

Project: <b>BizNotio</b>
Team No.: Team 2
Class: CSE 3310.001 – Summer 2020 Module: System Requirements Analysis (SRA) Deliverable: SRA Document

Version: [1.2]

Date: [07/21/2020]

## Contributors:

Sushant Gupta  
Lamia Chowdhury  
Jonathan Ruben Padilla Vences  
Sindhu Sudha Parajuli

### Revision History

<i>Version number</i>	<i>Date</i>	<i>Originator</i>	<i>Reason for change</i>	<i>High level description of changes</i>
1.0	07/17/2020	Sushant Gupta Lamia Chowdhury Sindhu Parajuli Jonathan Padilla	Initial draft	
1.1	07/20/2020	Sushant Gupta Lamia Chowdhury Sindhu Parajuli Jonathan Padilla	Revision	Section-5 updated
1.2	07/21/2020	Sushant Gupta Lamia Chowdhury Sindhu Parajuli Jonathan Padilla	System Requirement	Formatting, more specific description.

# TABLE OF CONTENTS

<b>1. INTRODUCTION AND PROJECT OVERVIEW .....</b>	<b>4</b>
<b>2. OBJECTIVES .....</b>	<b>5</b>
2.1 BUSINESS Objectives .....	5
2.2 SYSTEM Objectives .....	6
<b>3. PROJECT CONTEXT DIAGRAM .....</b>	<b>7</b>
<b>4. SYSTEMS REQUIREMENTS .....</b>	<b>8</b>
4.1 "Home Screen" Requirements .....	8
4.2 "Login" Requirements .....	10
4.3 "Account Setup" Requirements .....	13
4.4 "Account Maintenance" Requirements .....	15
4.5 "Manage Appointments" Requirements .....	17
4.6 "Manage Proposals" Requirements .....	20
4.7 "Review and Ratings" Requirements .....	23
4.8 "Payment" Requirements .....	24
4.9 "Search" Requirements .....	27
<b>5. SOFTWARE PROCESSES AND INFRASTRUCTURE .....</b>	<b>29</b>
5.1 Hardware and Infrastructure .....	29
5.2 Class Diagrams .....	30
Relation Between Classes .....	30
5.3 Use Case Diagrams .....	31
System Boundary .....	31
5.4 Activity Diagrams .....	32
User's Registration .....	32
Login .....	33
Uploading Medias .....	34
Managing Appointments .....	35
Home Page Interaction .....	36
Payment Diagram .....	37
Account Management .....	38
Review / Rating Diagram .....	39
5.5 Sequence Diagrams .....	40
Managing Proposals .....	40
Investing in a Project .....	41
5.6 State Machine Diagrams .....	42
Proposal Submission Flow .....	42
Appointment Request Flow .....	43
5.7 Conceptual Data Model - Database .....	44

5.8 Screen Shots .....	44
5.9 Test Plan .....	44
<b>6. ASSUMPTIONS AND CONSTRAINTS .....</b>	<b>45</b>
6.1 ASSUMPTIONS .....	45
6.2 CONSTRAINTS .....	45
6.3 Out of Scope material .....	45
<b>7. DELIVERY AND SCHEDULE .....</b>	<b>46</b>
<b>8. STAKEHOLDER APPROVAL FORM .....</b>	<b>47</b>
<b>APPENDIX: .....</b>	<b>48</b>

## 1. Introduction and Project Overview

---

Team-2 has been employed to design and implement an android application to connect investors and investees. This will be a platform where people with ideas/business can reach out to investors and vice-versa to find funding. In case of funding received, the application would get a certain commission from the receiving party. This application will be up by the first week of August and will have the features listed below initially. More features will be added per feedback and ideas received in future.

Using the android platform, our application can register users, create profiles for users, share ideas and proposals, chat/call other users, make minimum business goals, upload images/videos and even handle transactions. Our application will serve users to find the project they want to invest and be invested.

## 2. Objectives

---

### 2.1 BUSINESS OBJECTIVES

The following is a list of business objectives:

**Objective 1:** Member Registration: All members must provide the following information prior to using the system:

- First Name, last Name
- Home and mailing addresses
- E-mail address
- Username
- Password

**Objective 2:** Login functionality: All members must login to the system with a user/password that was established during Member registration stage.

**Objective 3:** “Account Maintenance” functionality must be supported that allows user to close and edit personal information and includes the following:

- E-mail address
- Password
- Delete Account

**Objective 4:** “Account Setup”: The user will be able to create a profile with the following features:

- Provide personal information
- Upload picture/video
- Upload a proposal as a word file or pdf
- Provide a minimum business case: goals, cost, schedule, restrictions, assumptions and constraints.

**Objective 5:** “Search”: The user will be able to search for other profiles registered in the application.

**Objective 6:** “Notification”: The user will be able to send and receive messages.

**Objective 7:** “Appointment”: The user will be able to call/video call other users.

**Objective 8:** “Account Maintenance”: The user will be able to recover their password or username in the event of authorized access or loss of credentials.

**Objective 9:** “Payments”: The user will be able to send and receive payments to another user via the following methods:

- Cash
- Card
- Check

**Objective 10:** “Rate and Review”: The user will be able to rate/review other users according to their experience.

## 2.2 SYSTEM OBJECTIVES

The following is a list of system objectives:

**Objective 1:** System will be an Android application

**Objective 2:** Kotlin will be used for UI.

**Objective 3:** Firebase will be used for authentication and database.

**Objective 4:** Material design theme will be used for interactive UI

### 3. Project Context Diagram

---

sd context diagram

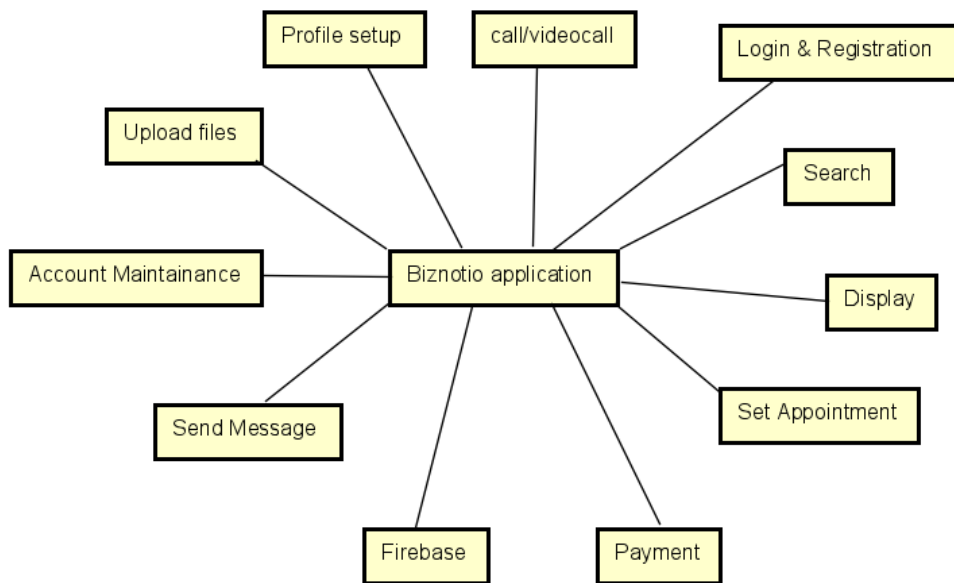


Figure 3.1: Project Context Diagram



## 4. Systems Requirements

---

### 4.1 “HOME SCREEN” REQUIREMENTS

<b>Requirement Title</b>	Home Screen
<b>Sequence No:</b>	001
<b>Short description:</b>	Main page seen right after creating account/login which displays the functionalities to the user on the application.
<b>Description:</b>	<p>The home-screen will serve as a roadmap of the application where the user can navigate subsections such as the following:</p> <ul style="list-style-type: none"><li>• Profile</li><li>• Settings</li><li>• Search</li><li>• Create Post</li></ul> <p>For a new user, the home-screen suggests creating a profile to begin with the application.</p> <p>Returning users can view other users who are already on the application.</p> <p>For a new user, the home-screen suggests to create a profile to begin with the application.</p> <p>Returning users can view other users who are already on the application.</p> <p>Application screen presents digital buttons with labels for basic user operations (Profile, Settings, Search, Create Post, Inbox).</p> <p>Tapping on a button opens the respective screen for the user.</p> <ul style="list-style-type: none"><li>• Tapping on “Profile” must let the user see their profile information and allow them to change information from that screen by communicating with our database and updating the field that they want to change.</li><li>• Tapping on “Settings” will allow the user to view the following: System settings (theme, account maintenance, notification, about, privacy, security, language.)</li><li>• Tapping on Search will allow the user to search for other registered users by username or project name.</li><li>• Tapping on “Create Post” will allow the user to post proposals.</li></ul> <p>Tapping on the display-result button combines the number in memory with the one in the display section according to the operation requested previously. The resulting number is shown in the display section of the screen.</p>

<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>Logging in the application successfully.</li> </ul>
<b>Post Conditions:</b>	N/A
<b>Other attributes:</b>	N/A

## 4.2 “LOGIN” REQUIREMENTS

<b>Requirement Title</b>	Login
<b>Sequence No:</b>	001
<b>Short description:</b>	Allow to register a new user as a new account
<b>Description:</b>	<p>New users after clicking ‘Register’ button enter the following information to create an account:</p> <ul style="list-style-type: none"><li>• Name (First and Last)</li><li>• Email Address (must be valid)</li><li>• Username</li><li>• Password</li></ul> <p>The registration process is completed when clicking the ‘submit’ button. The user can also cancel with the ‘cancel’ button.</p> <p>Length of the username must be no more than 25 characters. Password needs to be of at least eight characters long and have at least one capital letter, one number, and must be ASCII characters. The user is prompted to re-enter password and that must match with password entered before.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"><li>• Application must be downloaded.</li></ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"><li>• Confirmation email will be sent to the User and can login in the application.</li></ul>
<b>Other attributes:</b>	The system will check for errors if invalid fields are entered such as invalid email, or invalid passwords.

