A

Mini Project Report on

Ease Work

Submitted partial fulfillment of the requirements for the degree

Second Year Engineering – Computer Science Engineering (Data Science)

by

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CERTIFICATE

This to certify that the Mini Project report on EaseWork has been submitted by Vaishnavi Bhojak(23107022), Nishigandha Sawant(23107047), Nidhi Shettigar(23107041) and Abhishek Sali(23107004) who are Bonafide students of A. P. Shah Institute of Technology, Thane as a partial fulfillment of the requirement for the degree in Computer Science Engineering (Data-Science), during the academic year 2024-2025 in the satisfactory manner as per the curriculum laid down by University of Mumbai.

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ACKNOWLEDGEMENT

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Chapter 1
Introduction

In today's fast-paced and ever-evolving work environment, organizations are increasingly seeking streamlined and integrated systems to manage their HR and administrative functions with greater efficiency. EaseWork emerges as a comprehensive, all-in-one workplace management solution tailored to meet these modern demands. Designed to simplify and automate a wide array of core operational processes, EaseWork offers a unified platform that brings together essential features such as user profile management, leave tracking, attendance monitoring, HR document handling, task and performance management, holiday calendar integration, and digital visiting card generation. By consolidating these functionalities within a single, centralized dashboard, the platform significantly reduces the dependency on multiple disjointed tools and software solutions.

This report explores the architectural framework, feature set, and workflow of EaseWork, demonstrating how the platform transforms traditional HR management into a seamless digital experience. With a focus on usability, efficiency, and integration, EaseWork supports the transition toward a more connected, agile, and responsive workplace environment. Its emphasis on automation, centralized access, and real-time visibility positions it as a vital tool in enabling modern organizations to operate with enhanced clarity, speed, and effectiveness.

1.1 Purpose:

The purpose of this document is to provide a detailed overview of Ease Work, a management solution designed to streamline HR and administrative processes. It outlines the system's key features, including user profiles, leave management, attendance tracking, HR documents, task management, performance evaluation, holiday calendar and digital visiting card.

This application is designed for employees to manage their profiles, attendance, leaves, and performance evaluations efficiently. It also serves HR teams by streamlining administrative tasks such as document management, leave approvals, and performance tracking. Managers benefit by being able to monitor team performance, attendance records, and task progress.

1.2 Problem Statement:

Employees and HR departments often encounter considerable difficulties in efficiently managing crucial administrative and operational tasks, including attendance monitoring, leave management, HR documentation, performance evaluations, and task coordination. These challenges primarily stem from the reliance on multiple, fragmented tools that lack proper integration. As a result, organizations face operational inefficiencies, delays in approval workflows, and complications in retrieving and sharing vital information. This disjointed approach increases the risk of human error, miscommunication, and data inconsistencies, ultimately leading to decreased productivity. Furthermore, the absence of a unified and centralized system disrupts seamless collaboration, creates unnecessary administrative burdens, and adversely affects employee engagement and satisfaction. Such inefficiencies hinder an organization's ability to operate effectively, meet strategic objectives, and maintain a motivated and high-performing workforce.

1.3 Objectives:

1. To provide platform for managing employee profiles, offering easy logins and personalized profile creation.

2. To streamline attendance system, leave application and easy to view holiday calendar.

3. To enhance networking with personalized visiting cards, which can be easily shared through QR codes for efficient exchange of contact details.

4. To enable performance tracking, allowing users to add documents and create To- Do list with comprehensive tools.

1.4 Scope:

1. This application is designed for individuals seeking job opportunities across various sectors and professions, offering a versatile tool for career advancement.

2. It is particularly beneficial for students preparing resumes for internships or part-time jobs, helping them gain a competitive edge in their professional journey.

