

PUJCIT-Project Coordination Office	Final Version
Final Project Documentation	Date: 10 March, 2023

UniVerse

Web-based forum application (Deployed for PUJC)



By:

Muhammad Ali	BSCS-F19-A-01
Muhammad Rafey	BSCS-F19-A-07
Zohaib Nazakat	BSCS-F19-A-21
Musharaf Bashir	BSCS-F19-A-25

A Project Submitted

In partial fulfillment of the requirements for the degree of
BACHLEOR IN COMPUTER SCIENCE

University of Punjab Jhelum Campus
Department of Information Technology

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DEDICATION

“Dedicated to our Parents and Teachers without whose wholehearted support, encouragement and guidance it would have been impossible for us to make this project”

CERTIFICATE OF APPROVAL

This is to clarify that following students have successfully completed the final year project named as “UniVerse” at University of the Punjab Jhelum Campus, to fulfill the partial requirements of the degree of Bachelors of Computer Science.

Sr.	Student's Name	Student's Roll no
1	Muhammad Ali	BSCS-F19-A-01
2	Muhammad Rafey	BSCS-F19-A-07
3	Zohaib Nazakat	BSCS-F19-A-21
4	Musharaf Bashir	BSCS-F19-A-25

Supervisor

 Ms. Aminah Ali
 Department of Information Technology
 University of the Punjab, Jhelum Campus

Project Office Coordinator

 Ms. Nadia Mumtaz
 Department of Information Technology
 University of the Punjab, Jhelum Campus

Head of Department

 Ms. Nadia Mumtaz
 Department of Information Technology
 University of the Punjab, Jhelum Campus

Administrator

 Dr. Muhammad Mudasar Ghafoor
 Department of Commerce
 University of the Punjab, Jhelum Campus

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ACKNOWLEDGENTS

All glory to the Almighty **ALLAH (S.W.T)** the creator of the universe, who leads us in the sea of darkness and enables us to overcome adversity in difficult situations, Allah (S.W.T) has power over all. We lift up, ask for his help, mercy and strength in resisting our evil and corrupt practices. I want to thank **ALLAH (S.W.T)** for making this project possible with so much kindness and compassion.

All the respect and love of **HAZRAT MUHAMMAD (PUBH)** that enables us to see the philosophy of life.

The project is the result of a partnership.

Many thanks to Ms. Aminah Ali Our Project Manager, her supervisors who helped us to produce this project in a timely and efficient manner.

Thanks also to our friends the silent support has led us to complete our work

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PROJECT COMPLETION CERTIFICATE

It is confirmed that the report entitled "UniVerse" confirms that Muhammad Ali Roll # BSCS-F19-A-01, Muhammad Rafey Roll # BSCS-F19-A-07, Zohaib Nazakat Roll # BSCS-F19-A-21 & Musharaf Bashir Roll # BSCS-F19-A-25 Bachelor of Computer Sciences students from the Department of Information Technology, University of Punjab Jhelum Campus contains sufficient resources required to offer the above degree.

Ms. Aminah Ali (Supervisor)

Lecturer

Email: amina9945@gmail.com

Email: aminaali@pujc.edu.pk

Department of Information Technology
University of the Punjab, Jhelum Campus

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DECLARATION

It is declared that this is an original piece of our work, expect where acknowledgement in text and references. This work has not been submitted in any form for other degree or diploma at any university or other institution for tertiary education and shall not be submitted by me in future for obtaining any degree from this or any other university.

Muhammad Ali	BSCS-F19-A-01	_____
Muhammad Rafey	BSCS-F19-A-07	_____
Zohaib Nazakat	BSCS-F19-A-21	_____
Musharaf Bashir	BSCS-F19-A-25	_____

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ABSTRACT

The “UniVerse” is a web Based Forum Application. It is developed by ReactJs, NodeJS, Express and MongoDB. This is an application to gain and share knowledge. It’s a platform to ask questions and connect with people who contribute unique insights and quality answers. Its purpose is to both give you answers and allow you to answer questions for others in subjects you are knowledgeable about. PUJC students can get information about upcoming events in the university.

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1. Introduction

UniVerse is a web Based Forum Application. It is developed by ReactJs, NodeJS, Express and MongoDB. UniVerse is an application to gain and share knowledge. It's a platform to ask questions and connect with people who contribute unique insights and quality answers. Its purpose is to both give you answers and allow you to answer questions for others in subjects you are knowledgeable about. PUJC students can get information about upcoming events in the university.

1.1 Project Title

Universe: A web based Forum Application for University.

1.2 Project Overview Statement

UniVerse is a Web Based Forum Application. It's a platform to ask questions and connect with people who contribute unique insights and quality answers. Its purpose is to both give you answers and allow you to answer questions for others in subjects you are knowledgeable about. PUJC students can get information through noticeboard about upcoming events in the university. A person who will give the most liked answers will be appreciated on the leader board at the end of the month. Students who wants to take admission in PUJC will be guided properly through this application.

1.3 Project Overview Statement Template

Project Title: UniVerse: A web based forum Application			
Group Leader: Muhammad Ali			
Project Members: 4			
Name	Registration No#	Email	Signature
Muhammad Ali	2019-UJ-199	pujc.f19.a.01@gmail.com	
Muhammad Rafey	2019-UJ-203	pujc.f19.a.07@gmail.com	
Zohaib Nazakat	2019-UJ-217	zohaibnazakat@gmail.com	
Musharaf Bashir	2019-UJ-221	bcs.f19.a.25@gmail.com	
Project Goal: Our main goal is to provide a platform where students can ask their queries and get relevant answers.			
Objectives:			
Sr.#			
1	Makes the app user-friendly for ease use		
2	Like and dislike on given answers		
3	Person with most liked answers will be appreciated on leader board		
4	Students will be updated through notice board		
5	To provide admission information		
Project Success criteria: Divide the project work in team. Complete the project on time within budget. Defining Milestone which makes our project more manageable. Communication plan is essential between project members and stakeholder that reduces the issues.			
Organization Address (if any):			
Type of project: <input type="checkbox"/> Development			
Target End users: Students, Teachers and staff members of PUJC			
Development Technology: <input type="checkbox"/> Object Oriented <input type="checkbox"/> Structured			
Platform: <input type="checkbox"/> Web based			
Suggested Project Supervisor: Ms. Aminah Ali			
Approved By: Ms. Aminah Ali			
Date: 31 August, 2022			

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1.4 Project Goals & Objectives

Goals can lead us to set a path for our lives. In the development process of this application our goal is to give online platform to students where they can ask their queries related to university and can get relevant answers through community page.

Students can keep themselves updated through notice board. Upcoming event's information will be displayed on notice board.

Top 5 Persons with most liked answers will be appreciated on leader board. Another objective is to provide admissions information to students who want to take admission in PUJC.

1.5 High-level system components

The main purpose of this app is to provide a platform to students where they can ask their queries and get answers. There will be many different components in this app as shown below:

1. Sign Up:

It is a phrase referring to the creation of an online account using an email and password. Once user has signed up for a service, they can access their account by logging in. User can sign in through different ways:

- i. Sign in through email Id
- ii. Direct sign in through Gmail.

2. Login / Sign In:

Login is used for user authentication. Logging in (or logging on, signing in, or signing on) is the process by which an individual gains access in the app by identifying and authenticating themselves.

3. Admin Dashboard:

Dashboard will serve as an administrative homepage with access to the key components of the App. It provides convenient shortcut for common management tasks like admins can upload files, Update files and delete certain data files from the web App.

4. Community:

Our community web page give Teachers and students to connect directly to each other. Members of the community can guide each other to learn something interesting or important to them with focus.

- i. **Ask Question:** Users can ask their queries
- ii. **Like / Dislike Answers:** User can like or dislike the given answers

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5. Departments:

Information related to all departments will be given here. Basic Information about the faculty, Courses etc. will be mention on these pages.

6. Noticeboard:

Having a noticeboard on the website can be one helpful way of promoting important information or instructions to a huge amount of people.

- i. **Upcoming events:** Information of Upcoming events will be displayed on the noticeboard.
- ii. **Date sheets:** Date sheets for the exams of all departments will be displayed on the noticeboard.
- iii. **Scholarship Information:** Notifications of scholarships will be displayed on the noticeboard.

7. Leader Board:

Top 5 user with most liked answers will be appreciated at the end of the month on leader board to keep users motivated.

1.6 List of optional functional units

There are some optional functional units are developed under certain conditions which are helpful in increasing the performance. These optional functional units would include performance, time dependent, and ease of use.

1. Dark Mode:

Dark mode is especially helpful for those viewing mobile computing device screens at night. The reduced brightness can reduce eye strain in low light conditions.

2. Results:

Results of all departments will be displayed.

3. Feed:

Connecting people to stories that matters to them. Comprehensive up-to-date news coverage, aggregated from sources all over the world

4. Forget Password:

Users could take help from this option if they stuck while logging on.

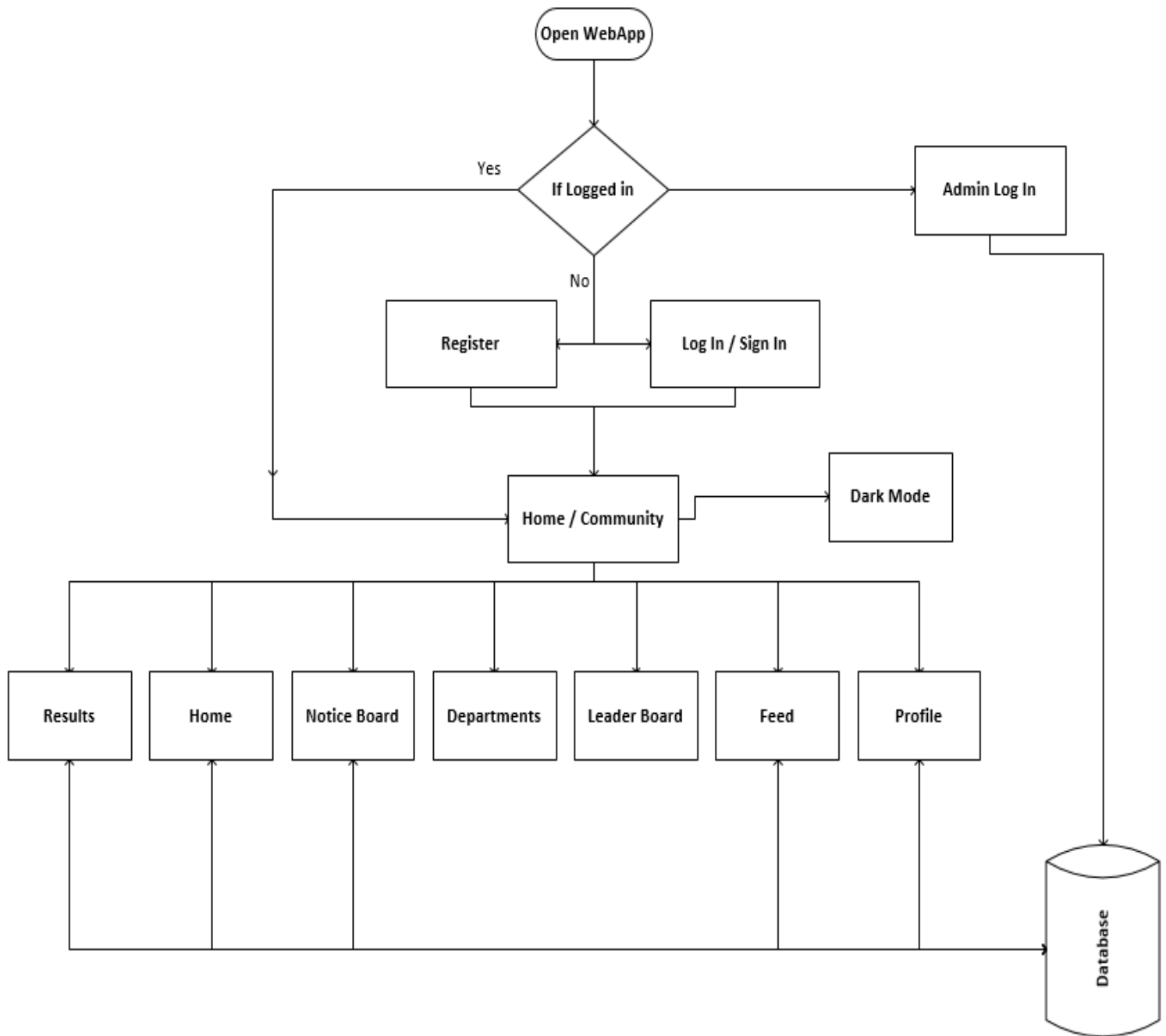
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1.7 Exclusions

In this section we will exclude those requirements which can be logically included but due to some reasons we exclude. so, the requirements and functionalities will be as follow:

- Complete Roll No of the student
- One-to-one chat
- Viewing other's profile

1.8 Application Architecture

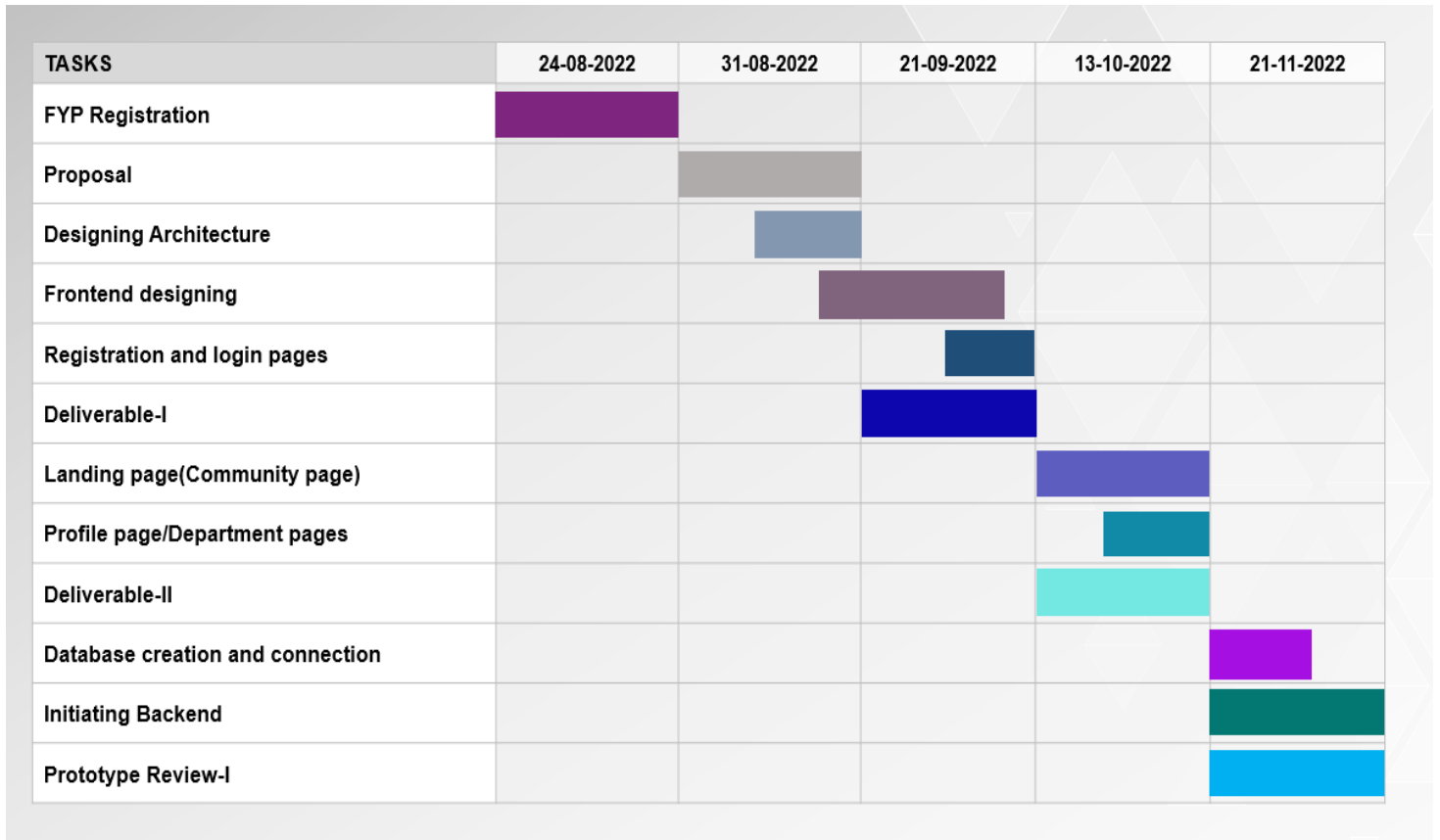


1.9 Software and Hardware Specification

This Web App will run on any Device with latest versions of Web Browser. There are no specific Hardware requirements to run this web app.

1.10 Gantt chart

The Gantt chart usually created by the vertical and horizontal axis in which the activities or working duration is listed on x-axis (horizontally). In the start of the Gantt chart there will be some phases of application which will be Login pages, all Front-end pages. This Gantt chart will identify some major milestones with their achievement criteria, which has to be carried out.



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1.11 Tools and technologies used with reasoning

This Web App will be developed by using the following:

- i. **React.JS:** React is a free and open source front-end JavaScript library for building user interfaces based on UI components
- ii. **Node.JS:** Node.js is an open source, cross platform, back-end JavaScript runtime environment that run on a JavaScript engine and execute JavaScript code outside a web browser.
- iii. **MongoDB:** MongoDB is a cross-platform document-oriented database program. Classified as a NoSQL database program.
- iv. **Express.JS:** Express.js, or simply Express, is a back-end web application framework for Node.js, released as free and open source software. It is used for building web applications
- v. **Visual Studio Code:** VS Code is a code editor redefined and optimized for building and debugging modern web and cloud applications.
- vi. **Bootstrap:** Bootstrap is a free, open source front-end development framework for the creation of websites and web apps.

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2. Project/Product Feasibility Report

UniVerse will be developed as an online forum where students can ask questions and get helpful answers. Its purpose is to both give you information and allow you to answer questions for others in subjects you are knowledgeable about.

The feasibility of this system is discussed in detail below:

2.1 Feasibilities:

- Technical
- Operational
- Economic
- Schedule
- Specification
- Information
- Motivational
- Legal and Ethical

2.1.1 Technical Feasibility

Technical feasibility states whether the project will work with current technology and equipment and whether it specifies user requirements. We will offer two platforms, one for administrators and one for students. UniVerse will be developed using MERN (MongoDB, ExpressJS, ReactJS, and NodeJS) technology. The platform provides a community webpage where teachers and students can connect directly. Second, there will be a digital notice board where students can view the latest university news and information, and it also features a leader board that recognizes the most popular respondents.

2.1.2 Operational Feasibility

An app is considered operational if it meets the requirements of administrators and users. The operational requirements of our app include:

- App will meet all rules and regulations.
- App will be user friendly and easy to use.
- App will be helpful for the students.

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2.1.3 Economic Feasibility

Economic feasibility is a cost-benefit analysis that evaluates whether a project is feasible. This means assessing and analysing the decision support potential of a project by objectively and rationally identifying relevant strengths, weaknesses, opportunities and risks. The resources required to complete the project are only one computer with active internet and server.

Personal and implementation cost:

- System with good Hardware specifications
- Database creation
- UI Design
- Debugging and troubleshooting

2.1.4 Schedule Feasibility

In Schedule Feasibility Study mainly timelines/deadlines is analyzed for proposed project which includes how many times teams will take to complete final project which has a great impact on the organization as purpose of project may fail if it can't be completed on time. For our project, a Gantt chart has been created. We'll correctly follow the Gantt chart. About April 2023 we will see the completion of our project.

2.1.5 Specification Feasibility

The requirements of this application are a good, safe and trustworthy for students where they can ask questions and get helpful answers, learn from knowledgeable and trustworthy people, answer questions and share knowledge with others. It's about creating a powerful online App. All of these requirements are being met by our application, thus we can state that it is specification feasible.

2.1.6 Information Feasibility

Information on various features, such as community pages, digital notice boards, leader boards, sign-up forms for administrators and students, departmental information, and other essential features, will be made available. So, our app is informatively feasible.

2.1.7 Motivational Feasibility

This Application satisfies all user requirements and is user-friendly. The application does not require any prior knowledge to utilise it. Everything will be straightforward and easy. This application responds immediately when the user needs it or makes a mistake, which shows how responsive it is. As a result, we may state that this application is motivationally feasible.

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2.1.8 Legal & Ethical Feasibility

We are developing the UniVerse application which has been approved by the Campus Authority of the University of Punjab Jhelum. The competent authorities claim that they will have no problem starting the project.

2.2 Project/Product Scope

Scope is a very dominant factor. Scope and context are intertwined because they both relate to system boundaries. Context refers to anything that applies outside the boundaries of the system. Scope describes what is within the bounds of the system.

Product scope is defined as the functions and features that characterize a product or a service. Our web-app mainly focuses on providing an online platform for the students and teaching staff to connect with each other and can ask questions and get helpful answers. Its purpose is to both give you information and allow you to answer questions for others in subjects you are knowledgeable about.

- Responsive website compatible on all devices
- Direct connection with Teachers and Staff Members
- Administrator Dashboard
- Digital Noticeboard for students
- Community Page
- Leader board

2.3 Project/Product Costing

It is said to be the total cost of project development and application development. Cost used for frontend development, UI design, and backend code. Most cost estimation work focuses on algorithms, flowcharts, and code and cost modelling.

In this process costs are analysed using mathematical formula as:

$\text{Cost/FP} = \text{Labour rate/Productivity parameter}$

This is the formula which is used to calculate the total cost and total estimated effort of the project development.

