
Software Requirements Specification

for

Investify

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of our final year project, Investify. It will explain the purpose and features of the project, the interfaces of the project, what the project will do, and the constraints under which it must operate. This document is intended for users of the project and potential developers.

1.2 Document Conventions

Headings	Font Style: Times New Roman Font Size: 16 pts
Sub-Headings	Font Style: Times New Roman Font Size: 14 pts
Regular Text	Font Style: Times New Roman Font Size: 12 pts

1.3 Intended Audience and Reading Suggestions

Our target audience will be the users who want to invest in small-scale businesses or startups and those businesses that are looking for small investments in order to grow their businesses.

This document is intended for those users who will be using this web app for its intended purpose and for those individuals who will manage the web app on the technical side.

1.4 Product Scope

The scope of this project will be to help people build their businesses by asking for small investments, and eventually this will also enable investors to invest in businesses in which they are interested, and then they can gain profits through the revenue sharing model, in which an agreement will be made between the investor and investee through which the investor will get some share of the profit for a limited period of time (according to the agreement). This project can start a culture of building small-scale businesses and startups.

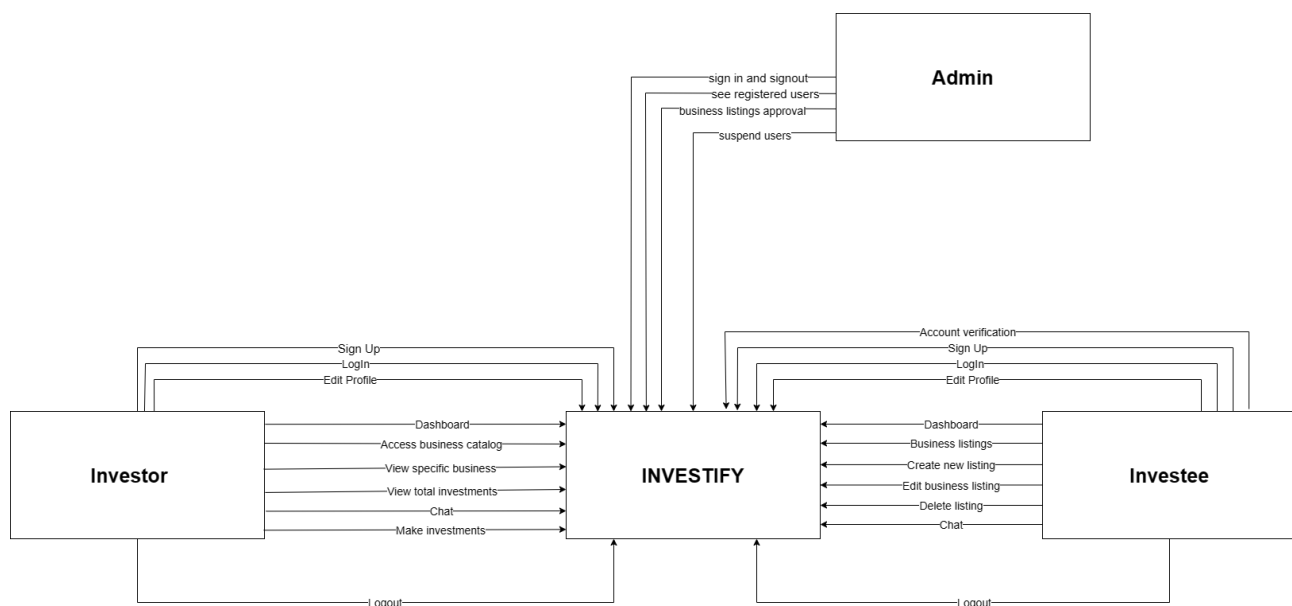
1.5 References

[draw.io \(diagrams.net\)](https://draw.io)

[How to Develop an Investment Platform: A Complete Guide \(scnsoft.com\)](https://scnsoft.com)

2. Overall Description

2.1 Product Perspective



2.2 Product Functions

2.2.1 Investor/Business Profile Creation:

- Users will choose between an investor and a business profile.
- Users can login by entering credentials.
- Users can edit his profile details.

2.2.2 Investment Posts/Listings:

- Users with a business profile can create a post asking for investments.
- Posts can be edited or deleted.
- Investors can look for the business posts in which they want to invest.

2.2.3 Chat Platform:

- A chat area for the conversation between the investor and the Investee.

2.2.4 In app notifications and emails:

- Investors and Investee will both get in app notifications and emails.

2.2.5 Admin Controls:

- Admin can approve or disapprove any listing.
- Approves business/investee account after thorough verification.
- Admin can suspend user profiles if they violate the platform rules.

2.2.6 Searching:

- Investors can search for their desired business in the listing area.

2.3 User Classes and Characteristics

- **Investor:**

This user will be able to invest in different businesses through our platform.

- **Investee:**

This user will be able to register his business on our platform and afterwards he can list his business, asking for investments

- **Admin:**

This user will be able to approve or disapprove any listing created by the investee and this user can also suspend Investor/Investee accounts if they violate platform rules.

2.4 Operating Environment

- Operating System: Windows, MacOS, iOS, Android, Linux
- Environment: A web application must be accessed on a web browser.
- Tech Stack: MERN (MongoDB, Express JS, React JS, Node JS)

2.5 Design and Implementation Constraints

- A web browser is needed to access the web application.
- A good internet connection must be ensured.
- Investees cannot ask for more than Pakistani Rupees 25,000 as an investment amount.
- Investees cannot have more than three investments running concurrently.

- A maximum of 30 percent can be shared from the profit amount with one investor.

2.6 User Documentation

The following documents will be provided for this project:

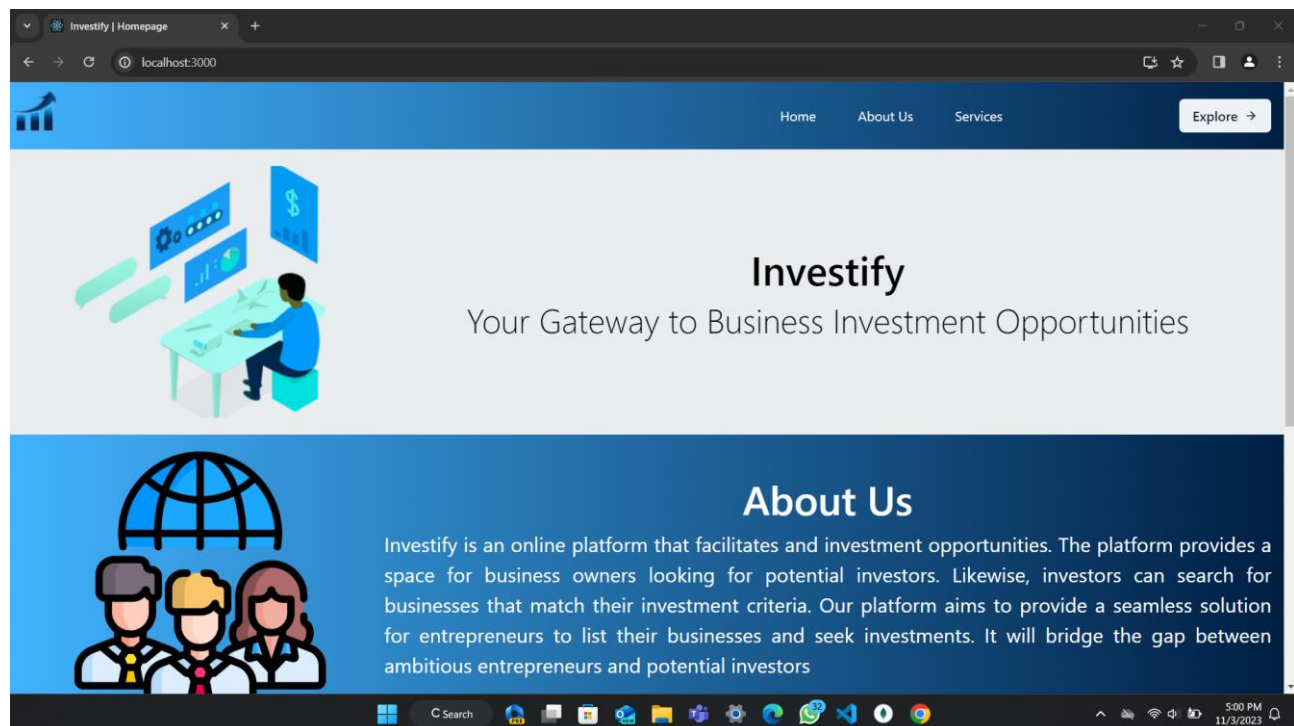
- SRS: Software Requirements Specification
- SDS: Software Design Specification

