CEBU INSTITUTE OF TECHNOLOGY
UNIVERSITY

IT342-G4
SYSTEMS INTEGRATION AND ARCHITECTURE 1

FUNCTIONAL REQUIREMENTS SPECIFICATION (FRS)

Project Title: Mini App – User Registration & Authentication System

Prepared By: Myron Deandre G. Alia

Date of Submission: 2/3/2026

Version: 1.0

Table of Contents

1. Introduction

1.1. Purpose

This document describes the functional requirements for the User Authentication System. It is intended for developers, system designers, and instructors to understand how the system should behave before implementation. The system will allow users to register, log in, access protected pages, and log out securely.

1.2. Scope

The system provides basic authentication features including account registration, login verification, access control to protected pages, and logout functionality. The system does not include advanced features such as email verification, password recovery, or multi-factor authentication. The system will be used as a learning project for implementing frontend and backend integration.

1.3. Definitions, Acronyms, and Abbreviations

Term	Meaning
UI	User Interface
API	Application Program Interface
DB	Database
Auth	Authentication
JWT	JSON Web Token

2. Overall Description

2.1. System Perspective

The system is a web-based application composed of a React frontend, a Spring Boot backend API, and a relational database. The frontend communicates with the backend through REST APIs, while the backend handles business logic and database interactions.

2.2. User Classes and Characteristics

User Type	Description
Guest User	Not logged in. Can register and log in.
Authenticated User	Logged-in user who can access protected pages like dashboard and profile.

2.3. Operating Environment

Frontend: React JS (Web Browser)

Backend: Spring Boot (Java)

Database: Firebase

Development Tools: draw.io

2.4. Assumptions and Dependencies

Users have internet access.
Backend server is running and accessible.
Database server is available.
Users will provide valid information during registration.

3. System Features and Functional Requirements

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

3.1. Feature 1: User Registration

Description: Allows a guest user to create an account by providing required information.
Functional Requirements:
- The system shall allow users to input name, email, and password.
- The system shall validate that the email is unique.
- The system shall encrypt the password before saving it.
- The system shall store the user in the database.
- The system shall display a success or error message.

3.2. Feature 2: User Login

Description: Allows a registered user to log in using email and password.
Functional Requirements:
- The system shall allow users to enter email and password.
- The system shall verify credentials with the database.
- The system shall generate an authentication token upon successful login.
- The system shall deny access if credentials are incorrect.
- The system shall redirect the user to the dashboard after login.

3.3. Feature 3: View Profile/Dashboard

Description: Allows authenticated users to access protected pages.
Functional Requirements:
- The system shall allow only logged-in users to access protected pages.
- The system shall display user information on the dashboard.
- The system shall block access if no valid token/session exists.

3.4. Feature 4: Logout

Description: Allows authenticated users to securely log out..\
Functional Requirements:
- The system shall provide a logout option.
- The system shall invalidate the authentication token/session.
- The system shall redirect the user to the login page.
- The system shall prevent access to protected pages after logout.

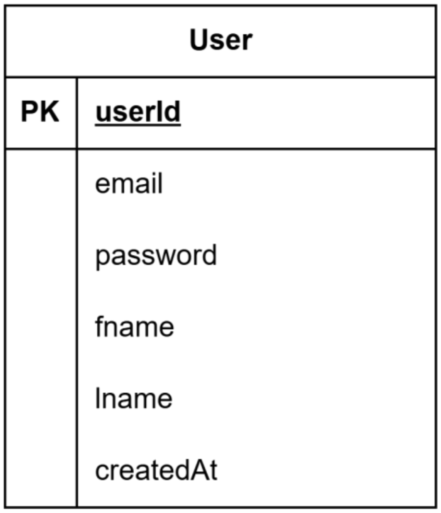
4. Non-Functional Requirements

Category	Requirement
Performance	System should respond within 2 seconds.
Security	Passwords must be encrypted. Protected routes require authentication.
Usability	Interface should be simple and easy to navigate.
Reliability	System should be available 95% of the time.
Scalability	System should support increasing number of users.