2.3.1 Project Cost Estimation by Function Point Analysis

Project Cost Estimation by Function Point Analysis:

- Number of User Input = 25
- Number of User Output = 21
- Number of User Enquires = 13
- Number of User Files = 08
- Number of External Interfaces = 15

Types of Components	Complexity of Average Components	
Domain	Count * Average	FP Count
External Input	25 * 4	100
External Output	21 * 4	84
External Inquires	13 * 4	52
Internal Logical Files	08 * 4	32
External Logical Files	15 * 4	60
	Total	328

Count Total = 328

1	Data communications	3
2	Distributed data processing	3
3	Performance	5
4	Heavily used configuration	2
5	Transaction rate	5
6	On-Line data entry	3
7	End-user efficiency	5
8	On-Line update	2
9	Complex processing	1
10	Reusability	3
11	Installation ease	5
12	Operational ease	4
13	Multiple sites	3
14	Facilitate change	4
	Total = $\Sigma (f_i)$	48

Calculate Function Point:

To compute function points (FP), the following relationship is used:

$$\begin{aligned}
 \text{FP} &= \text{Count-total} * [0.65 + 0.01 * \sum(\text{fi})] \\
 &= 328 * [0.65 + 0.01 * 48] \\
 &= 328 * [0.65 + 0.48] \\
 &= 328 * 1.13
 \end{aligned}$$

$$\text{FP} = 370$$

For our Project

Productivity = 21.2

Labour Rate = Rs: 11000/- Per month

The formulae are given as follows:

Cost / FP = labour rate / productivity parameter

$$= 11000/21.2$$

$$= 518.86$$

Total Project Cost = FP est. * (cost / FP)

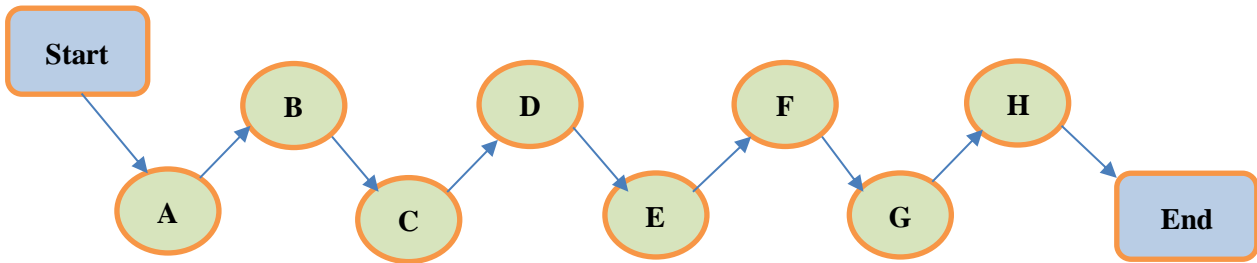
$$= 370 * 518.86$$

$$= \text{Rs: 191981 /-}$$

2.3.2 CPM - Critical Path Method

Description	Activity	Immediate Predecessor	Duration(Week)
SRS Document	A	None	1
Work Plan	B	A	2
Deliverable – 1	C	B	2
Deliverable – 2	D	C	2
Development Phase - 1	F	E	3
Prototype	E	D	2
Development Phase - 2	G	F	4
Final Year Project	H	G	3

2.3.3 Network Diagram



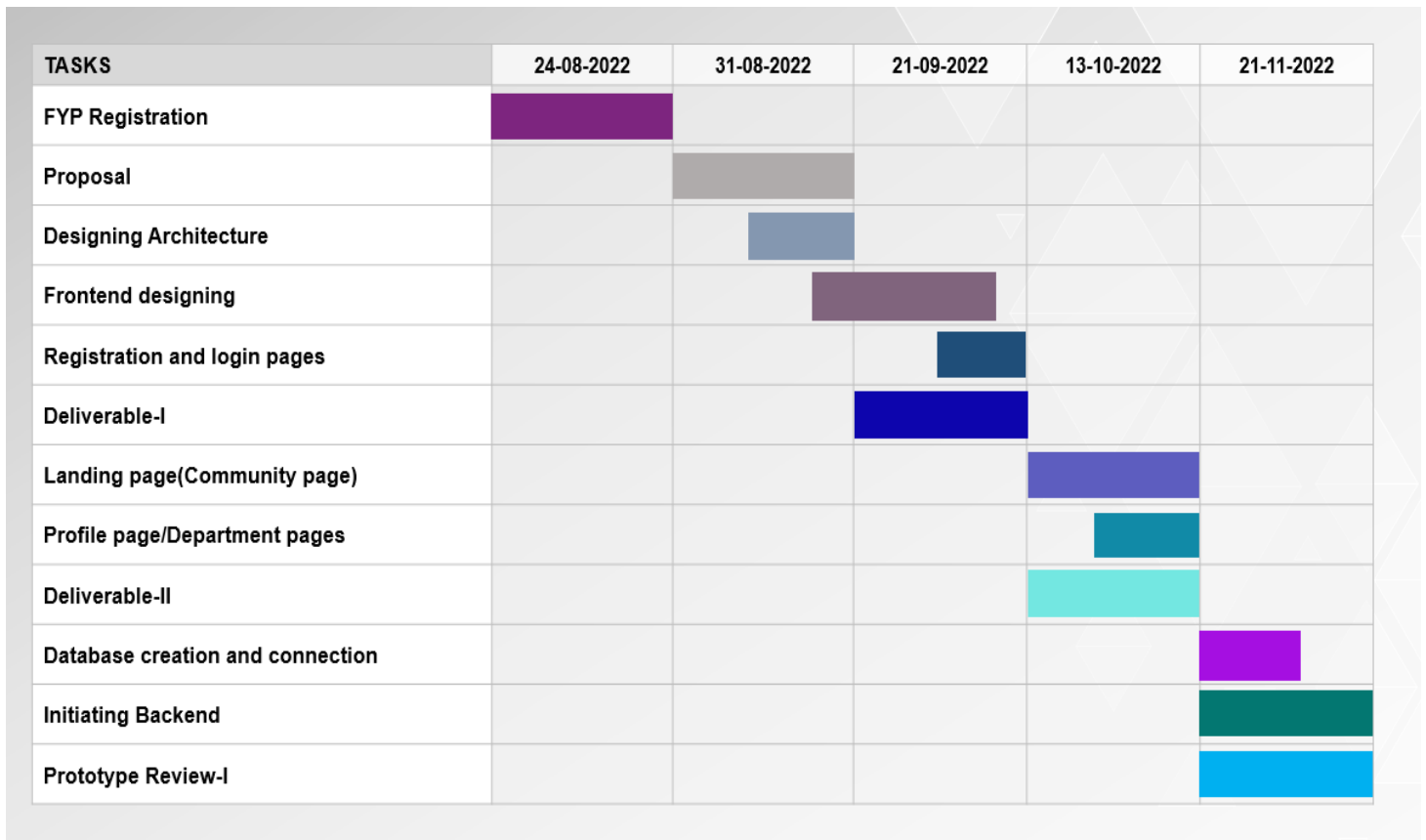
Activity	Duration	ES	EF	LS	LF	TS	FS
A	1	0	1	0	1	0	0
B	2	2	4	2	4	0	0
C	2	3	2	4	4	0	0
D	2	4	6	7	8	0	0
E	3	7	8	3	9	0	0
F	2	3	4	5	7	0	0
G	4	11	11	12	13	0	0
H	3	12	12	15	12	0	0

The Critical Path is:

A→B→C→D→E→F→G→H

2.4 Gantt chart

The Gantt chart usually created by the vertical and horizontal axis in which the activities or working duration is listed on x-axis (horizontally). In the start of the Gantt chart there will be some phases of application which will be Login pages, all Front-end pages. This Gantt chart will identify some major milestones with their achievement criteria, which has to be carried out.



2.5 Introduction to Team members and their skillset

Name	Roll Number	Skills
Muhammad Ali	BSCS-F19-A-01	Documentation and Database
Muhammad Rafey	BSCS-F19-A-07	Backend Development
Zohaib Nazakat	BSCS-F19-A-21	Frontend Development
Musharaf Bashir	BSCS-F19-A-25	Backend Development and Documentation

2.6 Tools and Technology with reasoning

This Web App will be developed by using the following:

- **React.JS:** React is a free and open source front-end JavaScript library for building user interfaces based on UI components
- **Node.JS:** Node.js is an open source, cross platform, back-end JavaScript runtime environment that run on a JavaScript engine and execute JavaScript code outside a web browser.
- **MongoDB:** MongoDB is a cross-platform document-oriented database program. Classified as a NoSQL database program.
- **Express.JS:** Express.js, or simply Express, is a back-end web application framework for Node.js, released as free and open source software. It is used for building web applications
- **Visual Studio Code:** VS Code is a code editor redefined and optimized for building and debugging modern web and cloud applications.
- **Programming Languages:** we are using the following languages in our project:
 - **HTML:** It is for front page designing. It helps us create the basic structure of the website
 - **CSS:** CSS is the language for describing the presentation of Web pages, including layouts and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers.
- **Bootstrap:** Bootstrap is a free, open source front-end development framework for the creation of websites and web apps.

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2.7 Vision Document

UniVerse: A web based Forum Application for University. In the development process of this application our goal is to give online platform to students where they can ask their queries related to university and can get relevant answers through Community Page.

Students can keep themselves updated through Notice Board. Upcoming event's information will be displayed on notice board.

Top 5 Persons with most liked answers will be appreciated on Leader Board. Another objective is to provide admissions information to students who want to take admission in PUJC.

Our mission statement better defines the true purpose of our application and further strengthens our team culture. What unites us is our consistent practice of our core values, practicing a profession in direct alignment with our mission statement. We strive to provide our customers with superior service and market-leading expertise. We are passionate about providing value that others don't have. Enthusiastic honesty and consistently impressive results are hallmarks of our service. Our collaborative spirit and desire to grow help us achieve the goals set. Through our talented people, proven systems and models, and disruptive technology, we aim to change the real estate industry forever. We believe that integrity, teamwork, passion, accountability and a learning mind-set are the key tenets of true success. Our goal is to develop a powerful app for students to make student's life easy.

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3 REQUIREMENTS ENGINEERING

Introduction

We are creating a web-app which will be a solution for many problems. Our web-app is divided into two main parts which are Admin and Users.

In Admin Section, firstly there will be a Log-in page. Through which admin will be authorized to manage the web-app. After login, a dashboard will be displayed It provides convenient shortcut for common management tasks like admins can upload files, Update files and delete certain data files from the web App.

In the User Section, user will sign-up to create a profile to access the Community page of the app, departmental information, Notice board and Leader board.

3.1 Systems Specifications

The following are the clauses that must be included while describing the system specifications:

Introduction

The main goal of our web-app is to provide an online platform where students and teachers can connect with each other directly. Students can ask their queries and can get helpful answers. Students can access digital Noticeboard where they can see the latest on-going events with-in the university. Users can also see the information of departments in department section. Web-app will have a Leader Board section where user with most liked answers will be appreciated.

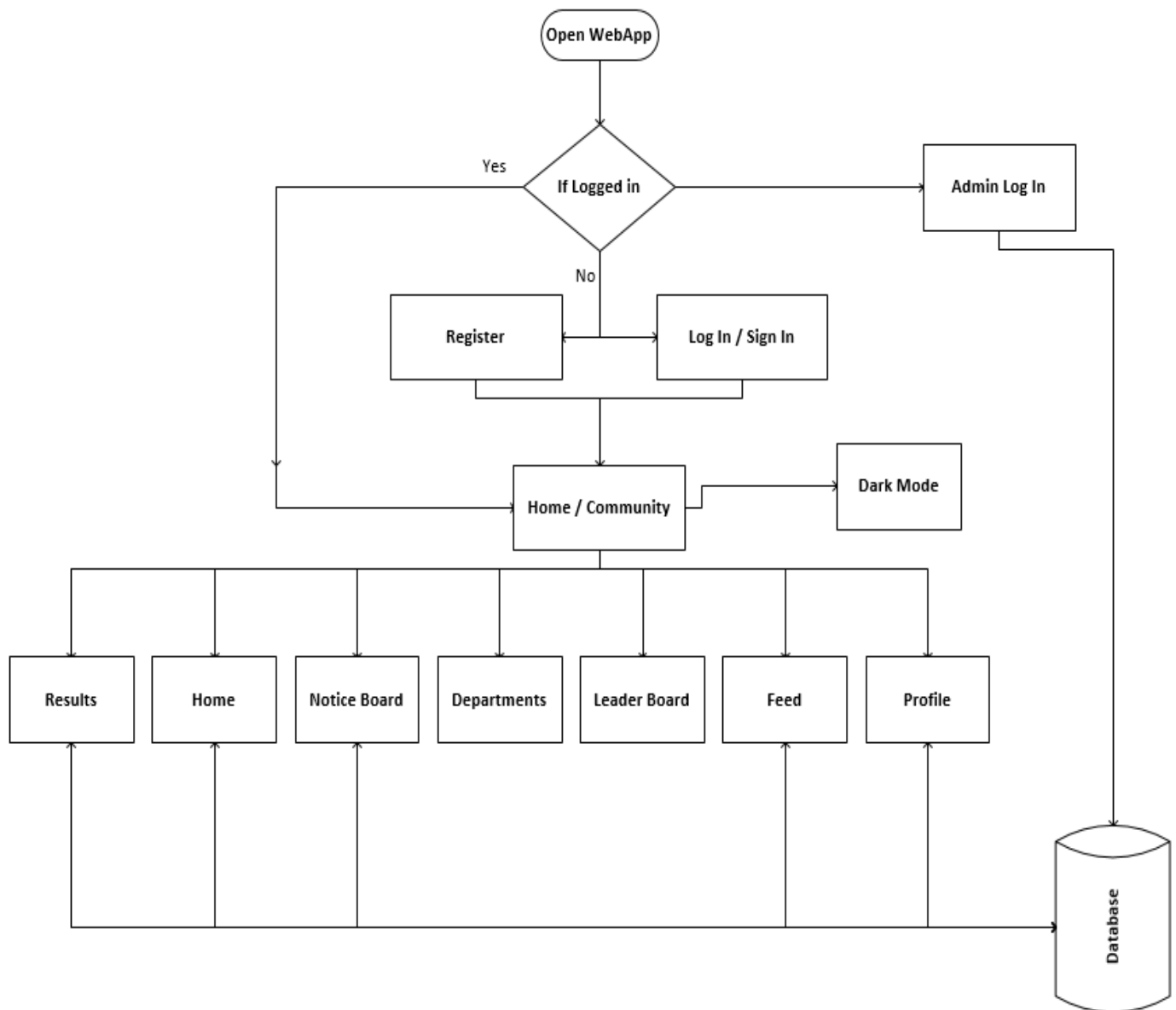
Existing System

There are several websites such as following:

- Quora
- Stackoverflow
- Mimo

These above-mentioned websites and mobile Apps are limited in their services such as the one just offering online community, and the other one is just have community page and leader board. We are offering all functionalities in one place.

3.2 Organizational Chart



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3.3 Scope of the System

UniVerse is divided into two phases.

Phase I

Phase I includes the points of User:

- Profile (Sign-up / Sign-in)
- Ask a Question
- Answer Existing questions
- Like Answers
- Viewing Leader Board
- Viewing Notice Board
- Access Departmental Information

Phase II

Phase II covers administration scope of the App which are:

- Profile (Sign-in)
- Admin Dashboard
- Add, Update, Delete files

3.4 Summary of Requirements (Initial Requirements)

The initial requirements are:

- Responsive web-app compatible on all devices.
- User can easily access all features.
- Direct interaction with other students
- Proper management of Notice Board
- Leader Board management

3.5 Identifying External Entities

The external entities are:

- Admins
- Users

We will make the UniVerse app to make things more comprehensible and understandable.

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The identification of external entities is done in two phases:

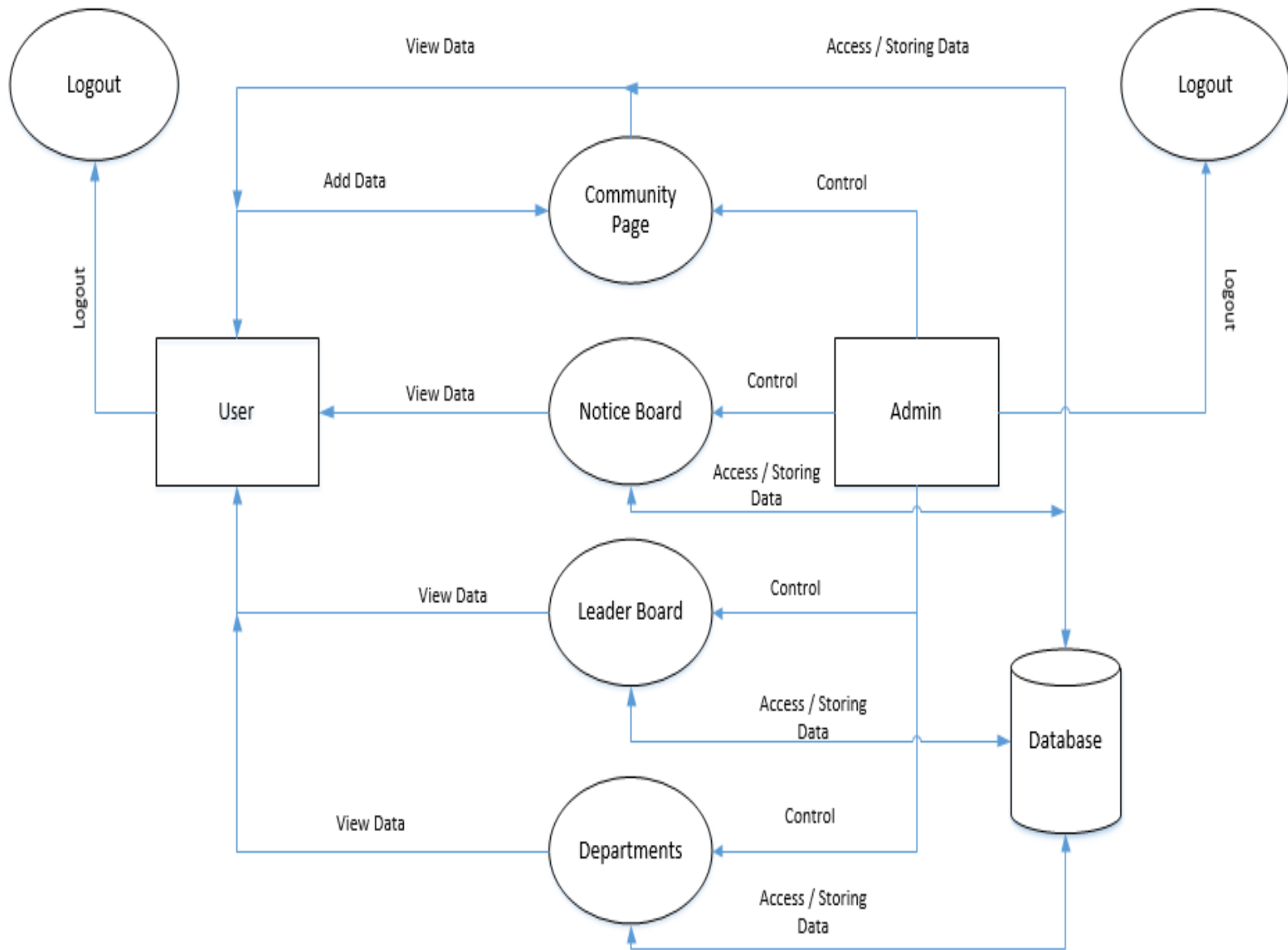
a. Over Specify Entities from Abstract

Under the domain of Community Page, available and existing questions by other user, you can answer those questions that you are knowledgeable about.

b. Perform Refinement

After over specifying the entities, the admin can remove users who try to do spam in answer section or users who will use inappropriate language.

3.6 Context Level Data Flow Diagram



3.7 Capture "shall" Statements and the external entities (Actors)

Para #	External Entity	Initial Requirements
1.0	User	A user “shall” create his/her account and register their self.
1.0	User	A User “shall” login in the web-app.
1.0	User	A user “shall” browse web-app.
1.0	User	A user “shall” browse community Page.
1.0	User	A user “shall” browse Notice board.
1.0	User	A user “shall” browse Leader board.
1.0	User	A user “shall” browse Department Information.
1.0	User	A user “shall” browse Profile Section.
1.0	User	A user “shall” able to change to profile picture.
1.0	User	A user “shall” able to change his username.
1.0	User	A user “shall” able to Ask Question.
1.0	User	A user “shall” able to Answer to a Question.
1.0	User	A user “shall” able to like a Question.
1.0	User	A user “shall” able to dislike a Question.
1.0	User	A user “shall” able to like an Answer.
1.0	User	A user “shall” able to dislike an Answer.
1.0	User	A user “shall” able to logout.
2.0	Admin	Admin “shall” login in the web-app.
2.0	Admin	Admin “shall” View Administrative Dashboard.
2.0	Admin	Admin “shall” able to control Community Page.
2.0	Admin	Admin “shall” able to remove the users.
2.0	Admin	Admin “shall” able to Add/Update/Delete Notice Board.
2.0	Admin	Admin “shall” able to Edit/Update Departmental Information.
2.0	Admin	Admin “shall” able to logout.

3.8 Allocate Requirements

Allocate the requirements in the use cases.

Para #	Initial Requirements	Use Case Name
1.0	A user “shall” create his/her account and register their self.	UC_User_Sign_Up
1.0	A User “shall” login in the web-app.	UC_User_Sign_In
1.0	A user “shall” browse web-app.	UC_User_View_WebApp
1.0	A user “shall” browse community Page.	UC_User_View_CommunityPage
1.0	A user “shall” browse Notice board.	UC_User_View_NoticeBoard
1.0	A user “shall” browse Leader board.	UC_User_View_LeaderBoard
1.0	A user “shall” browse Department Information.	UC_User_View_DepartmentalInformation
1.0	A user “shall” browse Profile Section.	UC_User_View_ProfileSection
1.0	A user “shall” able to change to profile picture.	UC_User_Update_ProfilePicture
1.0	A user “shall” able to change his username.	UC_User_Update_UserName
1.0	A user “shall” able to Ask Question.	UC_User_Ask_Question
1.0	A user “shall” able to Answer to a Question.	UC_User_Answer_Question
1.0	A user “shall” able to like a Question.	UC_User_Like_Question
1.0	A user “shall” able to dislike a Question.	UC_User_Dislike_Question
1.0	A user “shall” able to like an Answer.	UC_User_Like_Answer
1.0	A user “shall” able to dislike an Answer.	UC_User_Dislike_Answer
1.0	A user “shall” able to logout.	UC_User_Log_Out
2.0	Admin “shall” login in the web-app.	UC_Admin_Sign_In
2.0	Admin “shall” View Administrative Dashboard.	UC_User_View_Dashboard
2.0	Admin “shall” able to control Community Page.	UC_Admin_Update_CommunityPage
2.0	Admin “shall” able to remove the users.	UC_Admin_Delete_User
2.0	Admin “shall” able to Add/Update/Delete Notice Board.	UC_Admin_Update_NoticeBoard
2.0	Admin “shall” able to Edit/Update Departmental Information.	UC_Admin_Update_DempartmentalInformation
2.0	Admin “shall” able to logout.	UC_Admin_Log_Out

3.9 Prioritize Requirements

Requirements must be prioritized as this will help achieve tasks easily. Rank them as “highest, medium, and lowest”.

