

AttendEase - Employee Attendance System

Project Documentation

Name: Sobeka C

College: PSNA College of Engineering and Technology

Contact: 9344667769

Introduction

AttendEase is a simple and efficient employee attendance management system designed to make daily check-ins and check-outs effortless. The system helps employees record their attendance and allows managers to view and manage team attendance in real time. It is built using React, TypeScript, and PostgreSQL for a smooth and secure experience.

Features

Employee Features

- Email-based registration and login
- Check In and Check Out attendance system
- View past attendance in a calendar format
- Monthly summary (Present, Absent, Late)
- Personal dashboard with attendance insights

Manager Features

- Dashboard to view the entire team's attendance
- Filter attendance by date, employee, or status
- Team attendance calendar
- Export attendance to CSV
- Real-time attendance updates

Tech Stack

Frontend: React 18, TypeScript, Vite

State Management: React Context API

Backend: PostgreSQL

UI Components: Shadcn/ui + Tailwind CSS

Date Handling: date-fns

Form Validation: Zod

Database Schema

Users Table (profiles)

- id (UUID)
- name (TEXT)
- email (TEXT)
- employee_id (TEXT)
- department (TEXT)
- created_at (TIMESTAMP)

User Roles Table (user_roles)

- id (UUID)
- user_id (UUID)
- role (employee/manager)

Attendance Table (attendance)

- id (UUID)
- user_id (UUID)
- date (DATE)
- check_in_time (TIMESTAMP)
- check_out_time (TIMESTAMP)
- status (ENUM)
- total_hours (NUMERIC)
- created_at (TIMESTAMP)

Key Implementation Details

- Secure email authentication using PostgreSQL
- Role-based access for employees and managers
- Automatic calculation of status (Present/Late) and total hours
- Real-time updates using PostgreSQL subscriptions
- Row-Level Security (RLS) ensures data privacy
- CSV export option for monthly/weekly reports

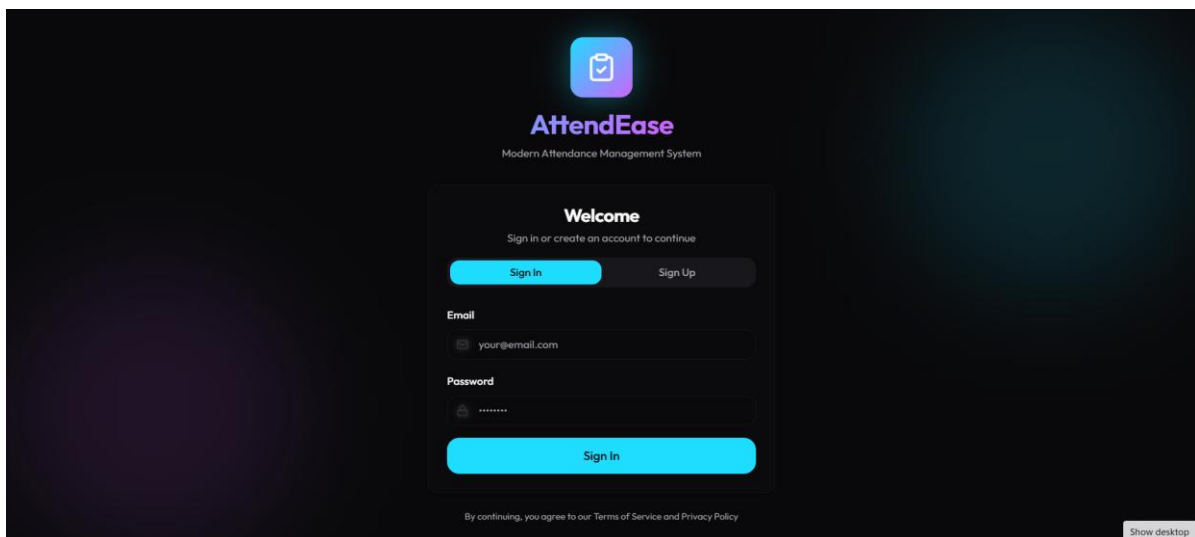
Setup Instructions

1. Clone the repository
2. Install dependencies using npm install
3. Run development server using npm run dev
4. Open the app at http://localhost:8080