5. System Models (Diagrams)

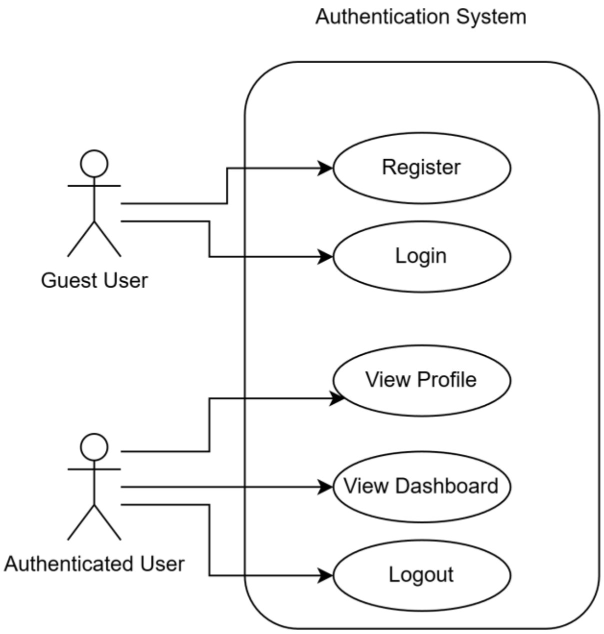
Insert the necessary diagrams for the system:

5.1. ERD

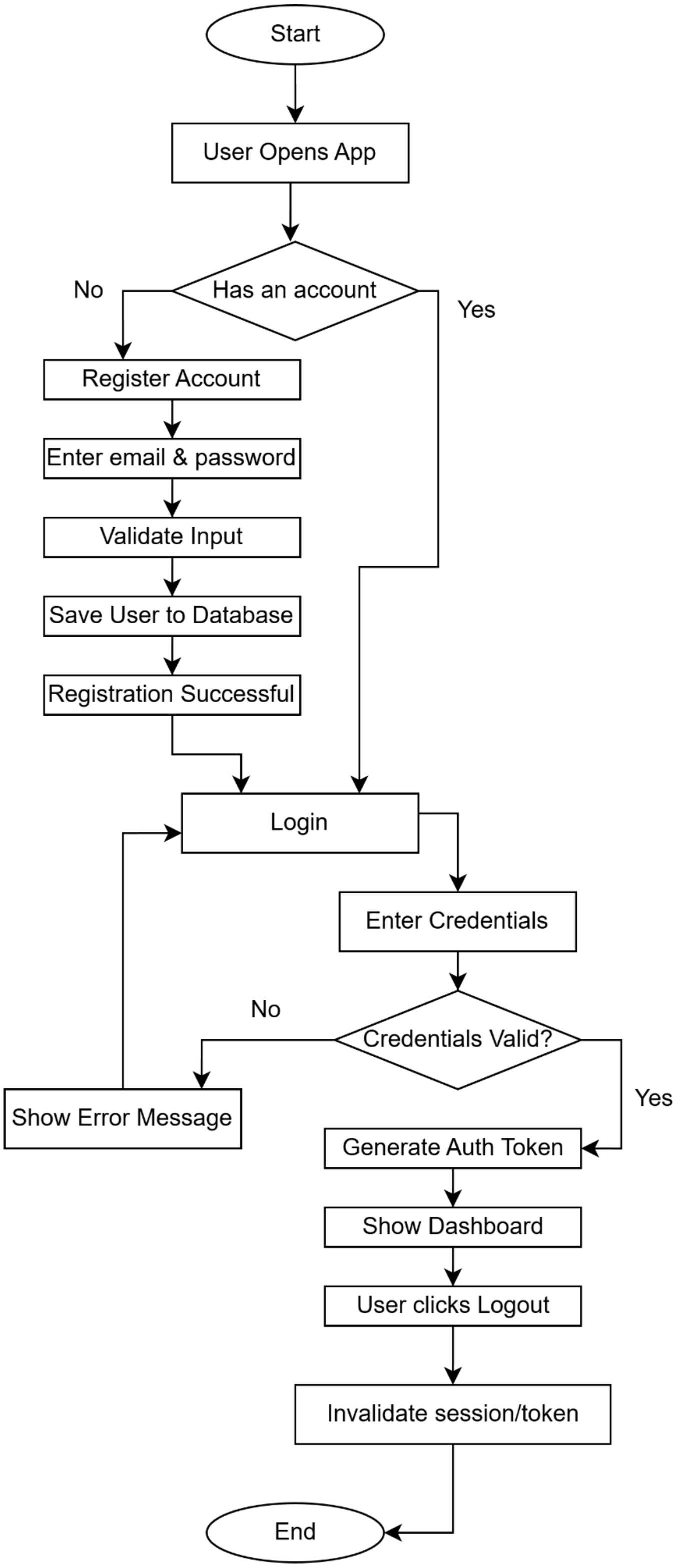


User	
PK	**userId**
	email
	password
	fname
	lname
	createdAt

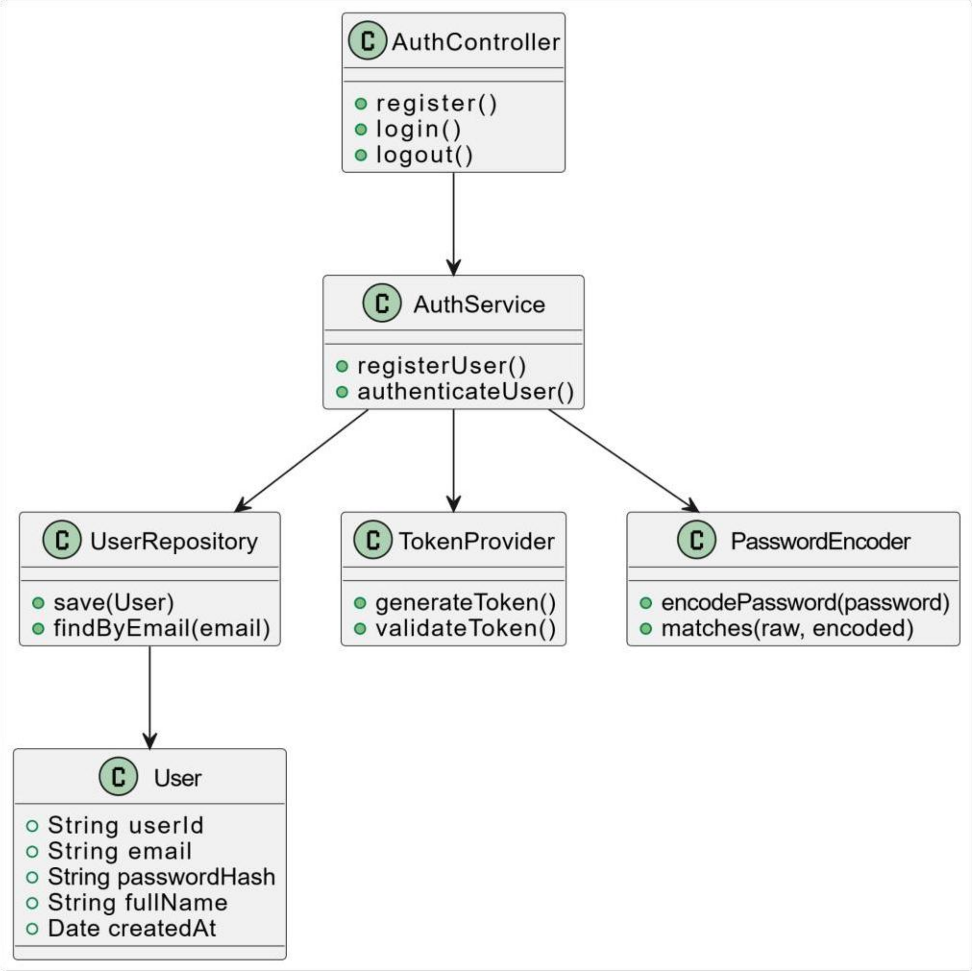
5.2. Use Case Diagram



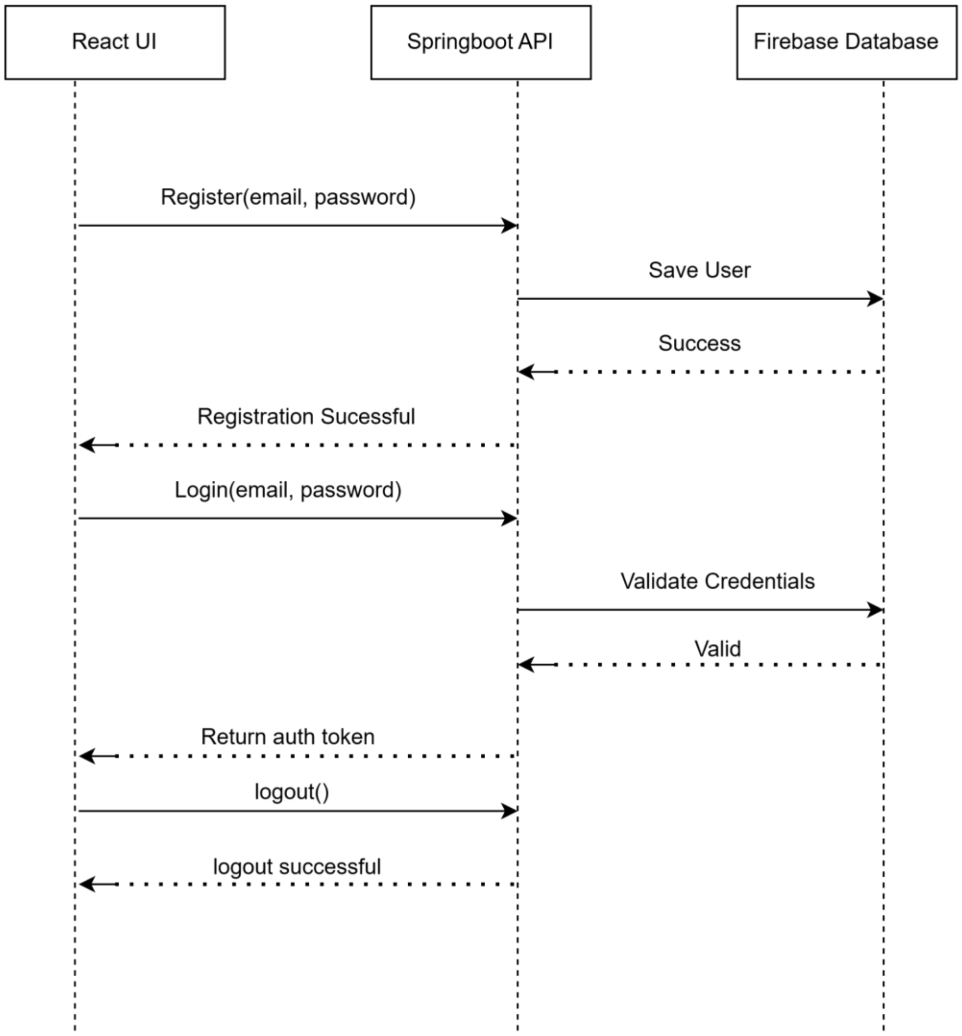
5.3. Activity Diagram



5.4. Class Diagram



5.5. Sequence Diagram

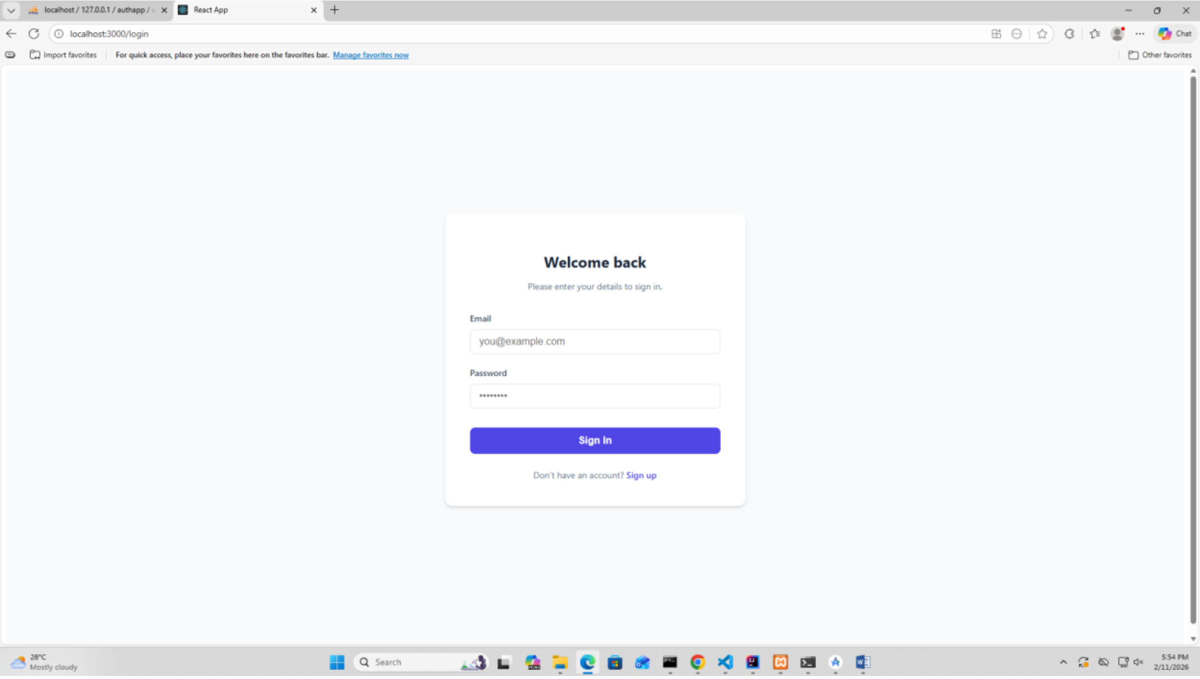