<b>Requirement Title</b>	Login
<b>Sequence No:</b>	002
<b>Short description:</b>	Allow the returning user to log into the application.
<b>Description:</b>	Application presents users with two test-box fields. One labeled "Username" and other labeled "Password". It also has "Forgot Password" button, incase users forget the user and/or password. On entering 'Username' and 'Password' and clicking the 'Login' button the user can login to their existing accounts in the application. Each of username and password fields cannot have more than 25 characters.
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The application must be already installed.</li> <li>• The user must already have an account.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• Upon successful login, the home page is displayed.</li> </ul>
<b>Other attributes:</b>	The system will verify if the entered information matches the database and send error messages if it doesn't.

<b>Requirement Title</b>	Login
<b>Sequence No:</b>	003
<b>Short description:</b>	Cancel the changes made.
<b>Description:</b>	<p>At any time while either making a new account or submitting the login information, the new or existing user may press the "cancel" button.</p> <p>The user may do this if they do not want to provide any other information or do not want to access the application at the moment.</p> <p>Pressing the "Cancel" button will move user to Login/Registration/Welcome-Screen.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The application must be already installed.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• Cancels and fields are empty.</li> </ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Login
<b>Sequence No:</b>	004
<b>Short description:</b>	Allows to set a new password incase forgotten
<b>Description:</b>	In events of a forgotten username/password, an existing user can simply click the 'forgot password' button and provide email address used to register user and get a link in the email to set a new password for their account. The link can be used to log into the system.
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The application must be already installed.</li> <li>• The user must be registered.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The system accepts the new password and the homepage is displayed.</li> </ul>
<b>Other attributes:</b>	The system will send an email with a link to reset the password.

<b>Requirement Title</b>	Login
<b>Sequence No:</b>	005
<b>Short description:</b>	Displaying the application logo on the login screen.
<b>Description:</b>	<p>A logo of the application is displayed on the top of the page above the login fields.</p> <p>The log in logo must be 250X250px.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The application must be already installed.</li> </ul>
<b>Post Conditions:</b>	N/A
<b>Other attributes:</b>	N/A

### 4.3 “ACCOUNT SETUP” REQUIREMENTS

<b>Requirement Title</b>	Account Setup
<b>Sequence No:</b>	001
<b>Short description:</b>	Create profile
<b>Description:</b>	<p>The registered user will be able to create a profile and input all of their personal information they want to include.</p> <p>This will be visible to other registered users.</p> <p>The user will have the option to provide the following information:</p> <ul style="list-style-type: none"><li>• Email (max characters: 50, must be valid email)</li><li>• Phone number (10 digits)</li><li>• Profile picture (max size: 5 megabyte)</li><li>• Bio (max character: 300)</li><li>• Location (must be in US, must include a state.)</li><li>• Minimum business case (max words: 500 (Goals, costs, schedule, restrictions, assumptions, etc.))</li></ul>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"><li>• The user must be registered.</li></ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"><li>• Profile is created and saved to the database.</li></ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Account Setup
<b>Sequence No:</b>	002
<b>Short description:</b>	Upload Profile Picture
<b>Description:</b>	<p>The registered user will be able to create a profile by uploading the profile picture of the user.</p> <p>Profile picture can be uploaded from the following:</p> <ul style="list-style-type: none"> <li>• Gallery</li> <li>• Camera</li> <li>• Default option</li> </ul> <p>No profile picture should be greater than 5MB. This will be visible to other registered users.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The user must be registered.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• Profile picture is saved to the database.</li> </ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Account Setup
<b>Sequence No:</b>	003
<b>Short description:</b>	Upload Minimum Business Case Information
<b>Description:</b>	<p>The registered user will be able to create a minimum business case.</p> <p>The user will have the option to provide the following information:</p> <ul style="list-style-type: none"> <li>• Goals</li> <li>• Costs</li> <li>• Schedule</li> <li>• Restriction</li> <li>• Assumption</li> <li>• Additional Information</li> </ul> <p>The minimum business case should be all text, and user is responsible for providing all of the information.</p>
<b>Pre-Conditions:</b>	The user must be registered.
<b>Post Conditions:</b>	Business goal is saved to the database.
<b>Other attributes:</b>	N/A

#### 4.4 “ACCOUNT MAINTENANCE” REQUIREMENTS

<b>Requirement Title</b>	Account maintenance
<b>Sequence No:</b>	001
<b>Short description:</b>	Edit user profile
<b>Description:</b>	<p>A registered user will be able to update or edit information on their profile at any time.</p> <p>The user will have the option to edit the following fields:</p> <ul style="list-style-type: none"><li>• Email (max characters: 50)</li><li>• Phone number (10 digits)</li><li>• Profile picture (max size: 5 megabyte)</li><li>• Bio (max character: 300)</li><li>• Location (must be in US, must include a state.)</li><li>• Minimum business case (max words: 500 (Goals, costs, schedule, restrictions, assumptions, etc.))</li></ul> <p>After updating the desired fields, the user will have the option to confirm or cancel the updates.</p> <p>If the user confirms, the profile would be updated, and the changes will be saved to the database.</p> <p>If database fails, it will display a failed message banner.</p> <p>If successful, the updates will be visible to other registered users.</p> <p>If the user cancels, their profile will not be updated, and the user will be redirected to the home page.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"><li>• The user must be successfully registered.</li><li>• The user must click the “edit” button on the profile page.</li></ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"><li>• The user must confirm the changes for the update to be successful.</li><li>• The changes will be saved to the database.</li></ul>
<b>Other attributes:</b>	N/A



<b>Requirement Title</b>	Account maintenance
<b>Sequence No:</b>	002
<b>Short description:</b>	Close/ deactivate existing account
<b>Description:</b>	<p>The user will be able to temporarily deactivate or permanently delete their account at any time. They will have the option to provide feedback for taking this action.</p> <p>If the user chooses to deactivate their account, the account will not be visible to anyone else while it is deactivated. The user may reactivate the account at any time.</p> <p>If the user chooses to delete the account, it will be permanently deleted. This action cannot be reversed.</p> <p>The user will need to open a new account if they wish to participate in the app in the future.</p> <p>The user must confirm the deletion/ deactivation for it to be successful.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The user must be successfully registered.</li> <li>• The user must click the “edit” button on the profile page.</li> <li>• The user must confirm for this action to be successful.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• Confirmation email will be sent to the user upon successful deletion/ deactivation.</li> </ul>
<b>Other attributes:</b>	N/A

## 4.5 “MANAGE APPOINTMENTS” REQUIREMENTS

<b>Requirement Title</b>	Manage appointments
<b>Sequence No:</b>	001
<b>Short description:</b>	Approve appointment
<b>Description:</b>	<p>The investee will be able to view the appointment summary and choose to approve the appointment.</p> <p>Appointment summary will have the following information:</p> <ul style="list-style-type: none"> <li>• Date of appointment (Must be a same day/future date)</li> <li>• Time of appointment (Must be a compatible time)</li> <li>• Project name and details (max length: (name) 50 characters, (detail) 50 words)</li> <li>• Name of investee and investor (Names must be already in the database)</li> <li>• Email of investee and investor (must be valid email)</li> <li>• Additional notes (max length: 50 characters)</li> </ul> <p>Upon approving the appointment, a confirmation email will be sent to both the investor and investee with the appointment details included.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor will have sent an appointment request to the investee.</li> <li>• The investee will need to review the request.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• Email confirmation with appointment summary will be sent to both the investor and investee.</li> </ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Manage appointments
<b>Sequence No:</b>	002
<b>Short description:</b>	Deny appointment
<b>Description:</b>	<p>The investee will be able to view the appointment summary and choose to deny the appointment.</p> <p>Appointment summary will have the following information:</p> <ul style="list-style-type: none"> <li>• Date of appointment (Must be a same day/future date)</li> <li>• Time of appointment (must include time zone, must valid ISO time stamp)</li> <li>• Project name and details (max length: (name) 50 characters, (detail) 50 words)</li> <li>• Name of investee and investor (Names must be already in the database)</li> <li>• Email of investee and investor (must be valid email)</li> <li>• Additional notes (max length: 50 characters)</li> <li>• Reason (max length: 50 characters)</li> </ul> <p>Upon denying the appointment, the investee may choose to provide feedback which will be sent along with a cancellation email to the investor.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor will have sent an appointment request to the investee.</li> <li>• The investee will need to review the request.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• Cancellation email with optional feedback will be sent to the investor.</li> </ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Manage appointments
<b>Sequence No:</b>	003
<b>Short description:</b>	Reschedule appointment
<b>Description:</b>	<p>The user may choose to reschedule an appointment. They will need to select the “reschedule” button and fill out a reschedule form which will then be sent to the investor/ investee to review.</p> <p>The user will need to review the changes and confirm to be able to submit the form.</p> <p>Users will have to provide the following information to reschedule an appointment:</p> <ul style="list-style-type: none"> <li>• New date (must be a future date)</li> <li>• New time (must include time zone, must valid ISO time stamp)</li> <li>• Reason (optional, max length: 50 characters)</li> </ul>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The user must have an appointment scheduled.</li> <li>• The form must be filled out before the scheduled appointment.</li> <li>• The user must select the “reschedule” button.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The original appointment will be cancelled.</li> <li>• A new request will be sent to the investor/ investee to be reviewed.</li> </ul>
<b>Other attributes:</b>	N/A