Evaluation Criteria

- Functionality – Complete working features
- Code Quality – Clean structure with TypeScript
- UI/UX – Modern responsive UI
- API Design – Proper error-handling and flow
- Database – Normalized schema
- Documentation – Comprehensive README

Employee



1.Sign /Sign Up page

Welcome

Sign in or create an account to continue

Sign In

Sign Up

Select Your Role

Employee

Manager

Full Name

John Doe

Email

sobekac22cs@psnacet.edu.in

Password

Employee ID

EMP001

Department

Engineering

Create Employee Account

2.Creating an account page

AttendEase

Employee

Dashboard

Mark Attendance

My Attendance

Profile

Sign Out

Today's Status

Saturday, November 29, 2025

Check In

08:39 PM

Check Out

08:39 PM

Total Hours

0 hrs

This Month's Performance

PRESENT DAYS

0

This month

ABSENT DAYS

0

This month

LATE ARRIVALS

0

This month

TOTAL HOURS

0.0

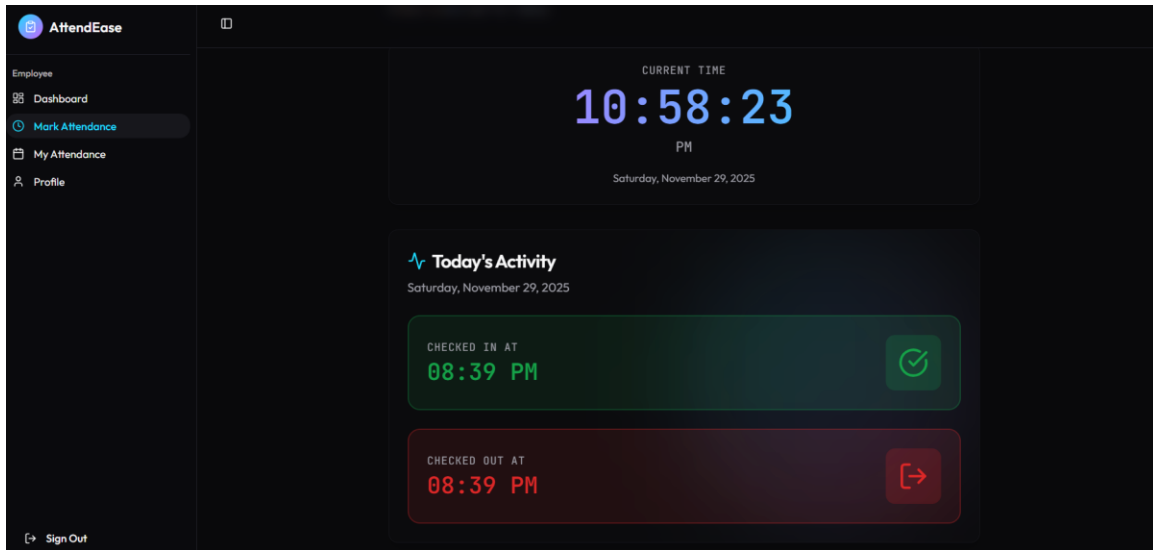
This month

Quick Actions

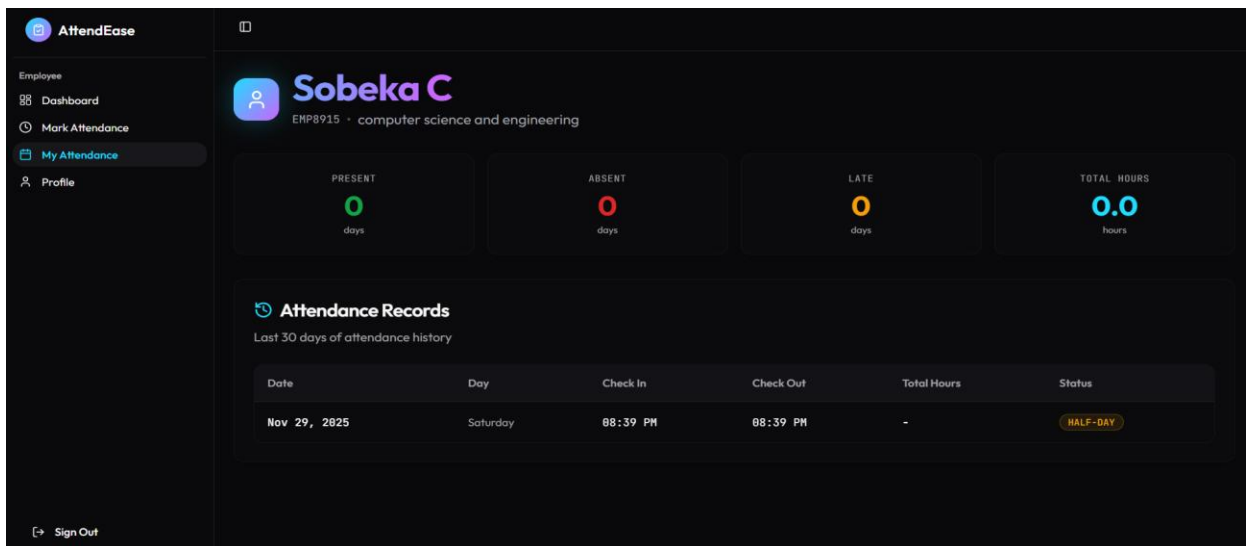
Mark Attendance

