

AttendEase - Employee Attendance System

Project Documentation

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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

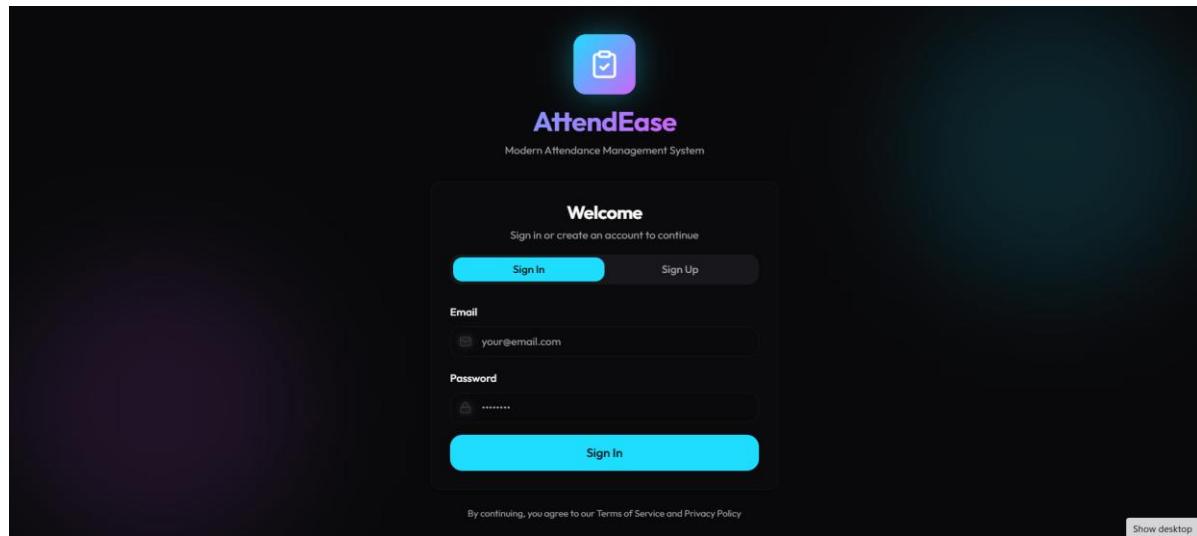
Setup Instructions

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

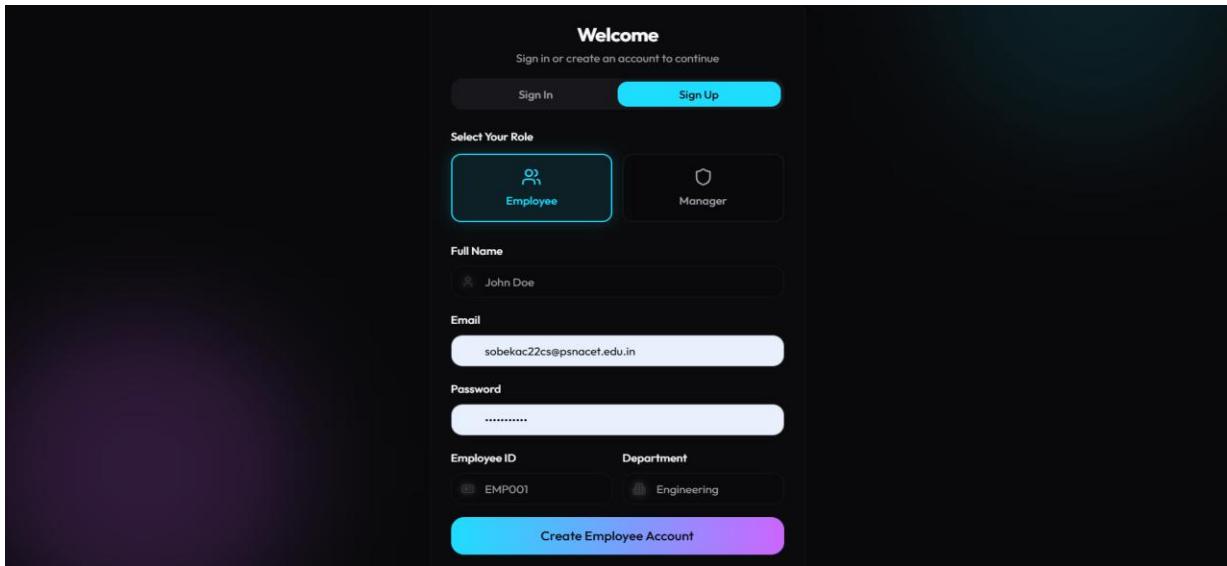
Evaluation Criteria

- 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



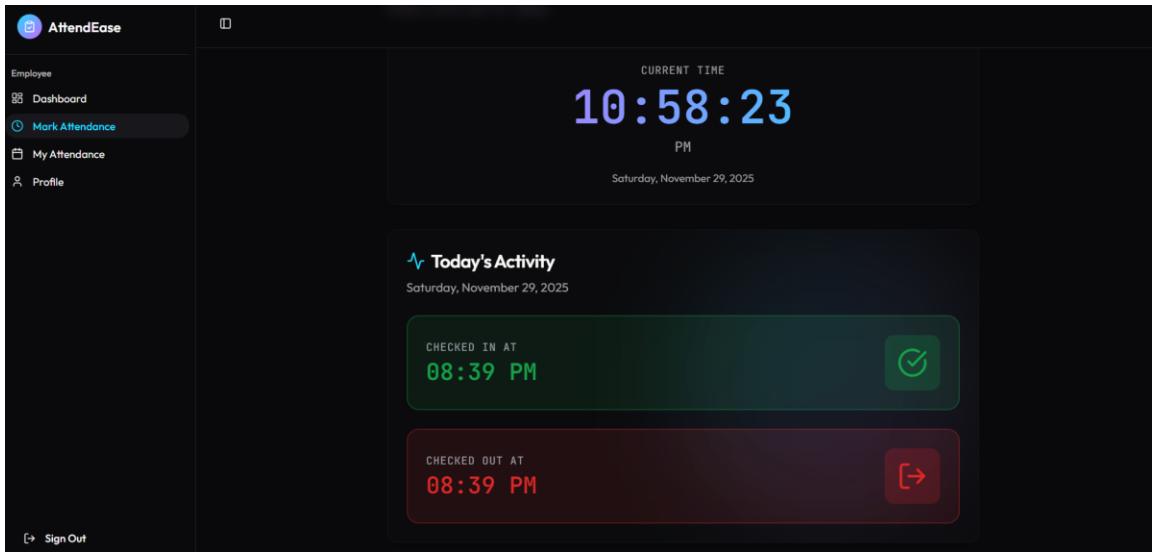
1.Sign /Sign Up page



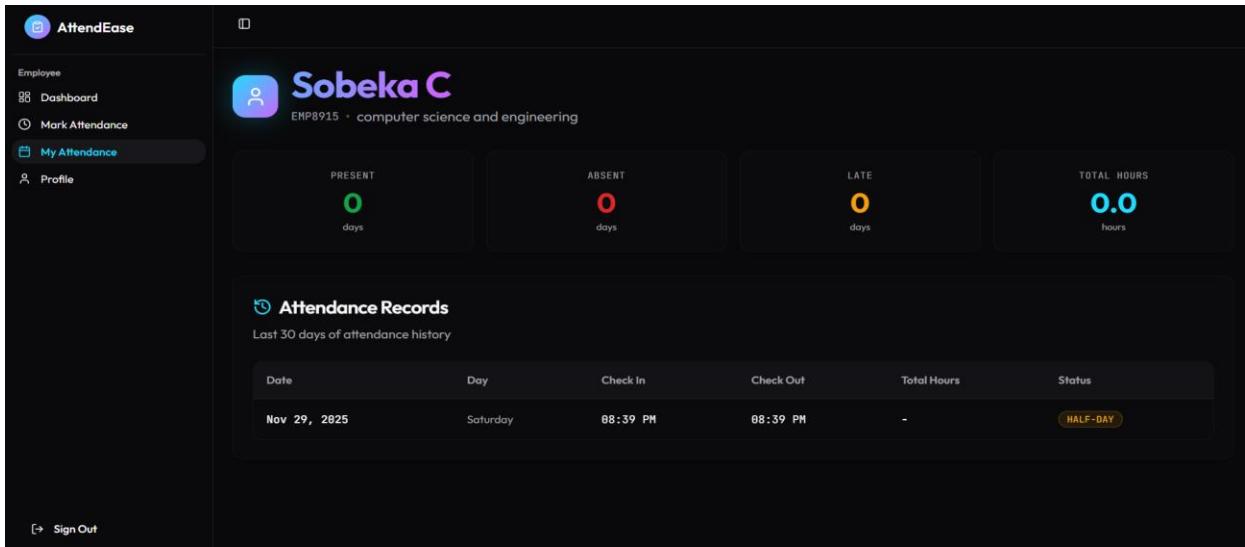
2.Creating an account page

The screenshot displays the 'Today's Status' section of the AttendEase dashboard. It shows a green 'Check In' status at 08:39 PM and a red 'Check Out' status at 08:39 PM. To the right, a teal box indicates 'Total Hours 0 hrs'. Below this, the 'This Month's Performance' section provides a summary of attendance metrics: 0 present days, 0 absent days, 0 late arrivals, and a total of 0.0 hours worked. Under the heading 'Quick Actions', there are buttons for 'Mark Attendance' (blue) and 'View History' (grey). At the bottom left, a 'Sign Out' button is visible.