## 4.6 “MANAGE PROPOSALS” REQUIREMENTS

<b>Requirement Title</b>	Manage proposals
<b>Sequence No:</b>	001
<b>Short description:</b>	Post new proposal
<b>Description:</b>	<p>The investee will be able to post a new project proposal at any time. They will be able to upload files or media along with additional texts they wish to provide on the proposal.</p> <p>Once the investee has finished uploading all the information, they will need to review the proposal. They will have the option to confirm, save draft, or cancel.</p> <p>If the investee chooses to confirm the proposal, they will need to click the “submit” button which will post the proposal for others to view.</p> <p>If the investee chooses to save it as a draft, the proposal will be saved to their account. They may choose to finish uploading the proposal at a later time. The draft will not be visible to others.</p> <p>If the investee chooses to cancel the proposal, the app will ask the user to confirm the cancellation and nothing will be uploaded. The proposal will not be saved to their account. The user will be directed back to the home page.</p> <p>Uploaded file will be saved to the database. No file should be more than 50 MB.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"><li>• The investee must be registered.</li><li>• Files/ media must be successfully uploaded.</li><li>• The investee must click the “new proposal” button on the proposal page.</li></ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"><li>• The proposal will be displayed on the investees page if the proposal has been successfully uploaded.</li><li>• The proposal will be visible to other registered users.</li></ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Manage proposals
<b>Sequence No:</b>	002
<b>Short description:</b>	Edit proposal
<b>Description:</b>	<p>The investee will have the option to edit an existing proposal that has been previously posted or choose to finish completing a saved draft.</p> <p>If the investee chooses to edit a previously posted proposal, they must make changes to the fields they wish to edit and review the proposal. After reviewing the proposal, they will need to confirm the changes and resubmit the proposal for the updated proposal to be posted.</p> <p>If the investee chooses to complete a saved draft, they will need to complete uploading the information. Once the investee has uploaded all the information, they will need to review and confirm the proposal and click “submit” which will post the proposal.</p> <p>Changes will be saved to the database and no file should be more than 50 MB.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The investee must be registered.</li> <li>• The investee must have previously uploaded projects or saved drafts.</li> <li>• The investee must click the “edit” button on the proposal page.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The updated proposal will be displayed on the investees page if the proposal has been successfully uploaded.</li> <li>• The proposal will be visible to other registered users.</li> </ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Manage proposals
<b>Sequence No:</b>	003
<b>Short description:</b>	Delete proposal
<b>Description:</b>	<p>The investee will have the option to delete a proposal they have previously posted. They will need to confirm the deletion for it to be successful.</p> <p>This will delete all of the information associated with the proposal from the database.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The investee must be registered</li> <li>• The investee must have at least one previously posted proposal.</li> <li>• The investee must click the “edit” button on the proposal page.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The app will display a confirmation deletion message.</li> </ul>
<b>Other attributes:</b>	N/A

## 4.7 “REVIEW AND RATINGS” REQUIREMENTS

<b>Requirement Title</b>	Review and ratings
<b>Sequence No:</b>	001
<b>Short description:</b>	Review investors/ investees
<b>Description:</b>	The user will be able to leave reviews if they have previously communicated with an investor/ investee. They may give helpful feedback, constructive criticism, or express appreciation depending on their experience. Reviews will be visible to others. Review sections will have a word limit of 1000.
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"><li>• The user will only be able to review investors/ investees they have previously communicated with.</li></ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"><li>• The review will be posted and visible to others</li><li>• Others may reply or comment to the review.</li></ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Review and ratings
<b>Sequence No:</b>	002
<b>Short description:</b>	Rate investors/ investees (stars)
<b>Description:</b>	<p>The user will be able to give ratings if they have previously communicated with an investor/ investee. This is to express their experience. Ratings will be visible to others. They will have the option to rate them on a scale from one star to five stars depending on their satisfactory level.</p> <p>The user will be able to select the rating from the following options:</p> <ul style="list-style-type: none"><li>• 5 stars - Very Satisfied</li><li>• 4 stars - Satisfied</li><li>• 3 stars - Fair</li><li>• 2 stars - Dissatisfied</li><li>• 1 star - Very Dissatisfied</li></ul> <p>Rating will be sent to the database.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"><li>• The user will only be able to review an investor/ investee they have previously communicated with.</li></ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"><li>• The rating will be posted and visible to others.</li></ul>
<b>Other attributes:</b>	N/A



## 4.8 “PAYMENT” REQUIREMENTS

<b>Requirement Title</b>	Payment
<b>Sequence No:</b>	001
<b>Short description:</b>	Payments methods
<b>Description:</b>	<p>An investor who has had meetings with an investee regarding a project may decide to invest in the project. If they choose to invest in a project, they will have several payment methods available to them.</p> <p>Payment methods:</p> <ul style="list-style-type: none"><li>• Card<ul style="list-style-type: none"><li>○ Credit card</li><li>○ Debit Card</li><li>○ Gift Card</li></ul></li><li>• Cash</li><li>• Check</li></ul> <p>Payments will be handled by Google Play services.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"><li>• The investor and investee have conducted a meeting regarding the project the investor wants to invest in.</li><li>• The investor must decide to invest.</li></ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"><li>• The investor will be directed to a specific payment method page depending on the payment method they choose.</li></ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Payment
<b>Sequence No:</b>	002
<b>Short description:</b>	Pay with Credit, Debit, or Gift Card
<b>Description:</b>	<p>Once the investor has selected to pay with either a credit, debit, or gift card, they will be directed to a page where they will need to provide their card information.</p> <p>They will need to provide the following information:</p> <ul style="list-style-type: none"> <li>• Name on card (Only ASCII characters, max length: 50 characters)</li> <li>• card number (min/max length: 12-20 integer characters)</li> <li>• Expiration date (format: mm/yyyy, m: month, y: year)</li> <li>• Security code (min/max length: 3-4 integer characters)</li> </ul>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor must decide to invest.</li> <li>• The investor must choose to pay with a credit card.</li> <li>• The investor will receive a confirmation email.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor will be emailed a receipt if payment has been successfully made.</li> </ul>
<b>Other attributes:</b>	The application gets a certain percentage of the commission on the money invested.

<b>Requirement Title</b>	Payment
<b>Sequence No:</b>	003
<b>Short description:</b>	Cash payment
<b>Description:</b>	<p>Once the investor has selected to pay with cash, they will need to set up a meeting time with the investee to make the transaction.</p> <p>Date and time must be in the future.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor must decide to invest.</li> <li>• The investor must choose to pay with cash.</li> <li>• The investor will receive a confirmation email.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor will be emailed a receipt if payment has been successfully made.</li> </ul>
<b>Other attributes:</b>	The application gets a certain percentage of the commission on the money invested.

<b>Sequence No:</b>	003
<b>Short description:</b>	Check payment
<b>Description:</b>	<p>Once the investor has selected to pay with a check, they will be directed to a page where they will need to provide their check information.</p> <p>They will need to provide the following information:</p> <ul style="list-style-type: none"> <li>• Routing number (integer characters, max length: 25)</li> <li>• Account number (integer characters, max length: 25)</li> <li>• First and last name (Only ASCII characters, max length: 50 characters)</li> <li>• Amount (format: \$X, X: Double value)</li> <li>• Payee First and Last name (Only ASCII characters, max length: 50 characters)</li> </ul>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor must decide to invest.</li> <li>• The investor must choose to pay with a check.</li> <li>• The investor will receive a confirmation email.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor will be emailed a receipt if payment has been successfully made.</li> </ul>
<b>Other attributes:</b>	The application gets a certain percentage of the commission on the money invested.

<b>Requirement Title</b>	Payment
<b>Sequence No:</b>	004
<b>Short description:</b>	Email receipt
<b>Description:</b>	<p>Once the investor has made the payment, they will receive an email with the receipt.</p> <p>The receipt will include the following:</p> <ul style="list-style-type: none"> <li>• Date of payment</li> <li>• Amount</li> <li>• Sender's Name</li> <li>• Receiver's Name</li> <li>• Receipt Number</li> </ul> <p>All in text format, will be formatted by and sent by the database. Firebase will be used as a service for this.</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• Payment must have been successfully made using one of the methods available.</li> <li>• The investor must provide a valid email address.</li> <li>• The investor will receive a confirmation email.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The investor will receive an email of the receipt.</li> </ul>
<b>Other attributes:</b>	N/A

## 4.9 “SEARCH” REQUIREMENTS

<b>Requirement Title</b>	Search
<b>Sequence No:</b>	001
<b>Short description:</b>	Search by username/ name
<b>Description:</b>	<p>A registered user will be able to search for anyone with a BizNotio account. They will have the option to search by name or username.</p> <p>If the user chooses to search by name, they will need to either enter the first name, last name, or both.</p> <p>If the user chooses to search by username, they will need to enter the username of the user.</p> <p>After entering the name or username, the app will display users with the matches or similar matches.</p> <p>Input: search String (max length: 50 characters) Output: result of the search (20 results per page)</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"><li>• The user must enter a username or name.</li><li>• The user they wish to search for must have a BizNotio account.</li></ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"><li>• The user will be able to view the search results.</li></ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Search
<b>Sequence No:</b>	002
<b>Short description:</b>	Search by projects
<b>Description:</b>	<p>A registered user will be able to search for anyone with a BizNotio account. They will have the option to search by project name.</p> <p>If the user chooses to search by project name, they will need to either enter the name of the project or similar names.</p> <p>After entering the name of the project, the app will display users with matching project names or similar matches.</p> <p>Input: search String (max length: 50 characters) Output: result of the search (20 results per page)</p>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The user must enter a project name.</li> <li>• The user they wish to search for must have a BizNotio account.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The user will be able to view the search results.</li> </ul>
<b>Other attributes:</b>	N/A

<b>Requirement Title</b>	Search
<b>Sequence No:</b>	003
<b>Short description:</b>	Search Failed
<b>Description:</b>	<p>After searching for a user by project name or username, the search may fail because of the following reasons:</p> <ul style="list-style-type: none"> <li>• The person the user wishes to search for is not registered.</li> <li>• There are no matches found with the username or project name entered by the user.</li> </ul>
<b>Pre-Conditions:</b>	<ul style="list-style-type: none"> <li>• The user must enter a project name or username.</li> </ul>
<b>Post Conditions:</b>	<ul style="list-style-type: none"> <li>• The screen will display a message saying, "Search failed".</li> </ul>
<b>Other attributes:</b>	N/A