6. Appendices

Include any additional information, references, or support materials.

7. Final UI Screenshots

Login


localhost / 127.0.0.1 / authapp
React App
localhost:3000/login
Import favorites
For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
Chat
28°C
Mostly cloudy
Search
5:54 PM
2/11/2026

Welcome back

Please enter your details to sign in.

Email

you@example.com

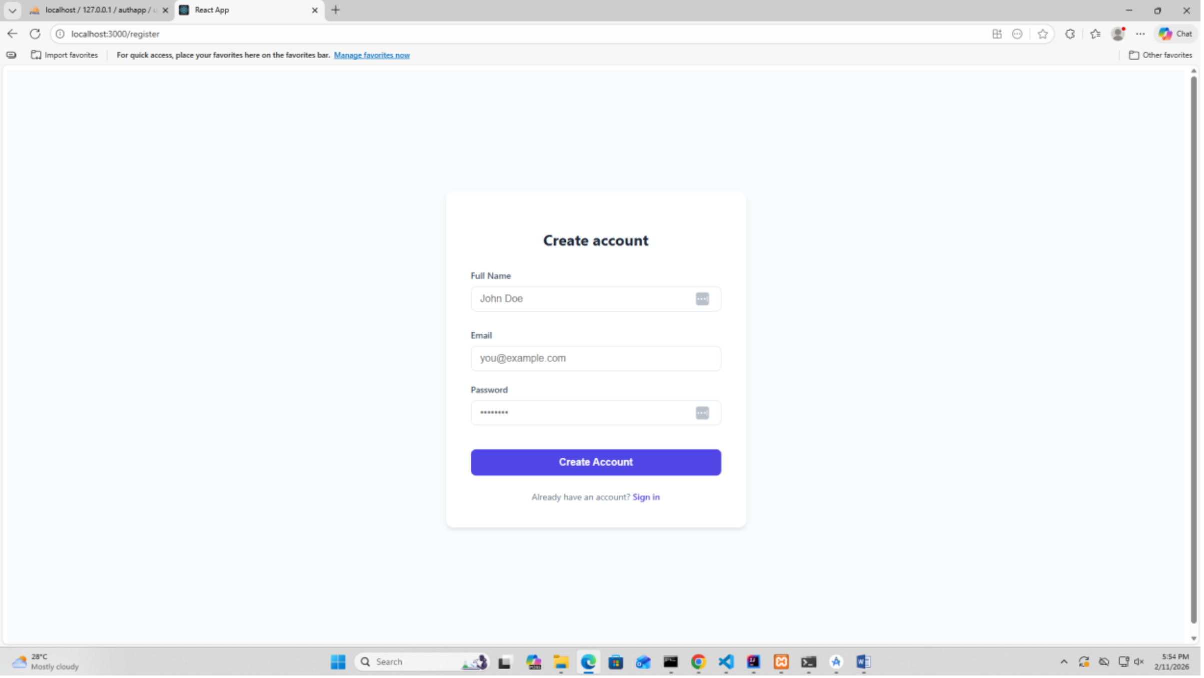
Password

••••••••

Sign In

Don't have an account? Sign up

Register


localhost / 127.0.0.1 / authapp
React App
localhost:3000/register
Import favorites
For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
Chat
28°C
Mostly cloudy
Search
5:54 PM
2/11/2026