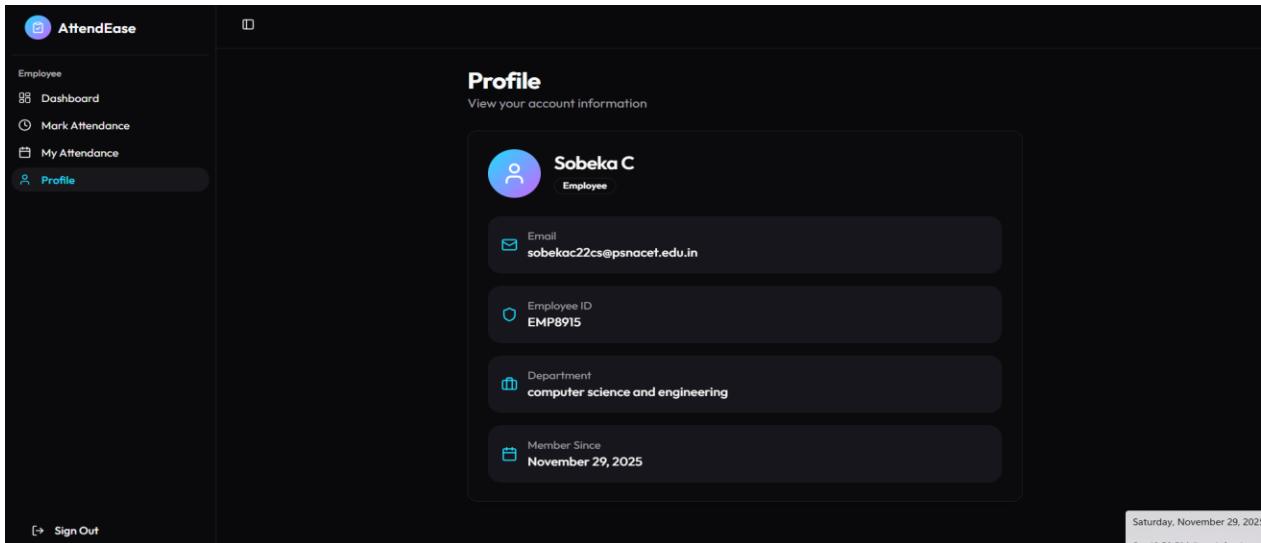
3.Employee Dashboard



4.Employee Mark Attendance

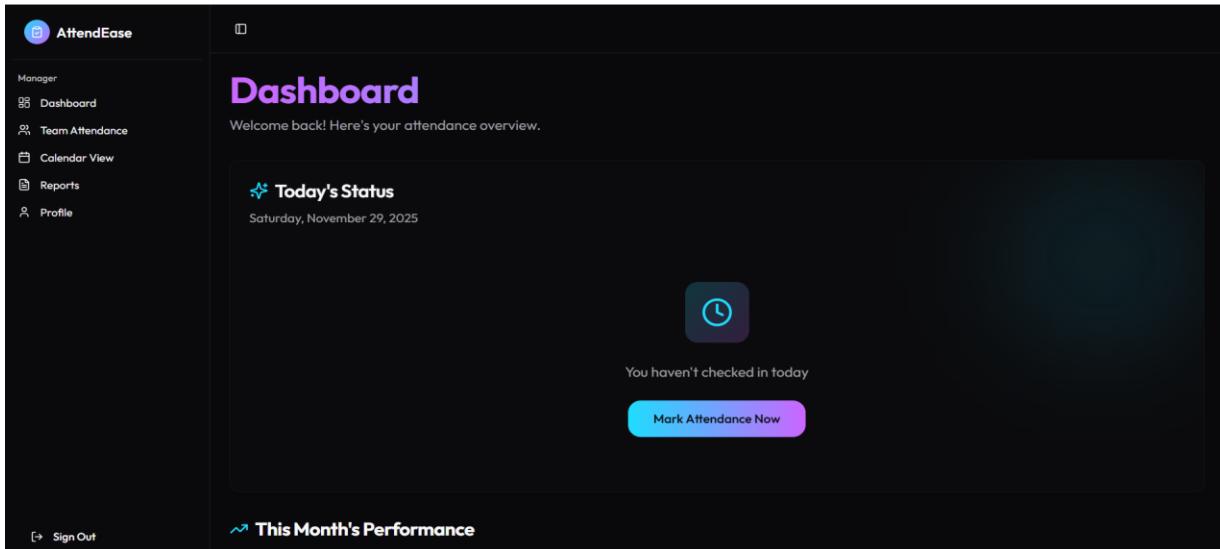


5.Employee Attendance



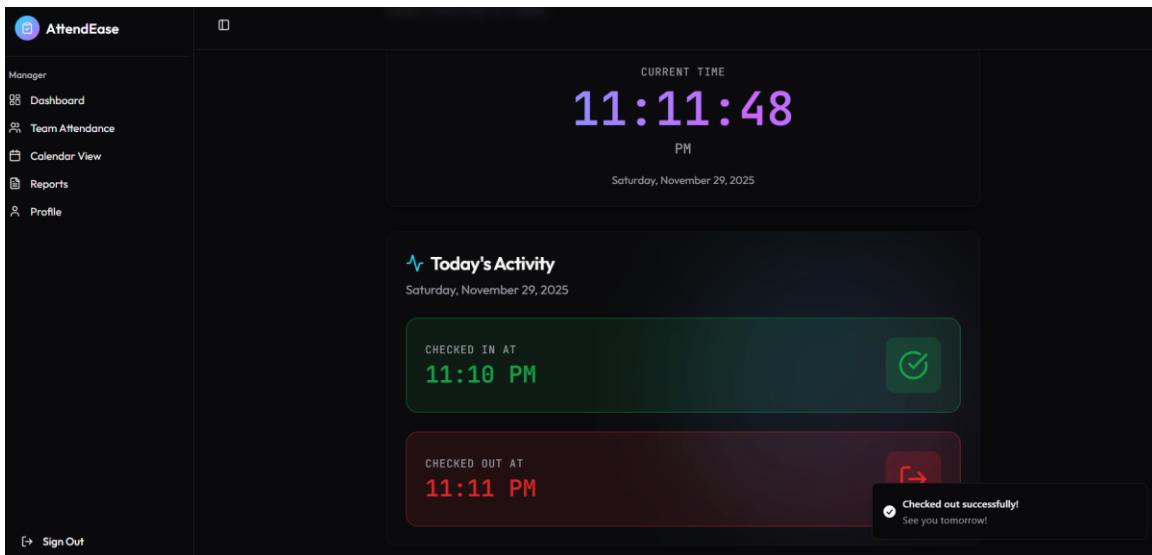
The screenshot shows the Employee Profile page of the AttendEase application. At the top left is the AttendEase logo. The navigation bar on the left lists 'Employee' and 'Manager' sections with links for Dashboard, Mark Attendance, My Attendance, and Profile. The 'Profile' link is highlighted with a dark background. The main content area has a title 'Profile' and a subtitle 'View your account information'. It features a circular profile picture placeholder for 'Sobeka C' and the word 'Employee'. Below this are four data cards: 'Email' (sobekac22cs@psnacet.edu.in), 'Employee ID' (EMP8915), 'Department' (computer science and engineering), and 'Member Since' (November 29, 2025). At the bottom right are the dates 'Saturday, November 29, 2025' and 'Get My QR Code (for mobile device)'. A 'Sign Out' button is at the bottom left.

6.Employee Profile



The screenshot shows the Manager Dashboard page of the AttendEase application. At the top left is the AttendEase logo. The navigation bar on the left lists 'Manager' and 'Employee' sections with links for Dashboard, Team Attendance, Calendar View, Reports, and Profile. The 'Dashboard' link is highlighted with a dark background. The main content area has a title 'Dashboard' and a subtitle 'Welcome back! Here's your attendance overview.' Below this is a section titled 'Today's Status' with the date Saturday, November 29, 2025. It features a large clock icon and the message 'You haven't checked in today' with a 'Mark Attendance Now' button. At the bottom left is the 'Sign Out' button.