3. Professionals looking to enhance their careers or transition to new roles can utilize its features to refine, improve, and customize their resumes for better job prospects.
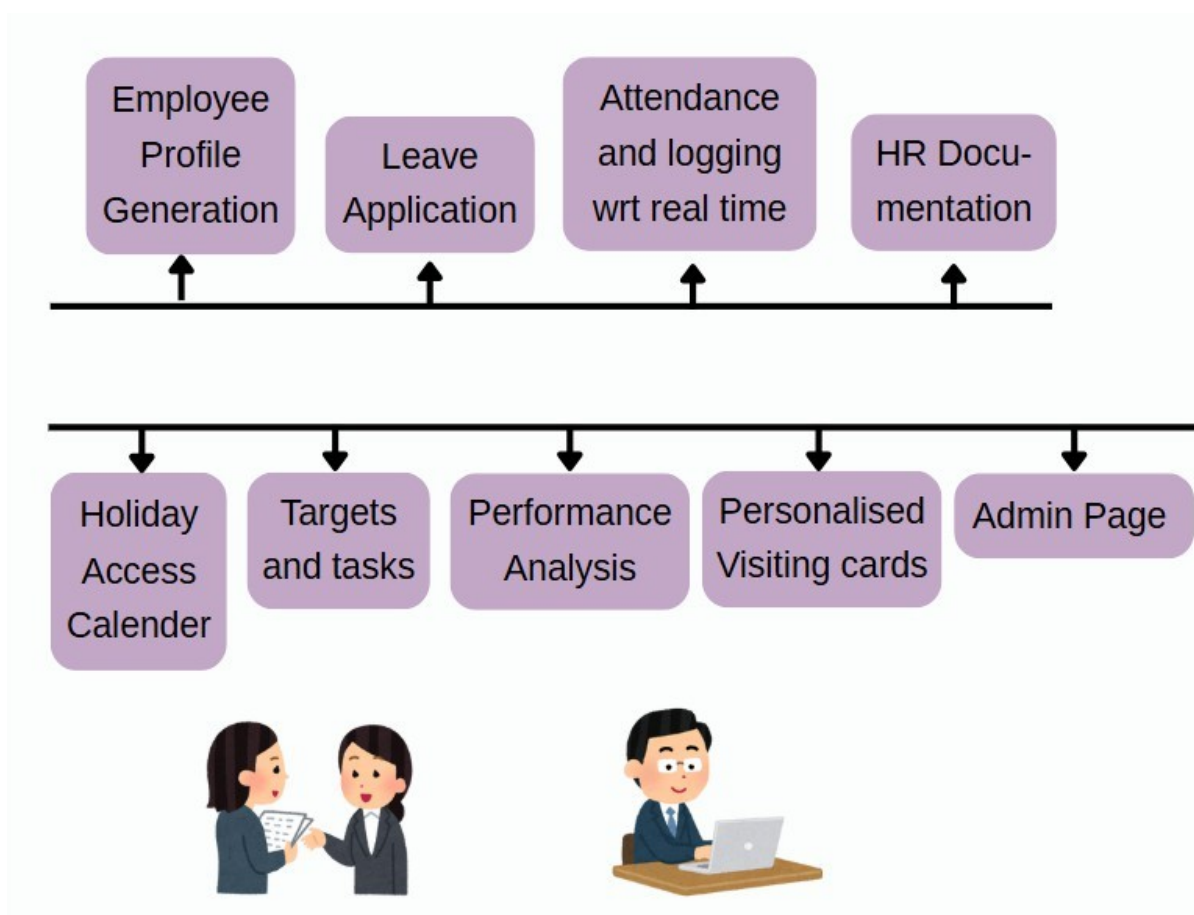

Fig 1.1 Block Diagram-

In the Fig 1.1 block diagram of an employee management system with core HR & task management features

Chapter 2

Proposed System

The proposed system, Ease Work, is a Python-based web application designed to streamline routine HR and administrative tasks through a centralized and user-friendly dashboard. It addresses the inefficiencies caused by scattered tools by integrating all essential features into a single platform, making daily operations more organized, reliable, and efficient.

Ease Work offers a range of modules to support both employees and administrators. These include user profile management for storing and updating employee information, leave application tracking with approval visibility, and attendance monitoring to reduce errors and ensure transparency. It also ensures secure handling of HR documents, allowing files to be uploaded, accessed, and managed in a structured manner.

In addition, the system provides a built-in to-do list for organizing daily tasks, a performance evaluation module for reviewing employee contributions, and a holiday calendar that outlines official breaks to help in better planning. The digital visiting card generator enables professionals to create and share contact details quickly using QR codes, promoting better networking.

The dashboard is designed to be intuitive and responsive, making it easy to use across devices and requiring minimal training. By combining these features into a single platform, Ease Work boosts overall productivity, minimizes manual effort, and strengthens communication between employees and HR departments. It also helps organizations maintain better records, ensure timely approvals, and promote a more transparent, organized work culture.