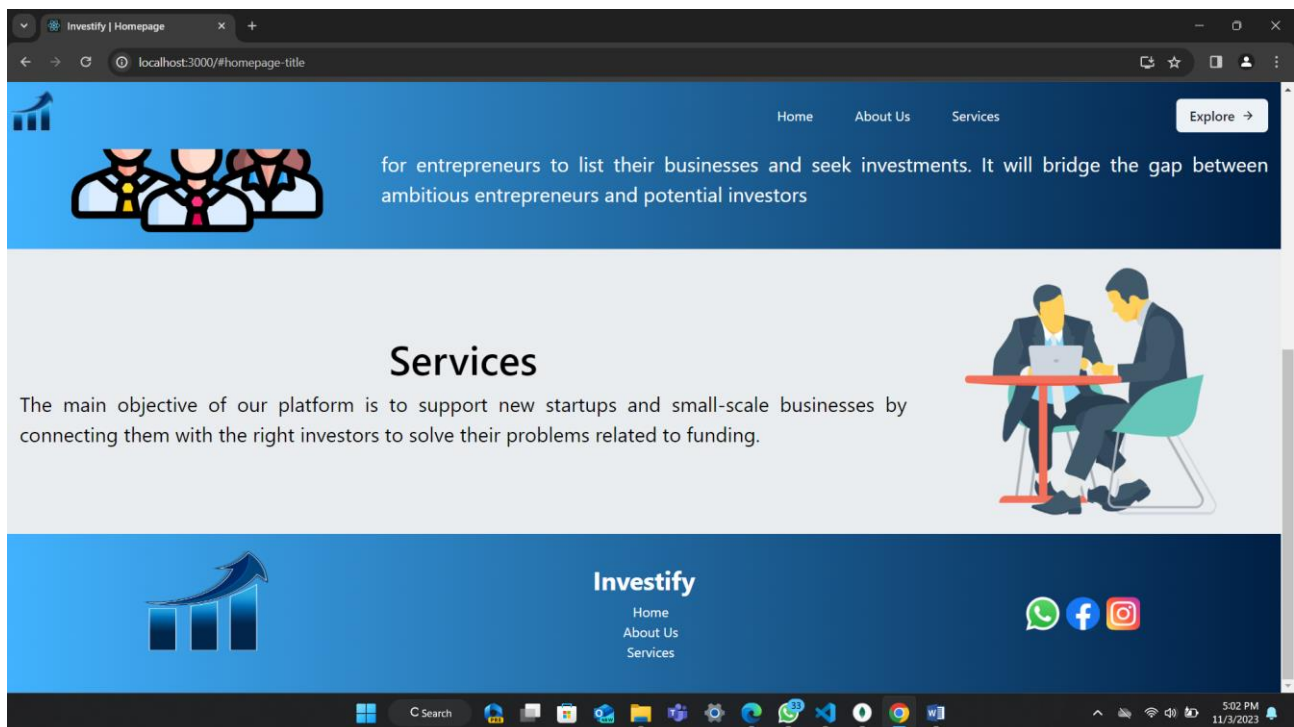
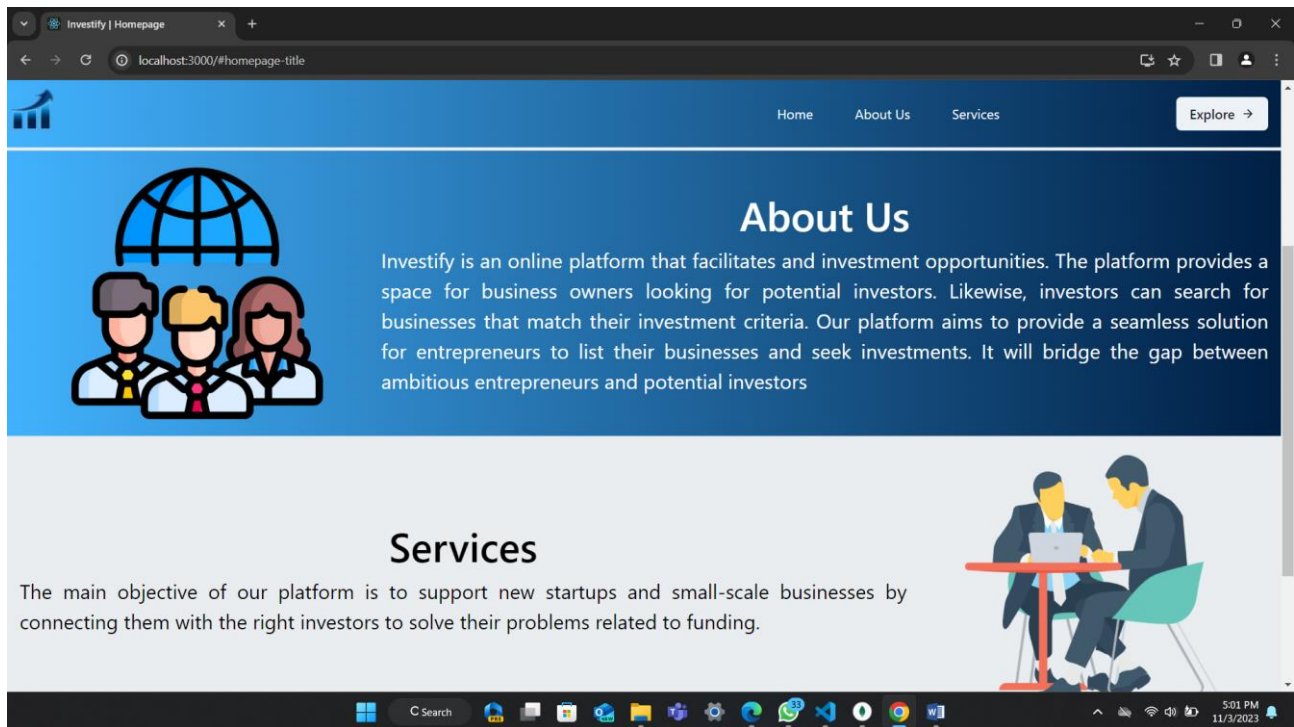
2.7 Assumptions and Dependencies

- Assuming users will have access to personal computers.
- Assuming that the computers running the web application have a minimal amount of memory and processing power.
- To access the web application, users must have a reliable and continuous internet connection.

