CEBU INSTITUTE OF TECHNOLOGY
UNIVERSITY

IT342-G4
SYSTEMS INTEGRATION AND ARCHITECTURE 1

FUNCTIONAL REQUIREMENTS SPECIFICATION (FRS)

Project Title: MINI APPLICATION

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1. Introduction

1.1. Purpose

The purpose of this document is to describe the requirements of the User Registration and Authentication System. This system allows users to register an account, log in securely, view their profile or dashboard, and log out.

The intended audience of this document includes instructors, students, and developers who will design, implement, and evaluate the system.

1.2. Scope

The system provides basic user authentication and access control. It allows users to create an account, log in using valid credentials, access protected pages such as a profile/dashboard, and log out of the system.

The system does not include advanced features such as password recovery, email verification, or multi-factor authentication.

1.3. Definitions, Acronyms, and Abbreviations

Term	Definition
User	A person who register and uses this system
Guest User	A user who is not logged in
Authenticated User	A user who is logged in
ERD	Entity Relationship Diagram
UI	User interface
API	Application Programming interface
JWT	JSON Web Token (Used for authentication)

1.4. System Perspective

The system is a standalone authentication module that can be integrated into a larger web or mobile application. It interacts with a frontend interface (React UI), a backend service (Spring Boot API), and a database for storing user information.

1.5. User Classes and Characteristics

User Type	Characteristics
Guest User	Can register an account and login
Authenticated User	Can access dashboard/profile and logout

1.6. Operating Environment

- **Frontend:** Web browser (Google Chrome)
- **Backend:** Spring Boot (Java)
- **Frontend Framework:** React
- **Database:** MySQL
- **Tools:** draw.io / diagrams.net (for diagrams)
- **Operating System:** Windows

1.7. Assumptions and Dependencies

- Users have access to the internet
- Users provide valid and unique email addresses
- Passwords are encrypted before storage
- The system depends on a database server and backend API availability

2. System Features and Functional Requirements

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

2.1. Feature 1: User Registration

Description:

Allows a guest user to create a new account by providing personal and login details.

Functional Requirements:
- The system shall allow users to enter name, email, and password

- The system shall validate that the email is unique
- The system shall store encrypted passwords in the database
- The system shall create a new user record upon successful registration

2.2. Feature 2: User Login

Description:

Allows a registered user to log in using valid credentials.

Functional Requirements:
- The system shall allow users to log in using email and password
- The system shall validate user credentials
- The system shall grant access to protected pages upon successful login

- The system shall deny access if credentials are invalid

2.3. Feature 3: View Profile / Dashboard

Description:
Allows authenticated users to view their personal profile or dashboard.

Functional Requirements:
- The system shall restrict access to authenticated users only
- The system shall display user information on the dashboard
- The system shall prevent guest users from accessing this page

2.4. Feature 4: User Logout

Description:
Allows authenticated users to log out of the system.

Functional Requirements:
- The system shall terminate the user session or token
- The system shall redirect users to the login page after logout
- The system shall block access to protected pages after logout

3. Non-Functional Requirements

3.1 Performance

- The system shall respond to user actions within acceptable time limits
- Login and registration processes should complete within a few seconds

3.2 Security

- Passwords shall be encrypted before storage
- Protected pages shall not be accessible without authentication
- Sessions or tokens shall expire after logout

3.3 Usability

- The user interface shall be simple and easy to use
- The system shall provide clear error messages

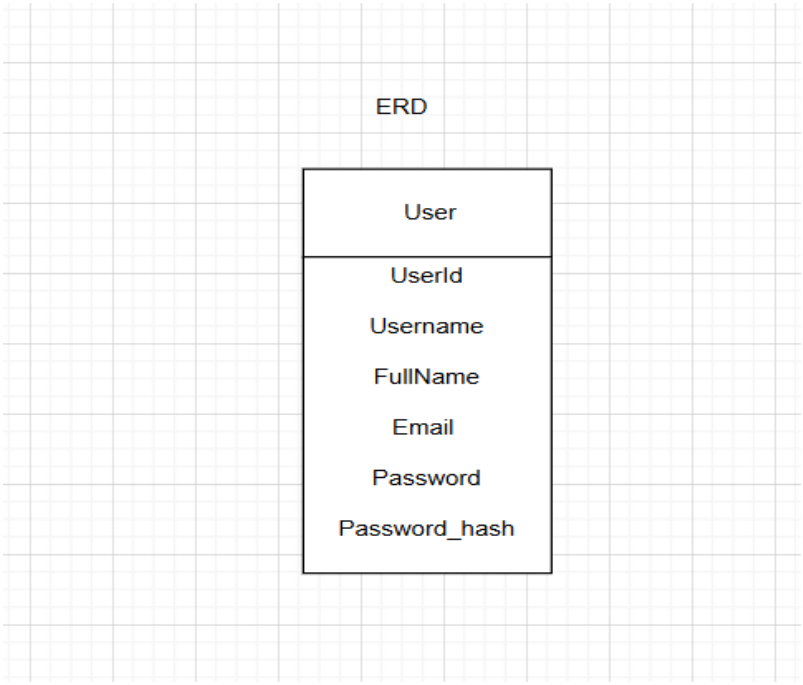
3.4 Reliability

- The system shall handle invalid inputs gracefully
- The system shall maintain data consistency in the database