View History

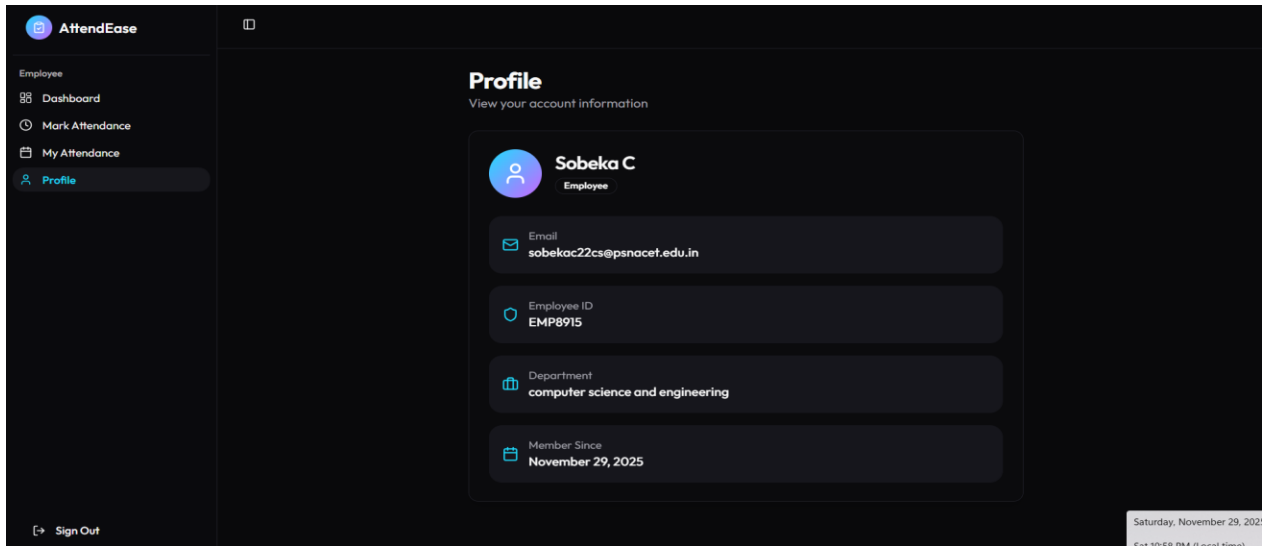
3.Employee Dashboard



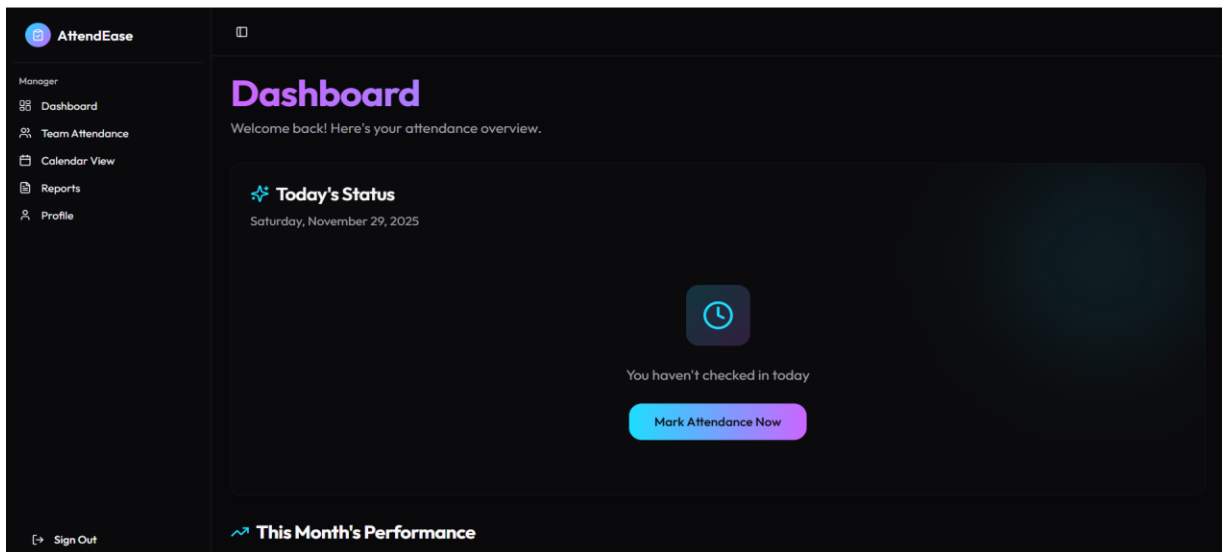
4.Employee Mark Attendance



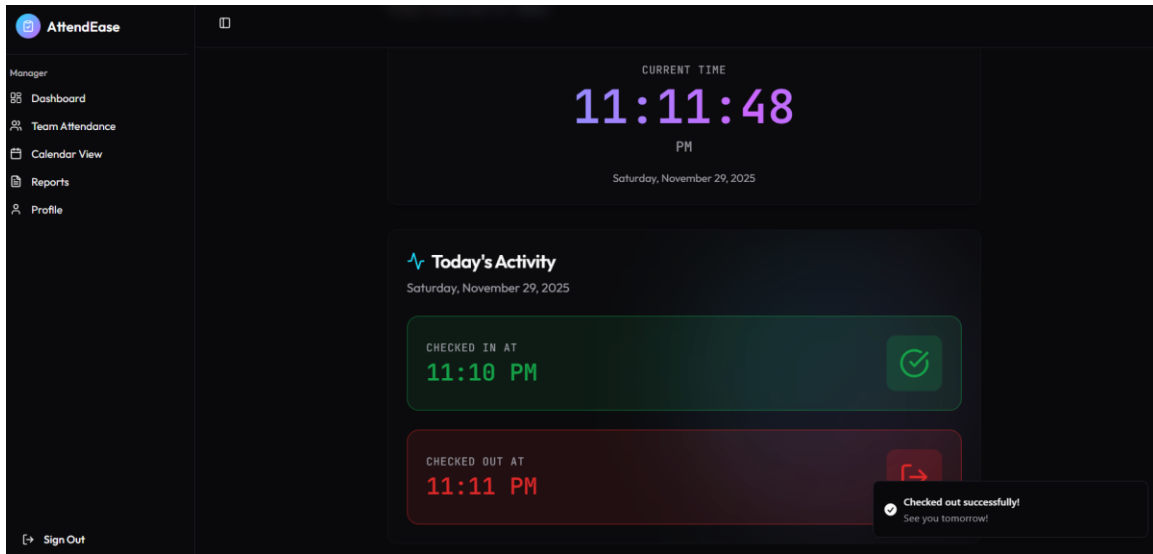
5.Employee Attendance



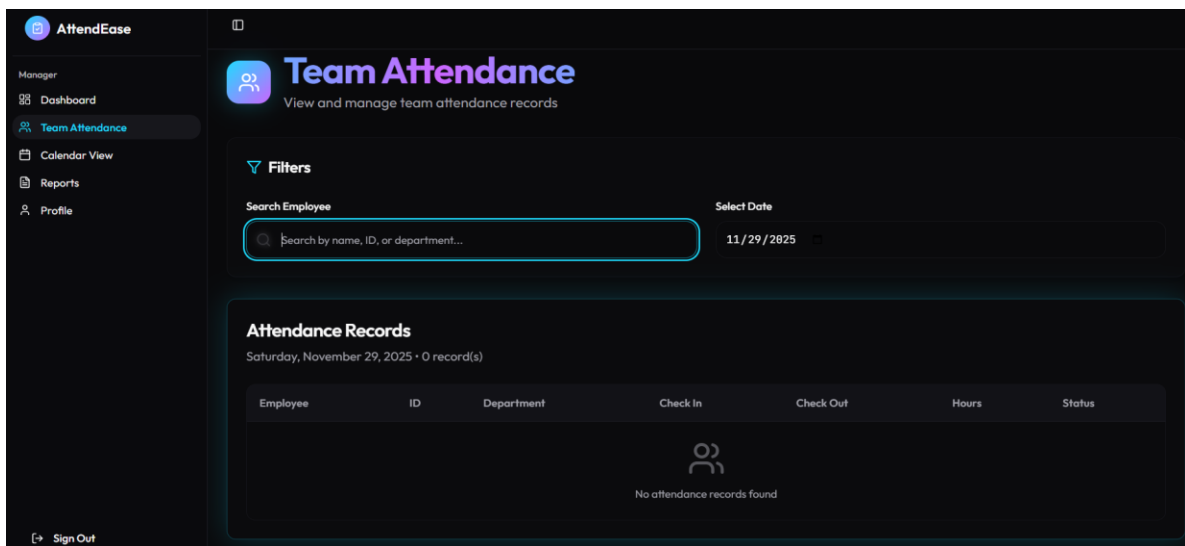
6.Employee Profile



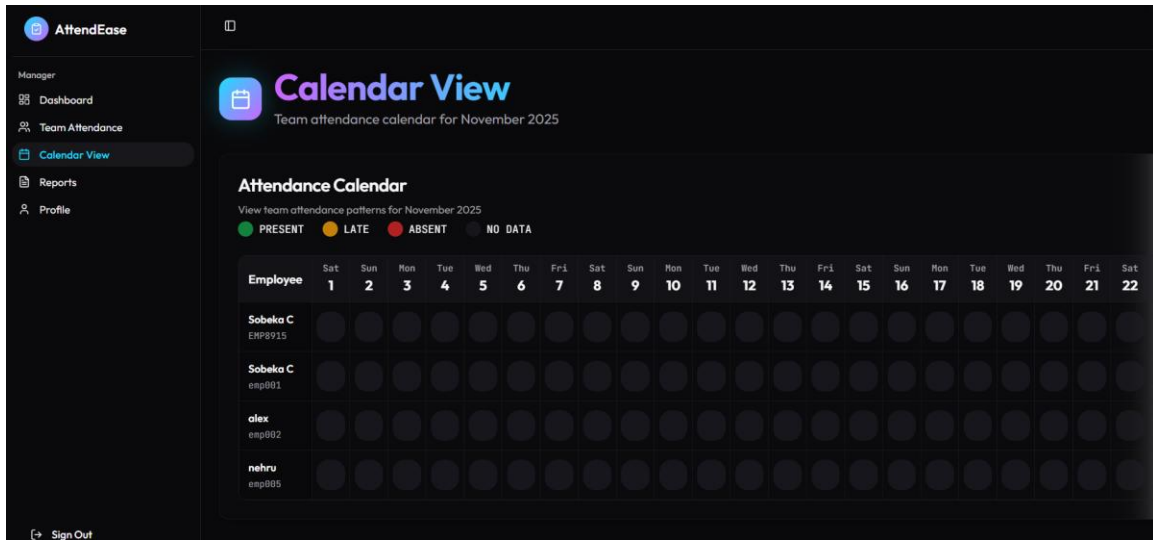