3 External Interface Requirements

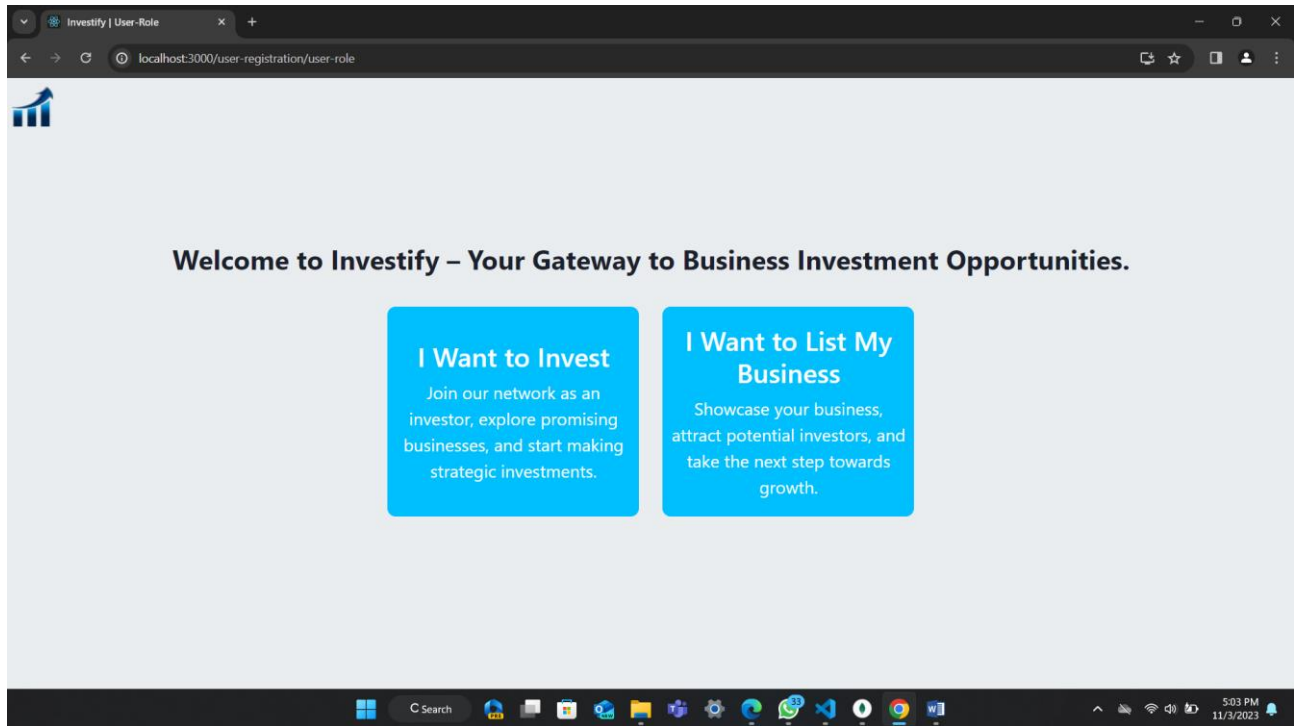
3.1 User Interfaces



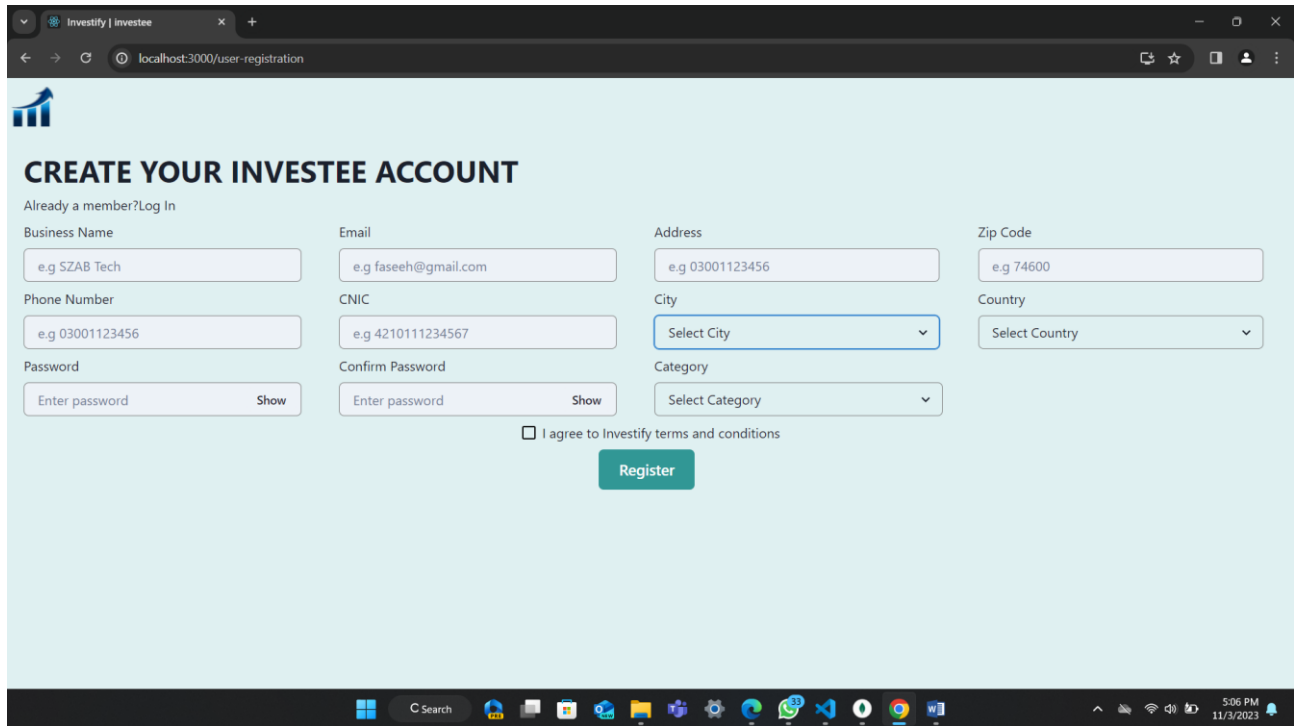


The screenshot shows a web browser window titled 'Investify | UserLogin' with the address bar displaying 'localhost:3000/user-login'. The page features a light blue sidebar on the left with a bar chart icon. The main content area is split into two sections. The left section, titled 'Login to Your Account', contains a form with two radio buttons: 'Investor' (selected) and 'Investee'. Below these are input fields for 'Email address' (placeholder: 'Enter Your email') and 'Password' (placeholder: 'Enter password' with a 'Show' toggle). A 'Forgot Password?' link is present, and a 'Sign In' button is at the bottom. The right section, titled 'New Here?', contains a sign-up message: 'Sign Up and unlock the potential of your financial future – Join our business investment platform today and start building wealth!' and a 'Sign Up' button. The Windows taskbar at the bottom shows the time as 5:02 PM on 11/3/2023.