## 5. Software Processes and Infrastructure

---

### 5.1 HARDWARE AND INFRASTRUCTURE

#### Hardware:

- Android phone with OS version 8.0 and above

- Phone with internet connection

- Phone with camera, microphone, and touch screen

#### Infrastructure:

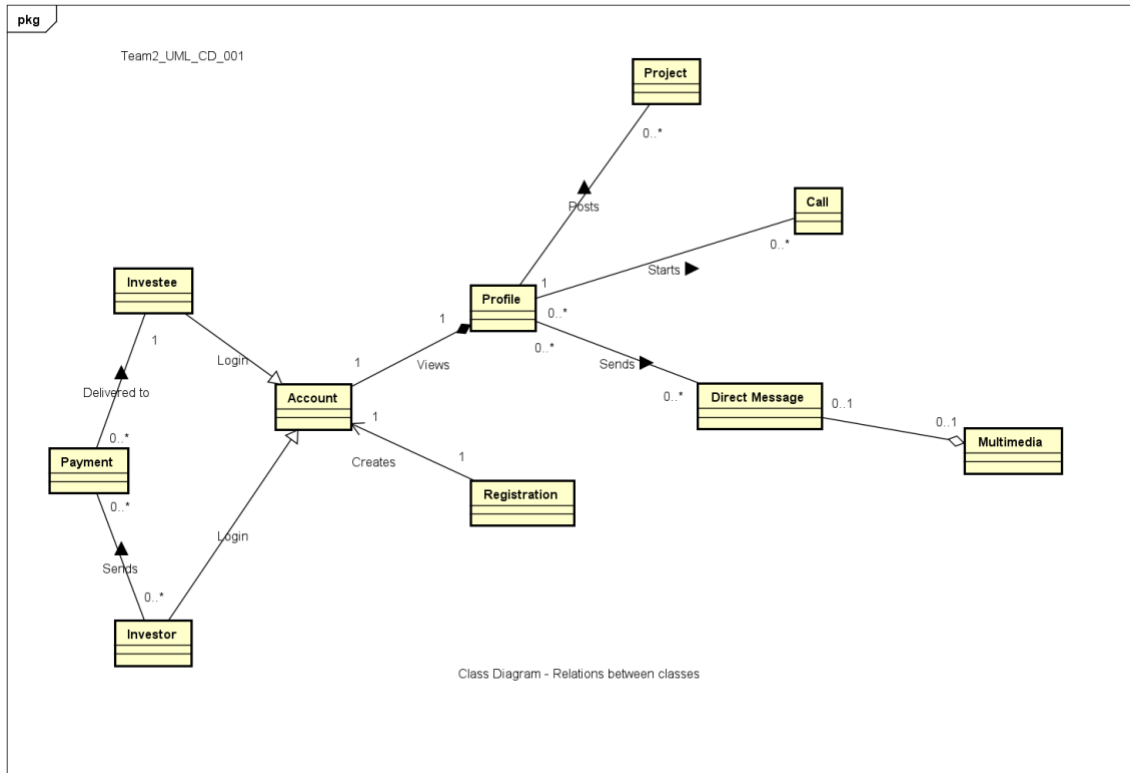
- Android studio / IntelliJ Idea

- Android Emulator

- Database will be hosted using Firebase

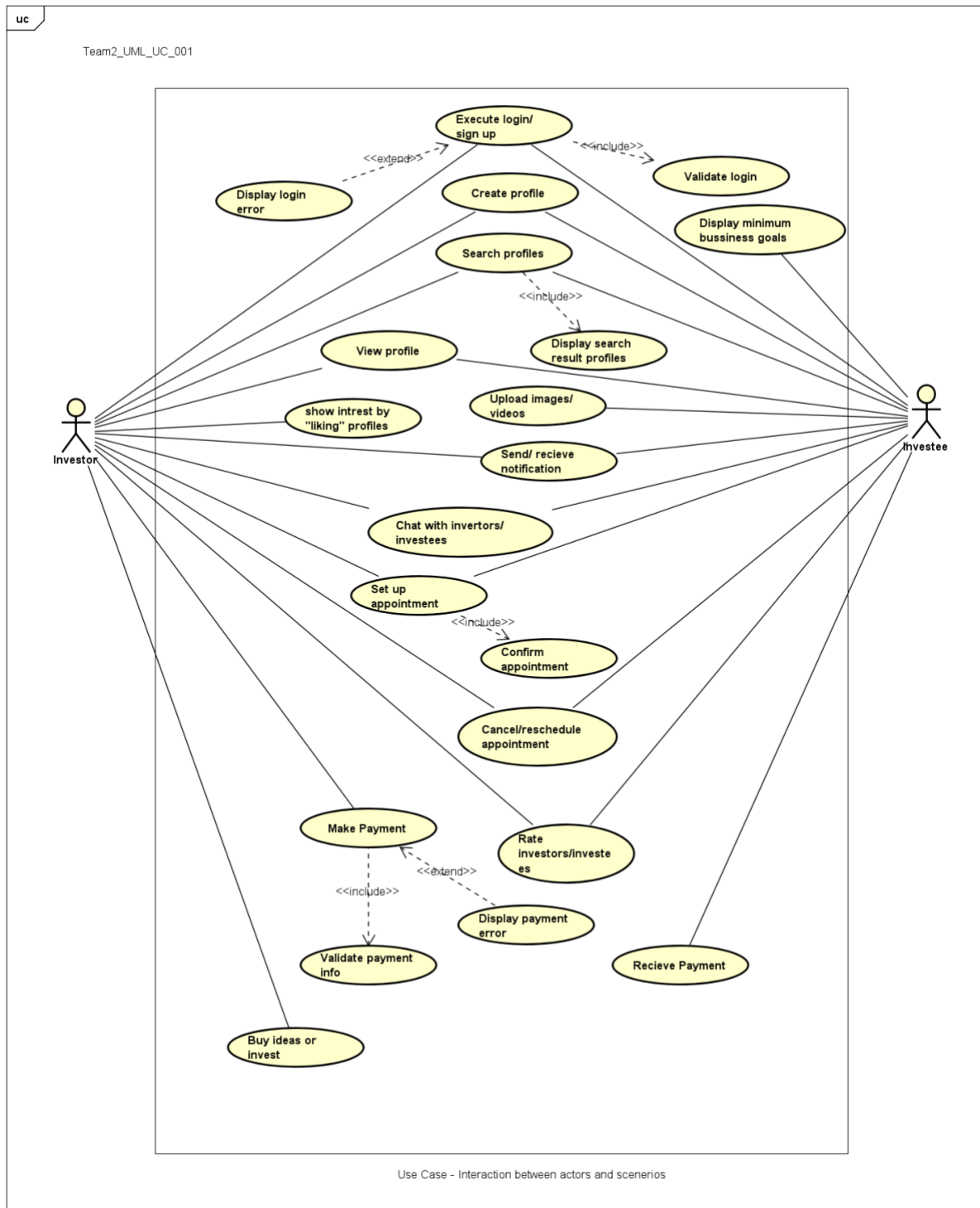
## 5.2 CLASS DIAGRAMS

### Relation Between Classes



## 5.3 USE CASE DIAGRAMS

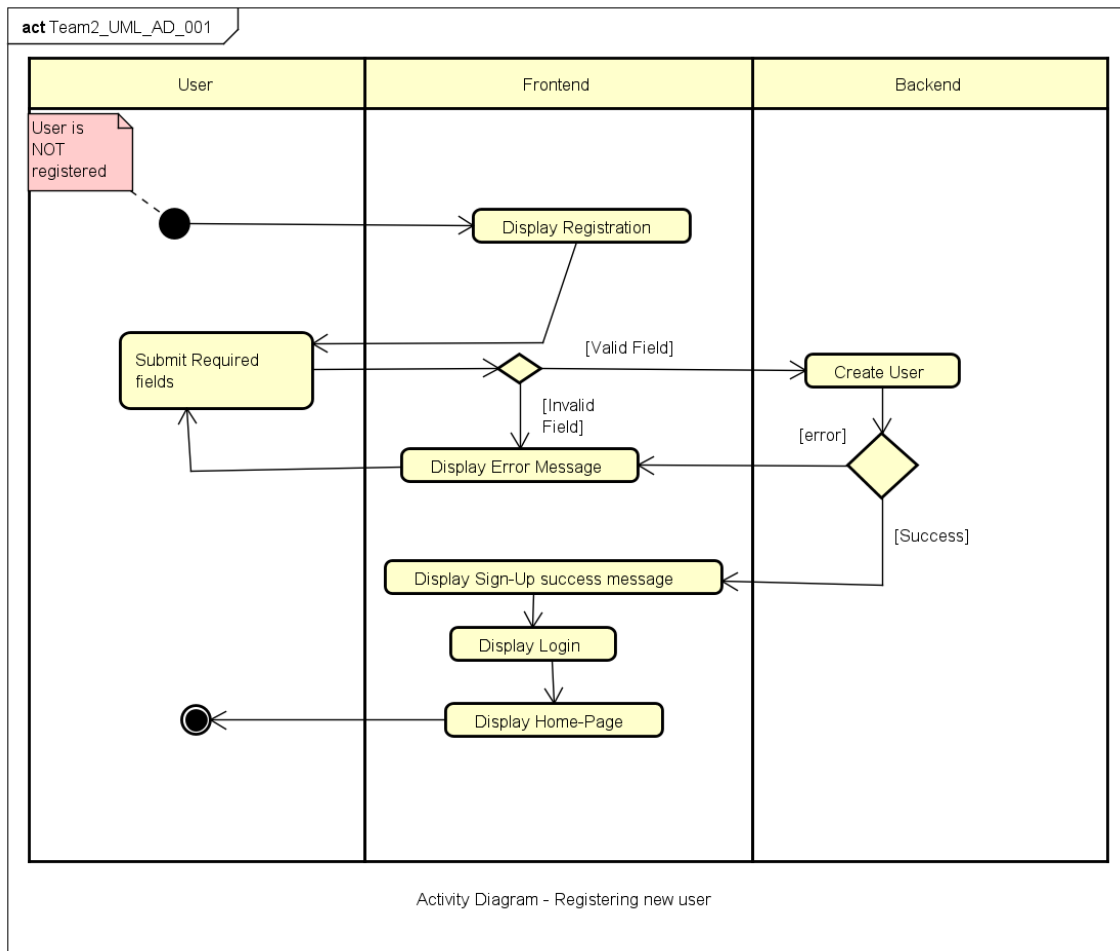
### System Boundary



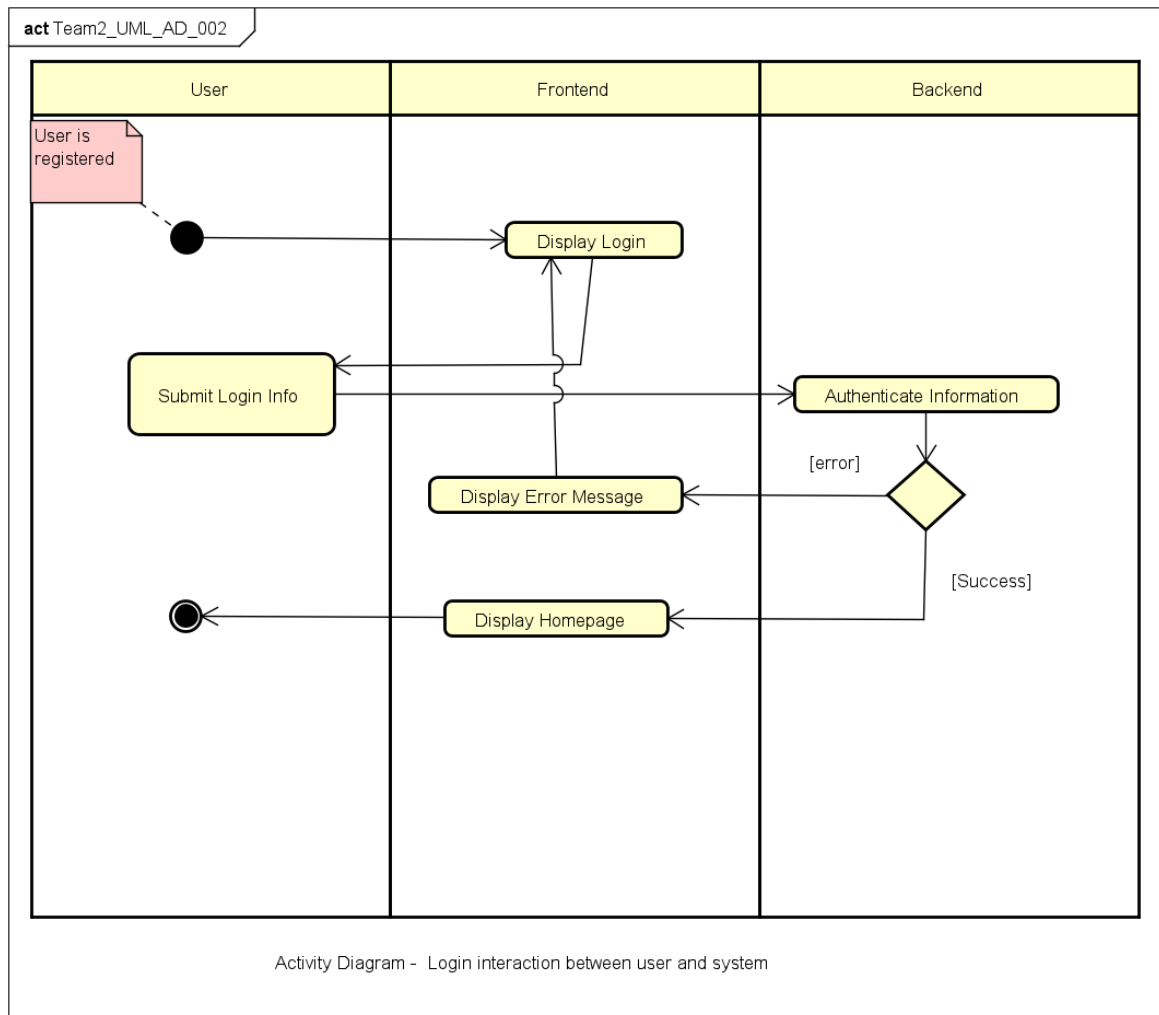


## 5.4 ACTIVITY DIAGRAMS

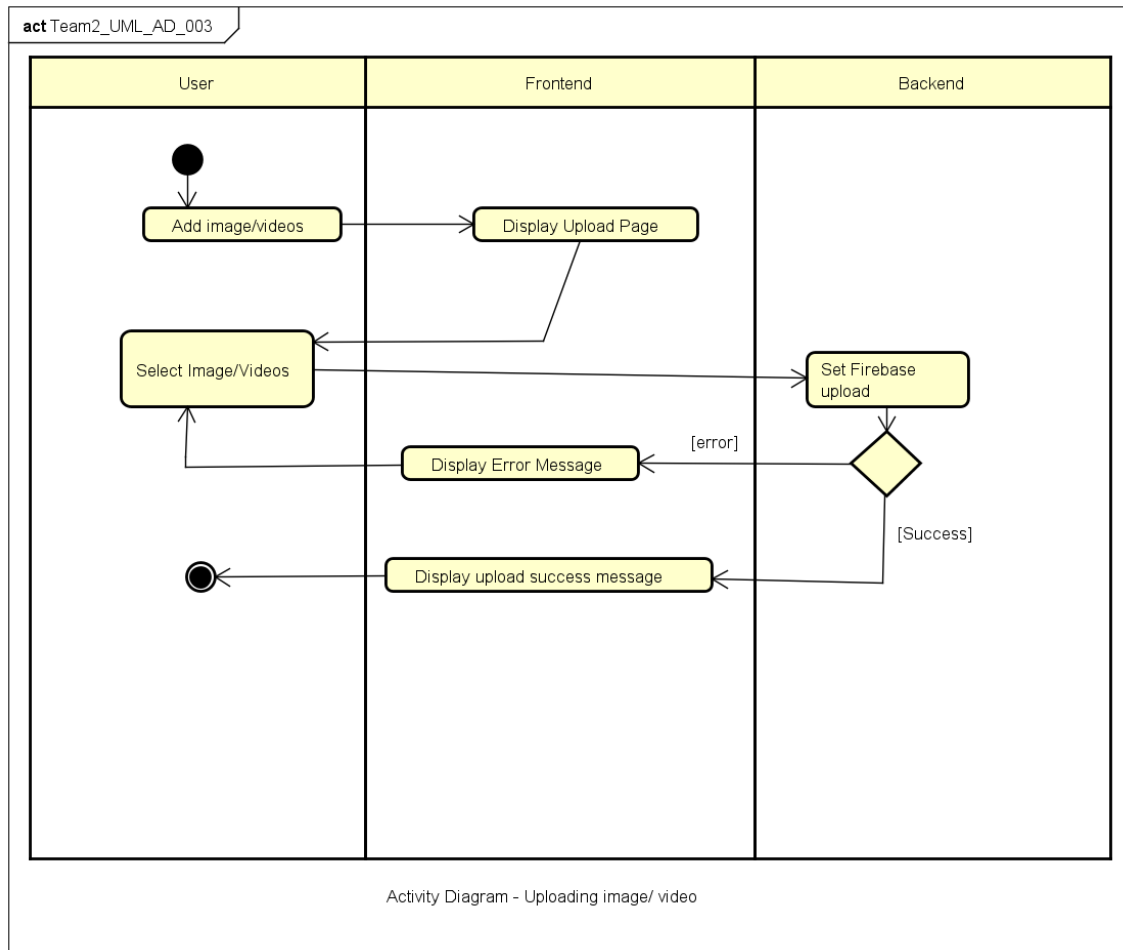
### User's Registration



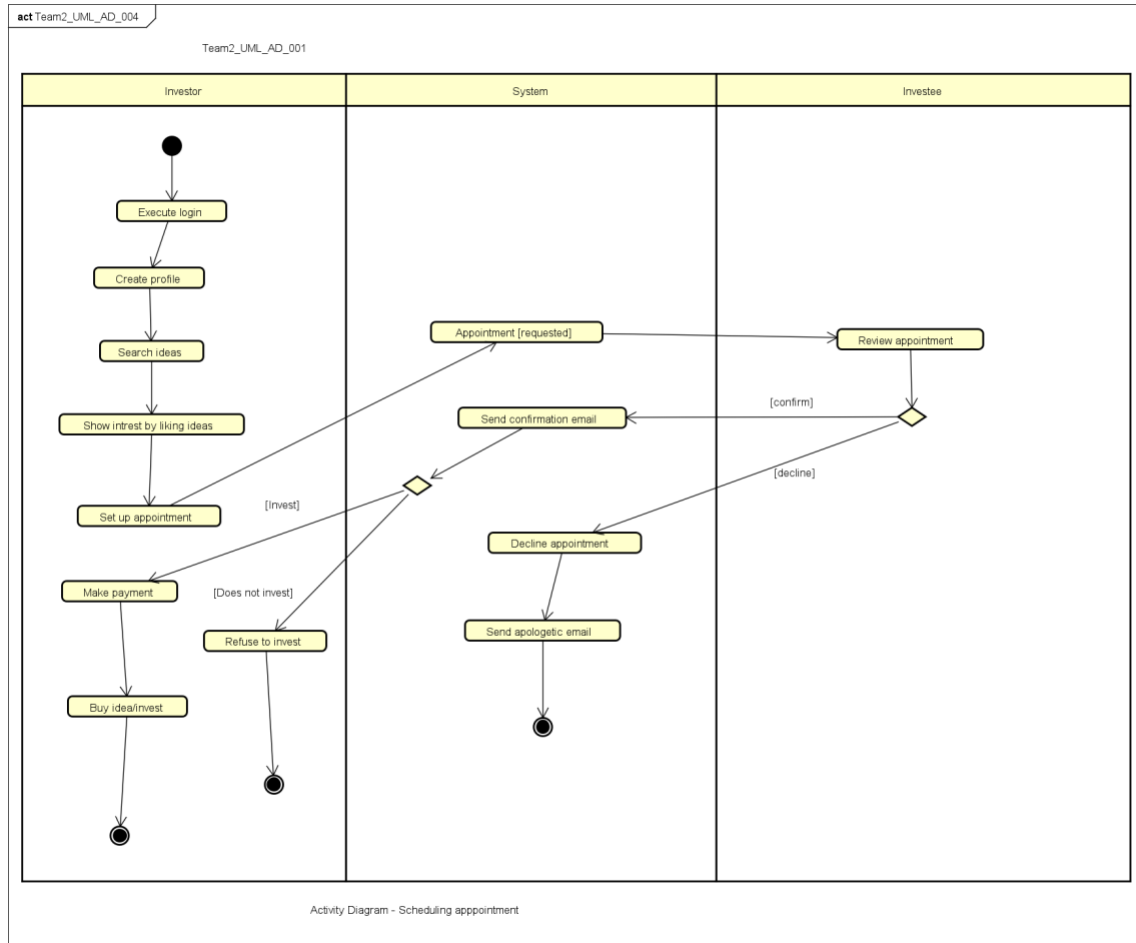
## Login



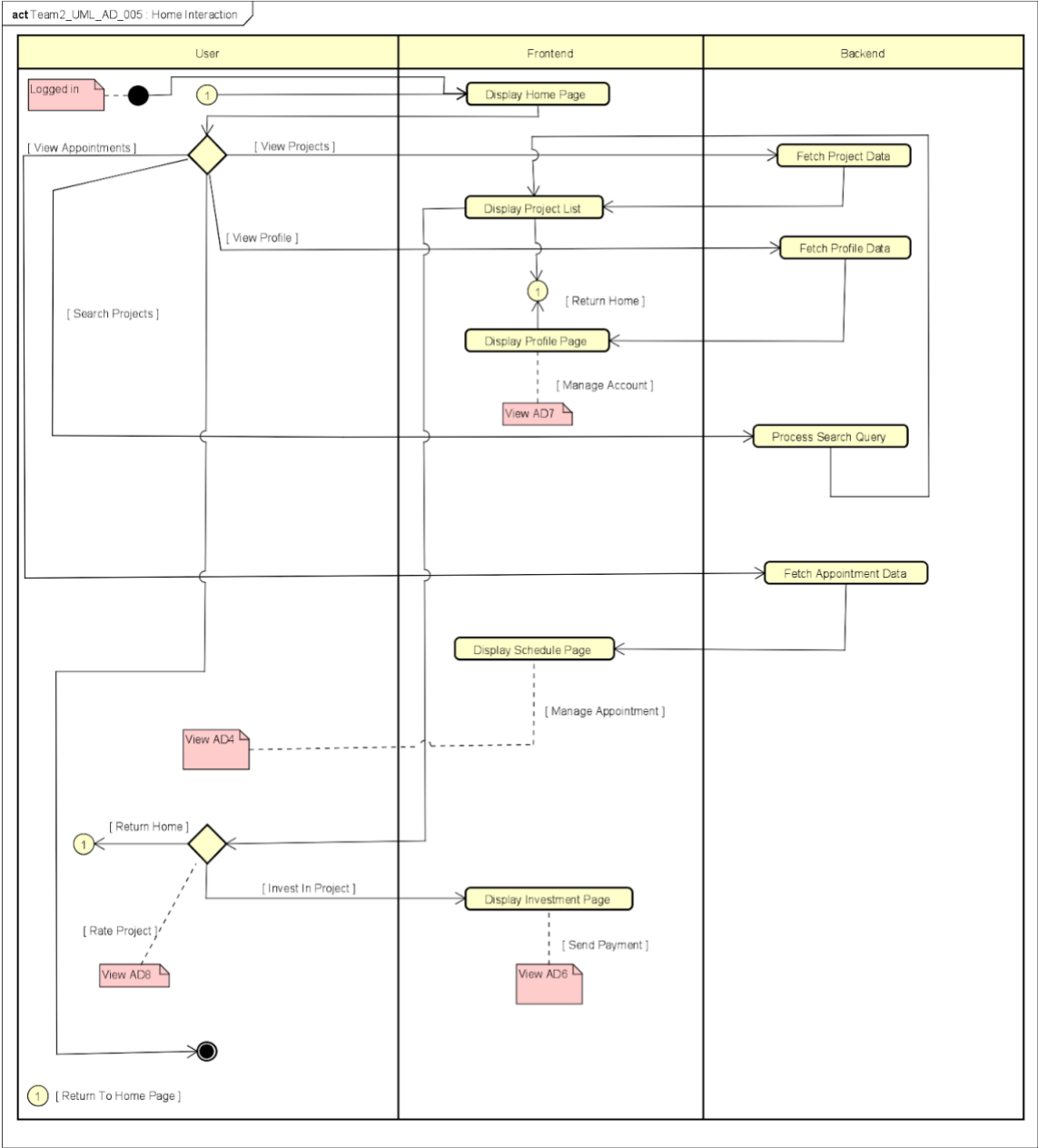
## Uploading Medias



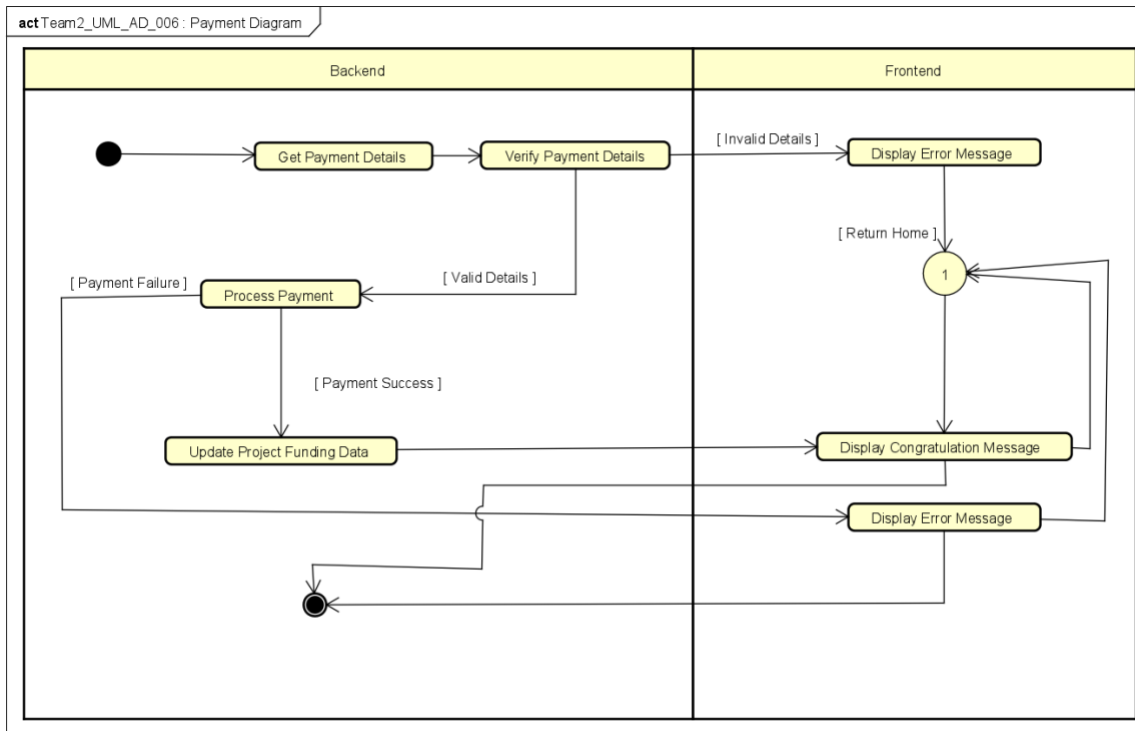
## Managing Appointments



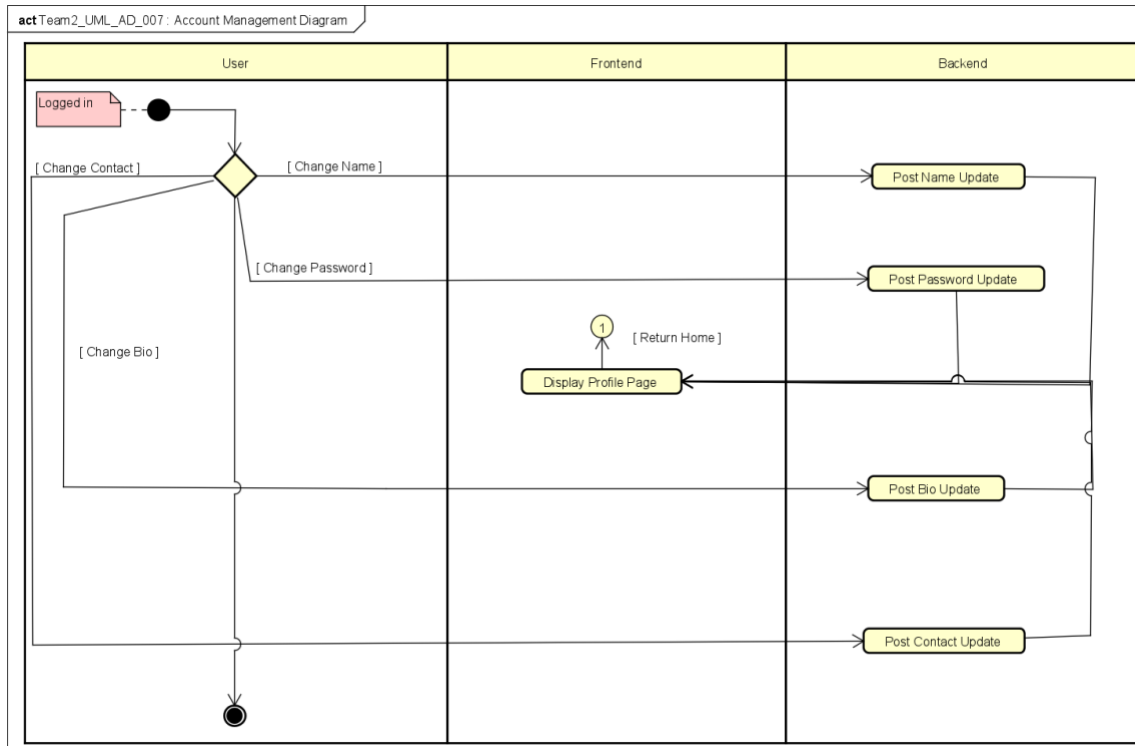
## Home Page Interaction



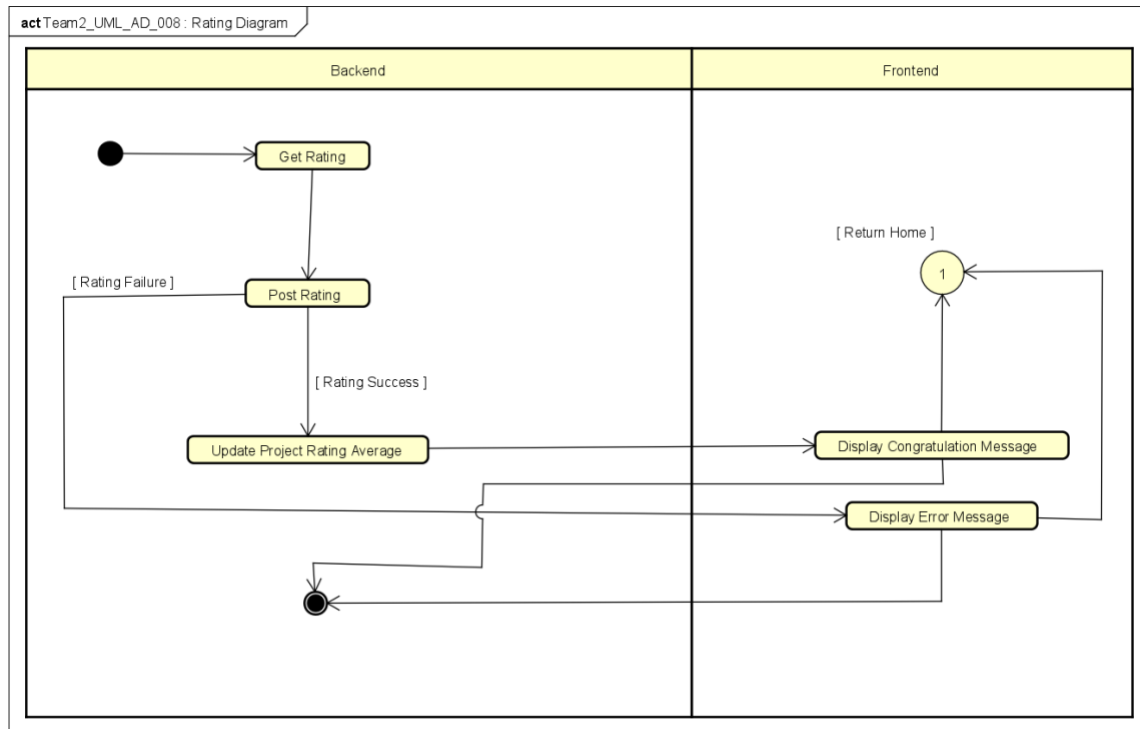