2.1 Features and Functionality:

1. User Profile: Allows employees to create and manage profiles with personal details, job roles, contact information, and profile images.

2. Leave Application: Employees can request, track, and manage leaves, while managers handle approvals efficiently.

3. Attendance System: Tracks employees' clock-in/out times and records attendance, marking them as present or late.

4. HR Documents: Securely stores and manages work-related documents, allowing employees to upload and download essential files.

5. To-Do List: Enables employees to organize, prioritize, and track tasks with deadlines for better productivity.

6. Performance: Provides performance analysis with reports and visualizations, including pie charts, to track progress.

7. Holiday Calendar: Displays a yearly calendar with company holidays, festivals, and special events for easy planning.

8. Visiting Card: Generates personalized digital visiting cards that can be downloaded and shared professionally.

Chapter 3

Project Outcomes

The implementation of the EaseWork system has significantly transformed the way organizations handle critical employee and administrative functions. By offering a centralized and streamlined platform, it has eliminated the inefficiencies associated with traditional manual processes. Employees now benefit from a secure login system that ensures data privacy and controlled access, while HR teams experience a simplified workflow for handling daily operations. This secure infrastructure not only reduces the risk of data breaches but also builds trust among users, making it a dependable solution for modern organizational needs.

One of the standout outcomes of the EaseWork system is its robust attendance tracking and leave management modules. These features have brought about a higher level of accuracy and accountability, allowing both employees and managers to monitor attendance records in real-time and manage leaves effortlessly. With automation minimizing human errors and providing transparent leave balances and approval processes, there has been a marked improvement in employee satisfaction and organizational efficiency. Managers are now able to make more informed decisions regarding resource allocation and planning, backed by reliable data.

Furthermore, the integration of task monitoring and performance analysis has elevated team productivity and individual accountability. By offering a clear view of ongoing tasks, deadlines, and performance metrics, EaseWork empowers both employees and supervisors to stay aligned with organizational goals. The ability to assess performance through objective data fosters a culture of continuous improvement and motivation. Overall, the system has not only optimized administrative operations but has also contributed to a more engaged and goal-oriented workforce, making it an indispensable asset for any forward-thinking organization.

1. Secure Employee Login & Profile Management – Employees can log in securely and manage their profiles with personal details and profile images.

2. Leave Management System – Employees can apply for leaves, track their history, and check real-time approval status.

3. Attendance Tracking – Records clock-in/out times, tracks work hours, and generates attendance reports.

4. HR Document Management – Securely uploads, stores, and allows access to policies, contracts, and other work-related documents.

5. Task Management – Helps employees organize, prioritize, and track tasks with deadlines.

6. Performance Analysis – Provides detailed performance tracking with visual reports and analytics.

7. Holiday Calendar – Displays company holidays, festival holidays, and personal leave balances for better planning.

8. Visiting Card Generator – Creates personalized digital visiting cards that can be downloaded and shared.

9. Admin Page – Enables administrators to manage employee details, oversee system configurations, and access additional control features seamless project management.

Chapter 4

Software Requirements

The development of Ease Work is backed by a strong combination of programming languages, libraries, and database technologies that ensure the system is both reliable and efficient. These components work in harmony to provide a responsive and intuitive user interface, enabling users to navigate and perform tasks with ease.

By leveraging the strengths of each tool, the system achieves a balance between functionality and user experience. The use of modern frameworks and libraries accelerates development while ensuring maintainability and scalability. Together, these technologies form the backbone of Ease Work, supporting its goal of simplifying HR and administrative processes within a single, integrated platform.

1. Front-End:

Python: A powerful, high-level programming language used to build the graphical interface, ensuring flexibility, efficiency, and ease of development.

2. Libraries Used:

CustomTkinter and Tkinter: A modern, customizable GUI framework that enhances the user interface with interactive elements.

Pillow: A library for image processing, enabling profile picture uploads and modifications within the application.

Matplotlib: Used for generating performance analytics and visual reports, including pie charts and graphical representations.

3. Back-End (MySQL):

MySQL: A widely used relational database management system that securely stores and manages employee data, attendance records, leave applications, and other essential information, ensuring efficient data retrieval and scalability.

