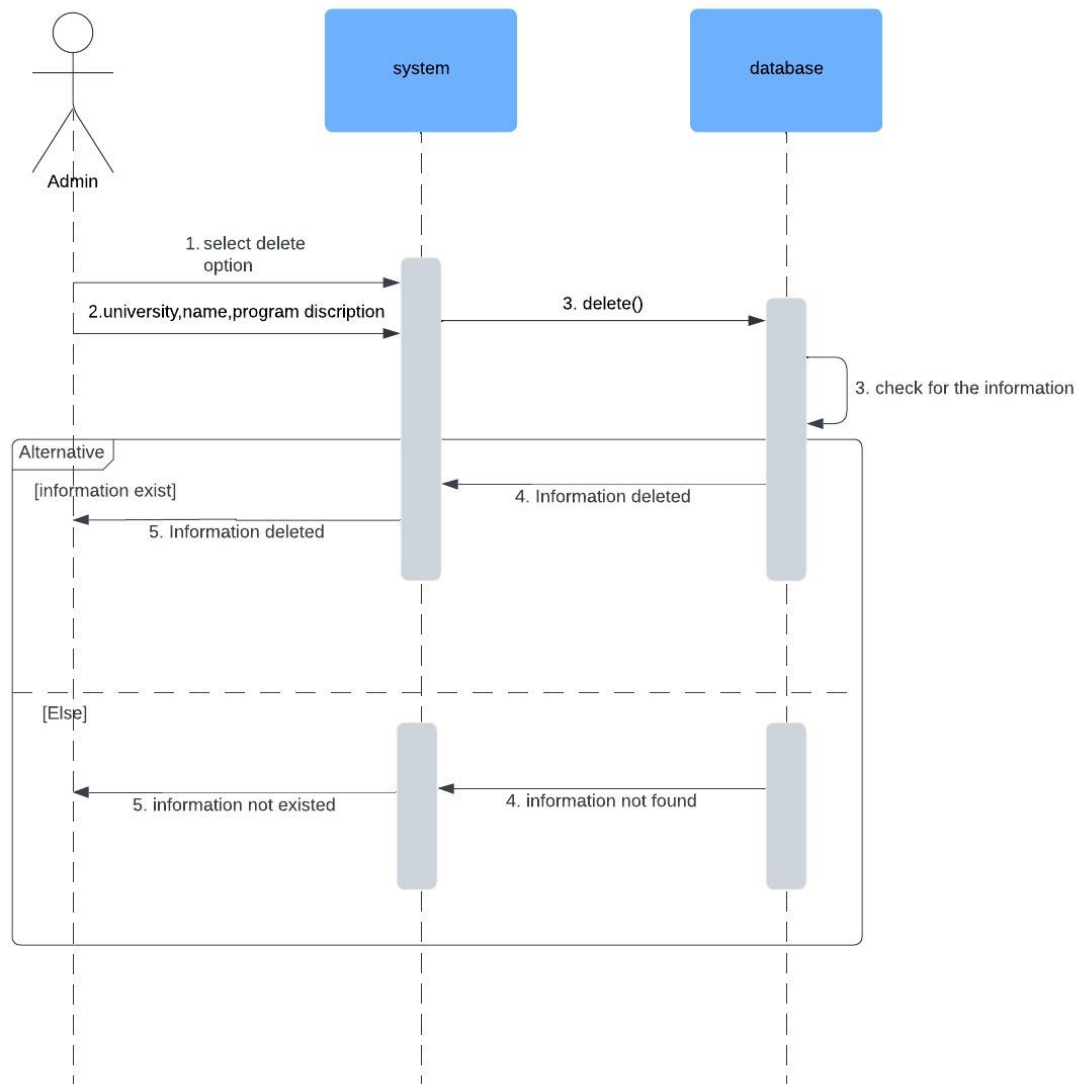
#### 4. Class Diagram