Create account

Full Name

John Doe

Email

you@example.com

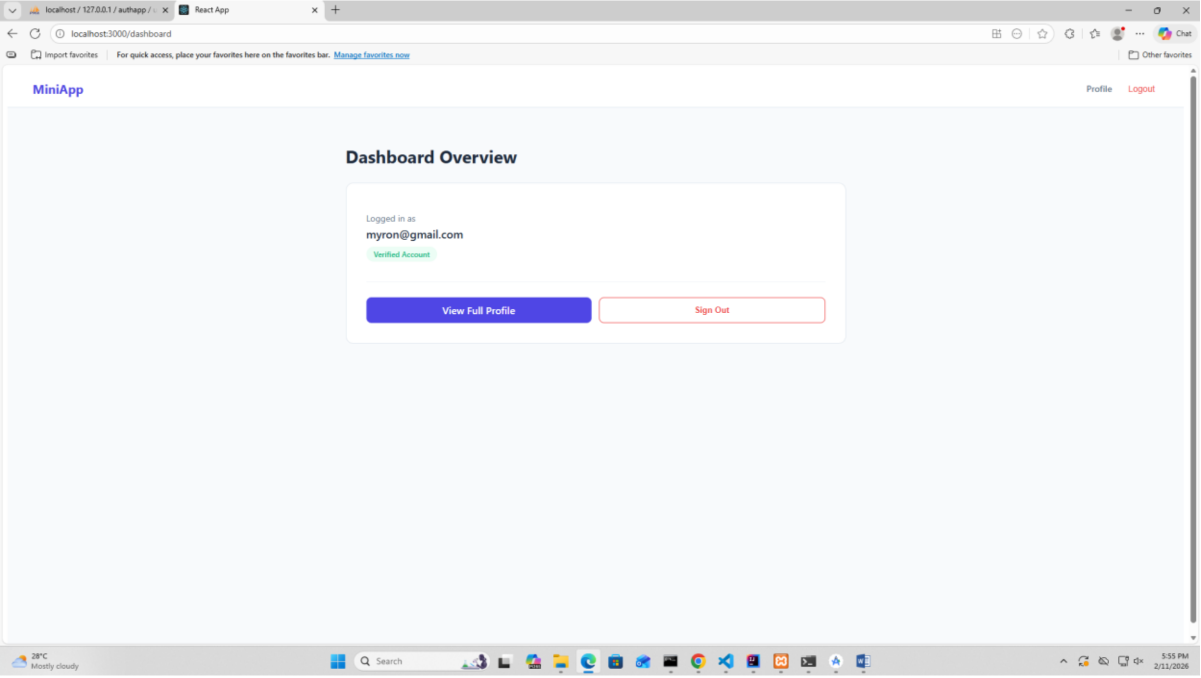
Password

••••••••

Create Account

Already have an account? Sign in

Dashboard



Dashboard Overview

Logged in as

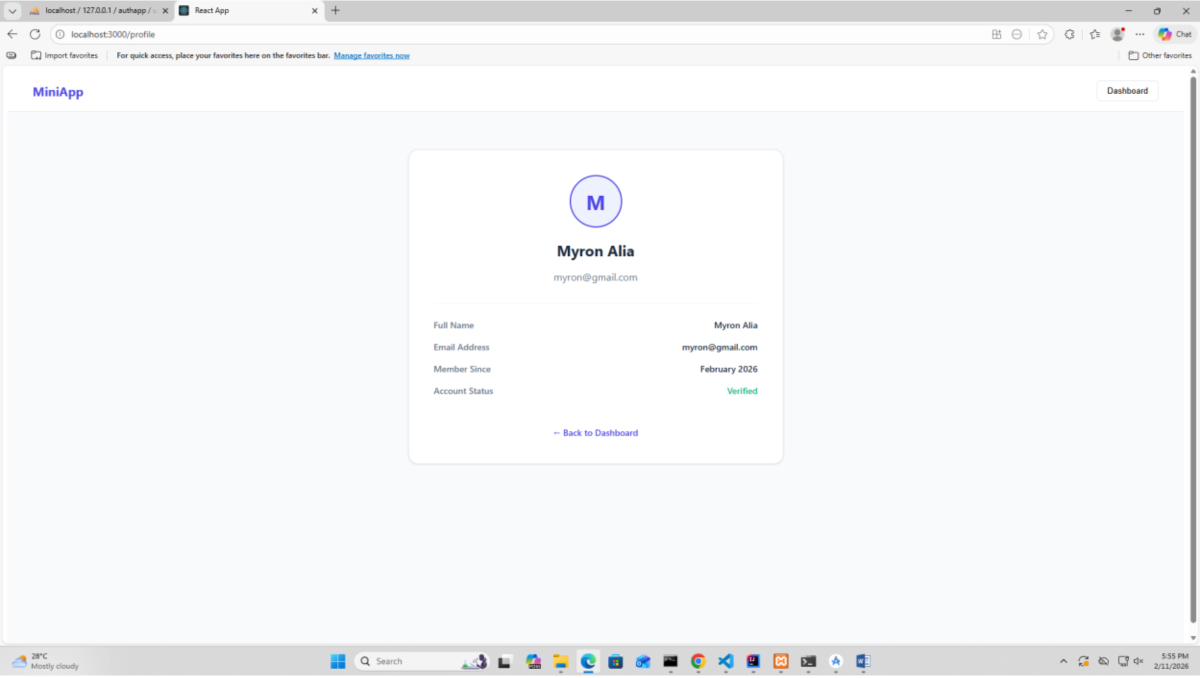
myron@gmail.com

Verified Account

View Full Profile

Sign Out

Profile



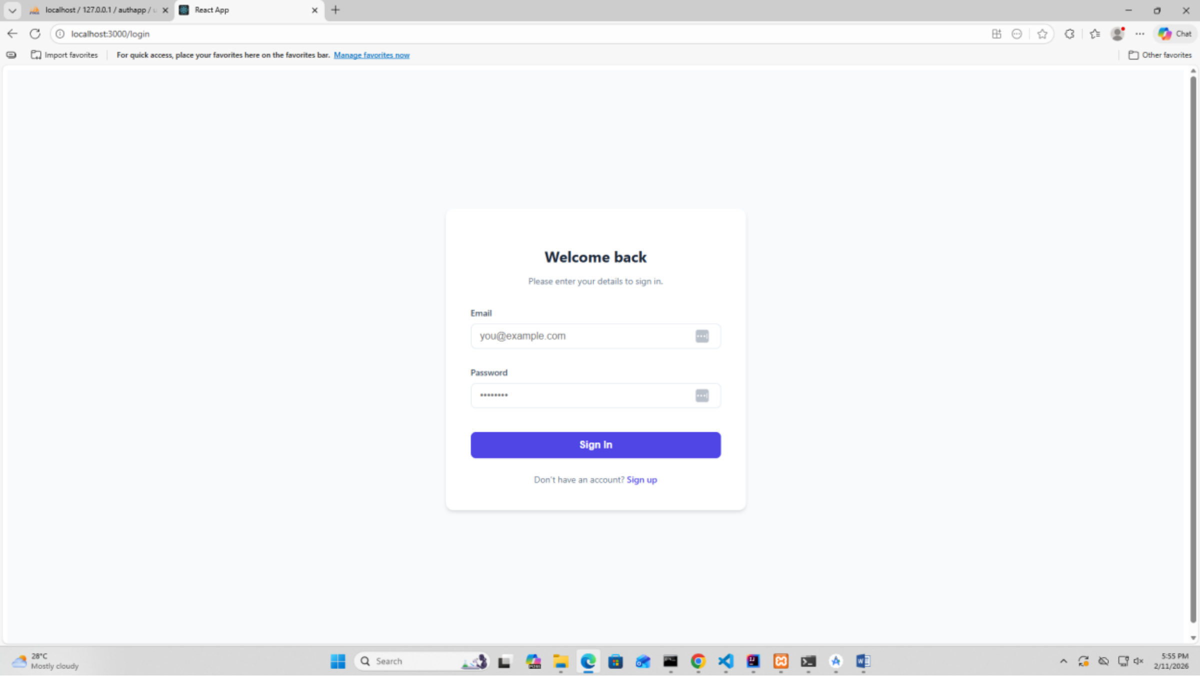
Myron Alia

myron@gmail.com

Full Name	Myron Alia
Email Address	myron@gmail.com
Member Since	February 2026
Account Status	Verified

← Back to Dashboard

Logout



localhost / 127.0.0.1 / authapp /
React App
localhost:3000/login
Import favorites
For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
Chat
28°C
Mostly cloudy
Search
5:55 PM
2/11/2026

Welcome back

Please enter your details to sign in.

Email

you@example.com

Password

••••••••

Don't have an account? Sign up