Chapter 5

Project Design

Each module within the dashboard is designed with a consistent layout and logical flow, making navigation seamless for both employees and administrators. The interface includes clearly labeled sections such as user profiles, attendance, leave applications, task management, HR documents, performance tracking, and a holiday calendar. This structured approach allows users to perform actions efficiently while keeping the interface uncluttered.The use of visual indicators, dropdowns, and clickable cards contributes to a smooth interaction flow, reducing the time needed to complete common HR tasks. The design also supports responsive behavior, adapting well to different screen sizes and devices, which ensures accessibility and convenience for users on both desktop and mobile platforms.

Overall, the Ease Work dashboard is thoughtfully crafted to support productivity, reduce user errors, and create a unified experience that aligns with modern workplace needs.

Core Functionalities briefly:

- User Profile: Manage personal and professional details conveniently.

- Leave Application: Request and track leave approvals seamlessly.

- Attendance Tracking: Monitor clock-in/out times and attendance history.

- HR Documents: Securely upload, download, and manage work-related documents.

- Task Manager: Organize and prioritize tasks with deadlines.

- Performance Analysis: Visualize performance metrics through charts and reports.

- Holiday Calendar: View company holidays and plan accordingly.

- Visiting Card: Generate professional digital visiting cards with ease.

This cohesive design ensures ease of use, streamlining day-to-day operations for employees and HR professionals.

Workflow:

1. Welcome Page:

The application starts with a clean and intuitive welcome screen introducing the platform.
2. User Login & Authentication Users log in securely using their credentials. On successful login, a unique User ID is generated or fetched.
3. Profile Page

Users are directed to their profile page where they can manage personal and professional information.

4. Dashboard

The user dashboard provides access to all core features:

- Attendance System: Mark and view daily attendance.

- Leave Management: Apply for leaves and check approval status.

- Holiday Calendar: View official holidays and upcoming off days.

- To-Do List: Track tasks and manage daily work.

- Performance Analysis: Monitor progress through task stats and analytics.

- HR Documentation: Upload/view certificates and important documents.

- Digital Visiting Card: Create and share a personalized contact card.

5. Admin Page

Accessible only to authorized personnel, the admin panel allows:

- Employee management

- System configuration

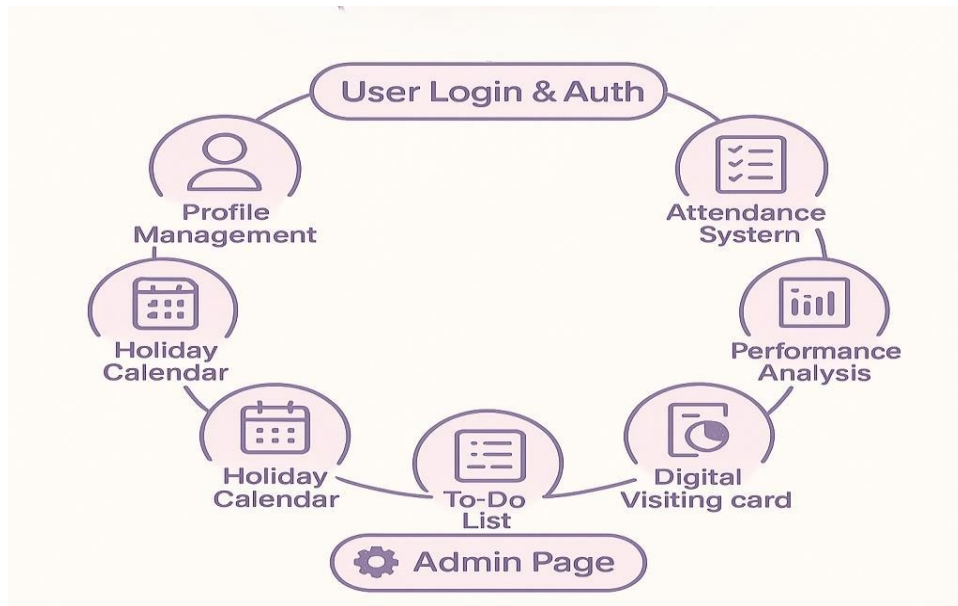- Leave approvals

- Report generation

Fig 5.1 Work Flow

In Fig 5.1 the workflow of the Ease Work application,starting with secure user login and authentication. Once logged in, users can access key features such as profile management, attendance tracking, performance analysis, and digital visiting card generation. The system also includes a to-do list for task organization, a holiday calendar for leave planning, and an admin page for overall system management. This streamlined flow ensures efficient handling of HR and administrative tasks through an integrated dashboard.