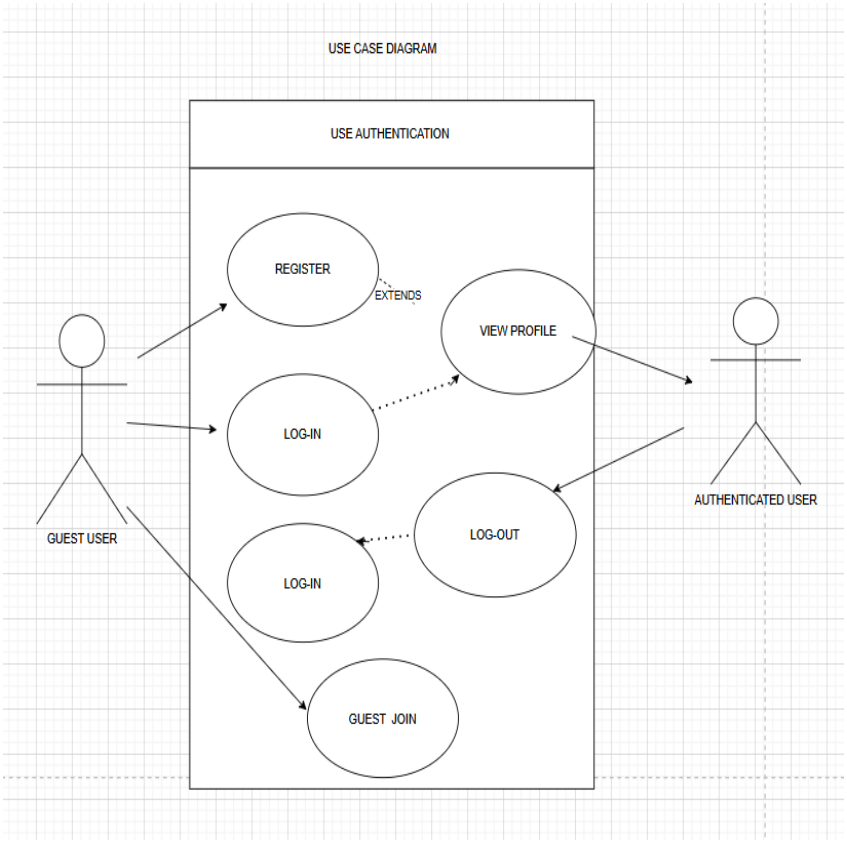
4. System Models (Diagrams)

Insert the necessary diagrams for the system:

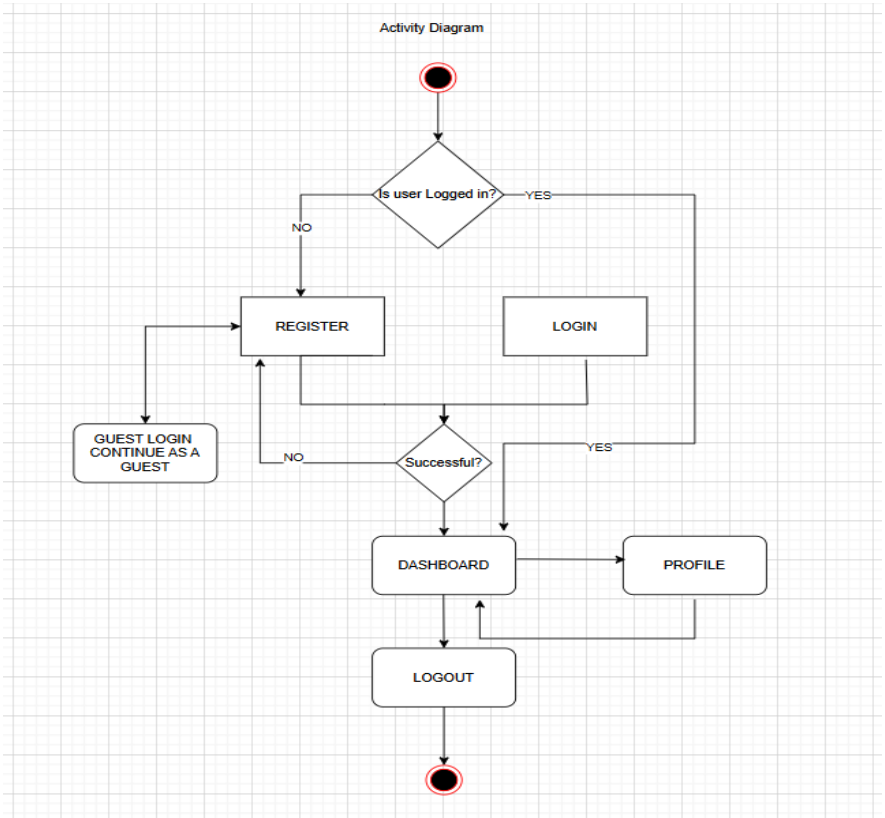
4.1. ERD



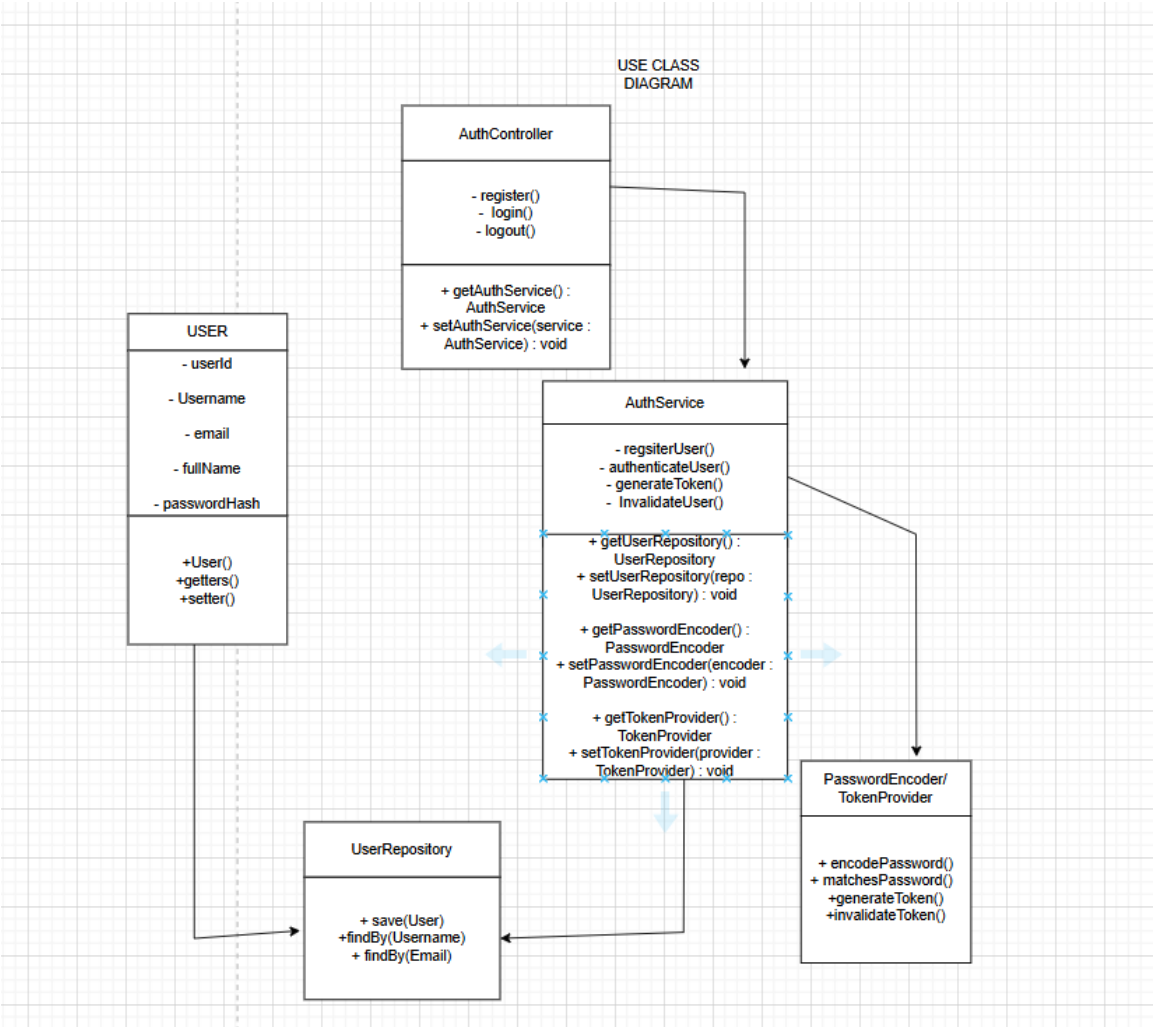
4.2. Use Case Diagram



4.3. Activity Diagram



4.4. Class Diagram



4.5. Sequence Diagram

Insert ERD here

5. Appendices

Include any additional information, references, or support materials.