Para #	Rank	Initial Requirements	Use Case ID	Use Case Name
1.0	Highest	A user “shall” create his/her account and register their self.	UC_1.1	UC_User_Sign_Up
1.0	Highest	A User “shall” login in the web-app.	UC_1.2	UC_User_Sign_In
1.0	Medium	A user “shall” browse web-app.	UC_1.3	UC_User_View_WebApp
1.0	Medium	A user “shall” browse community Page.	UC_1.4	UC_User_View_CommunityPage
1.0	Medium	A user “shall” browse Notice board.	UC_1.5	UC_User_View_NoticeBoard
1.0	Medium	A user “shall” browse Leader board.	UC_1.6	UC_User_View_LeaderBoard
1.0	Medium	A user “shall” browse Department Information.	UC_1.7	UC_User_View_DepartmentalInformation
1.0	Medium	A user “shall” browse Profile Section.	UC_1.8	UC_User_View_ProfileSection
1.0	Medium	A user “shall” able to change to profile picture.	UC_1.9	UC_User_Update_ProfilePicture
1.0	Medium	A user “shall” able to change his username.	UC_1.10	UC_User_Update_UserName
1.0	Highest	A user “shall” able to Ask Question.	UC_1.11	UC_User_Ask_Question
1.0	Medium	A user “shall” able to Answer to a Question.	UC_1.12	UC_User_Answer_Question
1.0	Medium	A user “shall” able to like a Question.	UC_1.13	UC_User_Like_Question
1.0	Medium	A user “shall” able to dislike a Question.	UC_1.14	UC_User_Dislike_Question
1.0	Medium	A user “shall” able to like an Answer.	UC_1.15	UC_User_Like_Answer
1.0	Medium	A user “shall” able to dislike an Answer.	UC_1.16	UC_User_Dislike_Answer
1.0	Lower	A user “shall” able to logout.	UC_1.17	UC_User_Log_Out

2.0	Highest	Admin “shall” login in the web-app.	UC_2.1	UC_Admin_Sign_In
2.0	Highest	Admin “shall” View Administrative Dashboard.	UC_2.2	UC_User_View_Dashboard
2.0	Highest	Admin “shall” able to control Community Page.	UC_2.3	UC_Admin_Update_CommunityPage
2.0	Medium	Admin “shall” able to remove the users.	UC_2.4	UC_Admin_Delete_User
2.0	Highest	Admin “shall” able to Add/Update/Delete Notice Board.	UC_2.5	UC_Admin_Update_NoticeBoard
2.0	Highest	Admin “shall” able to Edit/Update Departmental Information.	UC_2.6	UC_Admin_Update_DepartmentalInformation
2.0	Lower	Admin “shall” able to logout.	UC_2.7	UC_Admin_Log_Out

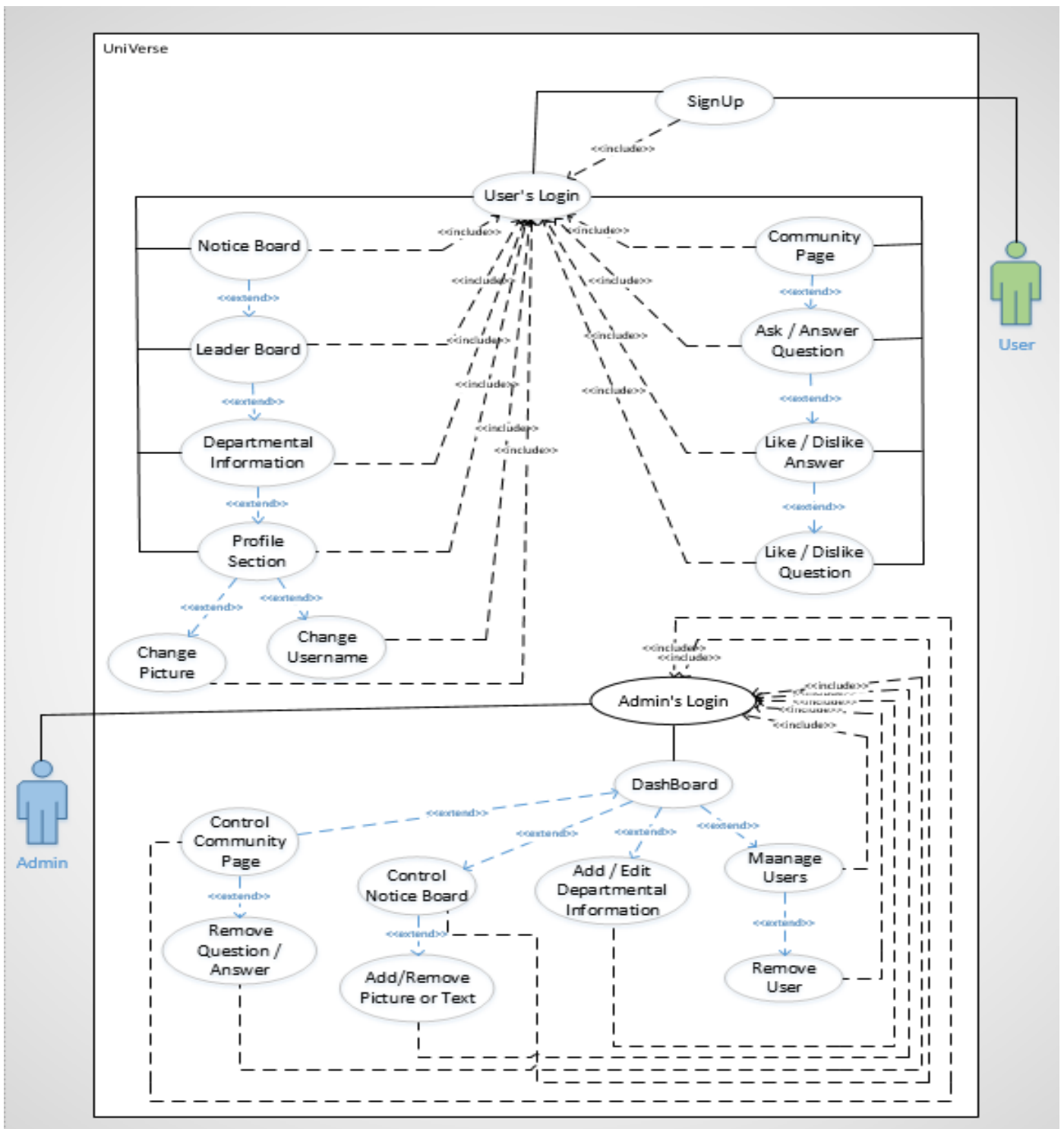
3.10 Requirements Trace-ability Matrix

Sr #	Para #	System Specification Test	Bui Id	Use Case Name	Category
1	1.0	A user “shall” create his/her account and register their self.	B1	UC_User_Sign_Up	Business
2	1.0	A User “shall” login in the web-app.	B1	UC_User_Sign_In	Business
3	1.0	A user “shall” browse web-app.	B1	UC_User_View_WebApp	Business
4	1.0	A user “shall” browse community Page.	B1	UC_User_View_CommunityPage	Business
5	1.0	A user “shall” browse Notice board.	B1	UC_User_View_NoticeBoard	Business
6	1.0	A user “shall” browse Leader board.	B1	UC_User_View_LeaderBoard	Business
7	1.0	A user “shall” browse Department Information.	B1	UC_User_View_DepartmentalInformation	Business
8	1.0	A user “shall” browse Profile Section.	B1	UC_User_View_ProfileSection	Business
9	1.0	A user “shall” able to change to profile picture.	B1	UC_User_Update_ProfilePicture	Business
10	1.0	A user “shall” able to change his username.	B1	UC_User_Update_UserName	Business
11	1.0	A user “shall” able to Ask Question.	B1	UC_User_Ask_Question	Business
12	1.0	A user “shall” able to Answer to a Question.	B1	UC_User_Answer_Question	Business
13	1.0	A user “shall” able to like a Question.	B1	UC_User_Like_Question	Business
14	1.0	A user “shall” able to dislike a Question.	B1	UC_User_Dislike_Question	Business
15	1.0	A user “shall” able to like an Answer.	B1	UC_User_Like_Answer	Business
16	1.0	A user “shall” able to dislike an Answer.	B1	UC_User_Dislike_Answer	Business
17	1.0	A user “shall” able to logout.	B1	UC_User_Log_Out	Business

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18	2.0	Admin “shall” login in the web-app.	B1	UC_Admin_Sign_In	Business
19	2.0	Admin “shall” View Administrative Dashboard.	B1	UC_User_View_Dashboard	Business
20	2.0	Admin “shall” able to control Community Page.	B1	UC_Admin_Update_CommunityPage	Business
21	2.0	Admin “shall” able to remove the users.	B1	UC_Admin_Delete_User	Business
22	2.0	Admin “shall” able to Add/Update/Delete Notice Board.	B1	UC_Admin_Update_NoticeBoard	Business
23	2.0	Admin “shall” able to Edit/Update Departmental Information.	B1	UC_Admin_Update_DempartmentalInformation	Business
24	2.0	Admin “shall” able to logout.	B1	UC_Admin_Log_Out	Business

3.11 High-level Use case Diagram



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4 Use cases

4.1 Use case Description

Actor represents 2 characters of this project

- Admin
- User

4.1.1 UC_Admin_Sign_In

Brief description

The use case begins when the actor indicates the intent to log-in to the web-app. It ends when the actor is login or cancels the login.

Preconditions

Admin has an account and a registered password. Admin details, and needed information.

Basic flow

1. Enter email. Enter Password. Submit.
2. Validate email and password.
3. Allow access to the webpage or the system.
4. If Admin enters invalid Email address
5. Error message should be generated
6. If Admin enters invalid Password. Error message generated

Alternate flows

1. Admin cannot get access to login unless he/she have signed up

Post conditions

If the Admin has successfully entered his details and have login successfully. Now Admin can access the Dashboard of the web-app.

4.1.2 UC_Admin_Update_CommunityPage

Brief description

This use case begins when actor will be logged in successfully and click on the Community page button. It ends when the actor will visit another option in the dashboard.

Preconditions

1. The system should be connected to the internet.
2. Admin must have logged in first and see the dashboard of the web-app.

Basic flow

1. Admin will click on the community page button.
2. Admin can see the all the questions and answers posted in the community page.
3. Admin can delete inappropriate questions and spams.

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Alternate flows

1. Admin will click on the community page button.
2. Admin can see the all the questions and answers posted in the community page.
3. If everything is all good then admin can move onto the next options.

Post conditions

Admin can visit other options (Notice Board and Departments sections).

4.1.3 UC_Admin_Update_NoticeBoard

Brief description

This use case begins when actor will be logged in successfully and click on the Notice Board button. It ends when the actor will visit another option in the dashboard.

Preconditions

1. The system should be connected to the internet.
2. Admin must have logged in first and see the dashboard of the web-app.

Basic flow

1. Admin will click on the Notice Board button.
2. Admin can see the all the Posts (Pictures and text) and can add, delete posts in the Noticeboard section.

Alternate flows

1. Admin will click on the Notice Board button.
2. Admin can see the all the Posts (Pictures and text).
3. If everything is all good then admin can move onto the next options.

Post conditions

Admin can visit other options (Community Page and Departments sections).

4.1.4 UC_Admin_Update_DepartmentalInformation

Brief description

This use case begins when actor will be logged in successfully and click on the Departments button. It ends when the actor will visit another option in the dashboard.

Preconditions

1. The system should be connected to the internet.
2. Admin must have logged in first and see the dashboard of the web-app.

Basic flow

1. Admin will click on the Departments button.
2. Admin can see the all the Departmental pictures, texts and tables and can add, delete information in the Departments section.

Alternate flows

1. Admin will click on the Departments button.
2. Admin can see the all the Departmental pictures, texts and tables
3. If everything is all good then admin can move onto the next options.

Post conditions

Admin can visit other options (Community Page and Departments sections).

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4.1.5 UC_Admin_LogOut

Brief description

An admin logout from the web-app.

Preconditions

1. The system should be connected to the internet.
2. Admin must have logged in first.

Basic flow

1. Press the logout button to logout from the system.
2. Admin is not logged in then admin cannot be logged out.

Alternate flows

1. Admin has not logged out and left the web-app.

Post conditions

If the Admin can log out without any error. The web-app should work promptly.

4.1.6 UC_User_Sign_Up

Brief description

An actor signs up to login and access the functionality of the webpage.

Preconditions

An Actor have email address or phone number to register himself. And all the needed information of an Actors.

Basic flow

1. Enter username.
2. Enter email address.
3. Enter other personal details.
4. Enter password.
5. Submit.
6. Validate input fields.
7. Allow user to register into the web-app or the system.
8. Invalid input field(s). Error message generated.
9. If the user already exists. Error message generated.

Alternate flows

1. User may use email address.
2. User wouldn't be able to get registered to the system if he/she have already signed up.
3. Incorrect input fields.
4. If user already exists.

Post conditions

If the user can sign up. And also get to know if he's is successfully signed up or not. If user already exist then he gets a message.

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4.1.7 UC_User_Sign_In

Brief description

The use case begins when the actor indicates the intent to log-in to the web-app. It ends when the actor is login or cancels the login.

Preconditions

User has an account and a registered password. User details, and needed information.

Basic flow

1. Enter email. Enter Password. Submit.
2. Validate email and password.
3. Allow access to the webpage or the system.
4. If user enters invalid Email address
5. Error message should be generated
6. If user enters invalid Password. Error message generated

Alternate flows

1. User cannot get access to login unless he/she have signed up.

Post conditions

If the User has successfully entered his details and have login successfully. Now User can access the Community Page and other features of the web-app.

4.1.8 UC_User_View_CommunityPage

Brief description

This use case begins when actor will be logged in successfully and landed on the Community page. It ends when the actor will visit another option from the navigation bar.

Preconditions

1. The system should be connected to the internet.
2. User must have logged in first and see the Community page of the web-app.

Basic flow

1. User can see the all the questions and answers posted in the community page by other users.

Alternate flows

1. User can see the all the questions and answers posted in the community page.
2. User can move onto the next options by clicking on any option from the Navigation-bar or side-bar

Post conditions

User can visit other options (Notice Board, Leader Board and Departments sections).

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4.1.9 UC_User_View_NoticeBoard

Brief description

This use case begins when actor will be logged in successfully and click on Notice Board option from the Navigation-bar. It ends when the actor will visit another option from the navigation bar.

Preconditions

1. The system should be connected to the internet.
2. User must have logged in first and see the Community page of the web-app.
3. User click on the Notice Board Button from the navigation-bar.

Basic flow

1. User can see all the Posts (Pictures and texts) and up-coming events information in noticeboard section.

Alternate flows

1. User can see the Posts (Pictures and texts) and up-coming events information.
2. User can move onto the next options by clicking on any option from the Navigation-bar or side-bar

Post conditions

User can visit other options (Community Page, Leader Board and Departments sections).

4.1.10 UC_User_View_LeaderBoard

Brief description

This use case begins when actor will be logged in successfully and click on Leader Board option from the Navigation-bar. It ends when the actor will visit another option from the navigation bar.

Preconditions

1. The system should be connected to the internet.
2. User must have logged in first and see the Community page of the web-app.
3. User click on the Leader Board Button from the navigation-bar.

Basic flow

1. User can see top 10 people ranked on basis of their likes and dislikes ratio on their questions and answers in Leader Board section.

Alternate flows

1. User can see top 10 ranked people.
2. User can move onto the next options by clicking on any option from the Navigation-bar or side-bar

Post conditions

User can visit other options (Community Page, Notice Board and Departments sections).

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4.1.11 UC_User_View_DepartmentalInformation

Brief description

This use case begins when actor will be logged in successfully and click on Departments option from the Navigation-bar. It ends when the actor will visit another option from the navigation bar.

Preconditions

1. The system should be connected to the internet.
2. User must have logged in first and see the Community page of the web-app.
3. User click on the Departments Button from the navigation-bar.

Basic flow

1. User can see every information about all the departments in the university.
2. User can read all the information of a certain department for example Fee structure of all the semesters in individual department, Road-map etc.

Alternate flows

1. User can see every information about all the departments in the university
2. User can move onto the next options by clicking on any option from the Navigation-bar or side-bar

Post conditions

User can visit other options (Community Page, Leader Board and Notice Board).

4.1.12 UC_User_Update_ProfileSection

Brief description

This use case begins when actor will be logged in successfully and click on Profile option from the Navigation-bar. It ends when the actor will visit another option from the navigation bar.

Preconditions

1. The system should be connected to the internet.
2. User must have logged in first and see the Community page of the web-app.
3. User click on the Profile Button from the navigation-bar.

Basic flow

1. User can see their username that has been used and registered in the database of the web-app.
2. User wants to edit/rename his/her username.
3. User click on the edit button beside the username.
4. User enter new name and click on the submit button.
5. Username will be updated.
6. A success message will be displayed.

Alternate flows

1. User can see their username and logout button.
2. User don't want to change their username and move onto the next option from the navigation-bar or can logout.

Post conditions

A successfully updated message will be displayed. If not then Profile not updated and a failed message will be popped up.

4.1.13 UC_User_Ask_Question

Brief description

This use case begins when actor will be logged in successfully and landed on the Community page and click on the Ask Question button in the community page. It ends when the actor will visit another option from the navigation bar.

Preconditions

1. The system should be connected to the internet.
2. User must have logged in first and see the Community page of the web-app.
3. User click on the Ask Question Button in the community page.

Basic flow

1. User will click on the Ask Question button.
2. A text box will open with submit and a cancel button.
3. User will write their question in the input field and click on the submit button.
4. The community page will reload and question will be posted on the top of the community page.
5. A success message will be displayed.

Alternate flows

1. User can click on the Ask Question button.
2. If user have no question to ask.
3. User can click on the cancel button.

Post conditions

A successfully uploaded message will be displayed. If not then Question has not been uploaded and a failed message will be popped up.

4.1.14 UC_User_Answer_Question

Brief description

This use case begins when actor will be logged in successfully and landed on the Community page and click on the answer icon on any question posted in community page. It ends when the actor will visit another option from the navigation bar.

Preconditions

1. The system should be connected to the internet.
2. User must have logged in first and see the Community page of the web-app.
3. User click on the Answer icon on any question posted in the community page.

Basic flow

1. User will click on the Answer icon on any question posted in the community page.
2. A text box will open with Question written on the top, an input field to write their answer and submit and a cancel button at the bottom.
3. User will write their Answer in the input field and click on the submit button.
4. The community page will reload and Answer will be posted on the bottom of the question in community page.
5. A success message will be displayed.

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Alternate flows

1. User can click on the Answer icon
2. If user have no Answer to post.
3. User can click on the cancel button.

Post conditions

A successfully uploaded message will be displayed. If not then Answer has not been uploaded and a failed message will be popped up.

4.1.15 UC_User_LogOut

Brief description

A User logout from the web-app.

Preconditions

1. The system should be connected to the internet.
2. User must have logged in first.

Basic flow

1. Press the logout button to logout from the system.
2. User is not logged in then user cannot be logged out.

Alternate flows

1. User has not logged out and left the web-app.

Post conditions

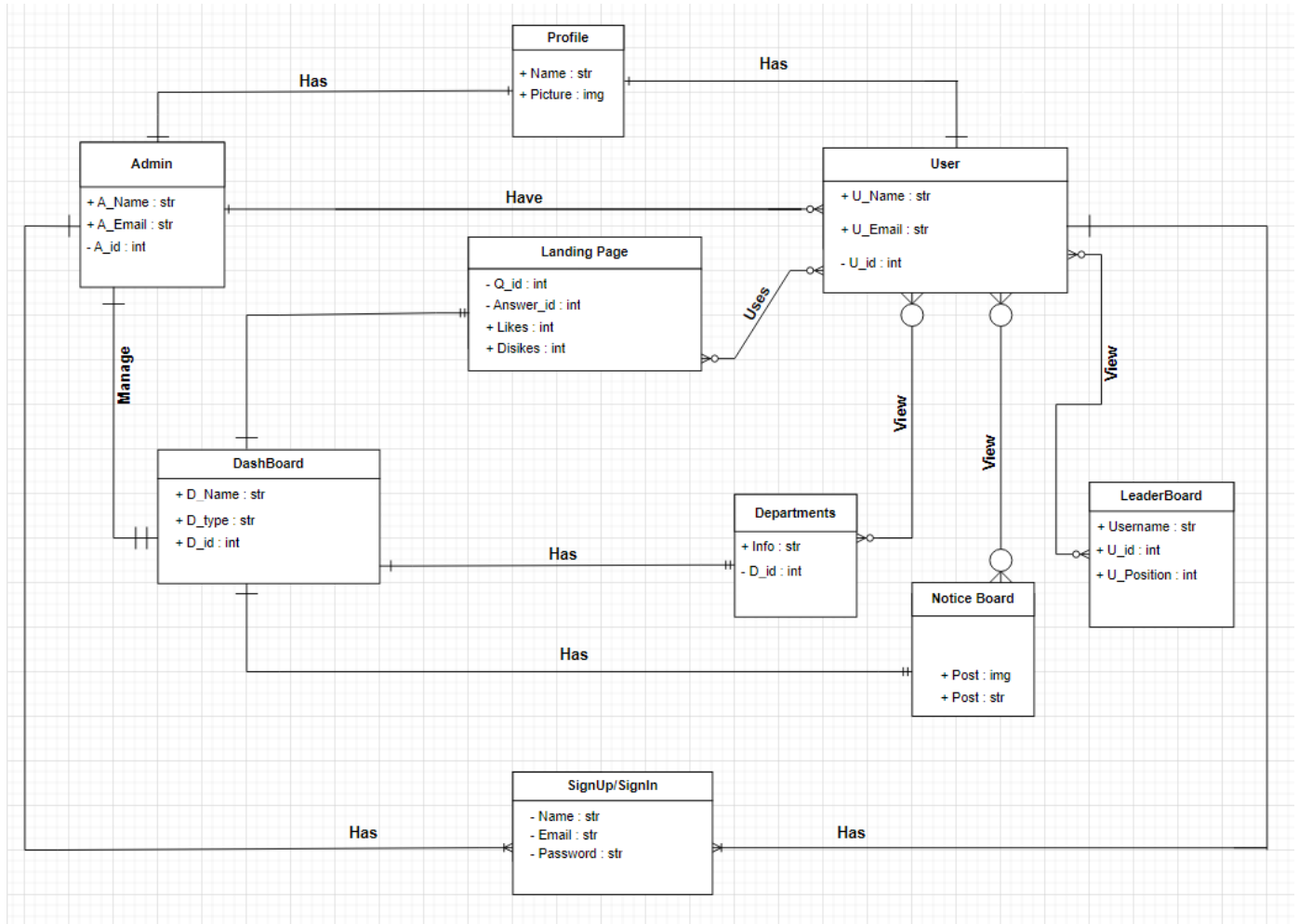
If the User can log out without any error. The web-app should work promptly.