Chapter 6

Project Scheduling

In addition to managing timelines, the Gantt chart plays a crucial role in improving coordination and accountability among team members. Tasks are clearly assigned to individuals or teams, making roles and responsibilities transparent. This clarity helps avoid confusion and promotes smoother collaboration by showing who is responsible for what at any given time. Furthermore, the Gantt chart helps identify and manage task dependencies, ensuring that the sequence of work follows a logical order. This helps prevent scheduling conflicts and project delays by ensuring that prerequisite tasks are completed before dependent tasks begin.

The Gantt chart also supports efficient resource allocation and serves as a tool for monitoring team performance. By displaying which resources are engaged in specific tasks, project managers can distribute workloads more effectively and avoid overburdening any single person or team. Additionally, the chart allows for ongoing performance tracking, providing a visual record of completed and pending tasks. This makes it easier to assess progress, evaluate team productivity, and make informed decisions or adjustments when necessary. Overall, the Gantt chart is an essential instrument for maintaining structure, efficiency, and transparency throughout the Ease Work project lifecycle.

The Gantt chart also serves as a clear communication tool for external stakeholders. It provides a high-level overview of progress and timelines, making reporting easier and more transparent. This builds trust and ensures everyone stays informed and aligned.

GANTT CHART TEMPLATE

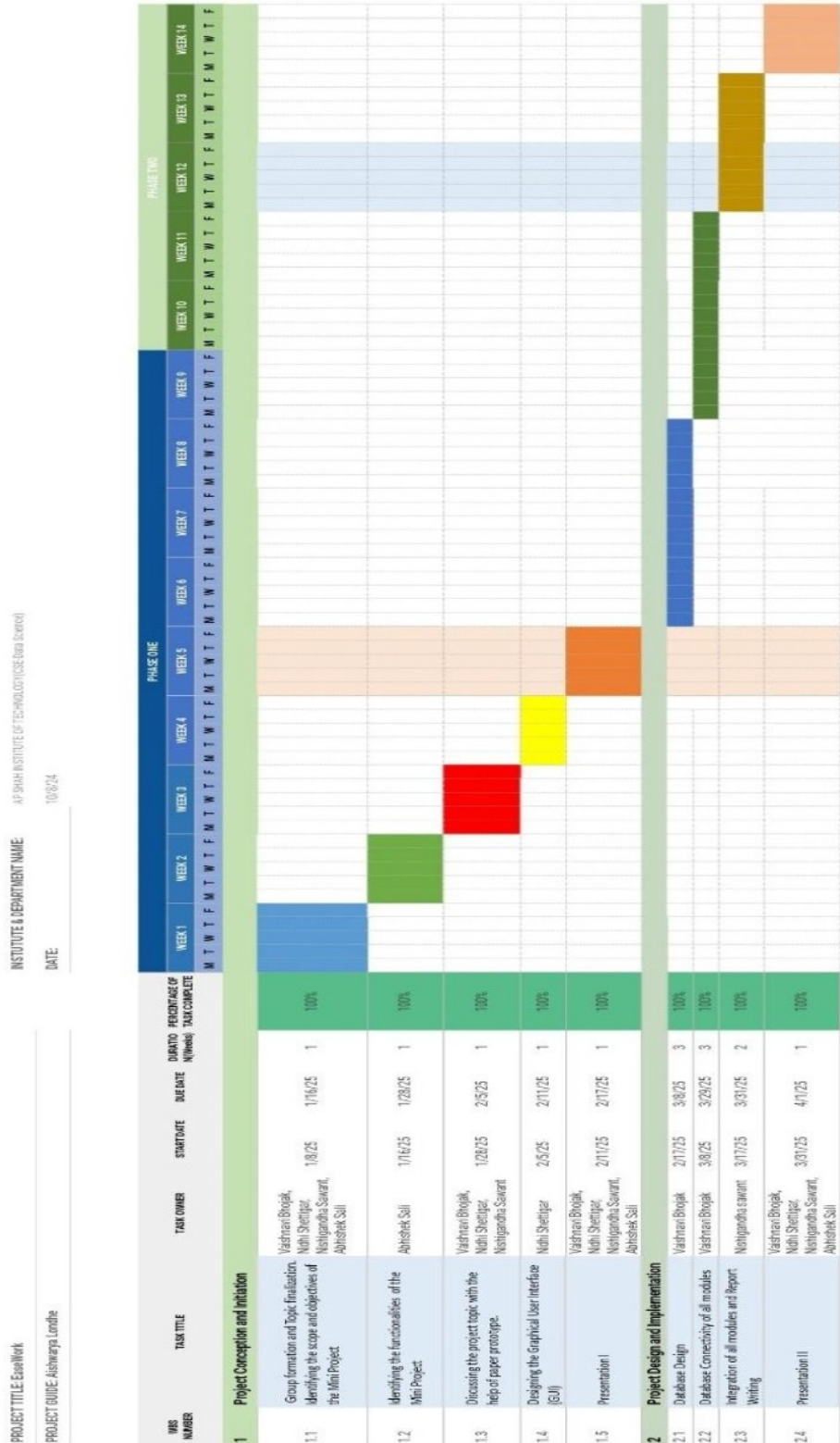Smartsheet Tip ➜ A Gantt chart's visual timeline allows you to see details about each task as well as project dependencies.

