



CEBU INSTITUTE OF TECHNOLOGY
UNIVERSITY

IT342-G01

SYSTEMS INTEGRATION AND

ARCHITECTURE 1

FUNCTIONAL REQUIREMENTS

SPECIFICATION (FRS)

Project Title: WorkForce Portal

Prepared By: Jethro L. Salindato

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1. Introduction

1.1. Purpose

The purpose of WorkForce Portal is to provide robust, scalable, and secure centralized platform for workforce management and authentication. The system serves as the primary gateway for employees to access resources while simultaneously providing management with real-time data regarding personnel availability.

Indented Audience

This document is prepared for the following audience:

- Stakeholders/Management: To review how the portal automates attendance and status tracking for the employees in the organization's workforce.

1.2. Scope

In-Scope

- User Authentication: Provide a secure registration and login interface for employees using encrypted password storage.
- Real-time Status Management: Automatically update a user's record in the database to "Active" upon a successful login and "Offline" upon a manual logout.
- Role-Based Logic: Differentiate between "Staff" and "Admin" roles, ensuring users only access data relevant to their permission level.
- Profile Visualization: Allow employees to view their personal details and current check-in status via a dedicated dashboard.

Out-of-Scope

- Payroll Processing: The system will not calculate salaries, taxes, or bank transfers.
- Advanced Scheduling: While the system tracks *when* a user is active, it does not include a calendar for shift scheduling or leave applications.

1.3. Definitions, Acronyms, and Abbreviations

- JWT (JSON Web Token): A compact, URL-safe means of representing claims to be transferred between two parties.
- LMS (Leave Management System): The module responsible for handling time-off requests.
- Clock-In/Out: The action of recording the start and end of a work session.

2. Overall Description

2.1. System Perspective

The WorkForce Portal is a standalone centralized platform designed to digitize internal administrative tasks. It replaces manual logbooks and physical bulletin boards with a secure, web-accessible interface. It operates as an independent ecosystem where attendance data and leave statuses are managed in a single relational database.

2.2. User Classes and Characteristics

- **Employees:** Staff members who use the system daily to log hours, check their personal attendance history, file leave requests, and read company news.
- **Management/Admins:** Higher-ups who use the system to oversee staff attendance, approve or deny leave requests, and post official announcements.

2.3. Operating Environment

- Backend Framework: Spring Boot 3.x (Java 17+)
- Database: MongoDB Atlas
- Security: Spring Security with JWT

2.4. Assumptions and Dependencies

- Connectivity: The local Spring Boot application must have an active internet connection to reach the MongoDB Atlas cluster via the connection string.
- Database Driver: The application uses the MongoDB Java Driver to handle BSON conversions.
- Local Clock: While the database is remote, the Spring Boot server time will serve as the reference for attendance timestamps.

3. System Features and Functional Requirements

3.1. Feature 1: Digital Attendance Tracking

Description: A digitized time-clock managed via Spring Boot REST controllers and MongoDB repositories.

Functional Requirements:

- The system shall map attendance records to a Attendance collection using the @Document annotation.
- The system shall use LocalDateTime to capture check-in and check-out events accurately.
- The system shall implement a Repository interface to fetch logs by userId for the personal dashboard.

3.2. Feature 2: Leave Request Management

Description: A workflow for filing and reviewing time-off requests using Spring Boot service logic.

Functional Requirements:

- The system shall allow employees to POST a leave request document containing start/end dates.
- The system shall use an Enum for leave status (PENDING, APPROVED, DENIED) to ensure data consistency.
- The system shall provide a PATCH endpoint for admins to update the status of specific leave documents.

4. Non-Functional Requirements

Specify system quality attributes such as performance, security, usability, reliability, etc.