7.Manager Dashboard



8. Manager Activity

The screenshot shows the 'Team Attendance' page. The sidebar menu under 'Manager' has 'Team Attendance' selected. The main content area features a title 'Team Attendance' with the subtitle 'View and manage team attendance records'. It includes a 'Filters' section with a search bar ('Search Employee') and a date selector ('Select Date' set to 11/29/2025). Below this is a section titled 'Attendance Records' with the text 'Saturday, November 29, 2025 • 0 record(s)'. A table header with columns 'Employee', 'ID', 'Department', 'Check In', 'Check Out', 'Hours', and 'Status' is shown, followed by a message 'No attendance records found'.

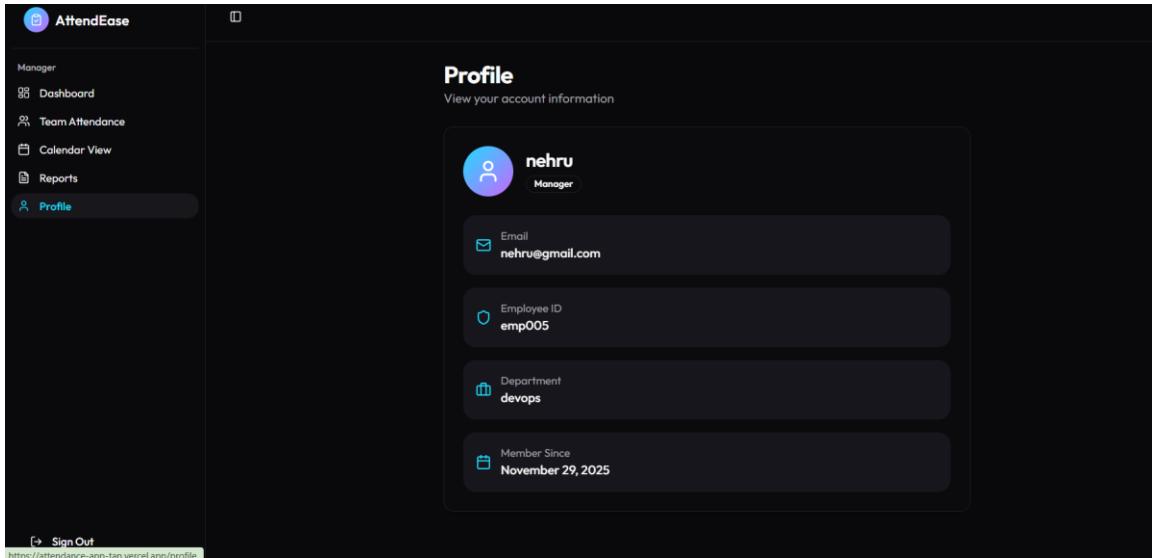
9. Team Attendance

The screenshot shows the 'Calendar View' section of the AttendEase application. The left sidebar has a dark theme with white text and icons. The 'Calendar View' option is selected, highlighted with a blue background. The main content area has a light blue header with the title 'Calendar View' and a subtitle 'Team attendance calendar for November 2025'. Below this is a section titled 'Attendance Calendar' with the sub-instruction 'View team attendance patterns for November 2025'. A legend at the top indicates four status colors: green for 'PRESENT', yellow for 'LATE', red for 'ABSENT', and grey for 'NO DATA'. The calendar grid for November 2025 is displayed, showing rows for each day of the week and columns for each date from 1 to 22. On the far left of the grid, there is a vertical list of employee names and their employee IDs: Sobeka C (EMP8715), Sobeka C (emp801), alex (emp802), and nehru (emp805). At the bottom left of the calendar area, there is a 'Sign Out' button.

10. Calender View

The screenshot shows the 'Reports' section of the AttendEase application. The left sidebar has a dark theme with white text and icons. The 'Reports' option is selected, highlighted with a blue background. The main content area has a light blue header with the title 'Reports' and a subtitle 'Export attendance data to CSV format'. Below this is a section titled 'Export Attendance Report' with the sub-instruction 'Select a date range and export comprehensive attendance data'. It features two date input fields: 'Start Date' (set to 11/29/2025) and 'End Date' (set to 11/29/2025). Below these is a large blue button with the text 'Export to CSV' and a small downward arrow icon. At the bottom of the page, there is a section titled 'Report Information' with the sub-instruction 'The exported CSV file will contain comprehensive attendance information including:'. A single bullet point is listed: 'Date of attendance' (described as 'Full date records for the selected range'). At the very bottom left, there is a 'Sign Out' button.

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.