4.3 Data Model

The data model is a subset of the implementation model, which describes the logical and physical representation of persistent data in the system.

Data model diagram:

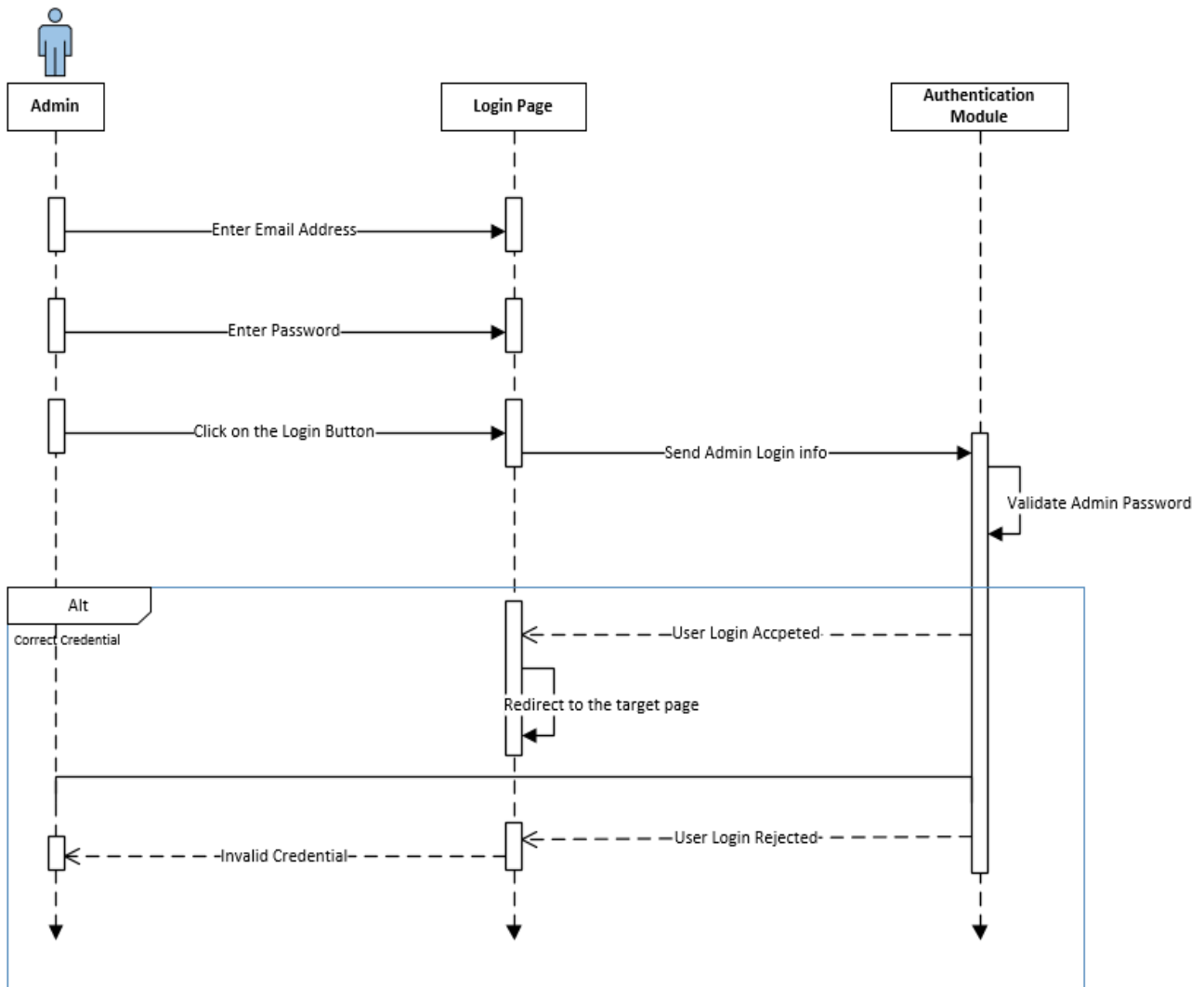
The diagram is:



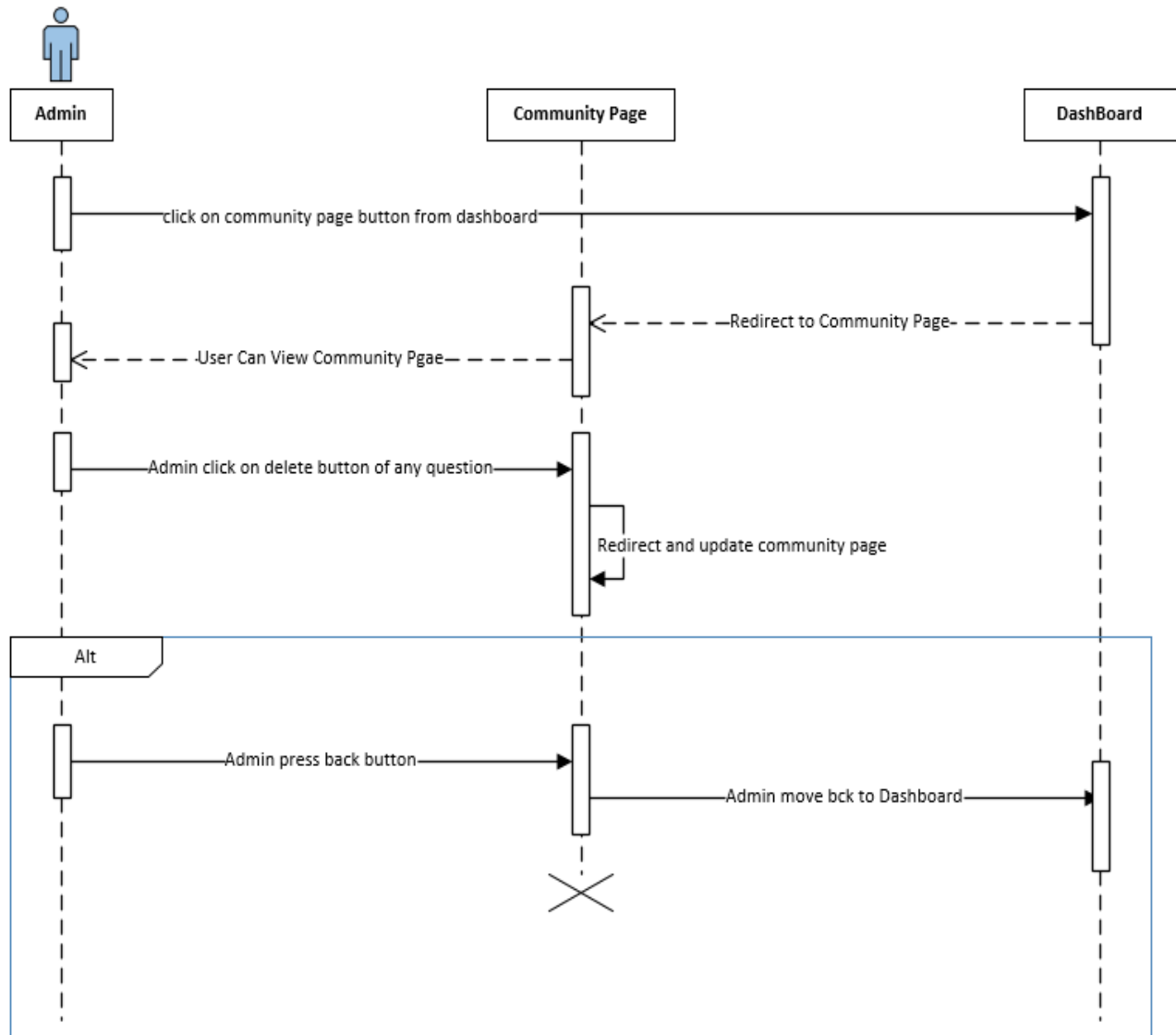
5 Sequence Diagram

A sequence diagram shows the order in which events take place in a system. A Sequence diagram depicts the invocation of methods in each object and the order in which they happen.