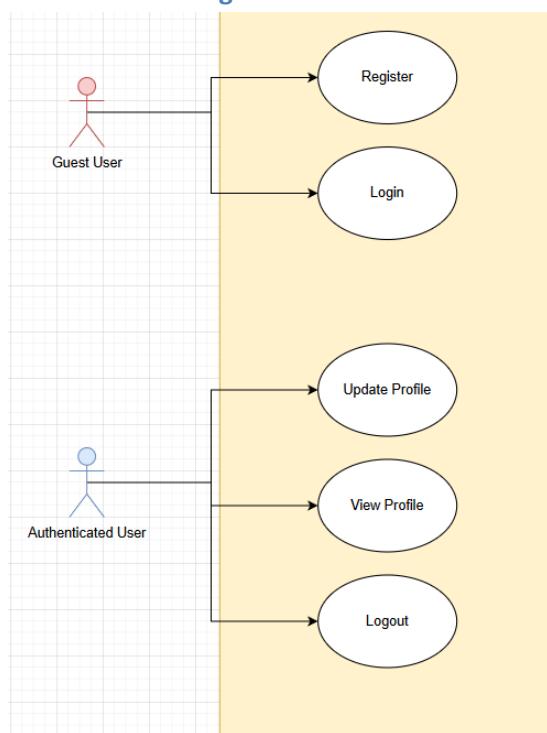
5. System Models (Diagrams)

Insert the necessary diagrams for the system:

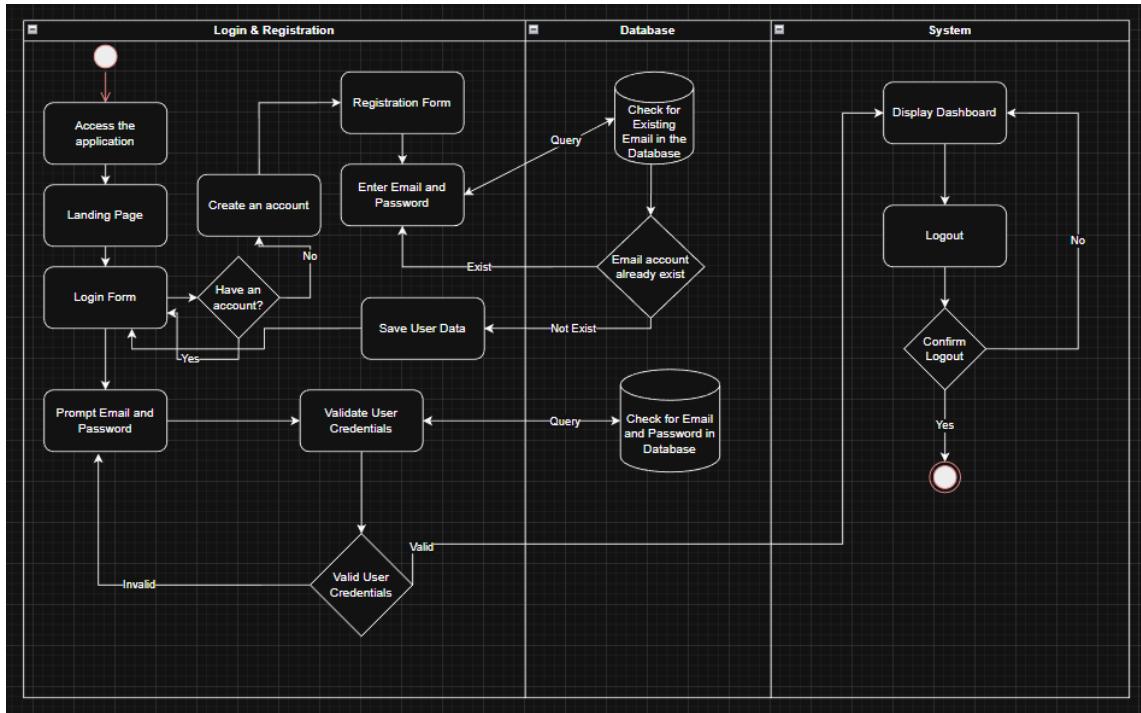
5.1. ERD

User		
PK	<u>user_id</u>	<u>int</u>
	email	varchar (65)
	first_name	varchar (65)
	last_name	varchar (65)
	password	varchar (65)
	phone_number	varchar (65)
	role	varchar (65)
	status	varchar (65)