7.Manager Dashboard



8.Manger Activity



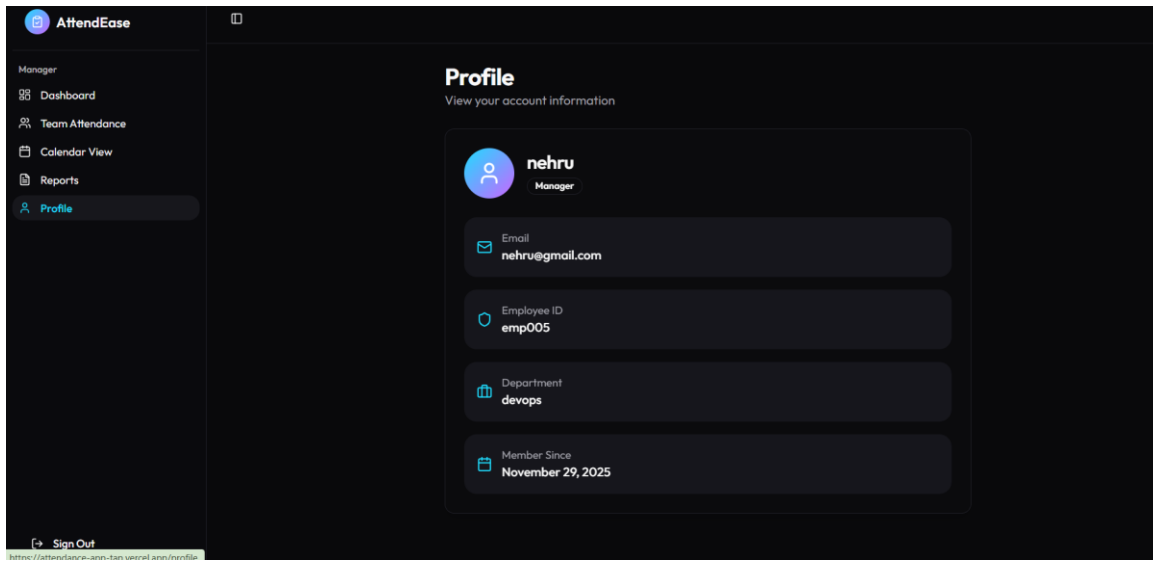
9. Team Attendance



10. Calender View



11. Reports



12.Manager Profile

Conclusion

AttendEase is a complete, secure, and efficient employee attendance system suitable for modern organizations.

Thank You

Thank you for reviewing my project documentation.