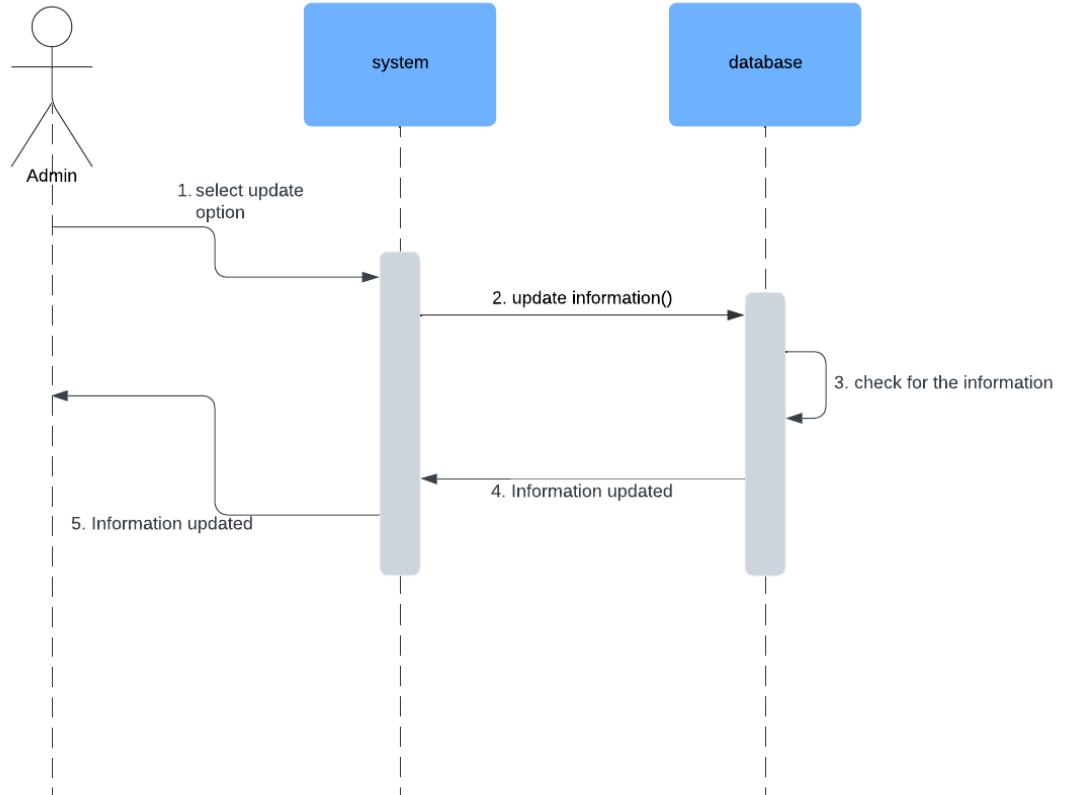
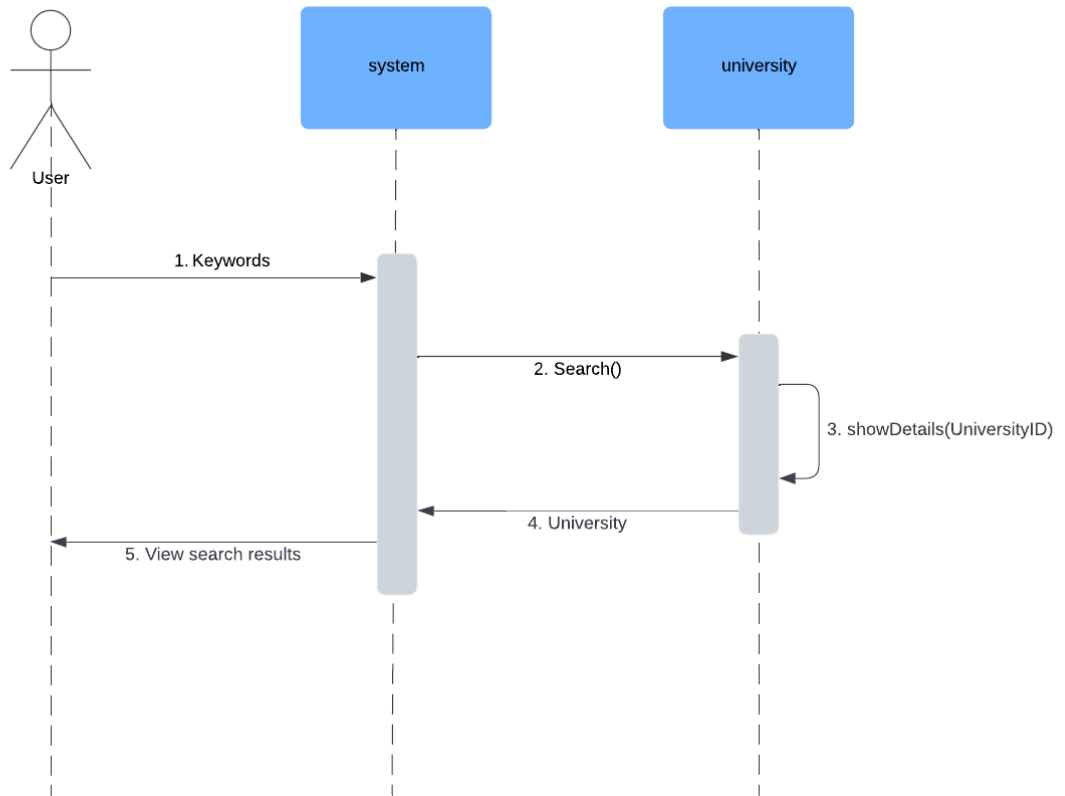