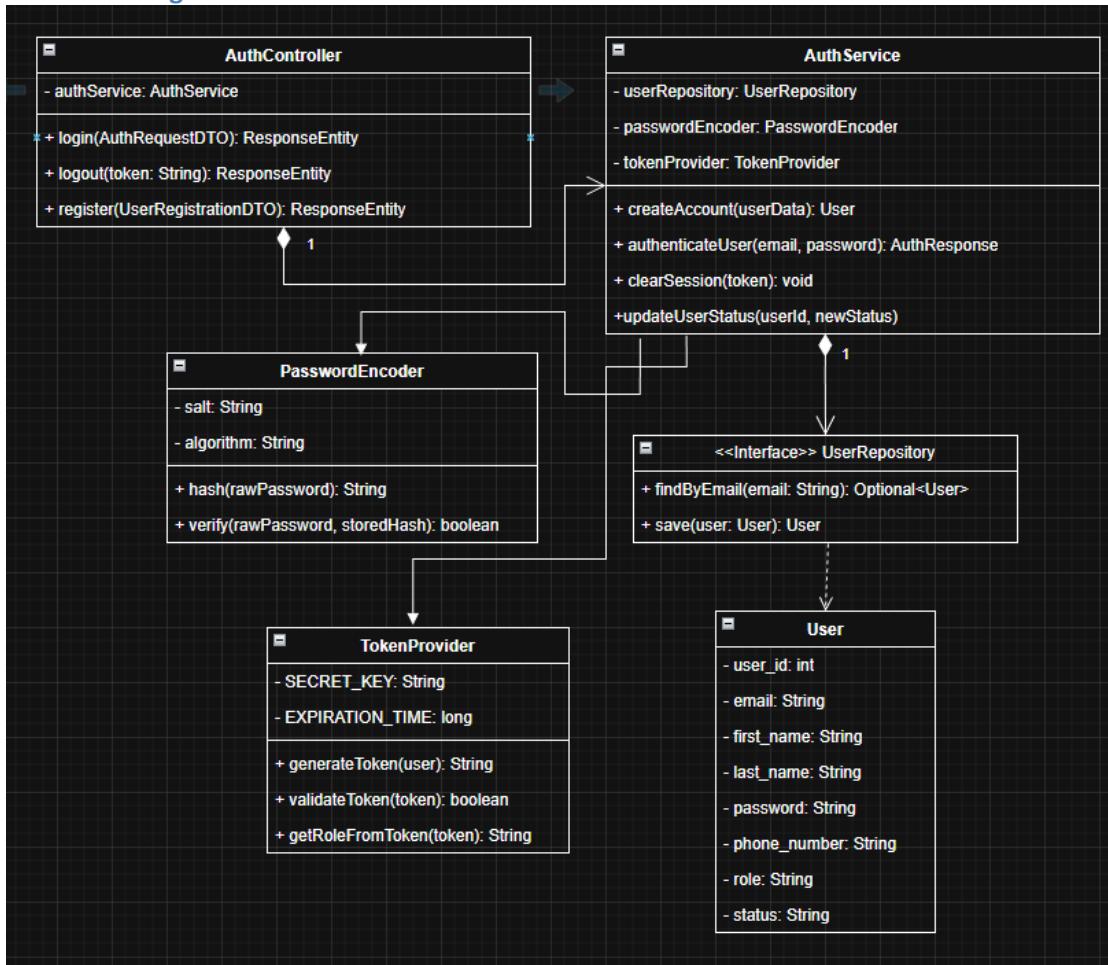
5.2. Use Case Diagram



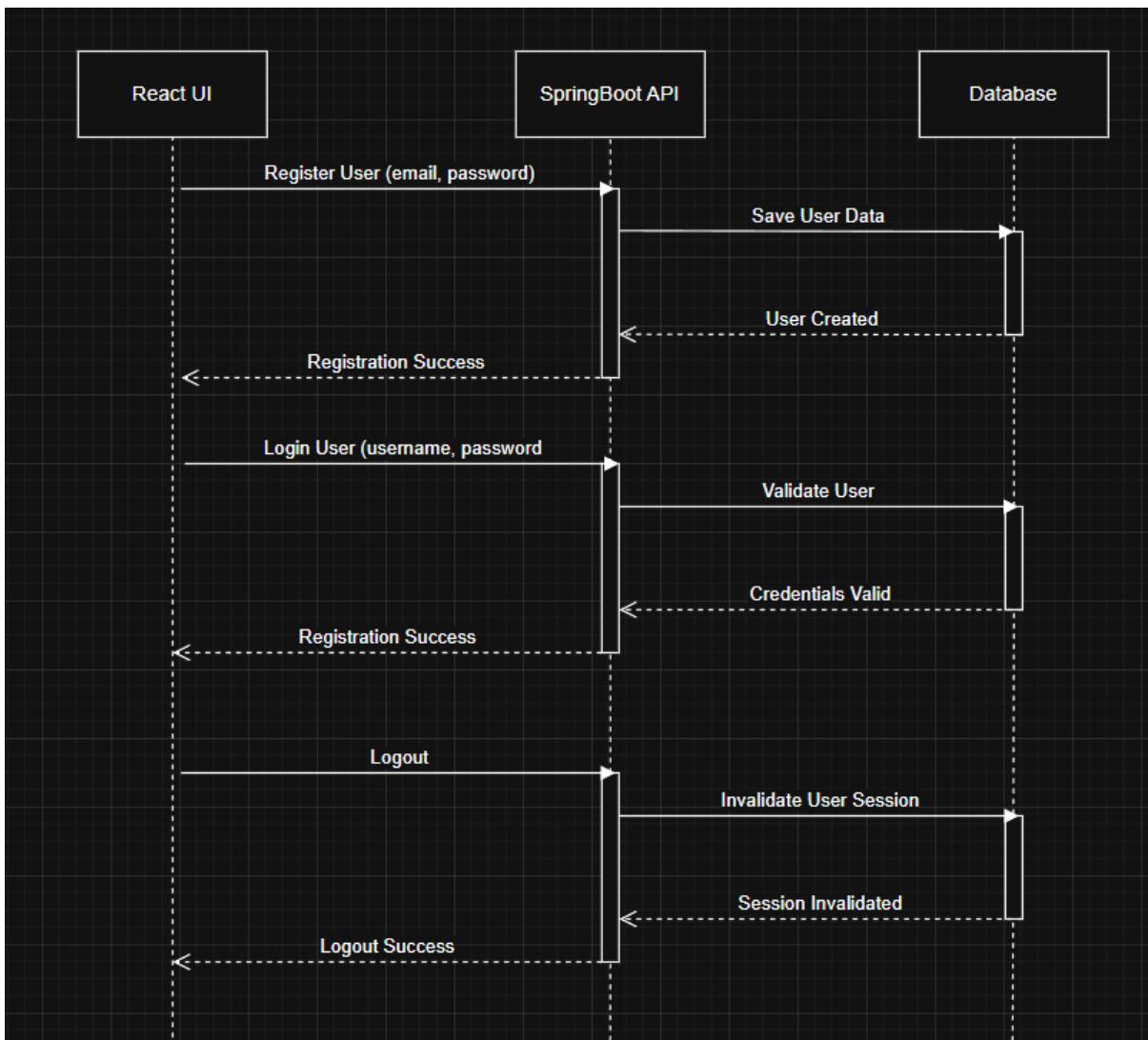
5.3. Activity Diagram



5.4. Class Diagram



5.5. Sequence Diagram



6. Screenshots of the Web UI

6.1 Register UI

The screenshot shows a registration form titled "Create Account" with a dark background. The title is centered at the top. Below it is a sub-instruction: "Fill in the details below". The form consists of several input fields:

- Email Address: A text input containing "you@example.com".
- First Name: A text input containing "John".
- Last Name: A text input containing "Doe".
- Phone Number: A text input containing "+63 9XX XXX XXXX".
- Password: A text input containing "Create a password" with a visibility icon.
- Confirm Password: A text input containing "Re-enter password".

At the bottom of the form is a large blue "Create Account" button. Below the button, a small link says "Already have an account? Sign in".