This screenshot is identical to the one above, showing the 'Investify | UserLogin' page. However, the 'Investee' radio button is now selected. The 'Sign In' button remains visible at the bottom of the login form. The rest of the page layout, including the sidebar, the 'New Here?' section, and the Windows taskbar, is unchanged.



The screenshot shows a web browser window with the title 'Investify | investor'. The address bar displays 'localhost:3000/user-registration'. The page features a blue bar at the top with a bar chart icon. Below this, the heading 'CREATE YOUR INVESTOR ACCOUNT' is centered. A link 'Already a member?Log In' is located below the heading. The form consists of several input fields: 'First Name' (with placeholder 'e.g Muhammad'), 'Last Name' (with placeholder 'e.g Faseeh'), 'Phone Number' (with placeholder 'e.g 03001123456'), 'City' (a dropdown menu with 'Select City'), 'Email' (with placeholder 'e.g faseeh@gmail.com'), 'CNIC' (with placeholder 'e.g 421011234567'), 'Country' (a dropdown menu with 'Select Country'), 'Password' (with placeholder 'Enter password' and a 'Show' button), and 'Confirm Password' (with placeholder 'Enter password' and a 'Show' button'). Below the form, there is a checkbox labeled 'I agree to Investify terms and conditions' and a green 'Register' button. The Windows taskbar at the bottom shows the time as 5:03 PM on 11/3/2023.



The screenshot shows a web browser window with the URL `localhost:3000/user-registration`. The page is titled "CREATE YOUR INVESTEE ACCOUNT" and includes a link for "Already a member? Log In". The registration form consists of several fields: Business Name (e.g. SZAB Tech), Phone Number (e.g. 03001123456), Password (with a "Show" toggle), Email (e.g. faseeh@gmail.com), CNIC (e.g. 4210111234567), Confirm Password (with a "Show" toggle), Address (e.g. 03001123456), City (a dropdown menu showing "Select City"), Country (a dropdown menu showing "Select Country"), and Zip Code (e.g. 74600). Below the form, there is a checkbox for "I agree to Investify terms and conditions" and a green "Register" button. The Windows taskbar at the bottom shows the time as 5:06 PM on 11/3/2023.

CREATE YOUR INVESTEE ACCOUNT

Already a member? Log In

Business Name
e.g SZAB Tech

Phone Number
e.g 03001123456

Password
Enter password Show

Email
e.g faseeh@gmail.com

CNIC
e.g 4210111234567

Confirm Password
Enter password Show

Address
e.g 03001123456

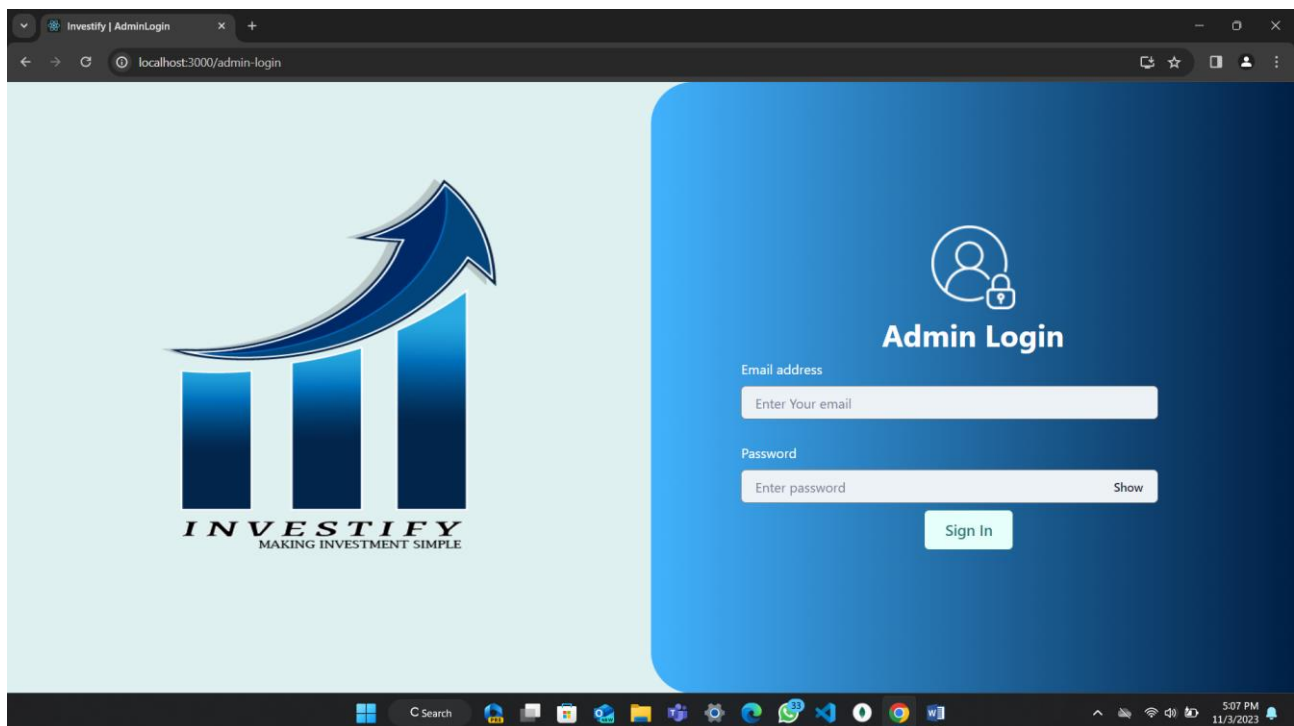
City
Select City

Country
Select Country

Zip Code
e.g 74600

☐ I agree to Investify terms and conditions

Register



The screenshot shows a web browser window with the URL `localhost:3000/admin-login`. The page features the Investify logo on the left, which includes a stylized bar chart with an upward-pointing arrow and the text "INVESTIFY MAKING INVESTMENT SIMPLE". On the right, there is a blue rounded rectangle containing the "Admin Login" section. This section includes a user icon, the title "Admin Login", and two input fields: "Email address" (with placeholder text "Enter Your email") and "Password" (with placeholder text "Enter password" and a "Show" toggle). A green "Sign In" button is located below the password field. The Windows taskbar at the bottom shows the time as 5:07 PM on 11/3/2023.

Admin Login

Email address
Enter Your email

Password
Enter password Show

Sign In

3.2 Hardware Interfaces

- **Desktop Computers:**

The platform can be accessed by users through conventional desktop or laptop computers. The platform exhibits compatibility with prominent online browsers such as Google Chrome, Brave, Mozilla Firefox, Apple Safari, and Microsoft Edge.

- **Smartphones:**

The platform can be accessed on smartphones that utilize widely used operating systems, like iOS and Android. The web application is designed to be optimized and responsive across various screen sizes and orientations.

3.3 Software Interfaces

- **Internal APIs (Application Programming Interfaces):**

Used to communicate between platform components, allowing modules to interact and share data.

- **Database Interface (MongoDB):**

Used to store and retrieve user profiles and platform data.