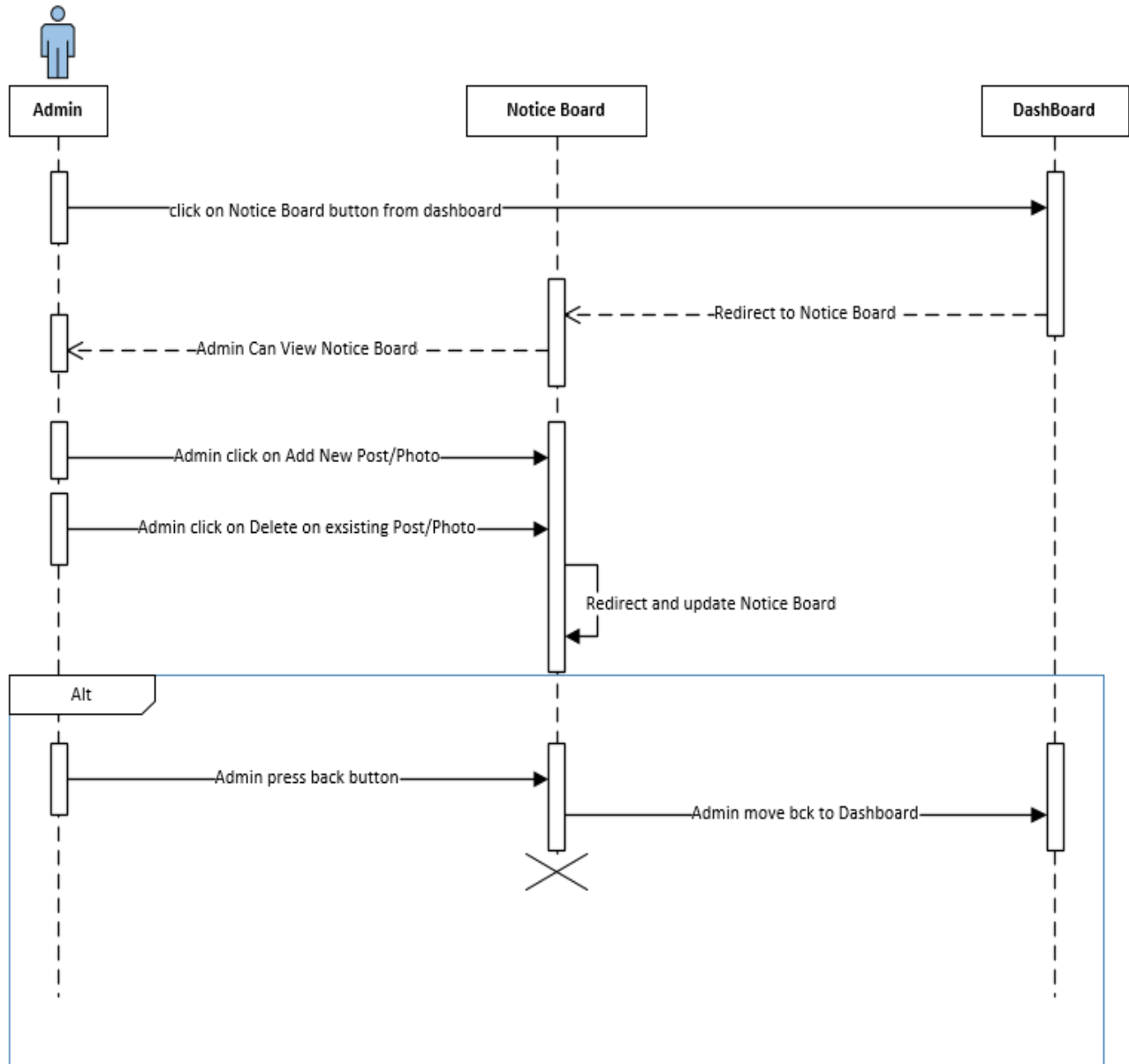
5.1 SQ_Admin_Login



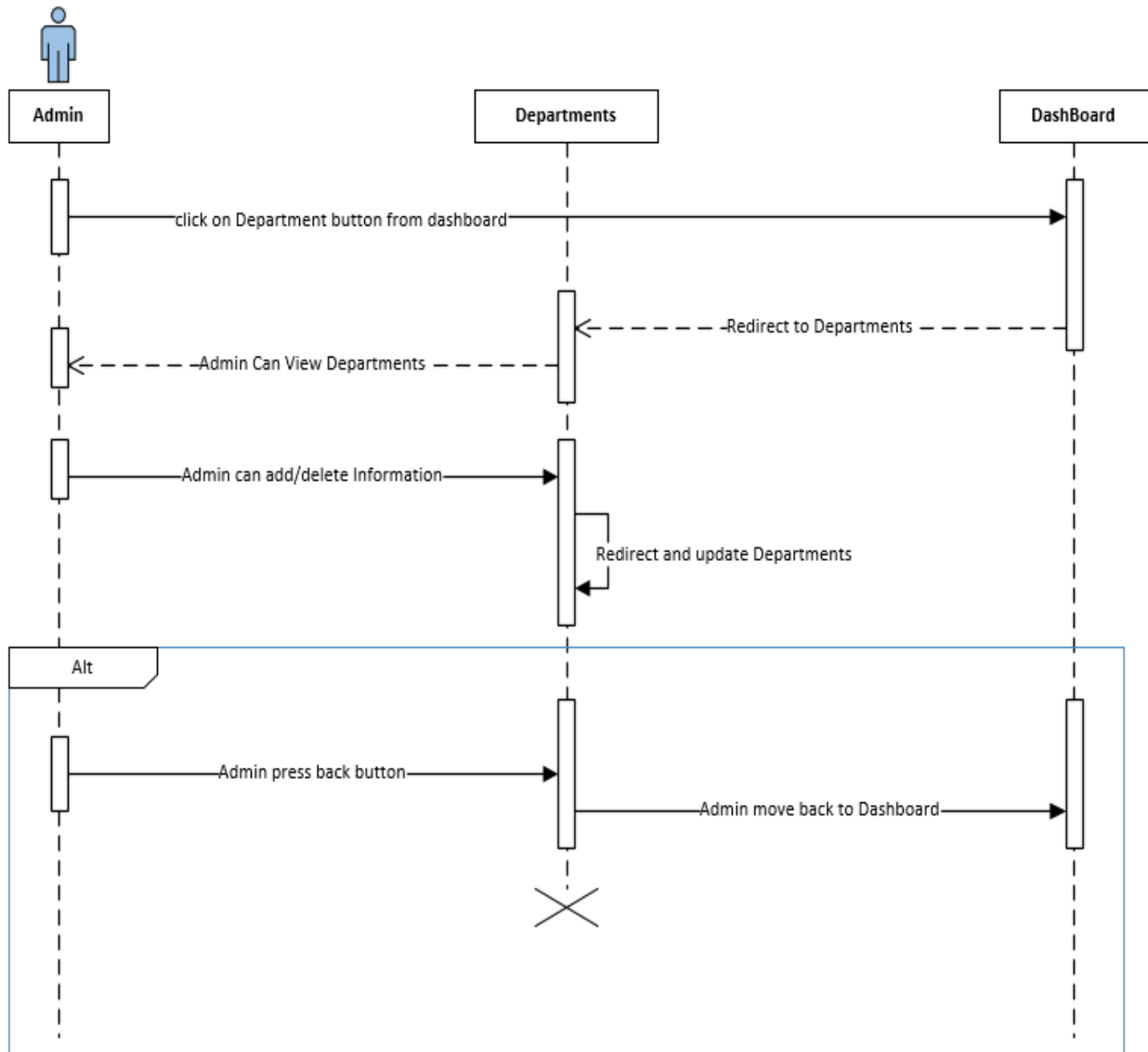
5.2 SQ_Admin_Update_CommunityPage



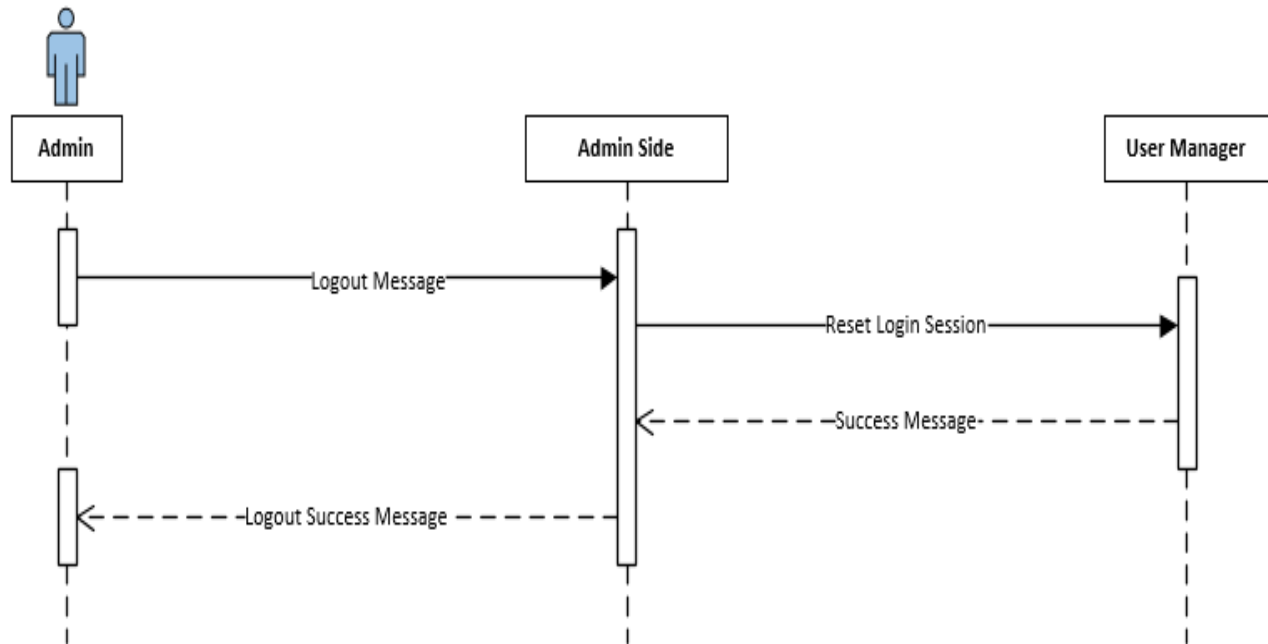
5.3 SQ_Admin_Update_NoticeBoard



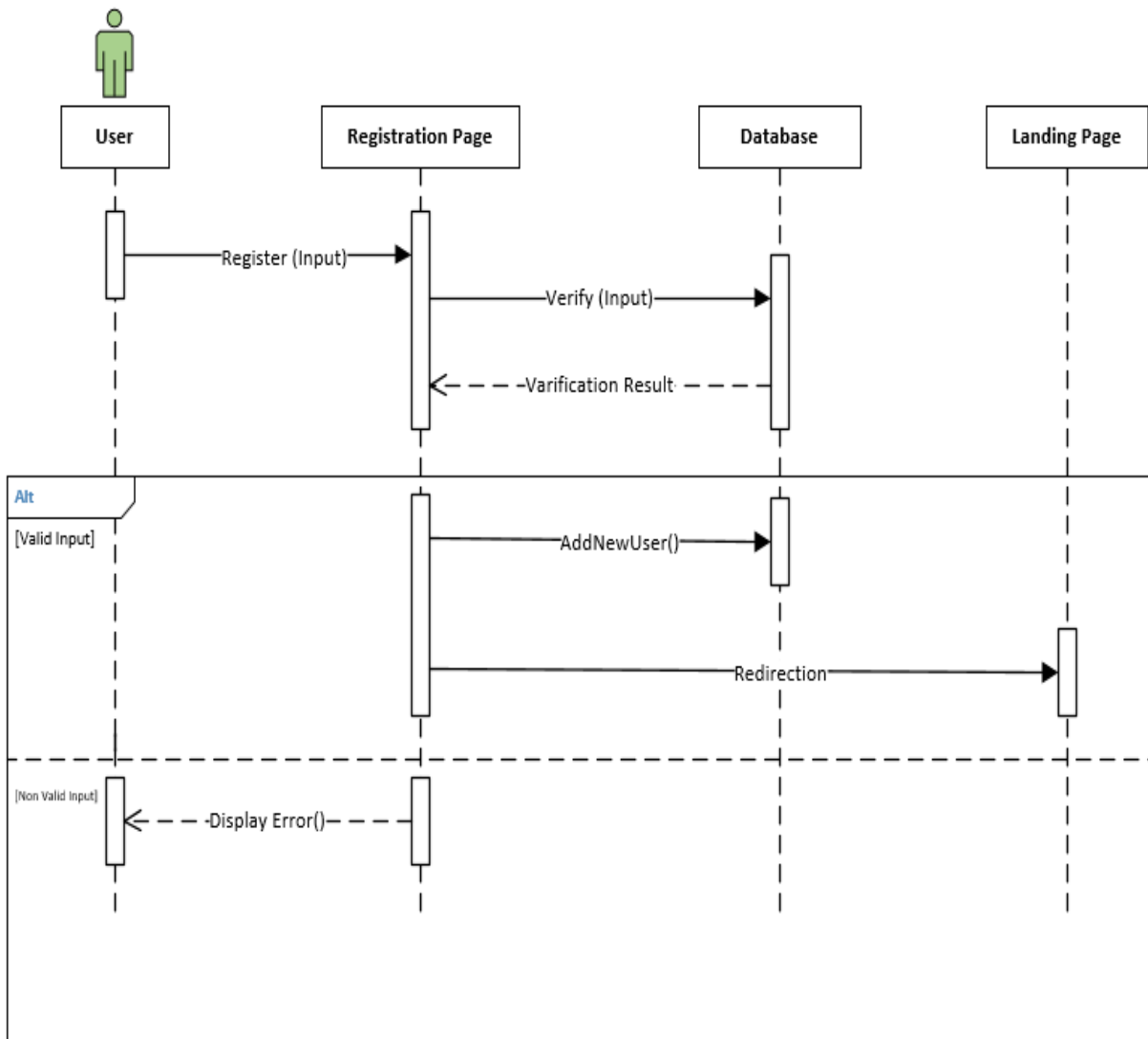
5.4 SQ_Admin_DepartmentalInformation



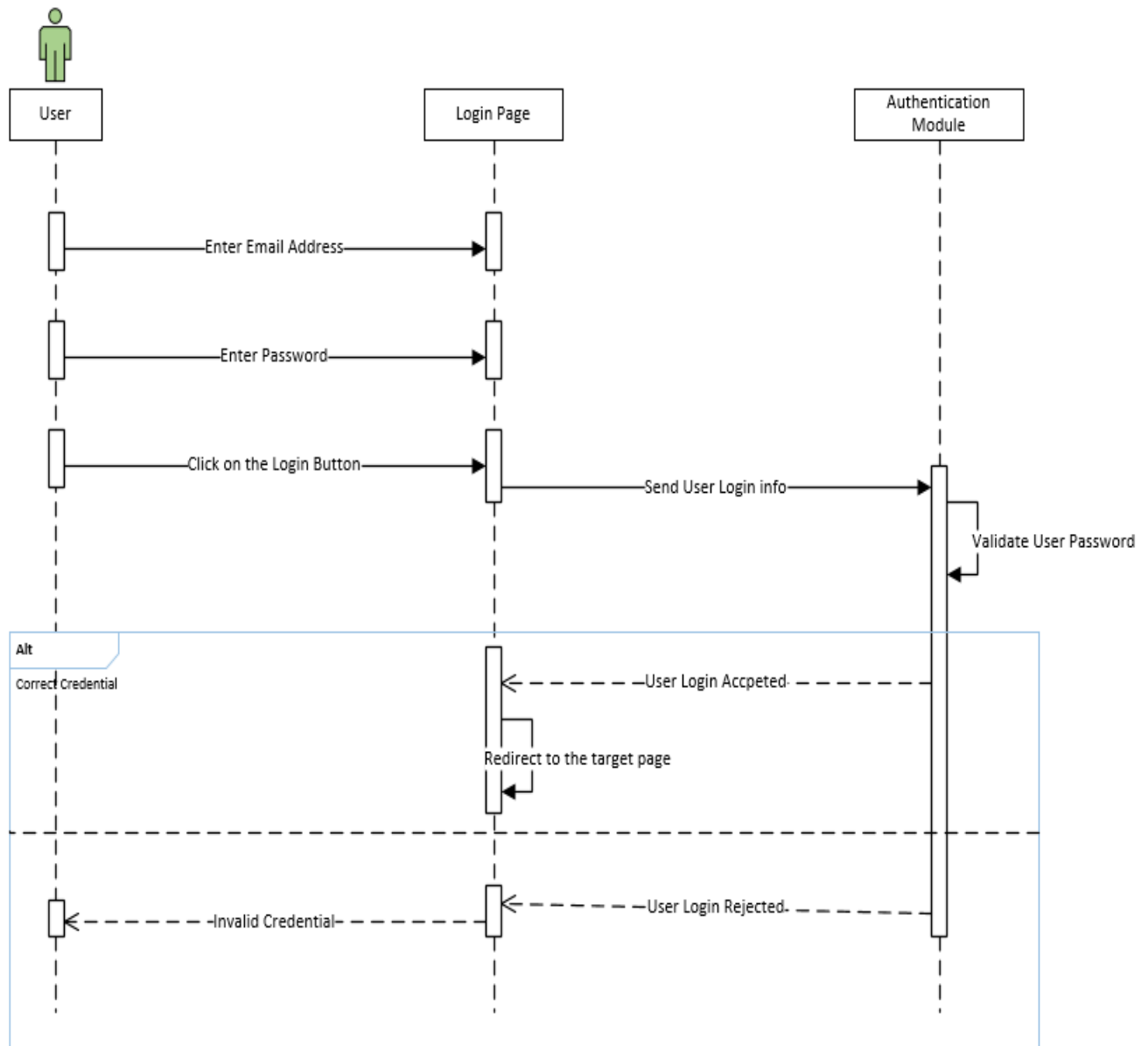
5.5 SQ_Admin_LogOut



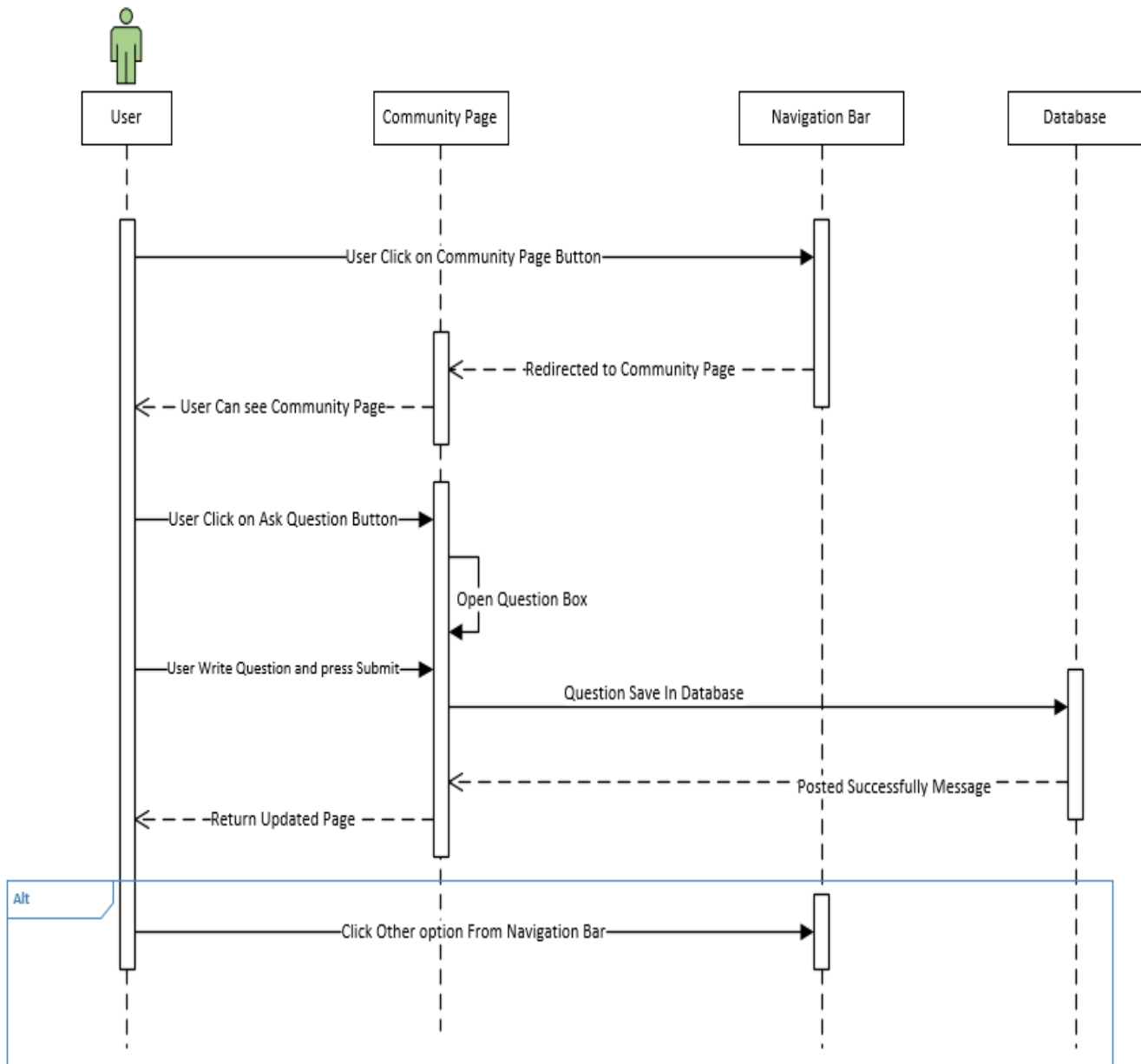
5.6 SQ_User_SignUp



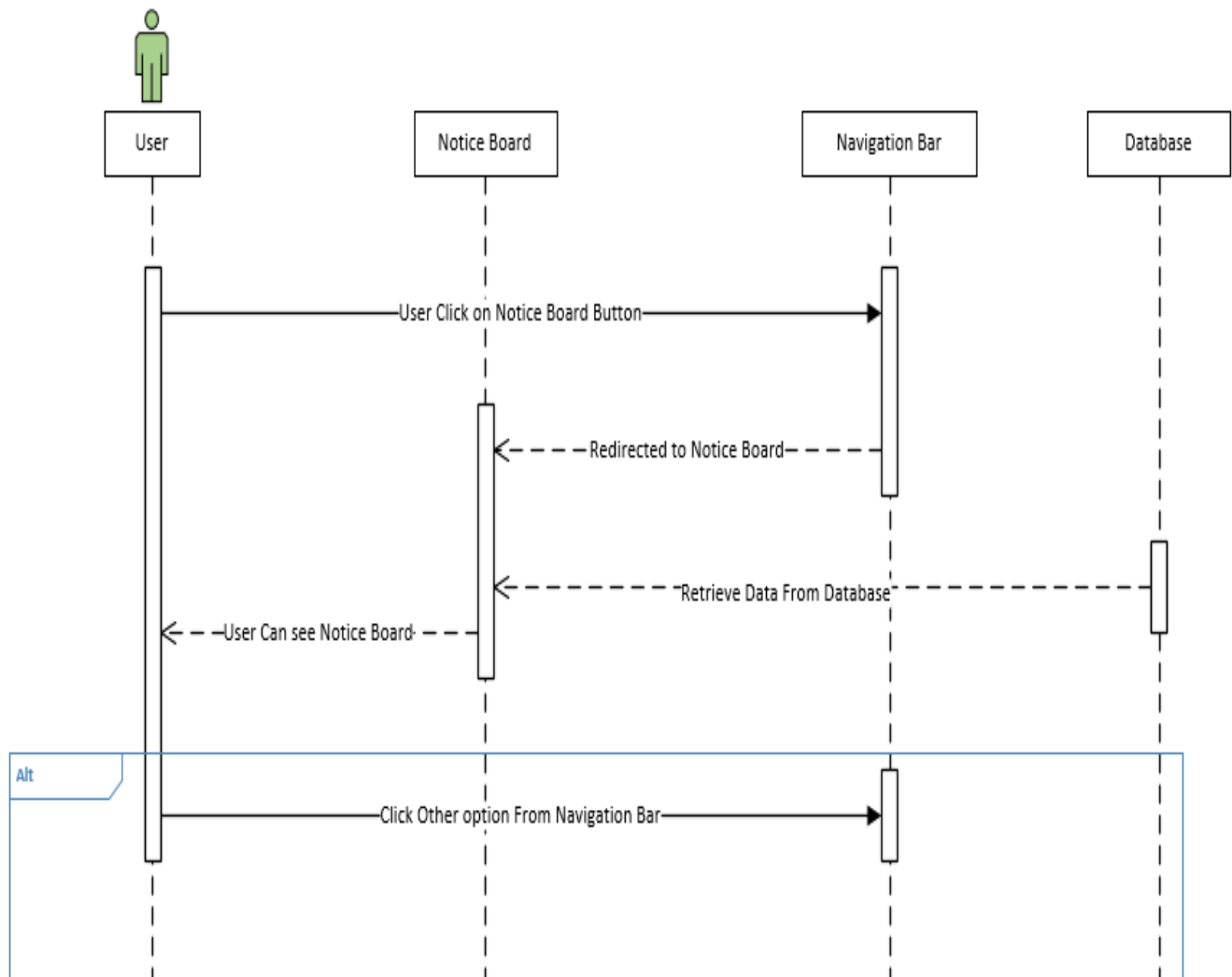
5.7 SQ_User_SignIn



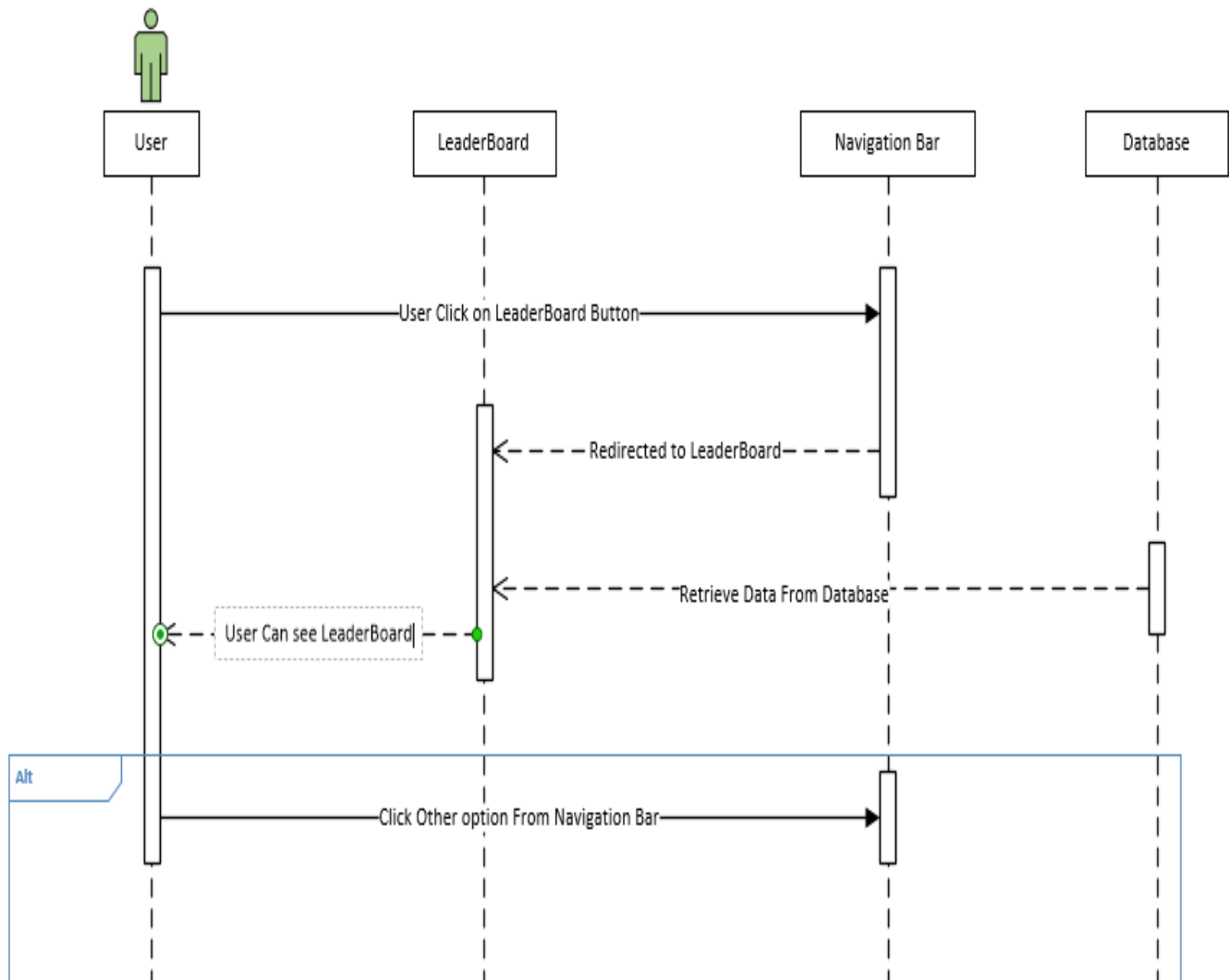
5.8 SQ_User_View and AskQuestion_CommunityPage