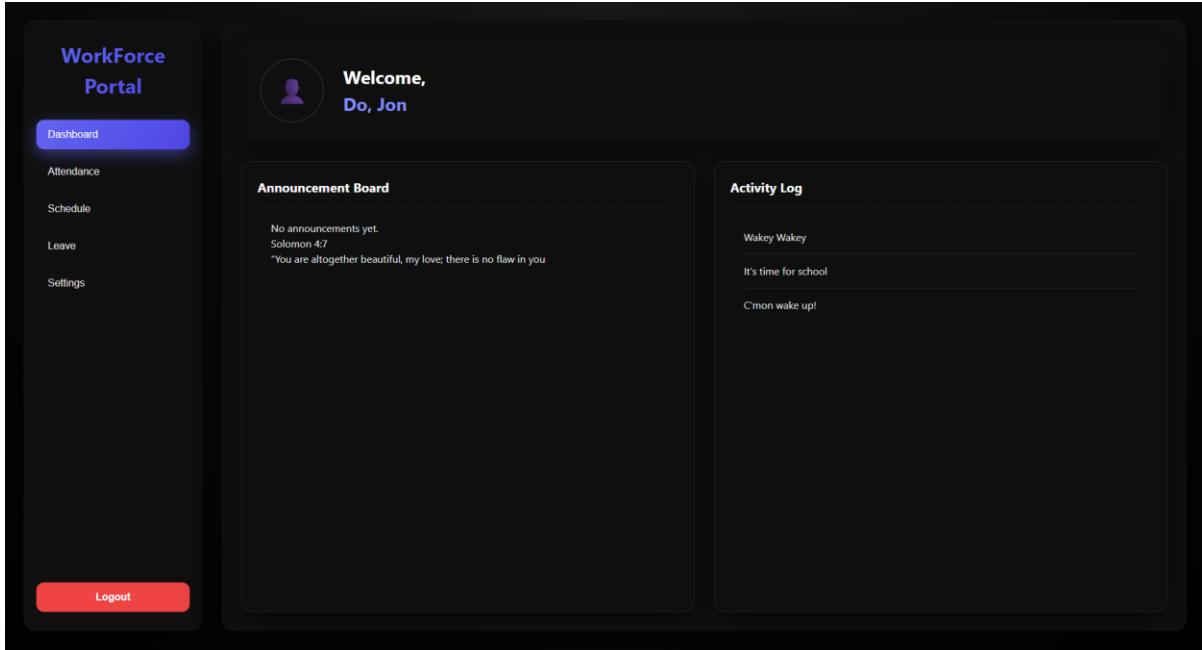
6.2 Login UI (Web)

The screenshot shows a login form titled "Welcome Back" with a dark background. The title is centered at the top. Below it is a sub-instruction: "Sign in to continue". The form consists of several input fields:

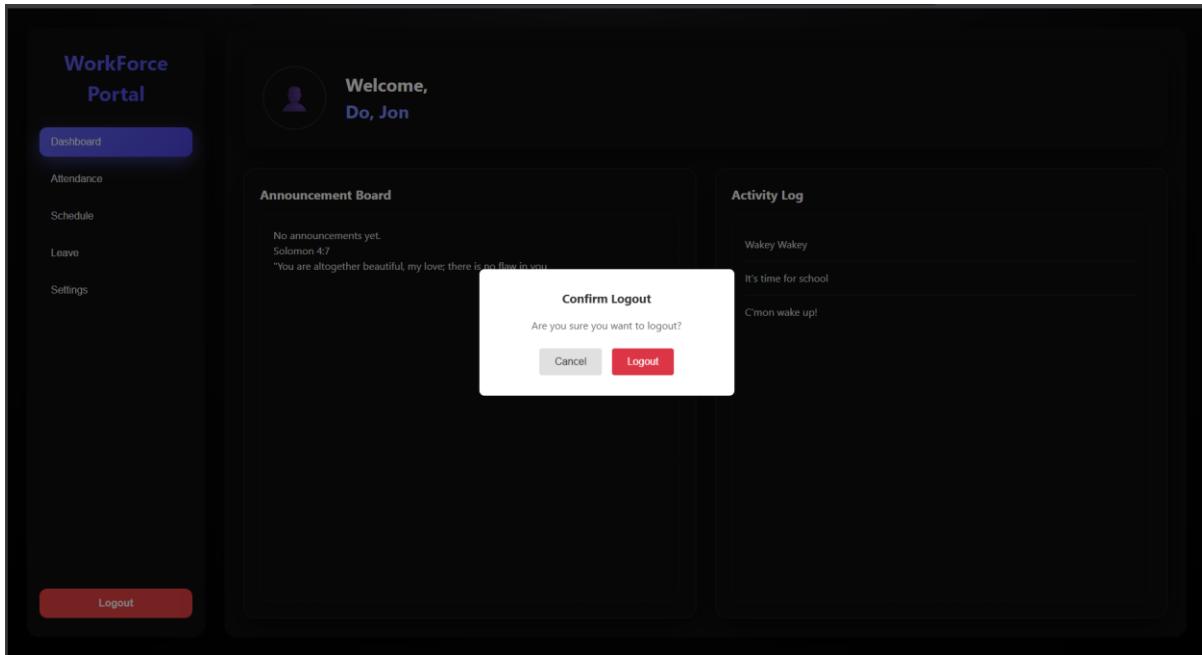
- Email Address: A text input containing "you@example.com".
- Password: A text input containing "*****" with a visibility icon.