3.4 Communications Interfaces

This application requires the user to have an active internet connection to be able to connect to the server on the web application that has been deployed.

4 System Features

The use cases for all the features are given below:

4.1 Profile Registration:

Use case name: Registration of Investor and Investee Accounts

Goal: This use case is used for registering investors and business accounts.

Actors: Investors, Investees

Precondition:

The details to be entered should be correct.

Basic Flow of Events:

Actor Action	System response
1. The Actor will enter all the required information.	2. The system will validate the information entered by the actor.
	3. The system will register the user and saves the information in database.

Alternate Path:

- If the entered details are Incorrect, then the system will ask for the information again.

Post Condition:

- The message “User Successfully Registered” will be displayed.
- The login page will be loaded.

Author and Date: Muhammad Faseeh, October 4, 2023

Test Case ID	Test Case Name	Test Case Description	Test Case Steps	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Sign Up	This test case is used to test the functionality of the signup feature.	The user enters all the required details and clicks submit.	The system will store the details in the database and create an actor's profile.	As expected	PASS
2	Incorrect details	Sign-up attempt with an invalid email address format.	Click the Sign Up button. Enters the wrong email format. Click Register.	On clicking Register, the system displays a toast message of validation error.	Sign Up form shown. Validation error message shown.	PASS
3	Empty Validation	Sign Up attempt with no information entered.	Press Sign Up and Press Register.	Clicking Sign up shows the form. Pressing Register informs user of a validation error message.	Sign Up form shown. Validation error message shown.	PASS

4	Reuse details	Sign Up attempt with already existing email, phone or cnic.	Press Sign Up, Fill in information with already existing email, phone or cnic. Press Register.	Clicking Sign up shows you the form. Clicking Register informs user that same email, phone or cnic already exists.	Sign Up form shown. Pressing submit informed user that same email, phone or cnic already exists.	PASS
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4.2 Login:

Use case name: Login of Investor, Investee, and Admin accounts.

Goal: To log in to the actor's designated portal.

Actors: Investors, Investees, and Admin

Precondition:

- The actor must have registered first.
- The login credentials of the actor should be correct.

Basic Flow of Events:

Actor Action	System Response
1. The actor will enter his login credentials.	2. The system will validate the login credentials.
	3. The system will redirect the actor to his dedicated dashboard.

Alternate Path:

- If the login credentials are invalid, then the system will ask the actor to enter the credentials again.

Post Condition:

- The actor will be redirected to his dashboard

Author and Date: Muhammad Faseeh, October 4, 2023

Test Case ID	Test Case Name	Test Case Description	Test Case Steps	Expected Results	Actual Results	Pass / Fail / Not executed / Suspended
1	Sign In	This test case is used to test the functionality of the signin feature.	The user enters email and password. Click signin.	Sign in Successful. Show dashboard.	As expected	PASS
2	Incorrect email	Sign-in attempt with an invalid email.	Enters the wrong email. Click Sign in.	On clicking SignIn, the system displays a toast message of "User does not exist"	Authetication Error. User does not exist.	PASS
3	Incorrect password	Sign-in attempt with an invalid password.	Enters the wrong password. Click Sign in.	On clicking SignIn, the system displays a toast message of invalid password.	Sign In unsuccessful. Authentication error message shown. Invalid	PASS

					password .	
4	SignIn with only email or password entered.	Sign Up attempt with only email or password entered.	Enters email or password only. Clicks signin.	Clicking Sign In shows toast message of "Empty fields"	Sign In unsuccessful. Shows toast message of "Empty fields"	PASS

4.3 Sign Out:

Use case name: Signout from Investor, Investee, and Admin accounts.

Goal: To signout from actor's designated portal.

Actors: Investors, Investees, and Admin.

Precondition:

- The actor must be logged in.

Basic Flow of Events:

Actor Action	System Response
1. The actor will click on the logout button in the dashboard header.	2. The system will ask for sign out confirmation.
3. Actor click yes.	4. System will redirect to the login page.

Alternate Path:

- If the login credentials are invalid, then the system will ask the actor to enter the credentials again.

Post Condition:

- The actor will be redirected to his dashboard

Author and Date: Muhammad Faseeh, October 4, 2023

4.4 Edit Profile:

Use case name: Edit profile

Goal: To enable investors to keep their profile information up-to-date and accurate

Actors: Investors, Investee.

Precondition:

The actor must have logged into their profile.

Basic Flow of Events:

Actor Action	System Response
The actor clicks "Edit Profile" in the dashboard.	The system displays a profile editing form with existing information.
The actor updates their information/details and clicks the update button.	The system saves the updated profile information and displays a confirmation message indicating the successful profile update.

Alternate Path:

- If the investor chooses not to edit their profile after clicking the "Edit Profile" button, he or she can simply exit the editing page. The profile is left unchanged.

Post Condition:

- The information on the investor's profile has been updated successfully in the system database.

Author and Date: Safwan Uddin Mairaj, October 4, 2023

4.5 View Business Catalog:

Use case name: View Business Catalog

Goal: To make a comprehensive catalog of available investment options available to investors.

Actors: Investors.

Precondition:

The investor is logged into their account

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks on the "Business Catalog" section.	2. The system displays a catalog of business listings.

Alternate Path:

- If there are technical issues, it displays an error message and advises the investor to try again later.

Post Condition:

- The actor would then be able to click on any business and see more details about it.

Author and Date: Safwan Uddin Mairaj, October 4, 2023

4.5 View Specific Business:

Use case name: View Specific Business

Goal: To see information about the investment required for the specific business.

Actors: Investors.

Precondition:

- The investor is logged into their account

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks on a specific business listing.	2. The system navigates to the specified business screen, where detailed information about the investment opportunity is displayed.

Alternate Path:

None

Post Condition:

- The actor can then use the chat tool to communicate with the investee in real time and continue with the investment process from the selected business screen.

Author and Date: Safwan Uddin Mairaj, October 5, 2023

4.6 Specified Business - Chat:

Use case name: Chat

Goal: To facilitate secure and efficient communication between investors and investees.

Actors: Investors, Investee.

Precondition:

Actors must be logged into their respective accounts and be on specified business screen.

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks on the chat option.	2. The system opens a secure chat platform, allowing the actors to communicate in real time.

Alternate Path:

None

Post Condition:

- The actors can then use the chat tool to communicate with each other in real time.

Author and Date: Safwan Uddin Mairaj, October 5, 2023

4.7 Specified Business - Proceed:

Use case name: Proceeding from a selected business

Goal: Allow investors to start the investing process for a particular business.

Actors: Investor.

Precondition:

- The investor is logged into their account and has selected a specific business.

Basic Flow of Events:

Actor Action	System Response
1. The investor clicks on the "Proceed" button.	2. The system navigates the investor through the investment process, which may include: accepting terms and conditions.

Alternate Path:

- If the actor decides not to proceed, he or she can stay on that screen or navigate back to the business catalog.

Post Condition:

- Actor redirected to the proceeding screen.

Author and Date: Safwan Uddin Mairaj, October 10, 2023

4.8 View Total Investments:

Use case name: View Total Investments

Goal: Allow investors to effectively track and manage their investment portfolio.

Actors: Investors.

Precondition:

- The actor must be logged into their account.