PROJECT TITLE: EaseWork

PROJECT GUIDE: Aishwarya Londhe

INSTITUTE & DEPARTMENT NAME: AP SHAH INSTITUTE OF TECHNOLOGY(CSE Data Science)

DATE: 10/8/24

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION (Weeks)	PERCENTAGE OF TASK COMPLETE
1	**Project Conception and Initiation**					
1.1	Group formation and Topic Finalization, identifying the scope and objectives of the Mini Project	Vaibhnavi Bhojak, Nidhi Shettigar, Nishigandha Sawant, Abhishek Sail	1/8/25	1/16/25	1	100%
1.2	Identifying the functionalities of the Mini Project	Abhishek Sail	1/16/25	1/23/25	1	100%
1.3	Discussing the project topic with the help of paper prototype.	Vaibhnavi Bhojak, Nidhi Shettigar, Nishigandha Sawant	1/26/25	2/5/25	1	100%
1.4	Designing the Graphical User Interface (GUI)	Nidhi Shettigar	2/5/25	2/11/25	1	100%
1.5	Presentation I	Vaibhnavi Bhojak, Nidhi Shettigar, Nishigandha Sawant, Abhishek Sail	2/11/25	2/17/25	1	100%
2	**Project Design and Implementation**					
2.1	Database Design	Vaibhnavi Bhojak	2/17/25	3/8/25	3	100%
2.2	Database Connectivity of all modules	Vaibhnavi Bhojak	3/8/25	3/29/25	3	100%
2.3	Integration of all modules and Report Writing	Nishigandha sawant	3/17/25	3/31/25	2	100%
2.4	Presentation II	Vaibhnavi Bhojak, Nidhi Shettigar, Nishigandha Sawant, Abhishek Sail	3/31/25	4/1/25	1	100%

Fig 6.1 Gantt Chart

1

Chapter 7

Results

The implementation of Ease Work has significantly improved organizational efficiency by bringing essential HR and administrative functions together in one streamlined platform. It enhances automation, accessibility, and communication across various departments. By replacing scattered tools with a unified system, Ease Work reduces redundancy and ensures that employees and administrators can manage tasks more effectively. It also contributes to improved data accuracy and security through centralized storage and role-based access. The platform's intuitive interface allows users to navigate effortlessly between modules, saving time and reducing the learning curve. As a result, organizations can experience faster decision-making, better collaboration, and a noticeable increase in overall productivity. The key benefits are as follows:

1. Employee management with secure login access, personalized profiles, and centralized data storage for easy access and smooth handling by both employees and administrators

2. Attendance and leave tracking through an automated system that removes manual errors, allows leave applications, and includes a holiday calendar for better planning

3. Networking and contact management using QR-based digital visiting cards, allowing quick and seamless sharing of contact details

4. Task and performance monitoring supported by task tracking, document uploads, and a to-do list to help employees stay organized and meet deadlines

5. Centralized administration through a dedicated dashboard that gives a complete view of employee data, attendance, leave, and performance, helping optimize decision-making and operations