Below the inputs are two links: "Remember me" and "Forgot password?". At the bottom of the form is a large blue "Sign In" button. Below the button, a small link says "Don't have an account? Sign up".

6.3 Dashboard/Logout UI (Web)

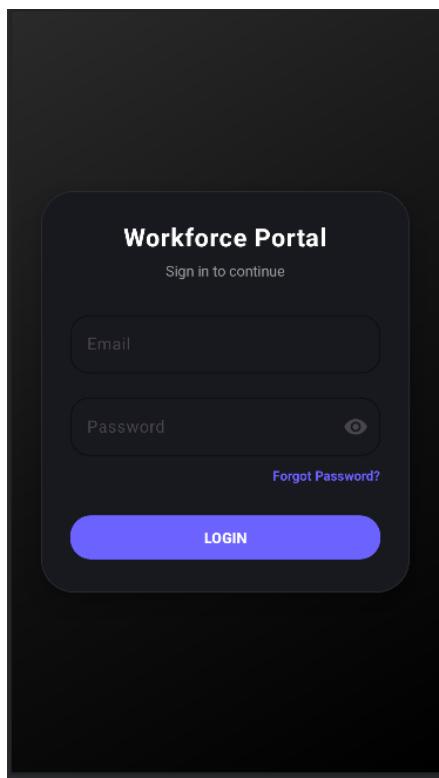


6.4 Logout UI (Web)

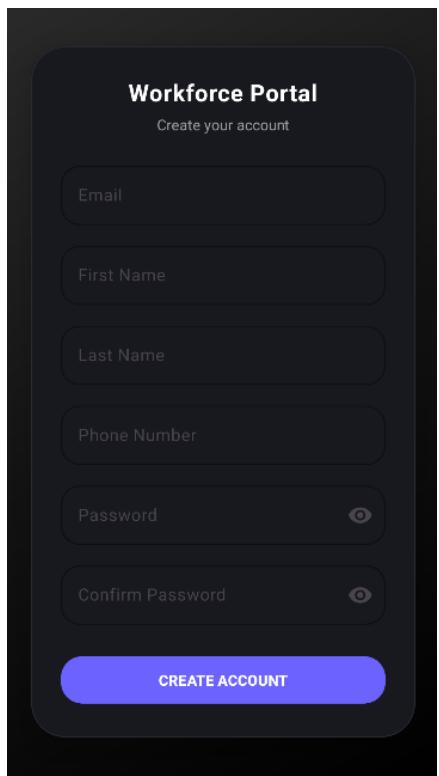


7. Screenshot of Mobile UI

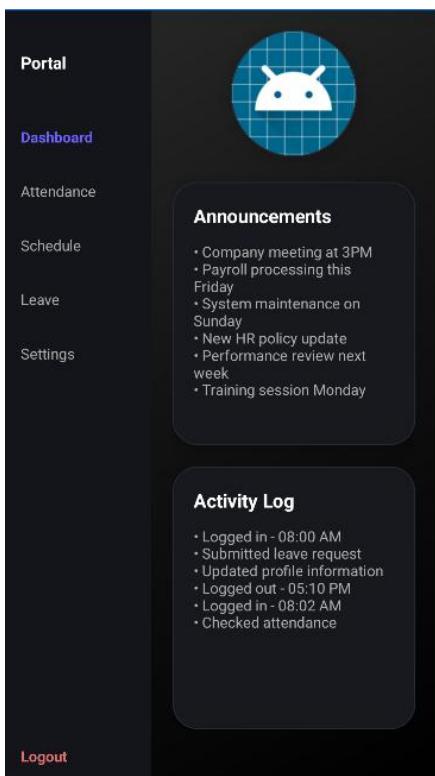
7.1 Login UI



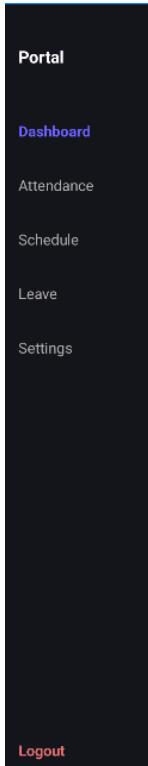
7.2 Register UI



7.3 Dashboard UI



7.4 Logout UI



8. Appendices

Include any additional information, references, or support materials.