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks “Total Investments” in their dashboard.	2. The system displays the actor's investment portfolio.

Alternate Path:

Not applicable.

Post Condition:

- The system redirects actor to “Total Investments” screen.

Author and Date: Safwan Uddin Mairaj, October 5, 2023.

4.9 My Listings:

Use case name: My listings

Actors: Investee.

Goal: To enable actor to list and manage their businesses effectively on the platform.

Precondition:

- The actor must be logged into their account.

Basic Flow of Events:

Actor Action	System Response
The actor clicks "My listings" in their dashboard.	The system retrieves data from the database and displays the actor's business listings.

Alternate Path:

- The system displays a message indicating no listings if the actor does not have any existing business listings.

Post Condition:

- Actor can view, edit, and manage their existing business listings.

Author and Date: Safwan Uddin Mairaj, October 7, 2023.

4.10 Create New Business Listing:

Use case name: Create new business listing.

Actors: Investee.

Goal: To enable actor to create new business listing.

Precondition:

- The actor must be logged into their account.

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks on "Create" icon on my listings screen.	2. The system will display the form asking for relevant information.
3. The actor enters the information.	4. The system validates and creates a new listing.

Alternate Path:

None.

Post Condition:

- Actor can view, edit, and manage the business listings.
- Actor must not exceed the amount of three active listing at a time.

Exception:

If there are technical problems, the system shows an error and recommends that the actor try again later.

Author and Date: Safwan Uddin Mairaj, October 7, 2023.

4.11 Delete listing:

Use case name: Delete listing

Actors: Investee.

Goal: To enable the actor to delete his business listing.

Precondition:

- The actor must be logged into their account and have an existing business listing that does not require any investment.

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks "My Listings" in their dashboard.	2. The system retrieves data from the database and displays the actor's business listings.
3. The actor selects the delete button from the business listing he wants to delete.	4. The system shows the confirmation message.
5. The actor selects "OK" and confirms.	6. The system deletes the business listing from the database.

Alternate Path:

- If the actor does not want to delete the business he can cancel the action.

Post Condition:

- Selected business will be deleted from the database.

Exception:

The system displays an error message if there are technical issues and advises the actor to try again later.

Author and Date: Safwan Uddin Mairaj, October 12, 2023.

4.12 Edit Business Listing:

Use case name: Edit business listing

Goal: To enable the actor to edit his business listing.

Actors: Investee.

Precondition:

- The actor must be logged into their account and have an existing business listing.

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks “edit” icon on any business listing.	2. The system displays an edit business listing screen with existing information.
3. The actor modifies the details and clicks the update button.	4. The system saves the updated business listing and updates the database.
	5. The system displays a confirmation message indicating the successful update of business listing.

Alternate Path:

- If the actor chooses not to edit the listing, actor can simply exit the editing page. The profile is left unchanged.

Post Condition:

- The details of the business listing have been updated successfully in the system database.

Author and Date: Safwan Uddin Mairaj, October 29, 2023

4.13 In App Notifications:

Use case name: In app notifications

Goal: To enable the actor to see notifications related to their activity.

Actors: Investors, Investee.

Precondition:

- The actor must be logged into their respective account.

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks “Notifictaions” icon on their dashboard.	2. The system displays all the relevant notifications.

Alternate Path:

- None.

Post Condition:

- The actor successfully accessed the notifications.

Author and Date: Safwan Uddin Mairaj, October 29, 2023

4.14 View registered users:

Use case name: View registered users.

Goal: To enable actor to view the registered users on the platform.

Actors: Admin.

Precondition:

- The actor must be logged into the account.

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks “Registered Users” from dashboard.	2. The system retrieves the data from database and displays all the registered users on the platform.

Alternate Path:

- If there are no users registered on the platform system shows “No Registered Users”.

Post Condition:

- The actor successfully accessed the list of registered users.

Author and Date: Safwan Uddin Mairaj, November 6, 2023

4.15 Business Listing Approval Request:

Use case name: Business listing approval.

Goal: To enable actor to approve the business listings request.

Actors: Admin.

Precondition:

- The actor must be logged into the account.

Basic Flow of Events:

Actor Action	System Response
1. The actor clicks “Business Listing Approvals” on dashboard.	2. The system retrieves the requests and displays the business listing approval requests.
3. The actor approves or disapproves the business listing.	

Alternate Path:

- If there are no Business listing approval requests on the platform, system shows “No Approval Requests”.

Post Condition:

- The actor successfully approved or disapproved the business listing.

Author and Date: Safwan Uddin Mairaj, November 6, 2023

4.16 Suspend Users:

Use case name: Suspend users.

Goal: To enable actor to suspend users if anyone violates the platform rules.

Actors: Admin.

Precondition:

- The actor must be logged into the account.

Basic Flow of Events:

Actor Action	System Response
1. The actor navigates to manage users.	2. The system retrieves the users account list.
3. The actor suspends the user from the platform.	

Alternate Path:

- If there are no users registered on the platform, system displays “No Registered Users”.

Post Condition:

- The actor successfully suspended the user.

Author and Date: Safwan Uddin Mairaj, November 6, 2023

5. Other Nonfunctional Requirements

5.1 Performance Requirements

N/A

5.2 Safety Requirements

Not applicable.

5.3 Security Requirements

User should not disclose their Email address and password to someone else. All the passwords would be encrypted before they are stored in the database.

5.4 Software Quality Attributes

Our objective is to ensure that the users experience no issues or interruptions. Our top aim is to protect the system's intended operation while avoiding any bugs or problems. It also includes simple capabilities prioritizing dependability and usability, resulting in a smooth user experience.

5.5 Business Rules

Understanding the societal demand for a specific business investment platform is required for the development of this web application. It has been carefully developed to fulfill the needs of an individual seeking investment to support business growth or to contribute to a business initiative of their choice.

This platform serves as a bridge, facilitating significant connections and helping businesses to thrive while meeting the specific needs of investors and investees.