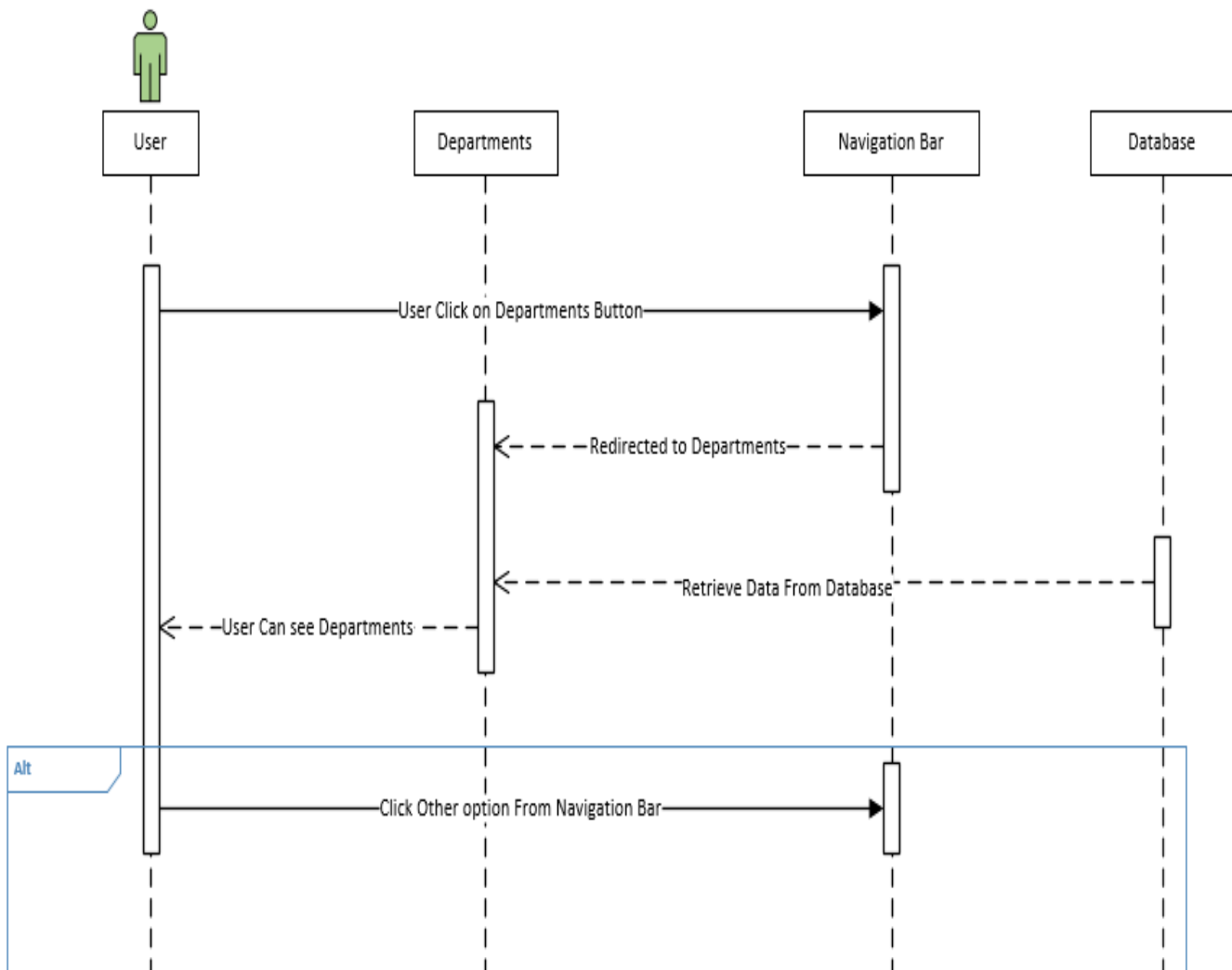
5.9 SQ_User_View_NoticeBoard



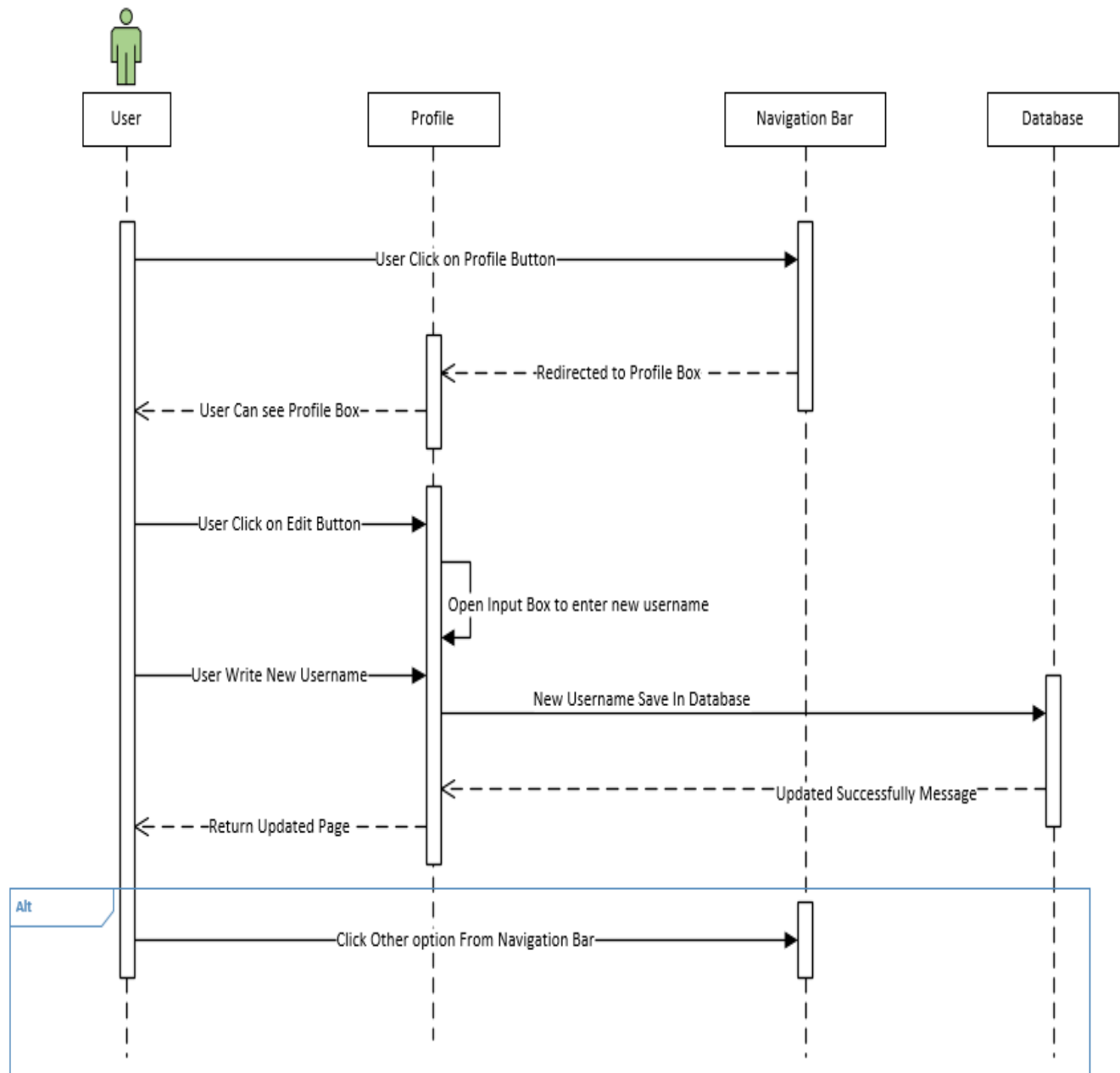
5.10 SQ_User_View_LeaderBoard



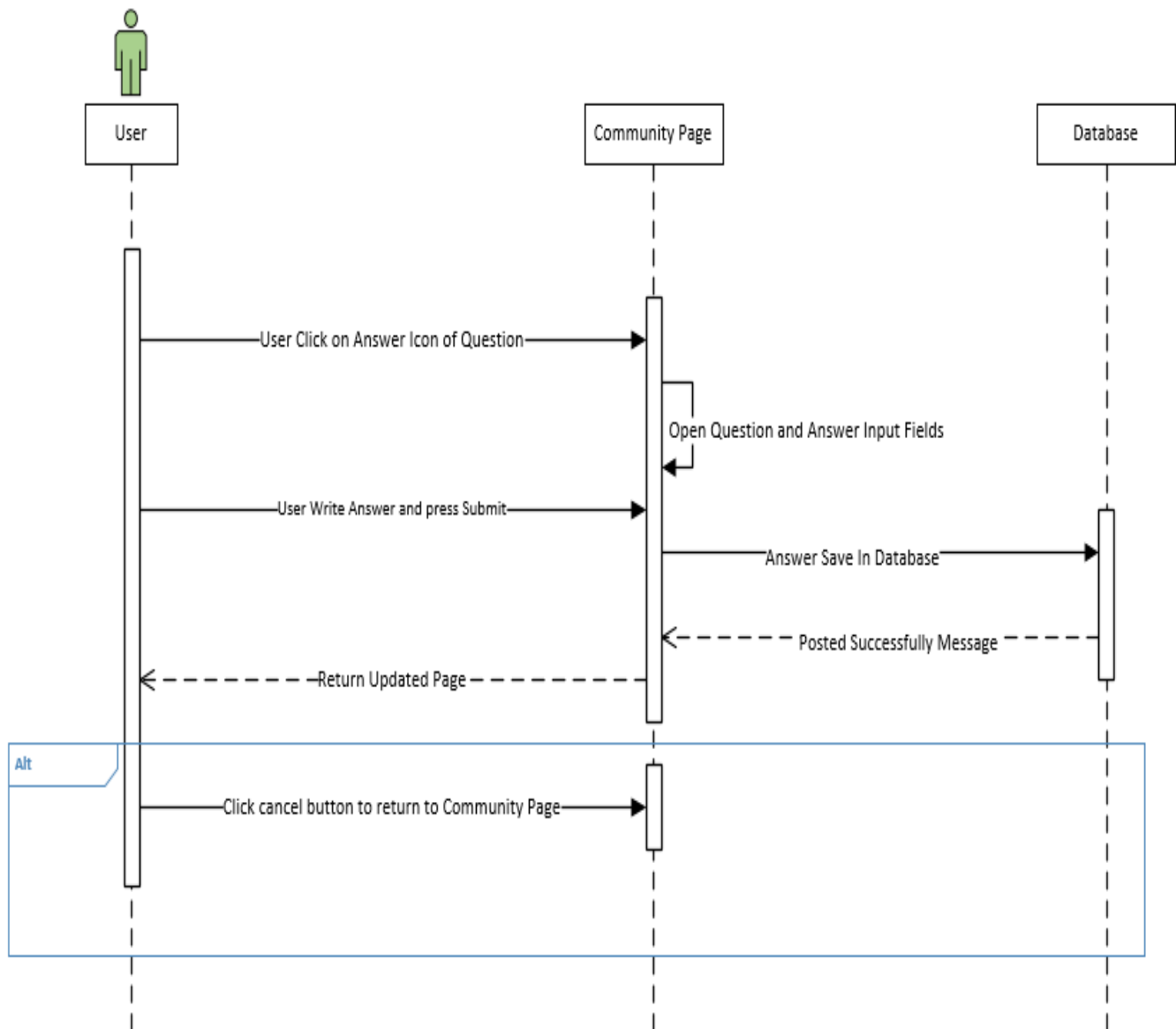
5.11 SQ_User_View_Departments



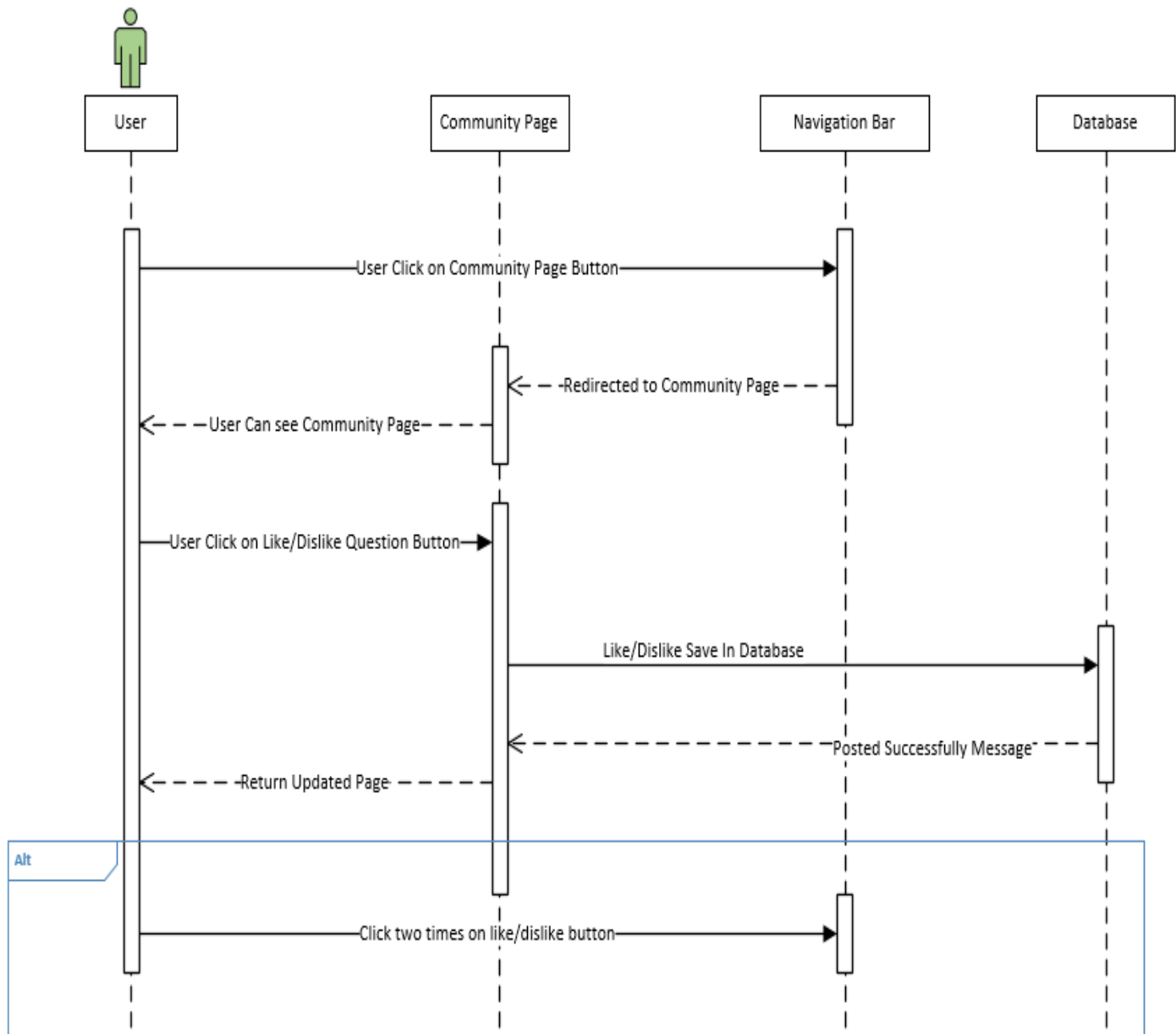
5.12 SQ_User_View and Edit_ProfileSection



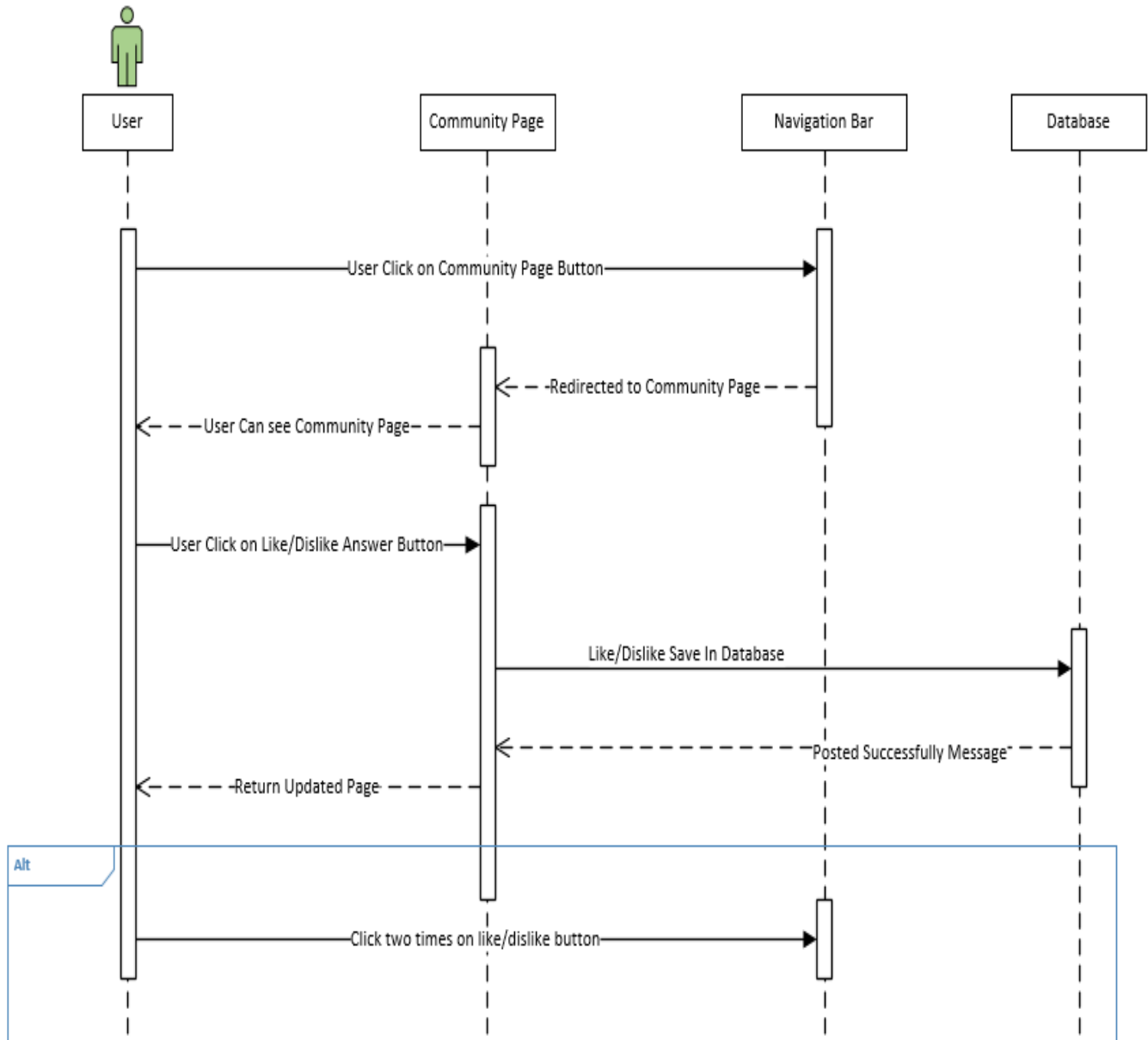
5.13 SQ_User_AnswerQuestion



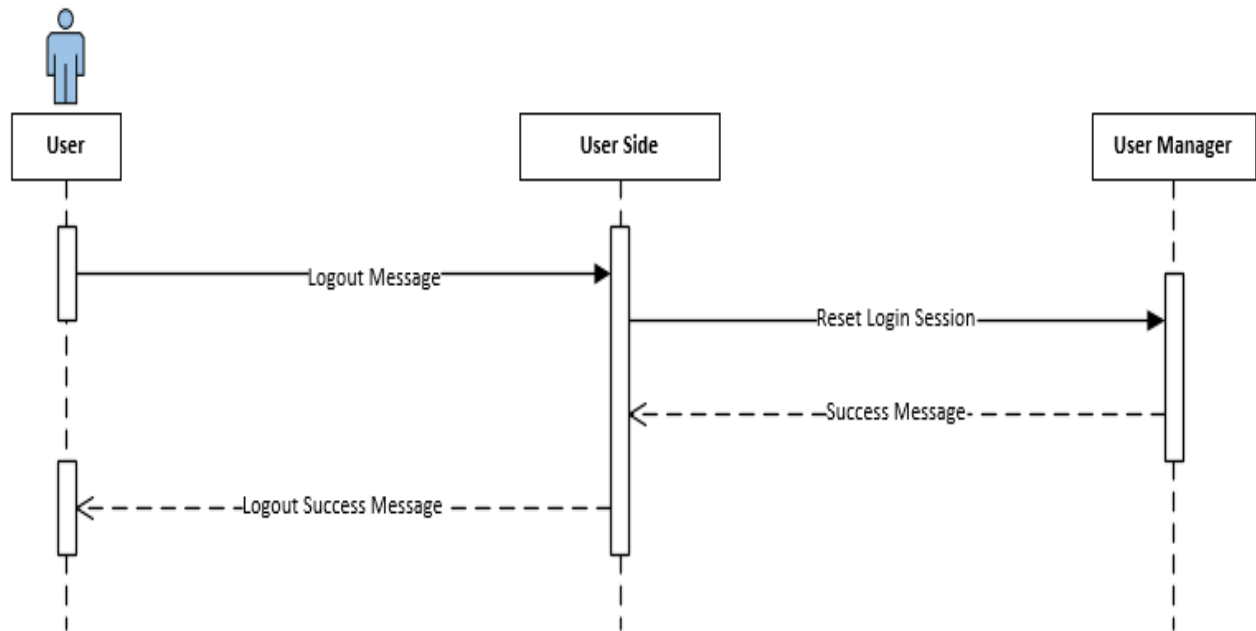
5.14 SQ_User_Like and Dislike_Question



5.15 SQ_User_Like and Dislike_Answer



5.16 SQ_User_LogOut



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6. Operation Contracts

A UML Operation contract identifies system state changes when an operation happens. Effectively, it will define what each system operation does. An operation is taken from a system sequence diagram. It is a single event from that diagram. A domain model can be used to help generate an operation contract.

- **User Sign in()**

Responsibilities: Allow the user to Sign up to App.

Cross References: Use Case: UC_User_SignIn.

Exceptions: If user will not fill all fields, miss something or enter something wrong.

Pre conditions:

- The actor must have an internet connection
- The actor is viewing the app.

Post conditions: The user will properly sign up into the app and get the home page interface

- **User Login()**

Responsibilities Allow the user to Login to App.

Cross References: Use Case: UC_User_SignUp

Exceptions: Incorrect Credentials. If wrong password and email will be entered, message will be displayed to enter correct password or email.

Pre conditions:

- The actor must have an internet connection
- The actor is viewing the app.
- The actor has a registered account.
- Application is working properly.

Post conditions: The user will properly log in into the app and get the community page interface.

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- **User Logout()**

Responsibilities: Allow the user to Logout to App

Cross References: Use Case: UC_User_Logout.

Exceptions: Error in logging out.

Pre conditions:

- The system must be connected to the internet.
- User must be logged in.

Post conditions: The user will properly log out and will get the login/Signup page again.

- **View Community page()**

Responsibilities: Allow the user to view community page after login. User can see the all the questions and answers posted in the community page by other users.

Cross References: Use Case: UC_User_Sign_Up, UC_User_Sign_In, UC_User_View_WebApp, UC_User_View_CommunityPage.

Exceptions: User lost internet connection and lost access to the app.

Pre conditions:

- The system should be connected to the internet.
- User must have logged in first and see the Community page of the web-app.

Post conditions: User can visit other options (Notice Board, Leader Board and Departments sections).

- **User Ask Questions()**

Responsibilities: Allow User to post a questions on the Community Page.

Cross References: Use case: UC_User_Ask_Question, UC_User_View_CommunityPage.

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Exceptions: User does not ask any questions and just browse through community page.

Pre conditions:

- User must be logged into the app
- User must be on the community page to ask a question.

Post conditions: User can visit other options (Notice Board, Leader Board and Departments sections).

- **User answer Questions()**

Responsibilities: Allow User to answer the existing questions.

Cross References: Use Case: UC_User_View_CommunityPage, UC_User_Answer_Question.

Exceptions: There are no questions to answer.

Pre conditions:

- User must be logged into the app
- User must be on the community page to answer a question.

Post conditions: User can visit other options (Notice Board, Leader Board and Departments sections).Or Like/dislike Answers.

- **like/dislike Answers and Questions()**

Responsibilities: Allow User to Like/dislike Answers and Questions.

Cross References: Use Case: UC_User_View_CommunityPage, UC_User_Like_Question, UC_User_Dislike_Question, UC_User_Like_Answer, UC_User_Dislike_Answers

Exceptions: There are no Answers and Questions to like or Dislike or User decides not to do so.

Pre conditions:

- User must be logged into the app
- User must be on the community page to Like/Dislike Questions and Answers.
- There must be Questions and answers Posted on the community page.

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Post conditions: User can visit other options (Notice Board, Leader Board and Departments sections).

- **View Noticeboard()**

Responsibilities: Allow to user to view Information on Noticeboard.

Cross References: Use case: UC_User_View_NoticeBoard

Exceptions: User decides to browse through other options of the app.

Pre conditions:

- The system should be connected to the internet.
- User must have logged in first and see the Community page of the web-app.
- User click on the Notice Board Button from the navigation-bar.

Post conditions: User can visit other options (Notice Board, Leader Board and Departments sections).

- **View Leaderboard()**

Responsibilities: Allow User to see top 10 people ranked on basis of their likes and dislikes ratio on their questions and answers in Leader Board section.

Cross References: Use case: UC_User_View_Leaderboard.

Exceptions: User moves onto the next options by clicking on any option from the Navigation-bar or side-bar.

Pre conditions:

- The system should be connected to the internet.
- User must have logged in first and see the Community page of the web-app.
- User click on the Leader Board Button from the navigation-bar.

Post conditions: User can visit other options (Notice Board, Leader Board and Departments sections).

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• **View Departmental Information()**

Responsibilities: User can read all the information of a certain department for example Fee structure of all the semesters in individual department, Road-map etc.

Cross References: Use case: UC_User_View_DepartmentalInformation

Exceptions: User can move onto the next options by clicking on any option from the Navigation-bar or side-bar.

Pre conditions:

- The system should be connected to the internet.
- User must have logged in first and see the Community page of the web-app.
- User clicks on the Departments Button from the navigation-bar.

Post conditions: User can visit other options (Notice Board, Leader Board and Departments sections).

• **Update Profile Section()**

Responsibilities: Allow user to edit/rename his/her username.

Cross References: Use Case: UC_User_View_ProfileSection, UC_User_Update_ProfilePicture.

Exceptions: User can move onto the next options by clicking on any option from the Navigation-bar or side-bar.

Pre conditions:

- The system should be connected to the internet.
- User must have logged in first and see the Community page of the web-app.
- User clicks on the Profile Button from the navigation-bar.

Post conditions: A successfully updated message will be displayed. If not then Profile not updated and a failed message will be popped up.