## Payment Diagram



# Account Management



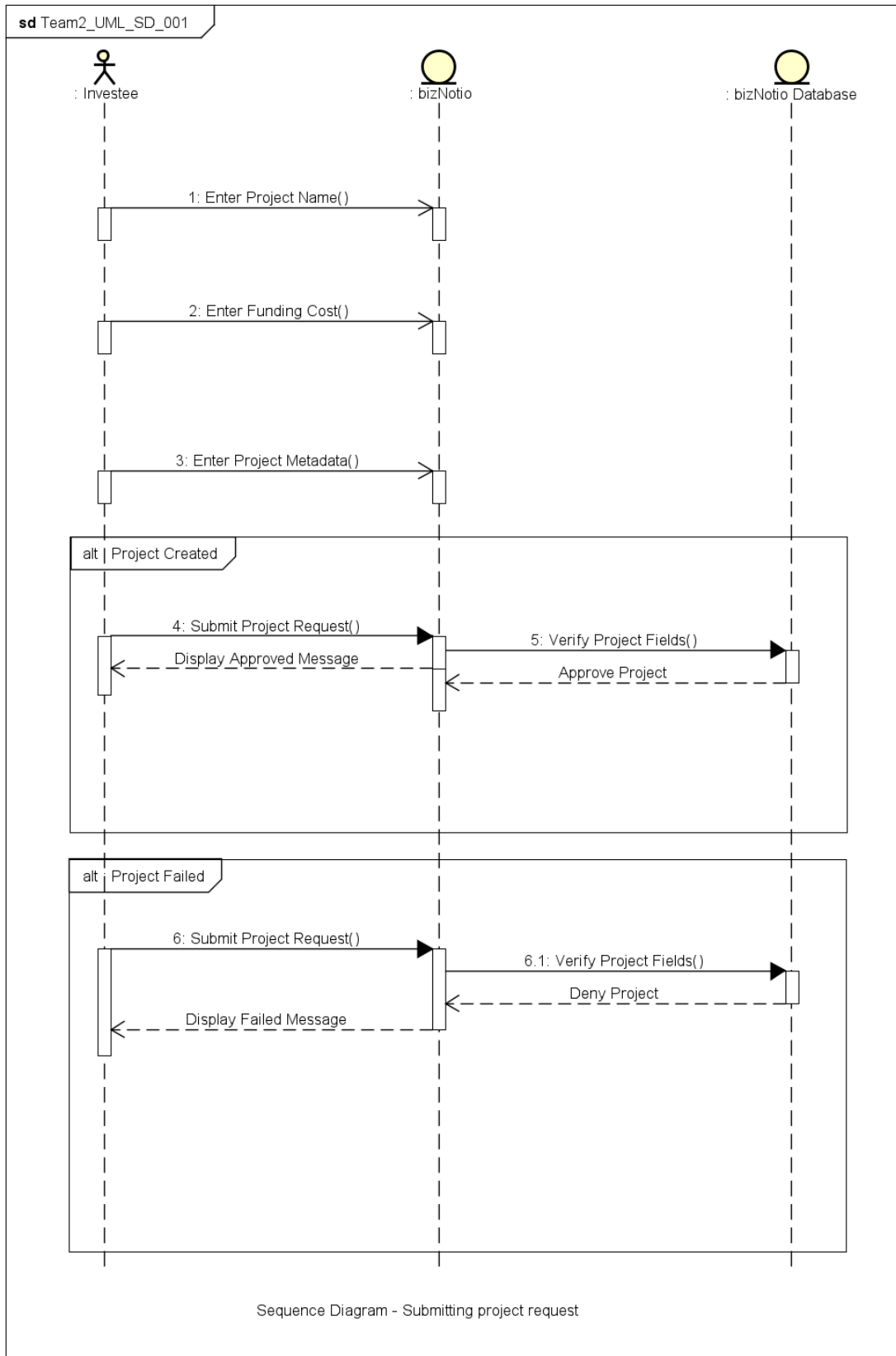
## Review / Rating Diagram



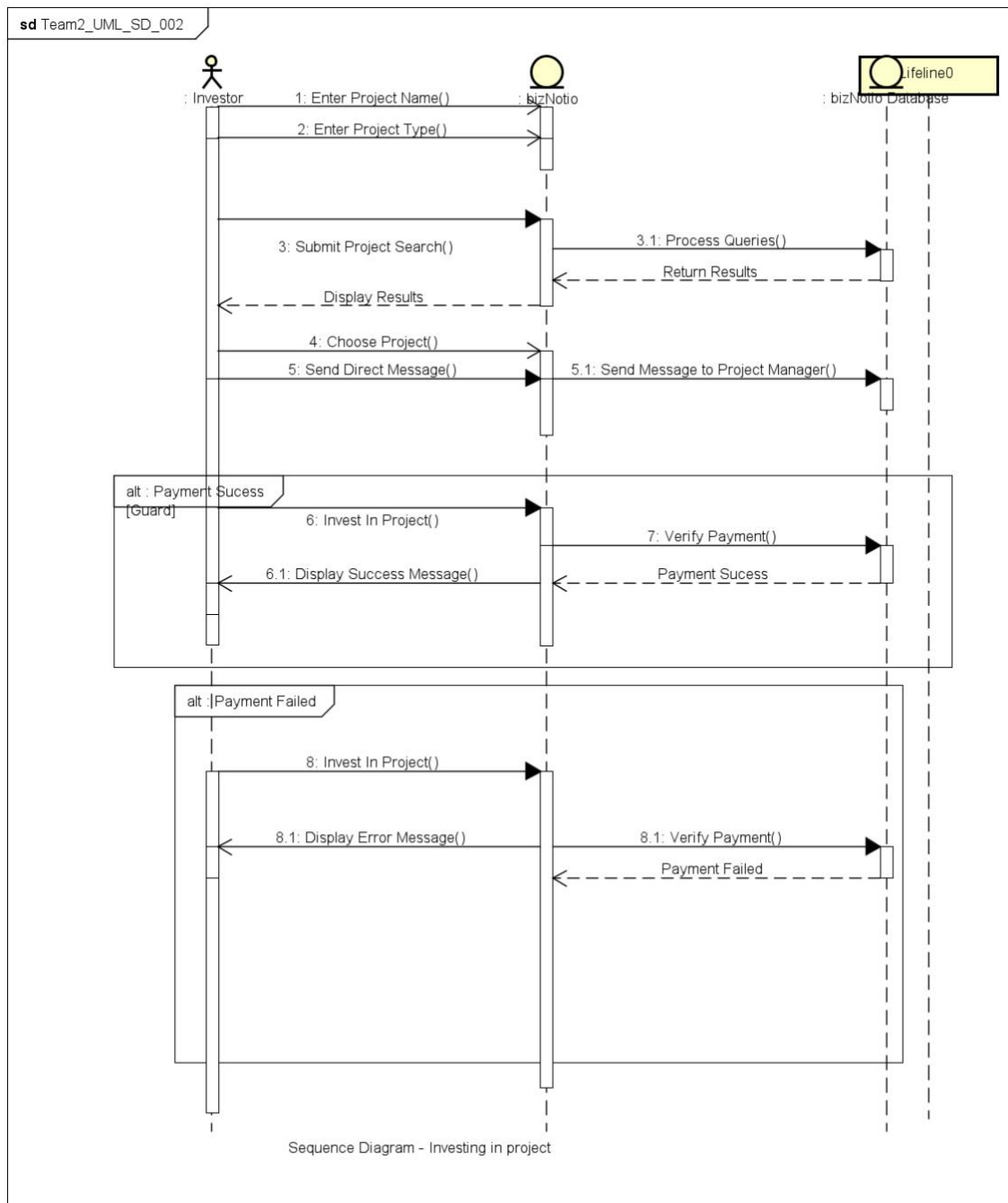


## 5.5 SEQUENCE DIAGRAMS

### Managing Proposals

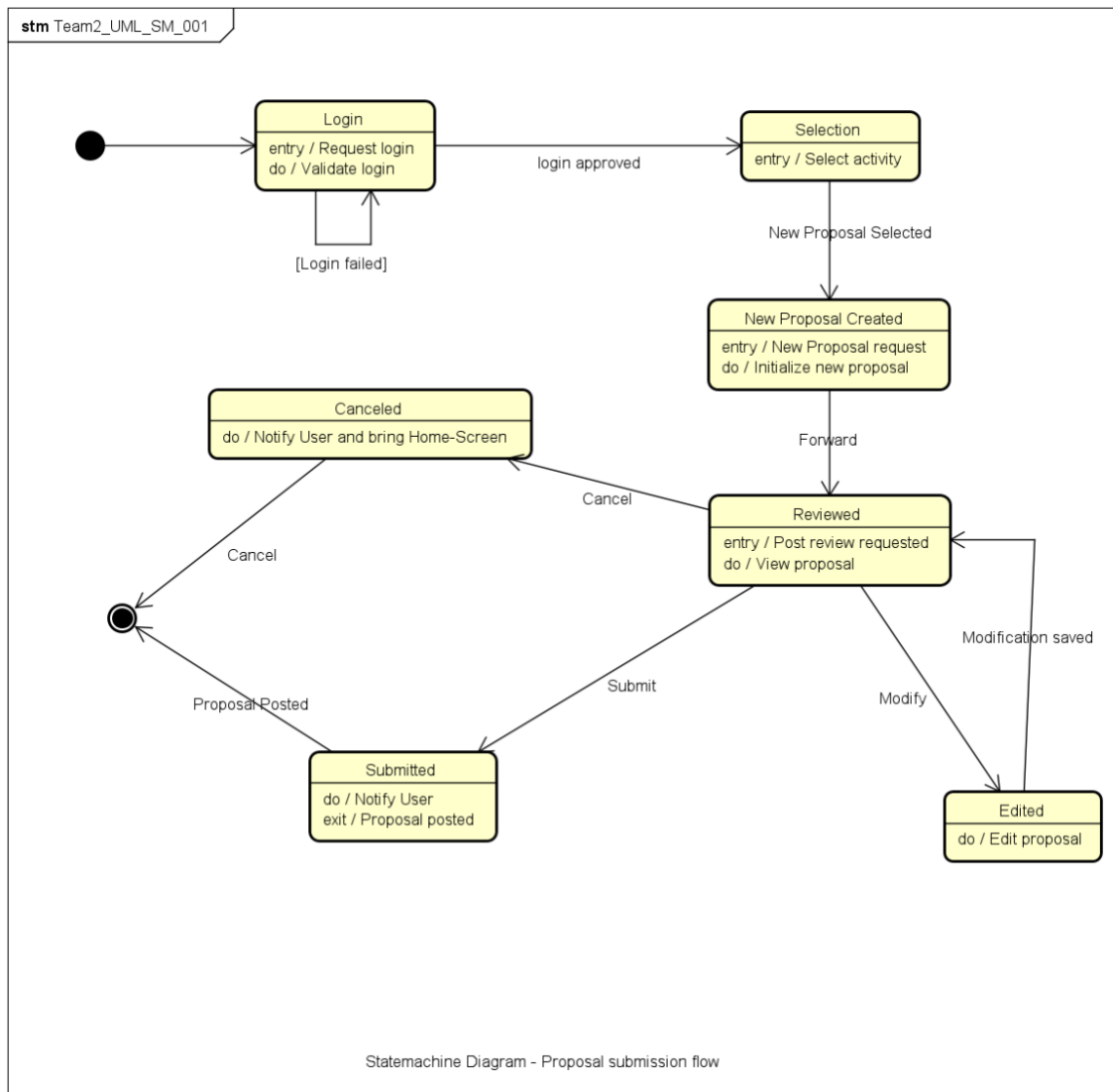


## Investing in a Project

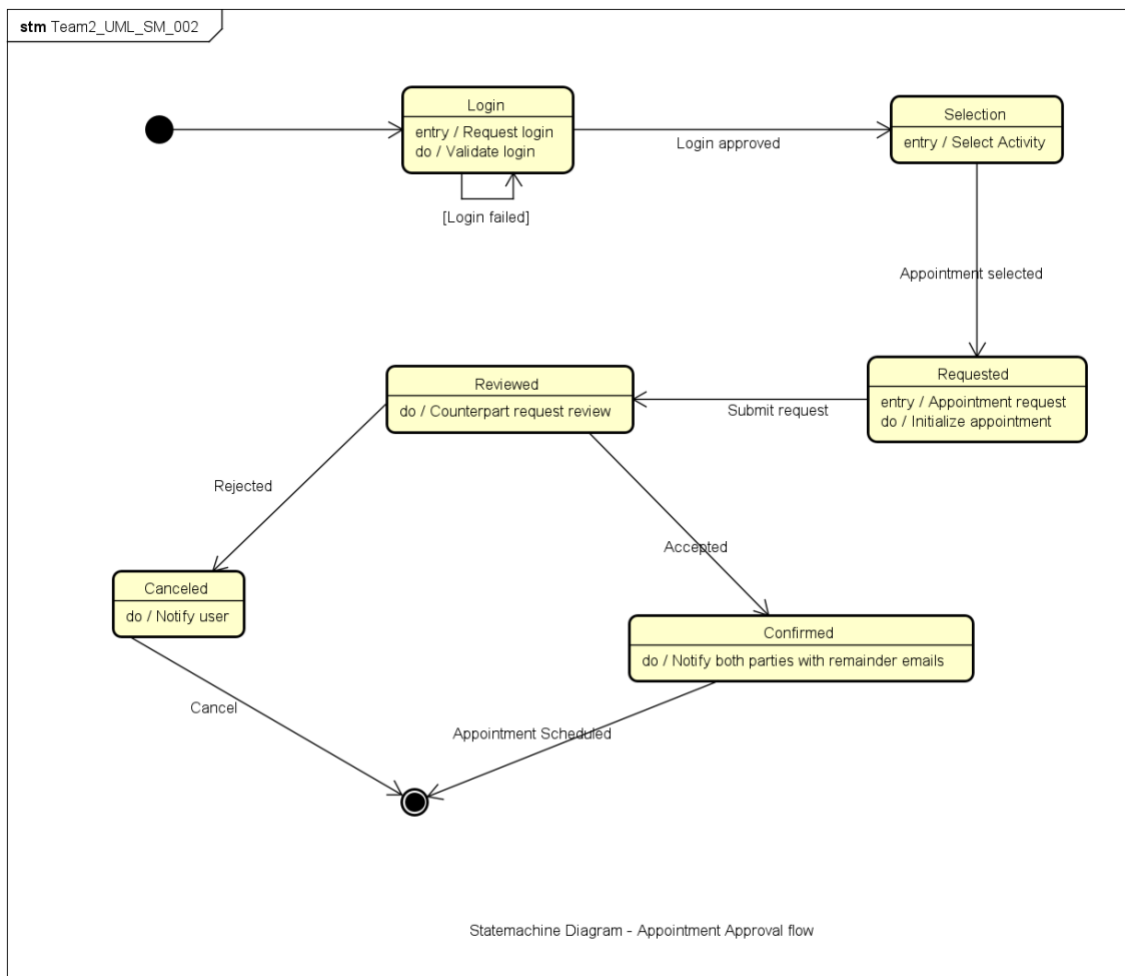


## 5.6 STATE MACHINE DIAGRAMS

### Proposal Submission Flow



## Appointment Request Flow



## 5.7 CONCEPTUAL DATA MODEL - DATABASE

Database will have three main objects.

Investor, Investee, Project Data

Investor:

Name, Funding Range, Domain Interest, Contact Information, invested projects, liked projects.

Investee:

Name, Project ID, Contact Information, liked projects, investor connections, bio, profile picture.

Project Data:

Project Name, Project funding goal, project id, project owner, project timeline, project start date, project description, project media (videos, photos), project links (GitHub, website), project current funding status, project current launch status (launched, idea phase, research phase, development phase).