6. Other Requirements

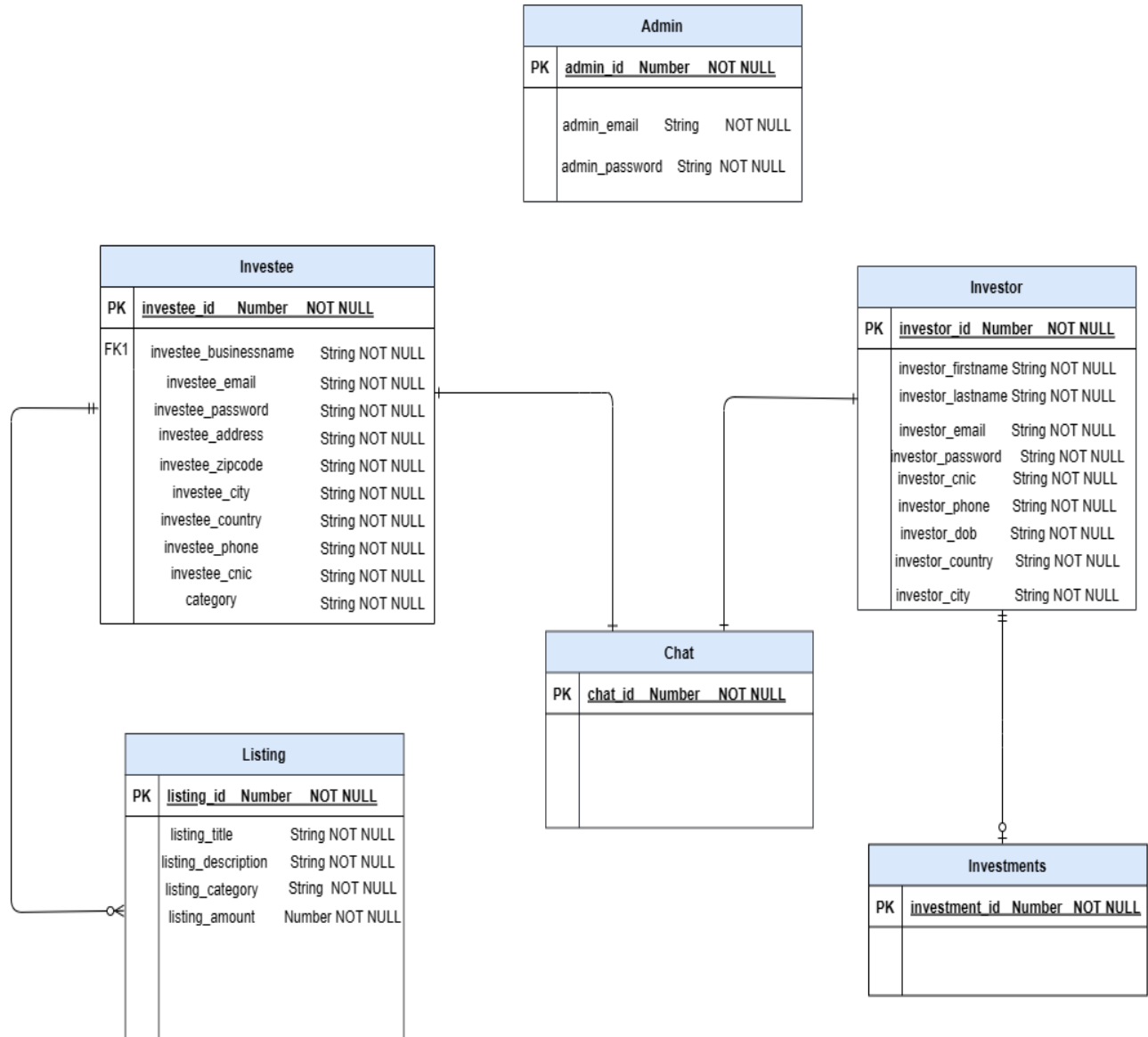
N/A

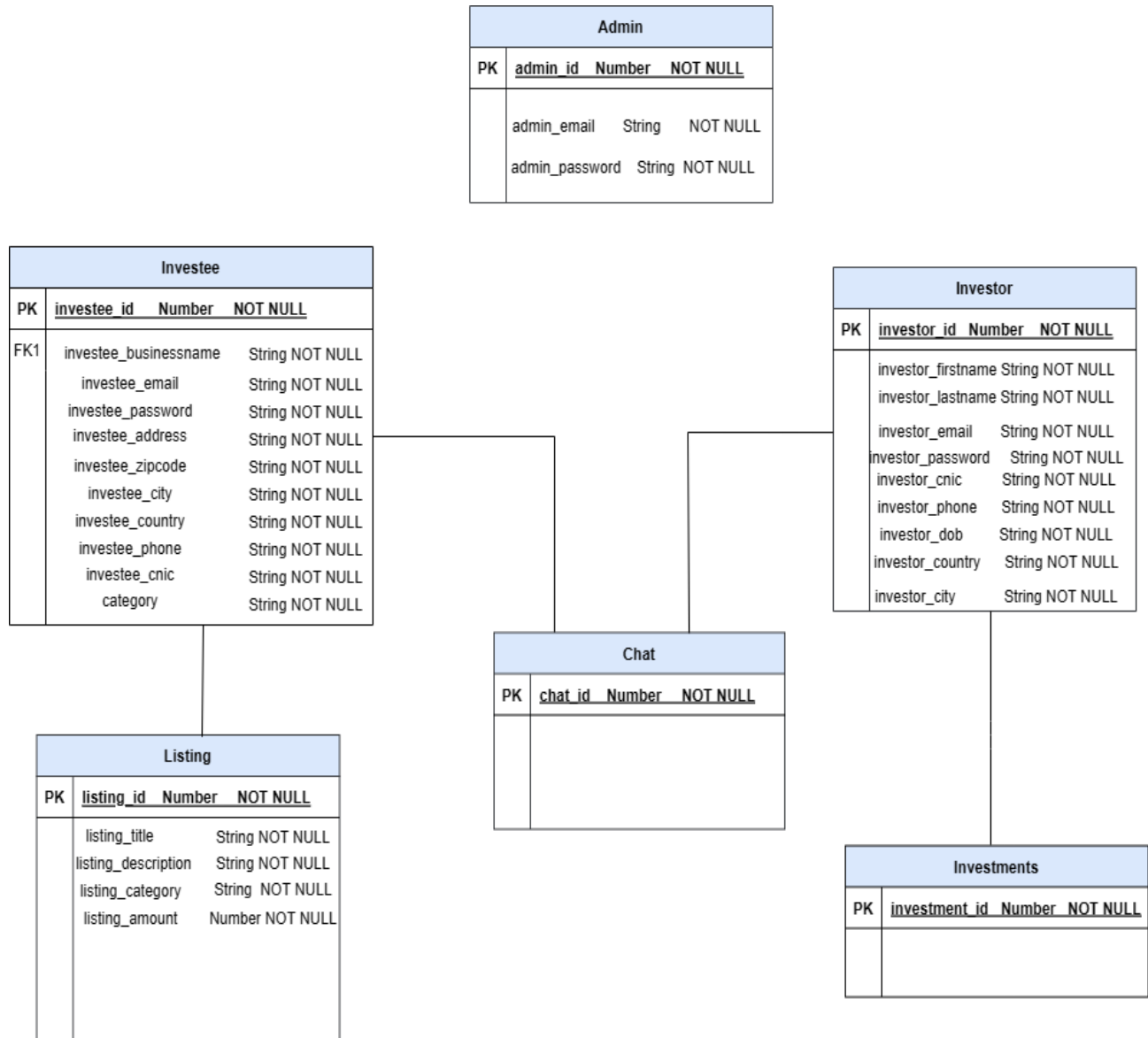
Appendix A: Glossary

N/A

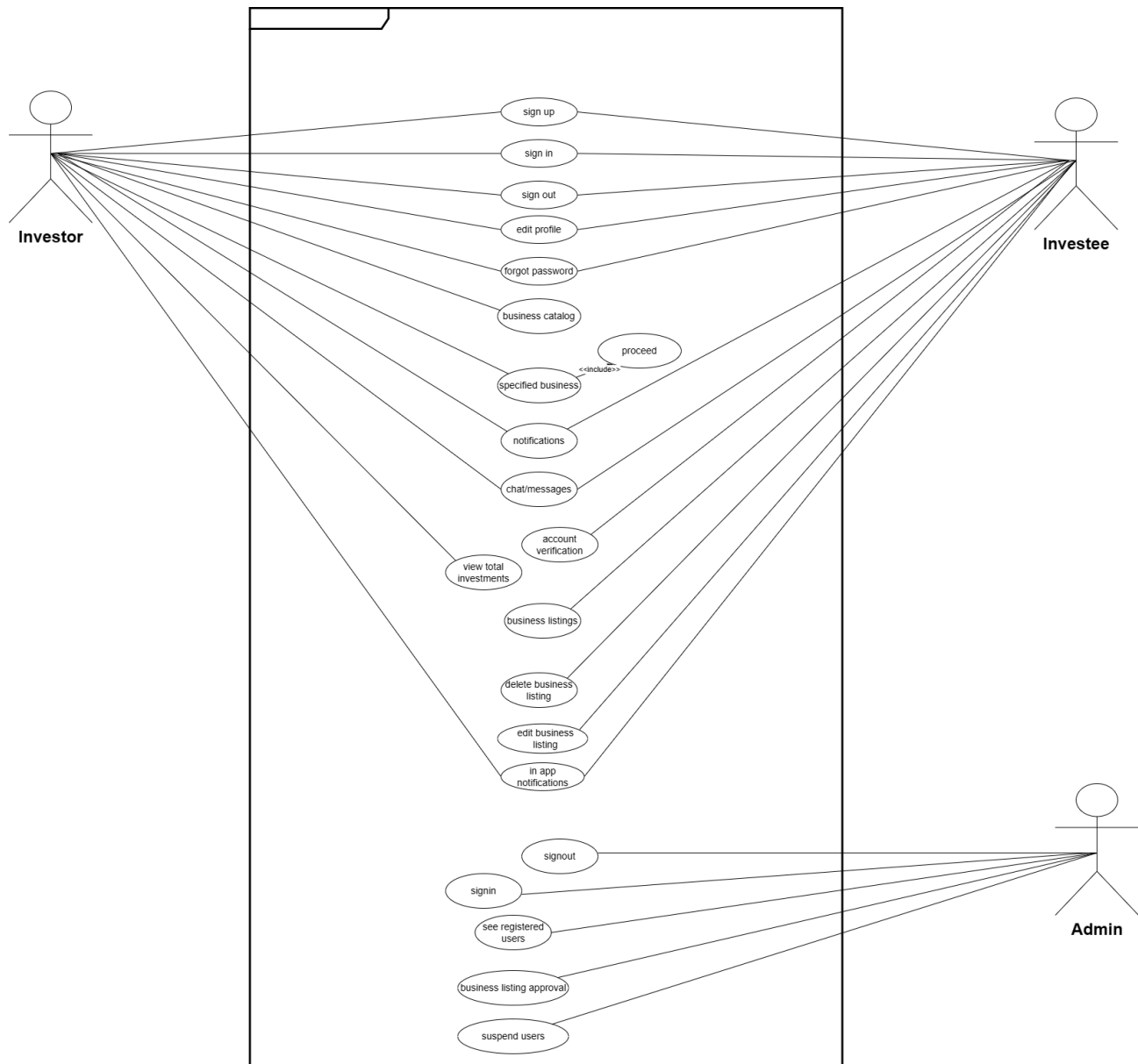
Appendix B: Analysis Models

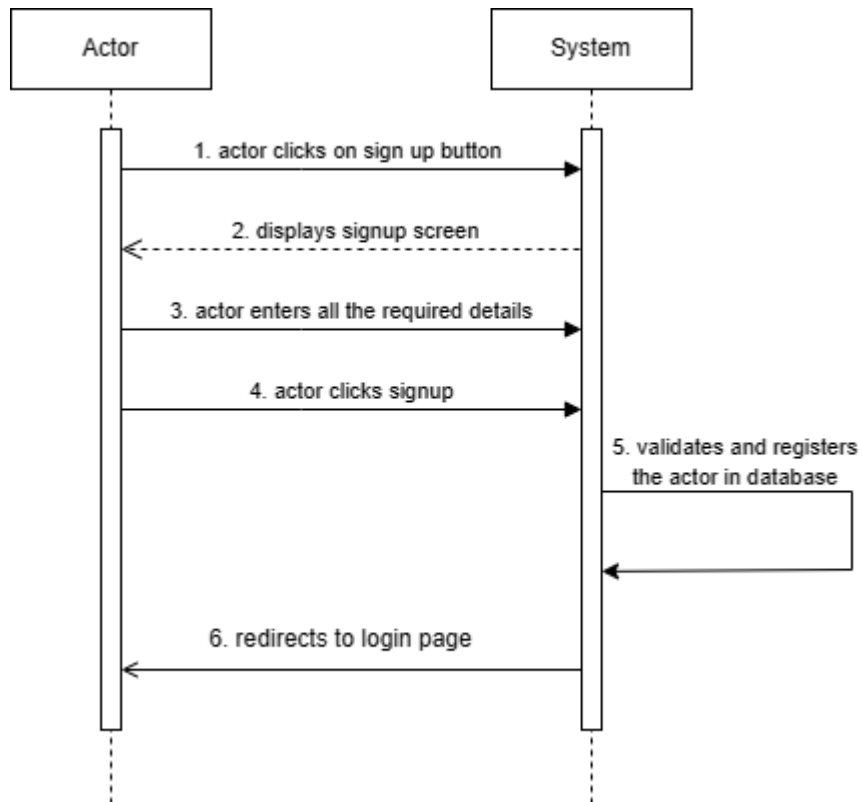