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- **Admin Sign in()**

Responsibilities: Allow Admin to sign in.

Cross References: Use case: UC_Admin_Sign_In

Exceptions: Admin could not get access to login he/she have not signed up.

Pre conditions:

Admin has an account and a registered password. Admin details, and needed information.

Post conditions: If the Admin has successfully entered his details and have login successfully. Now Admin can access the Dashboard of the web-app.

- **Admin Sign in()**

Responsibilities: Allow Admin to sign in.

Cross References: Use case: UC_Admin_Sign_In

Exceptions: Admin could not get access to login he/she have not signed up.

Pre conditions:

Admin has an account and a registered password. Admin details, and needed information.

Post conditions: If the Admin has successfully entered his details and have login successfully. Now Admin can access the Dashboard of the web-app.

- **Admin manage Community page()**

Responsibilities: Allow Admin to see the all the questions and answers posted in the community page and allow Admin to delete inappropriate questions and spams.

Cross References: Use case: UC_Admin_Sign_In, UC_User_View_Dashboard, UC_Admin_Update_CommunityPage

Exceptions: Admin will see the all the questions and answers posted in the community page. If everything is all good then admin can move onto the next options.

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Pre conditions:

- The system should be connected to the internet.
- Admin must have logged in first and see the dashboard of the web-app.

Post conditions: Admin can visit other options (Notice Board and Departments sections).

- **Admin Update Noticeboard()**

Responsibilities: Allow Admin to see the all the Posts (Pictures and text) and can add, delete posts in the Noticeboard section.

Cross References: Use case: UC_Admin_Sign_In, UC_User_View_Dashboard, UC_Admin_Update_Noticeboard.

Exceptions: Admin can see the all the Posts (Pictures and text).If everything is all good then admin decides not to update anything and moves onto the next options.

Pre conditions:

- The system should be connected to the internet.
- Admin must have logged in first and see the dashboard of the web-app

Post conditions: Admin can visit other options (Community Page and Departments sections).

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- **Admin Update Department Information()**

Responsibilities: Allow admin to Edit, Update, Delete Information in Department section.

Cross References: Use case: UC_Admin_Sign_In, UC_User_View_Dashboard, UC_Admin_Update_DepartmentalInformation.

Exceptions: Admin does not edit anything and moves onto the next options.

Pre conditions:

- The system should be connected to the internet.
- Admin must have logged in first and see the dashboard of the web-app

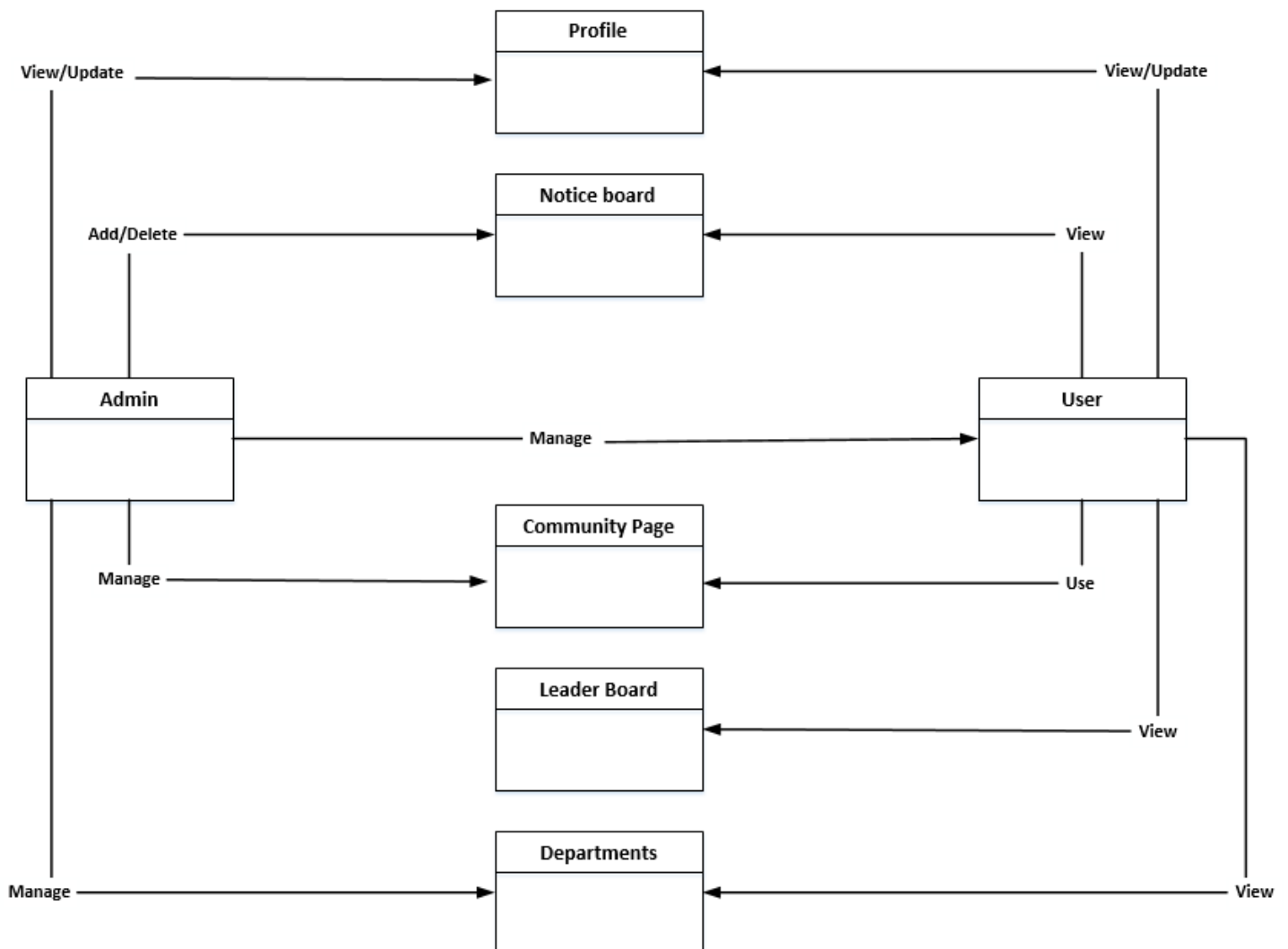
Post conditions: Admin can visit other options (Community Page and Noticeboard sections).

7. Domain Model

A domain model is a collection of specifications that apply to systems throughout a product line. One product line may cover a variety of domains or areas, while one domain may be covered by several product lines. The domain model expresses the following requirements:

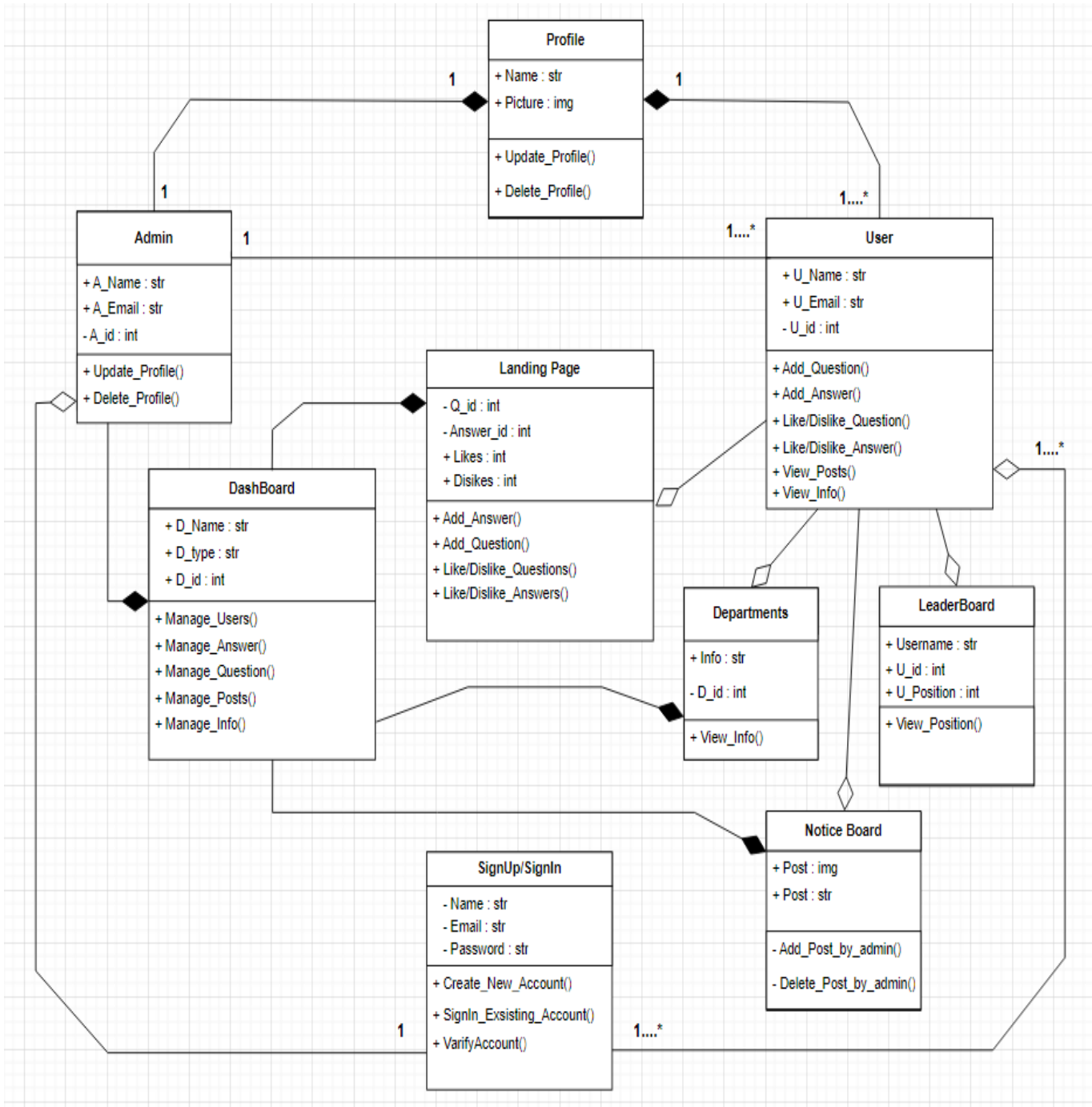
- Define domain scope
- Information or objects
- Features or use cases, along with elements that result in variation
- Use/action features

The domains required to construct systems for the product line will be described in a product line description



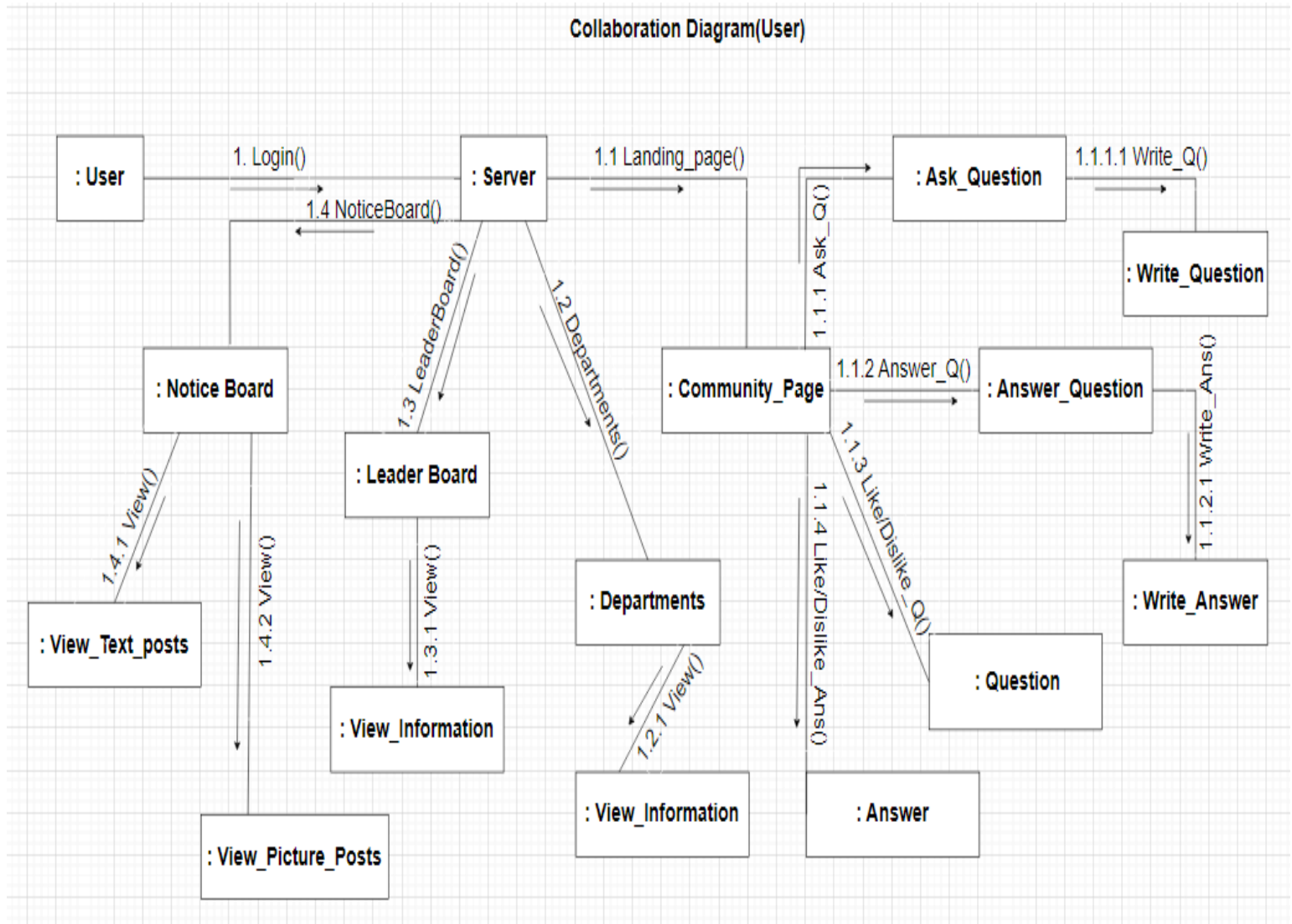
8. Design Class Diagram

8.1 Design Class Relationships:

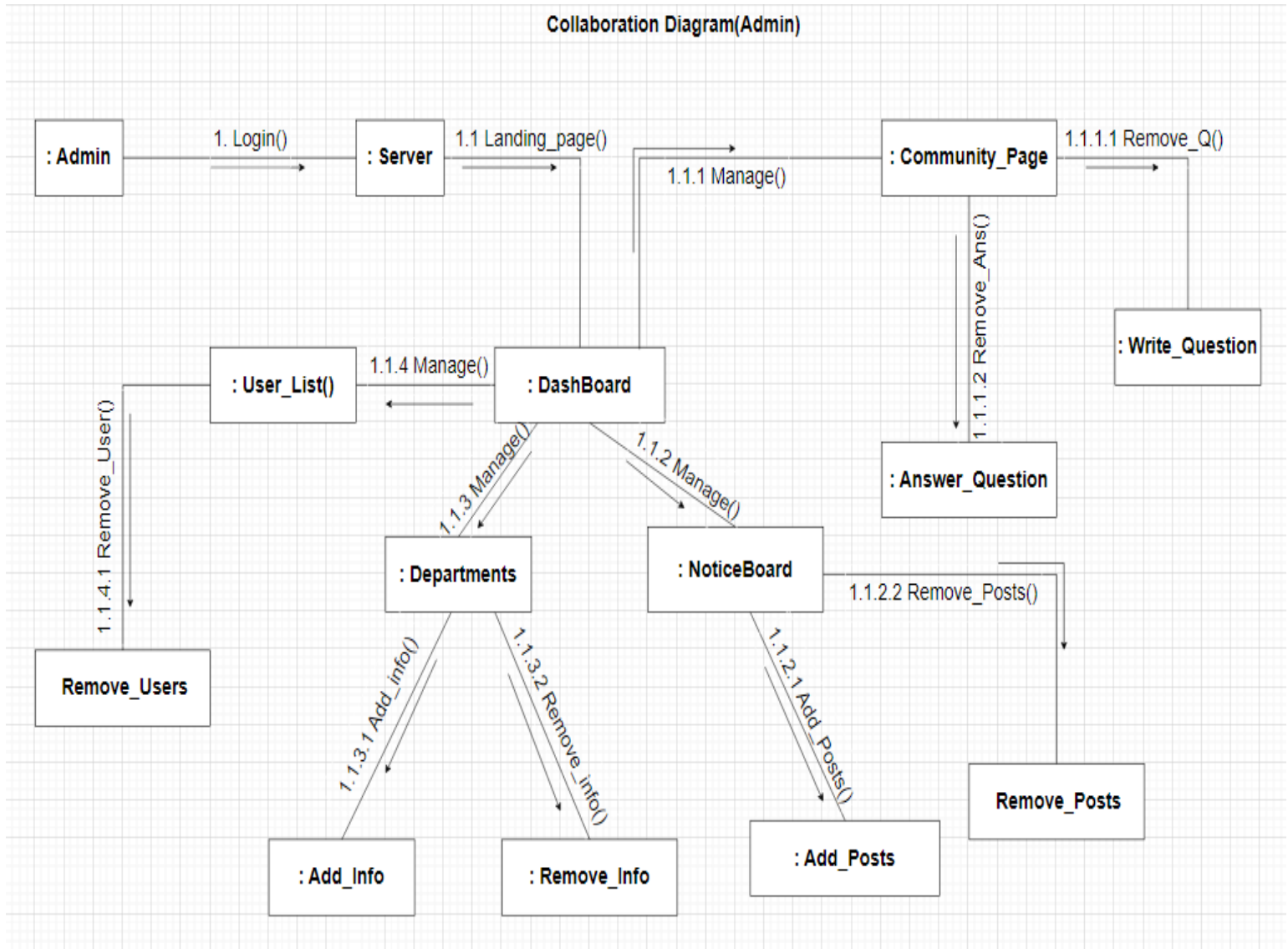


9. Collaboration Diagram

9.1 Collaboration Diagram(User)




9.2 Collaboration Diagram(Admin)



10 Manuals

10.1 Registration Page



The image shows a 'Sign Up' registration form on a light blue background. The form includes input fields for First Name, Last Name, User Name, Email Address, Phone Number, and Password (with a toggle icon). A green 'Register' button is at the bottom of the form, followed by a link that says 'Already Have an Account?'. To the right of the form is an illustration of a person interacting with a large smartphone screen, with gears and plants in the background. Two callout boxes provide instructions: one points to the form fields and the other points to the 'Account' link.

