CEBU INSTITUTE OF TECHNOLOGY
UNIVERSITY

IT342-Section
SYSTEMS INTEGRATION AND ARCHITECTURE 1

FUNCTIONAL REQUIREMENTS SPECIFICATION (FRS)

Project Title: Mini App – User Registration & Authentication

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1. Introduction

1.1. Purpose

The purpose of this system is to provide a secure and user-friendly authentication mechanism for users. The system will allow users to register, log in, access their profile/dashboard, and log out.

1.2. Scope

The system will:

- Enable users to register an account.
- Enable users to sign in with their credentials.
- Prevent unauthenticated users from accessing restricted pages.
- Allow users to log out securely.
- Allow authenticated users to view their dashboard/profile

1.3. Definitions, Acronyms, and Abbreviations

User	A person who registers and logs in to the system.
Registration	The process of creating a new user account
Login	The process of verifying a registered user's credentials.
Logout	Terminating a user's session.
Dashboard	Protected page visible only to authenticated users.

2. Overall Description

2.1. System Perspective

The Authentication System operates as a standalone module responsible for validating users, maintaining session states, and controlling access to protected resources.

2.2. User Classes and Characteristics

Guest User	Can register and attempt to login. Cannot access protected pages.
Authenticated User	Can access protected pages, view profile/dashboard, and log out.

2.3. Operating Environment

- Web browser or mobile device for user access.
- Backend server handling authentication logic.
- Database to store user credentials securely.

2.4. Assumptions and Dependencies

- Users will provide valid and accurate credentials.
- Password will be encrypted and securely stored.
- Database server is available and operational.
- Frontend and backend are properly connected.

3. System Features and Functional Requirements

Describe each major feature of the system and its functional requirements.

3.1. Feature 1: User Registration

Description: This feature allows a guest user to create a new account. The user provides basic information, and the system saves it securely.
Functional Requirements:

- The system allows a guest user to register an account.
- The system lets the user enter an email and password.
- The system checks if the email is already registered.
- The system encrypts the password before saving it.
- The system stores the user's information in the database.
- The system shows a message to let the user know if registration is successful or failed.

3.2. Feature 2: User Login

Description: This feature allows a registered user to log in using valid credentials. The system verifies the credentials, manages user sessions, and controls access to protected pages.
Functional Requirements:

- The system allows a registered user to log in using email and password.
- The system verifies the entered credentials against stored user data.
- The system denies access if the credentials are invalid.
- The system creates a session or authentication token upon successful login.
- The system allows authenticated users to access protected pages such as the dashboard.
- The system prevents unauthenticated users from accessing protected resources.

3.3. Feature 3: User Logout

Description: This feature allows an authenticated user to securely log out, ending their session and preventing further access to protected pages.

Functional Requirements:

- The system allows authenticated users to log out from the system.
- The system invalidates the user's session or authentication token upon logout.
- The system redirects the user to the login page after logging out.
- The system prevents access to protected pages after logout.

4. Non-Functional Requirements

Security:

- The system encrypts user passwords.
- The system allows only logged-in users to access protected pages.

Performance:

- The system responds to user actions quickly.
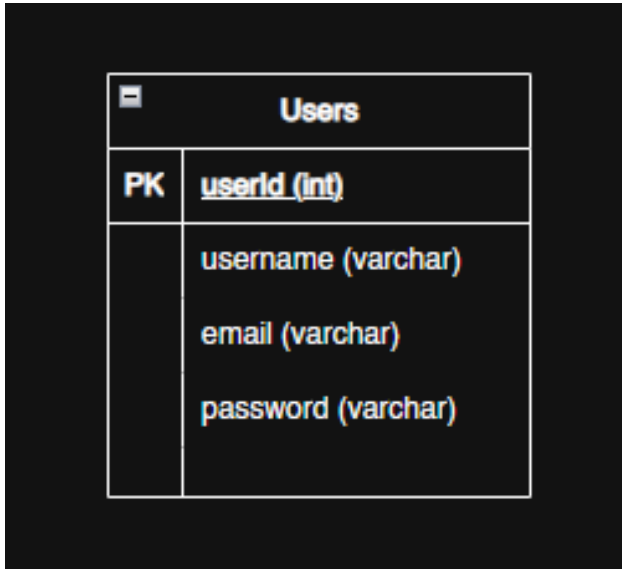
Usability:

- The system displays clear error messages to the user.
- The system is easy for the user to use and understand.
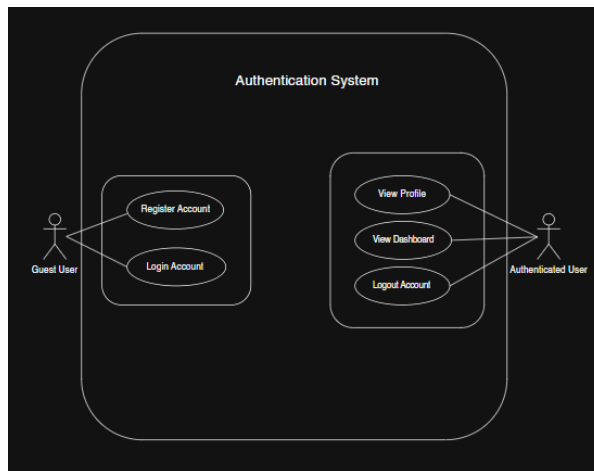
Reliability:

- The system handles login and logout properly.
- The system remains stable during normal use.
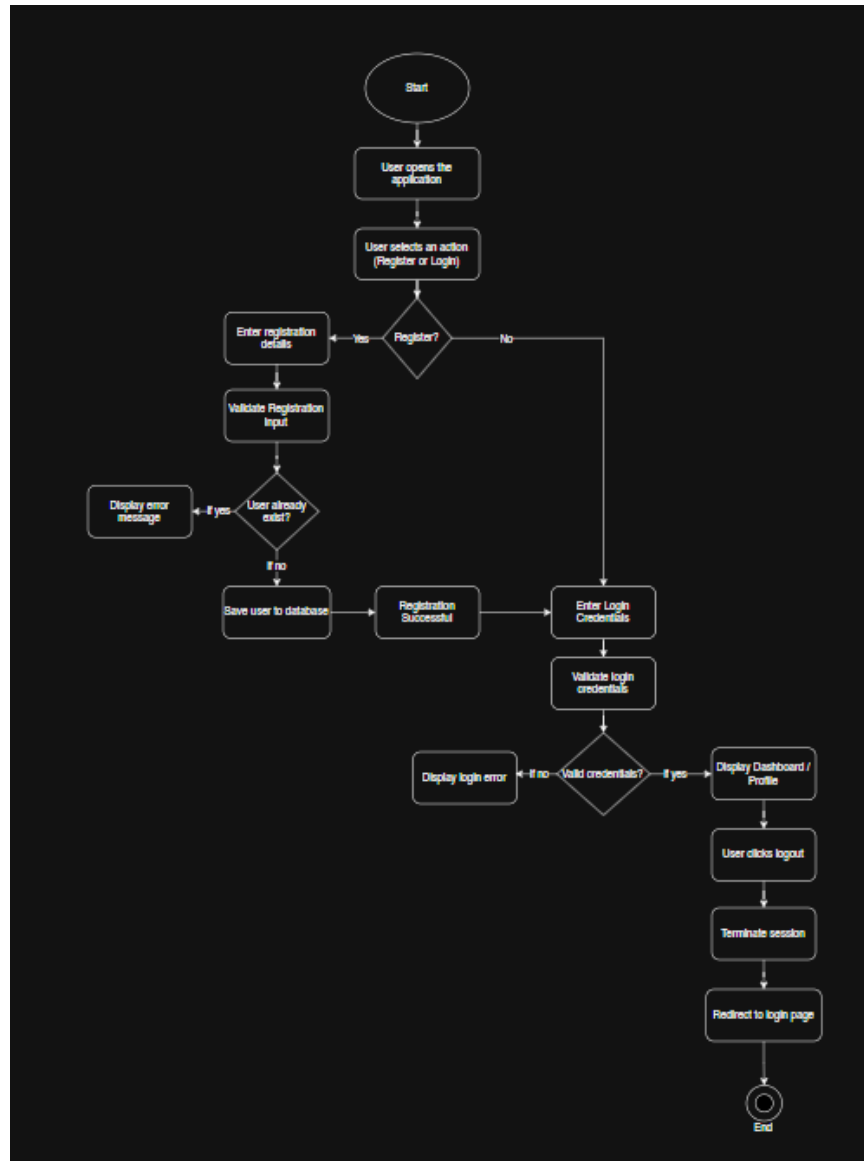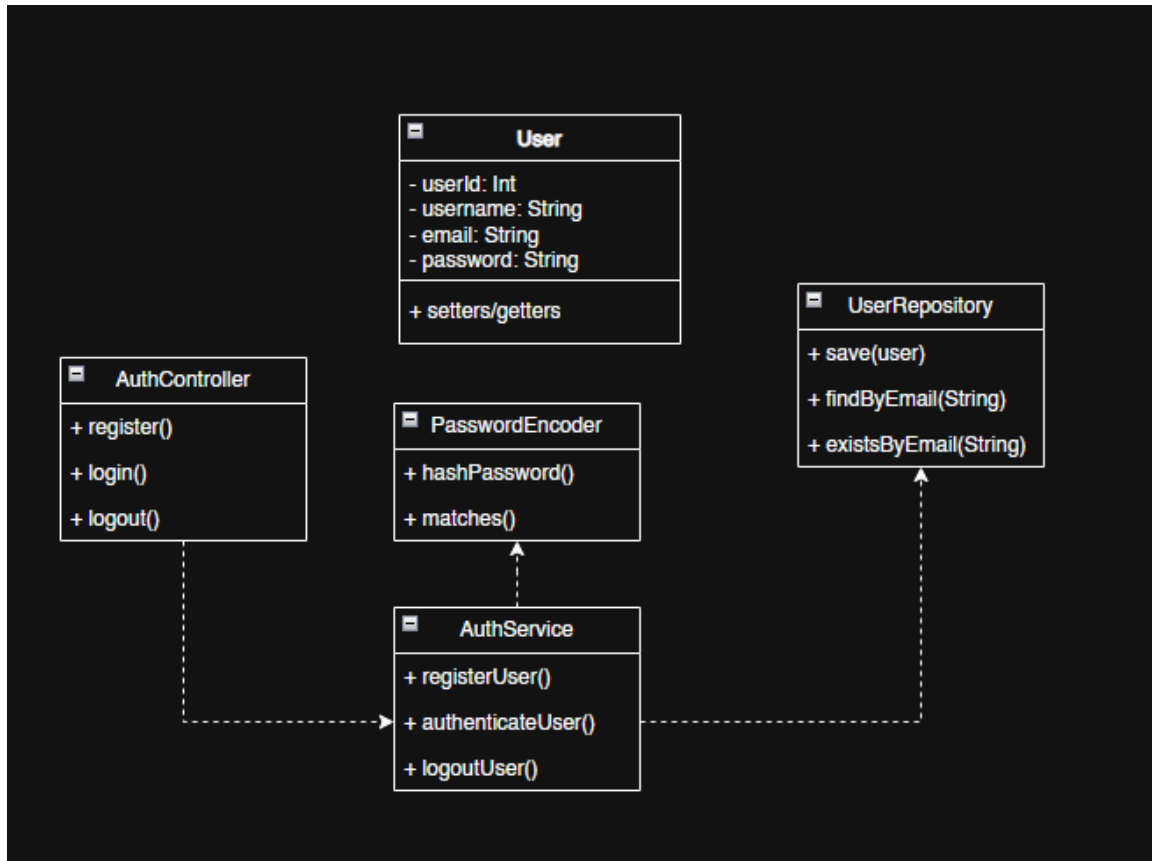
5. System Models (Diagrams)
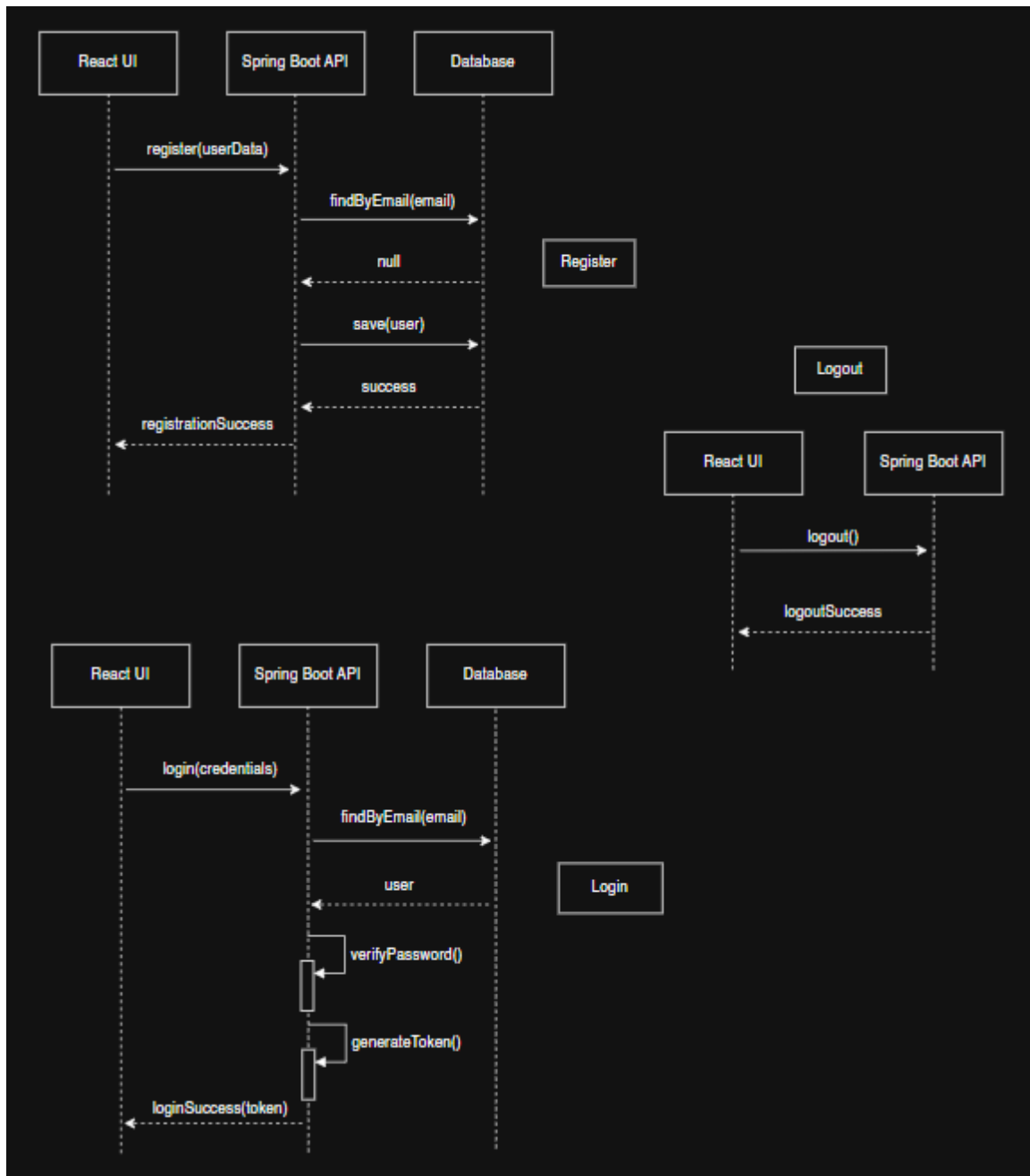
5.1. ERD

5.2. Use Case Diagram

5.3. Activity Diagram

5.4. Class Diagram

5.5. Sequence Diagram

6. Appendices

Testing and Validation

- Checked that users can register, log in, and log out successfully.

- Verified that invalid emails or passwords show error messages.