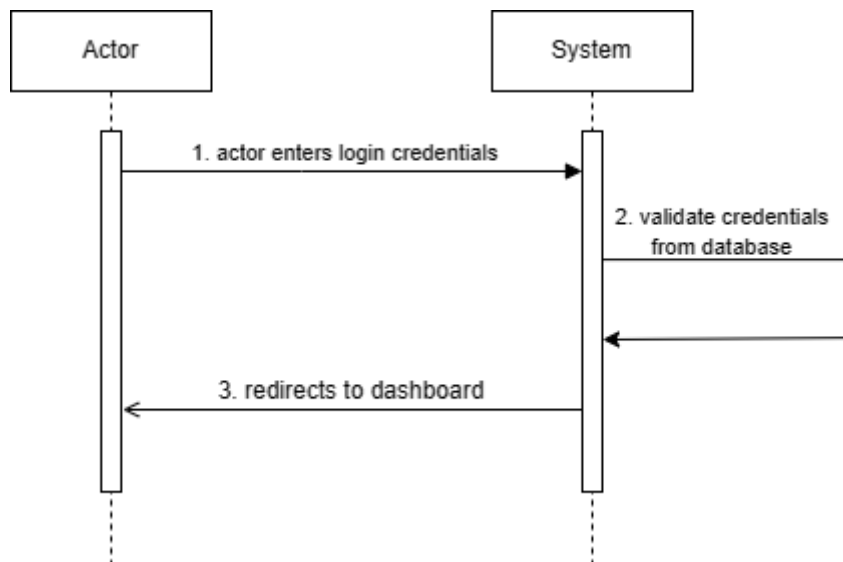
Entity Relationship Diagram (ERD):



Domain Model Diagram:

Use Case Diagram:



System Sequence Diagrams:**SignUp:****Login:**

Appendix C: To Be Determined List

N/A