## 5. Sequence diagram



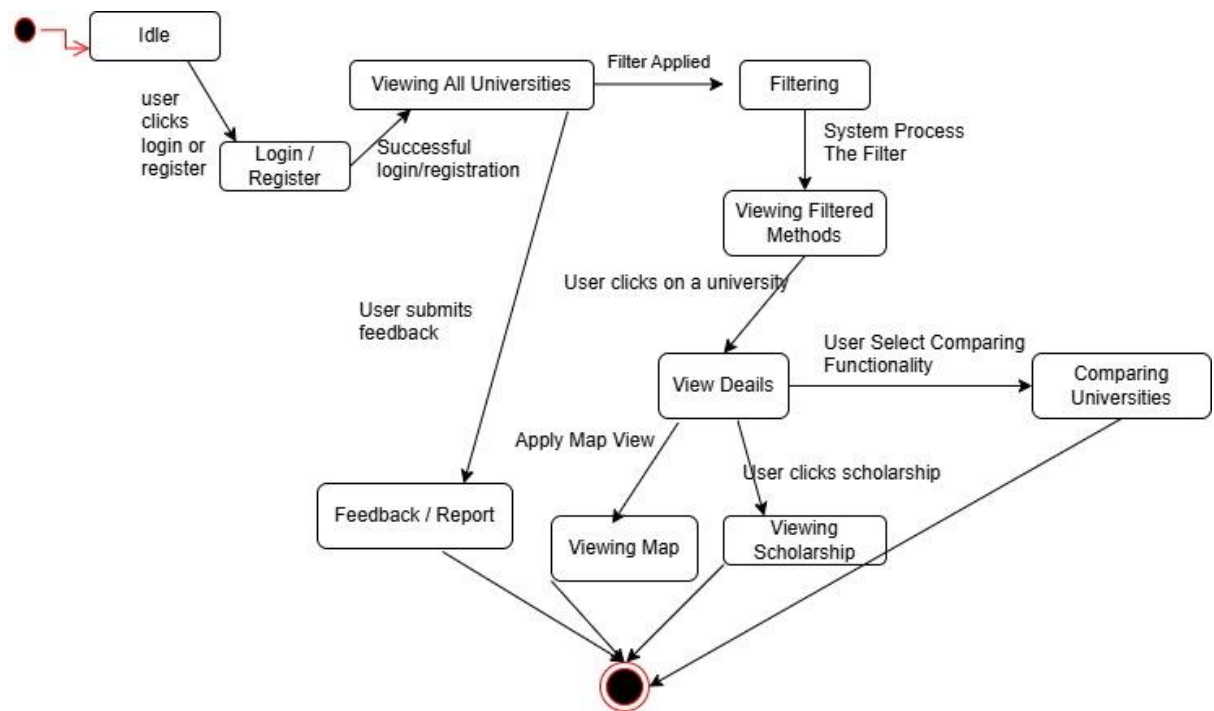








## 6. State diagram



## 7. Risk Analysis

Identified Hazard	Hazard Probability	Impact Severity	Estimated Risk	Acceptability
System downtime during peak application periods	Medium	High	High	Intolerable
Incorrect scholarship information displayed	Medium	Medium	Medium	ALARP
Errors in search/filter functionality	Medium	Low	Low	Acceptable
Map inaccuracies (e.g., wrong university location)	Low	Medium	Medium	ALARP
Unauthorized access to user profiles	High	High	High	Intolerable
Delayed housing option updates	Low	Low	Low	Acceptable

Failure to notify users of new scholarships	Medium	Medium	Medium	ALARP
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## 8. Activity Diagram