All these main data types will be stored using Firebase and will be accessed via access tokens when the user logs in. The appropriate data will be used when the app makes requests to the database and will display the data to the users.

## 5.8 SCREEN SHOTS

None available at this time.

## 5.9 TEST PLAN

Test plan will be provided at a later stage of the project.

## 6. Assumptions and Constraints

---

### 6.1 ASSUMPTIONS

The following is a list of assumptions:

- Ignore collecting money from external advertisement and general accounting
- Ignore compliance issues
- Users are real Investees and Investors with correct information on profile
- User agreement and terms are not required
- Users are 18 years or older
- Ignore taxations on payment made through the application
- Abundant availability of team's members throughout the project
- Team's members are familiar with all the development tools

### 6.2 CONSTRAINTS

The following is a list of constraints:

- Team lacks android experience
- Schedule very aggressive
- Team lacks prior Firebase experience
- Team lacks prior Kotlin/Java experience
- Team lacks prior database experience
- Lack of face to face meetings
- New team's members to each other making difficult communication
- Application needs to be installed on a device

### 6.3 OUT OF SCOPE MATERIAL




The following is a list of "out of scope" material:

- Post Project maintenance is not covered
- No web version is developed

## 7. Delivery and Schedule

Task/Milestone Description	Anticipated Start Date	Anticipated End Date	Status	Comments
Prepare Requirements and UML diagram	06/16/2020	07/02/2020	Completed	Deliverable will be ULM document in PDF format. Increment 1 Deliverable
SRA document (Includes project objectives, Requirements and UML diagrams)	07/02/2020	07/21/2020	In Progress	Deliverable will be the SRA document. All stakeholders agree on the content of the SRA by signing in section 8. Increment 2 Deliverable
Home screen design and implementation	07/02/2020	07/22/2020	To Be Completed (TBC)	
Login and registration design and implementation	07/22/2020	07/25/2020	TBC	
Account setup and maintenance design and implementation	07/22/2020	07/30/2020	TBC	
Appointment management design and implementation	07/22/2020	07/30/2020	TBC	
Proposals management design and implementation	07/22/2020	07/30/2020	TBC	
Individual reviews and ratings design and implementation	07/22/2020	07/30/2020	TBC	
Payment management design and implementation	07/22/2020	07/30/2020	TBC	
Search design and implementation	07/22/2020	07/30/2020	TBC	
Test case design	07/22/2020	07/30/2020	TBC	Increment 3 Deliverable
External Documentation (i.e. User Manual)	07/22/2020	08/10/2020	TBC	
Project presentation	08/01/2020	08/11/2020	TBC	
Final Milestone: project delivery		08/11/2020	TBC	Increment 4 Deliverable

## 8. Stakeholder Approval Form

Stakeholder Name	Stakeholder Role	Stakeholder Comments	Stakeholder Approval Signature and Date
Rodrigo Augusto	Development Mgr		
Prajwal Gautam	Project Assistant		
Sushant Gupta	Developer		
Sindhu Parajuli	Developer		 07/21/2020
Lamia Chowdhury	Developer		 07/21/2020
Jonathan Padilla	Developer		 07/21/2020



Appendix:

---

None