Fill all fields and click **Register** Button for Registration

Sign Up

First Name

Last Name

User Name

Email Address

Phone Number

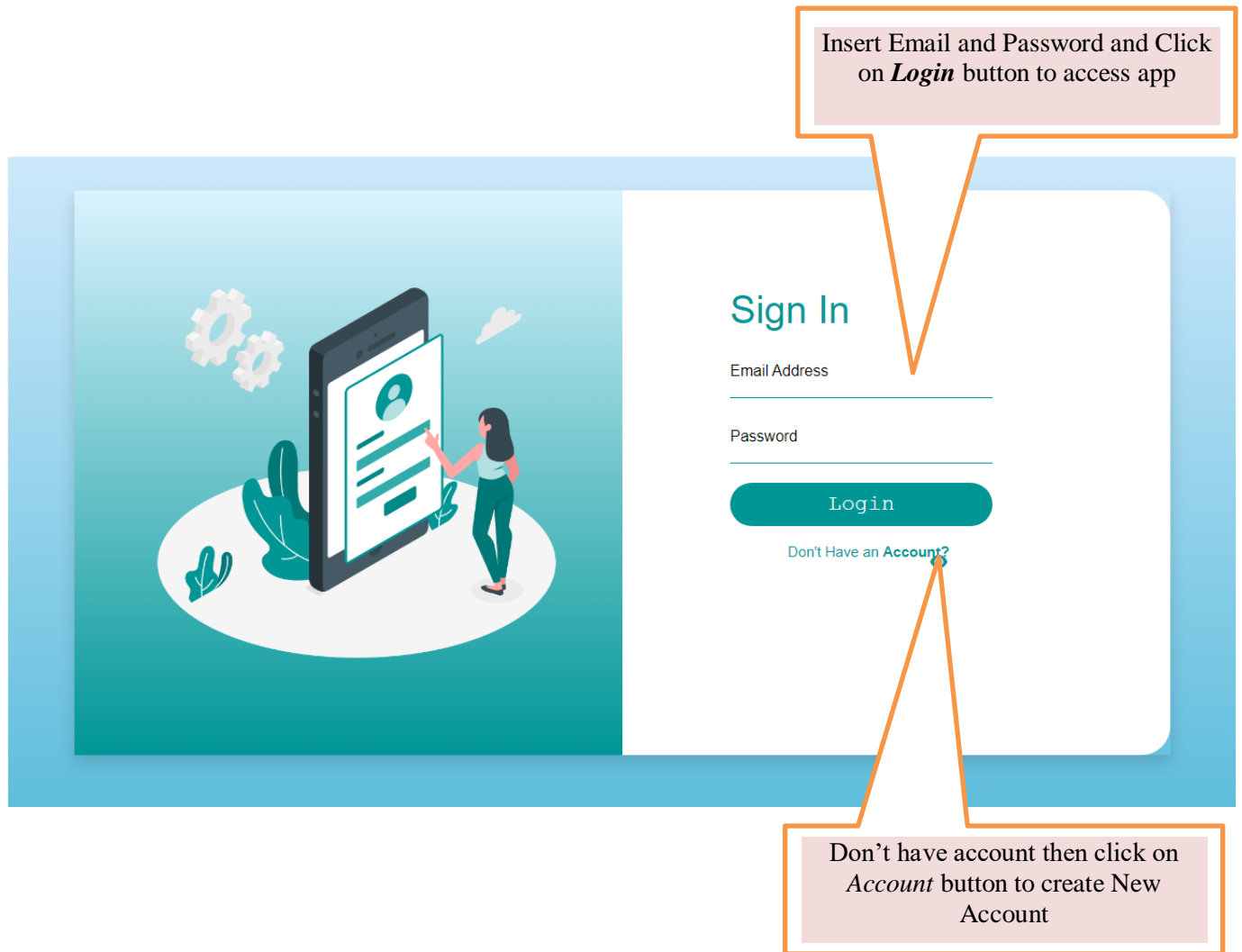
Password

Register

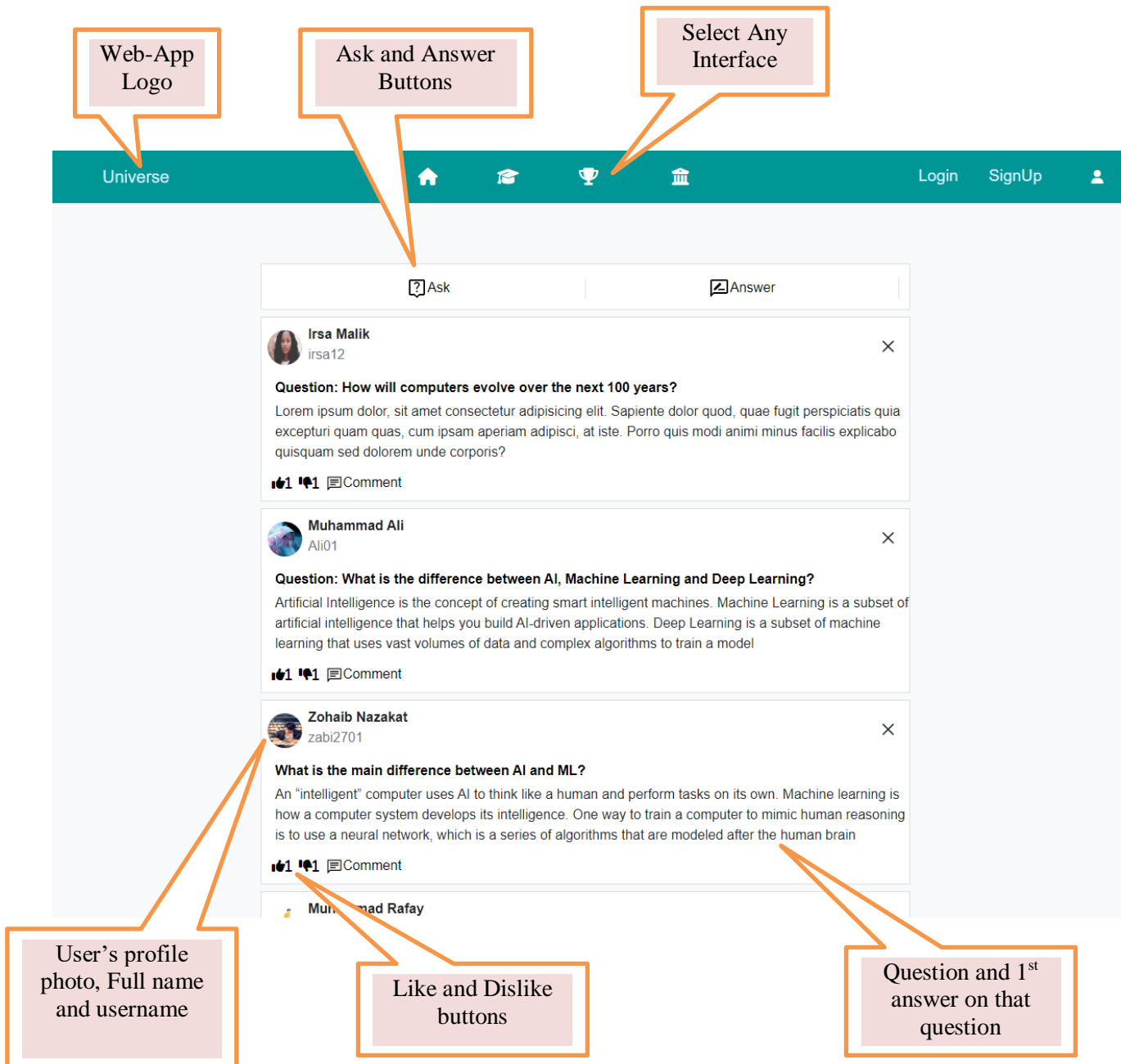
Already Have an **Account?**

If already registered then click on **Account** button to log in

10.2 Login Page



10.3 Home Page




10.4 Question Box

Add Question

×

Tips on getting good answers quickly

- Make sure your question has not been asked already
- Keep your question short and to the point
- Double-check grammar and spelling

▶ Private ▼

Write Your Question Here

Start your question with "What", "How", "Why", etc.

⏎

Cancel

Add question

Button to add question or to cancel tab

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10.5 Questions need to be answered

Universe

Login
SignUp

★ Questions for you

How would you print an upside-down triangle in Python?

X

No answer yet · Last requested 7m

Answer
Follow
Pass
↓

How would you print an upside-down triangle in Python?

X

No answer yet · Last requested 7m

Answer
Follow
Pass
↓

How would you print an upside-down triangle in Python?






X

No answer yet · Last requested 7m

Answer
Follow
Pass
↓

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10.6 Noticeboard

Universe




Login
SignUp


Examination

Bscs

[BSCS Second Semester DATESHEET 2021](#)
[BSCS 5th Semester DATESHEET 2021](#)
[BSCS 7th Semester DATESHEET 2021](#)

BBA

Bcom

[Bcom 3rd Semester DATESHEET 2021](#)
[Bcom 7th Semester DATESHEET 2021](#)
[Bcom SPECIAL EXAMS DATESHEET](#)

BSM

[Bsm 3rd Semester DATESHEET 2021](#)
[Bsm 7th Semester DATESHEET 2021](#)
[Bsm SPECIAL EXAMS DATESHEET](#)

LAW

Date sheets and other
Notices

10.7 Leader board

Leader Board Page

Universe

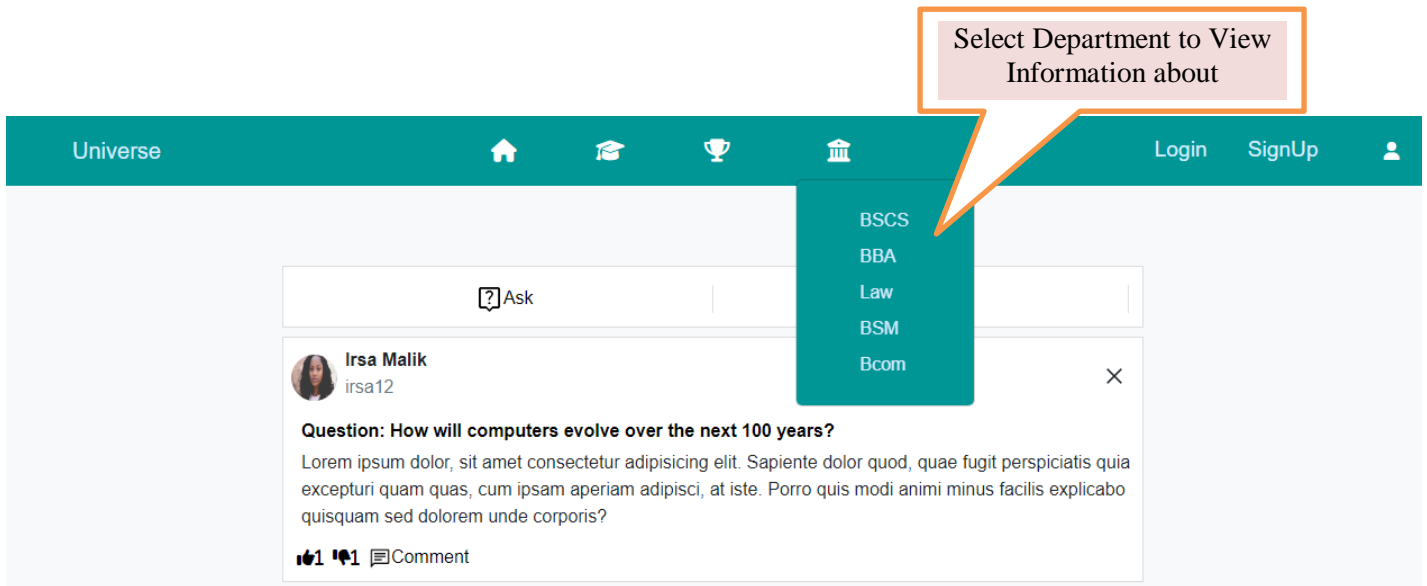
[Login](#)
[SignUp](#)

LeaderBoard

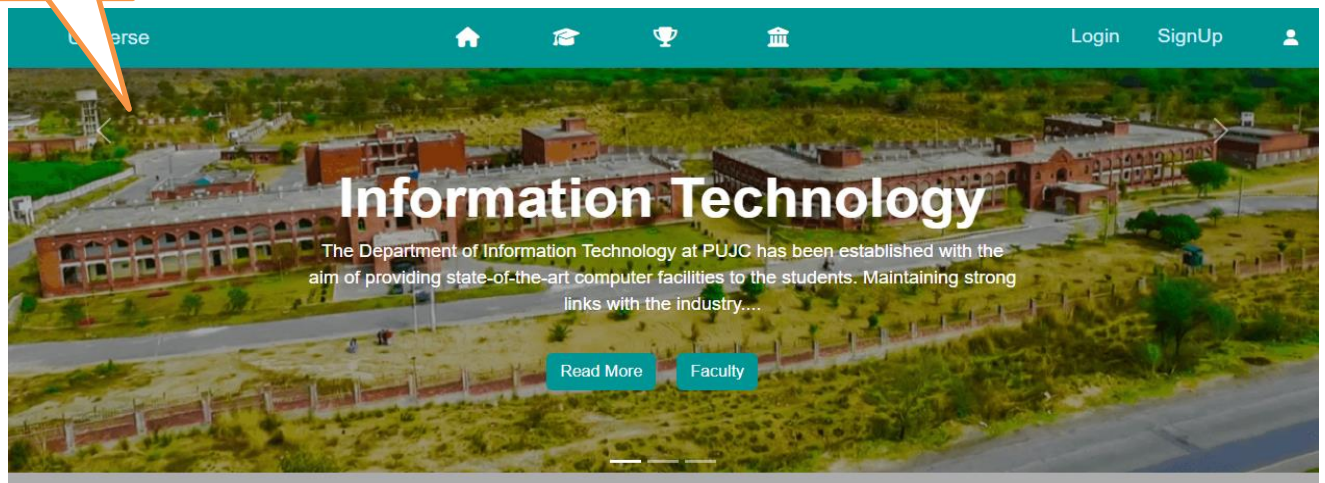
Rank	User-Name	Likes	Average
1	Jose Brag	239	12.54
2	Lily Simons	209	10.2
3	Tom Higgle	154	8.4
4	Alex Roger	100	3.1
5	Mavie Ruth	82	2.0

Top 5 Users of the months

10.8 Departments Section



Picture Slider

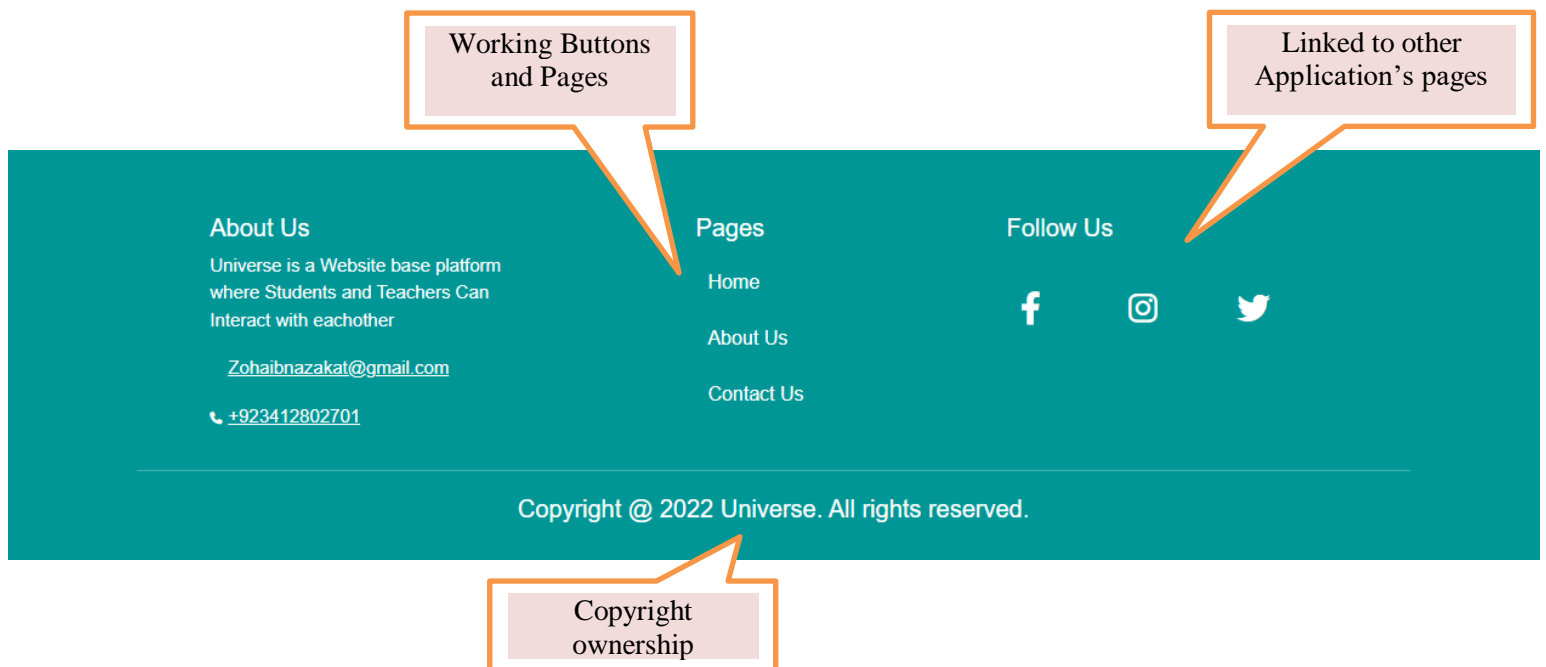
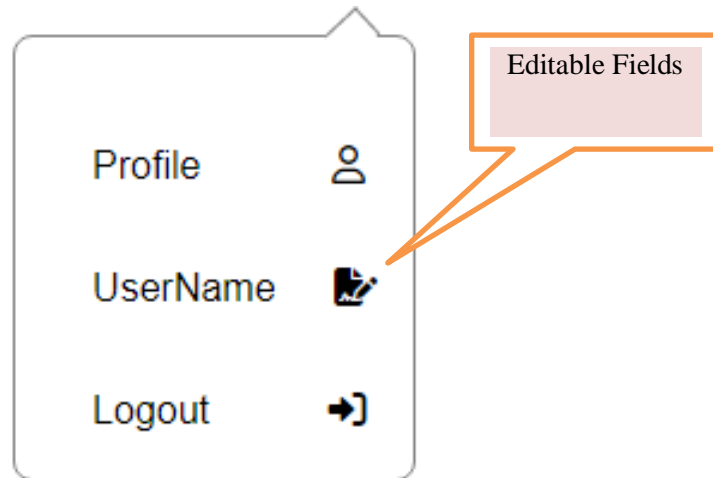


Department's Information

INFORMATION TECHNOLOGY

The Department of Information Technology at PUJC has been established with the aim of providing state-of-the-art computer facilities to the students. Maintaining strong links with the industry, the Faculty has designed such programmes that meet the ever-changing demands of workplace and professional development. These programmes equip the students with a broader and deeper understanding of the theory, design and application of computers to enable them to implement their novel ideas. Our students will 'learn to learn', so that they can readily adapt themselves to the field of

10.9 Profile Section



11 Testing

11.1 Test case user login:

Test Case ID	Test case description	Test steps	Test data	Expected result	Actual result	Pass/Fail
TU01	User Id and password are blank	1. User id not entered 2. User password not entered	Id= Password=	Error message should be displayed.	As expected	Pass
TU02	User Id is blank	1. User id not entered	Id= Password=Pass123	Error message should be displayed.	As expected	Pass
TU03	Password is blank	1. User password not entered	Id= Test1@gmail.com Password=	Error message should be displayed.	As expected	Pass
TU04	Wrong Id	1. Enter wrong user id	Id= Test123@gmail.com Password=Pass123	Error message should be displayed.	As expected	Pass
TU05	Wrong password	1. Enter wrong user password	Id= Test1@gmail.com Password=Pass000	Error message should be displayed.	As expected	Pass
TU06	Check user login with valid data.	1. Enter user id 2. Enter user password	Id= Test1@gmail.com Password=Pass123	User should login into the website	As expected,	Pass

11.2 Test case user Sign up:

Test Case ID	Test case description	Test steps	Test data	Expected result	Actual result	Pass/Fail
TU01	User name, password and id are blank	1. User name not entered 2. User password not entered 3. User id not entered	name= Password= id=	Error message should be displayed.	As expected	Pass
TU02	User Name is blank	1. Name not entered	Name= Id= Test1@gmail.com Password=Pass123	Error message should be displayed.	As expected	Pass
TU03	User Id is blank	1. User id not entered	Name=Test Id= Password=Pass123	Error message should be displayed.	As expected	Pass
TU04	Password is blank	1. User password not entered	Name=Test Id= Test1@gmail.com Password=	Error message should be displayed.	As expected	Pass
TU05	User Name is wrong	1. Name entered wrong	Name=Test1 Id= Test1@gmail.com Password=Pass123	Error message should be displayed.	As expected	Pass
TU06	Wrong Id	1. Id entered wrong	Name=Test1 Id= Test123@gmail.com Password=Pass123	Error message should be displayed.	As expected	Pass
TU07	Wrong password	1. Password entered wrong	Name=Test1 Id= Test1@gmail.com Password=Pass000	Error message should be displayed.	As expected	Pass
TU08	Check user Sign up with valid data.	1. Enter user name 2. Enter user id 3. Enter user password	Name=Test1 Id= Test1@gmail.com Password=Pass123	User should be signed up	As expected,	Pass

11.3 Test case Using Home Page:

Test Case ID	Test case description	Test steps	Test data	Expected result	Actual result	Pass/Fail
TU01	Selecting page from the Navigation bar	1. Not selecting any page from the navigation bar	Not clicking mouse button	Stay on home page	As expected	Pass
TU02	Question Writing field is blank	1. Question/Text not entered in the field	Field=	Add Question button will not be enabled	As expected	Pass
TU03	Answer Writing field is blank	1. Answer/Text not entered in the field	Field=	Add Answer button will not be enabled	As expected	Pass
TU04	Selecting profile section from the Navigation bar	1. Not selecting profile section from the navigation bar	Not clicking mouse button on profile icon	Stay on home page	As expected	Pass
TU05	Like and Dislike a question and answer	1. clicking mouse button on like or dislike button	clicking mouse button on like or dislike button	Button will get bold and change color	As expected	Pass
TU06	Reply Writing field is blank	1. Text not entered in the field	Field=	Reply button will not be enabled	As expected	Pass

11.4 Test case Using Notice Board:

Test Case ID	Test case description	Test steps	Test data	Expected result	Actual result	Pass/Fail
TU01	Click File in noticeboard	1. Choose a file that is needed	Clicking on the file	File will open in the browser	As expected	Pass
TU02	Right click to download file	1. Choose a file that needed to be download	Right click on the file then download	File will start to save in the device	As expected	Pass

11.5 Test case Viewing Leader Board:

Test Case ID	Test case description	Test steps	Test data	Expected result	Actual result	Pass/Fail
TU01	Selecting Leader Board from the Navigation bar	1. selecting Leader Board page form the navigation bar	clicking mouse button on icon	Navigate to leader board page	As expected	Pass

11.6 Test case Viewing Departmental Section:

Test Case ID	Test case description	Test steps	Test data	Expected result	Actual result	Pass/Fail
TU01	Selecting Departmental section from the Navigation bar	1. selecting Departmental Information page form the navigation bar	clicking mouse button on icon	Navigate to Departments page	As expected	Pass

11.7 Test case Profile:

Test Case ID	Test case description	Test steps	Test data	Expected result	Actual result	Pass/Fail
TU01	Selecting Profile section from the Navigation bar	1. selecting Profile page form the navigation bar	clicking mouse button on icon	Opens a profile window prompt on right side	As expected	Pass
TU02	Update Profile Picture	1. Select the profile button	Click profile button to update your new profile picture	Profile picture will be updated	As expected	Pass
TU03	View your question	1. Select the My Question button	Click My Question button to view questions posted by you.	Opens a new page with the list of questions	As expected	Pass
TU04	Logout	1. Select the logout button	Click the logout button	Redirect to the SignIn page	As expected	Pass

11.8 Test case Footer:

Test Case ID	Test case description	Test steps	Test data	Expected result	Actual result	Pass/Fail
TU01	Accessing Footer	1. Scroll to the end of the Home page	View Footer	Footer will render smoothly	As expected	Pass
TU02	Accessing Social media pages of University	1. Click on Social media icons in the footer	Click on the icon of the social media application	Redirect to page in that particular social media application	As expected	Pass
TU03	Accessing other pages of the web-App	1. Click on the page name	Click on the page you want to visit	Navigate to that page of the web-App	As expected	Pass

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PROJECT COMPLETION CERTIFICATE

It is confirmed that the report entitled "UniVerse" confirms that Muhammad Ali Roll # BSCS-F19-A-01, Muhammad Rafey Roll # BSCS-F19-A-07, Zohaib Nazakat Roll # BSCS-F19-A-21 & Musharaf Bashir Roll # BSCS-F19-A-25 Bachelor of Computer Sciences students from the Department of Information Technology, University of Punjab Jhelum Campus contains sufficient resources required to offer the above degree.

Ms. Aminah Ali (Supervisor)

Lecturer

Email: amina9945@gmail.com

Email: aminaali@pujc.edu.pk

Department of Information Technology
University of the Punjab, Jhelum Campus