Overall, ease work reduces manual effort, increases productivity, and supports efficient and organized workplace management for modern businesses.
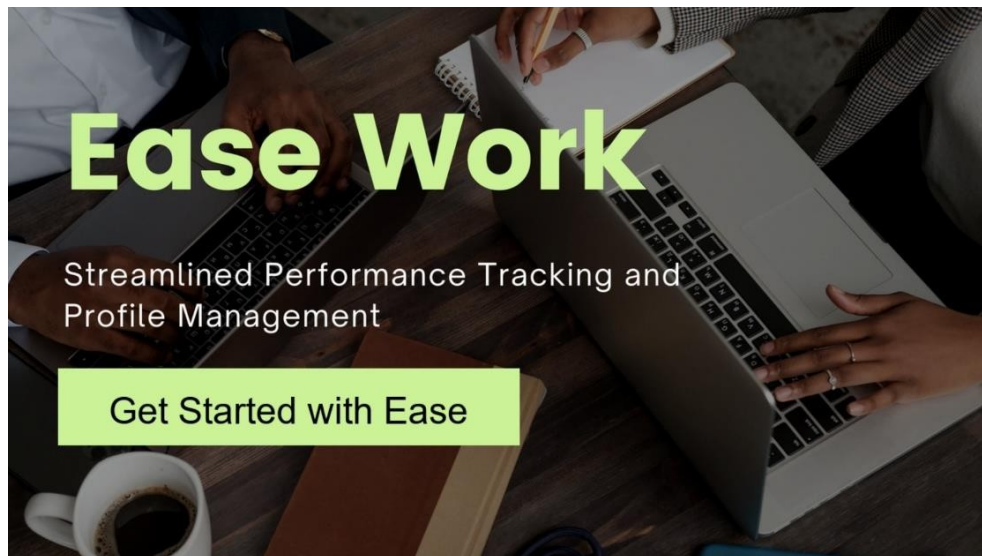
Fig 7.1-Welcome page of EaseWork

Fig 7.1 Shows the welcome screen of the Ease Work application, featuring a "Get Started with Ease" button that directs users to the login/sign-up page.
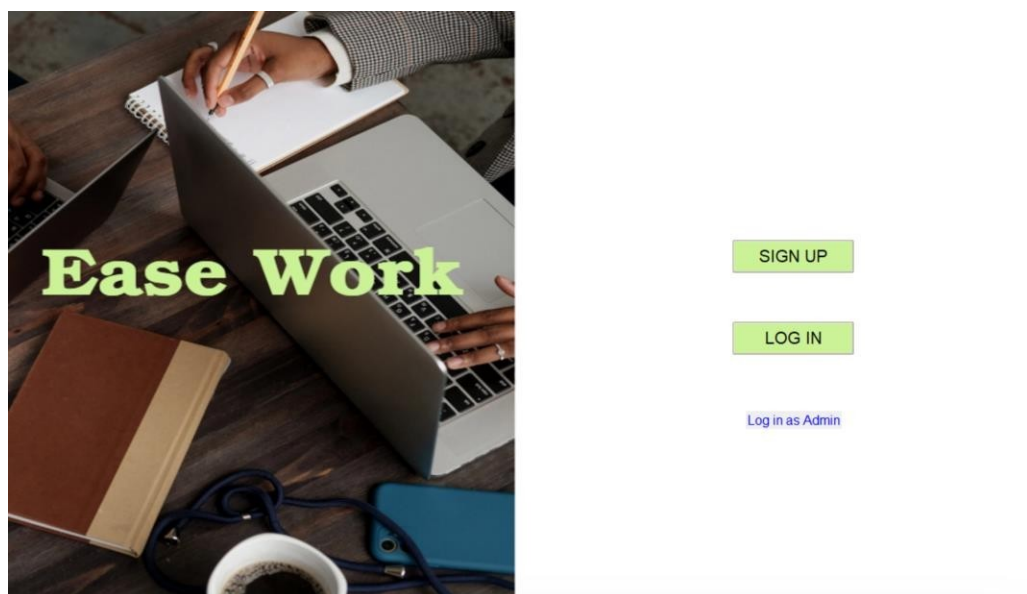
Fig 7.2- Signup/login page of Ease work

Fig 7.2 it displays the signup/login page where new users can signup and already signed up users can login. On same page admin can login as well

Fig 7.3 Signup page for new users

Fog 7.3 This page allows users to create an account by entering their name, email, and password. Upon signing up, a unique employee ID is generated for login.

Fig 7.4 Login Page

In Fig 7.4 On the login page, users must enter their unique employee ID—generated after signing up —along with their password to access the application.
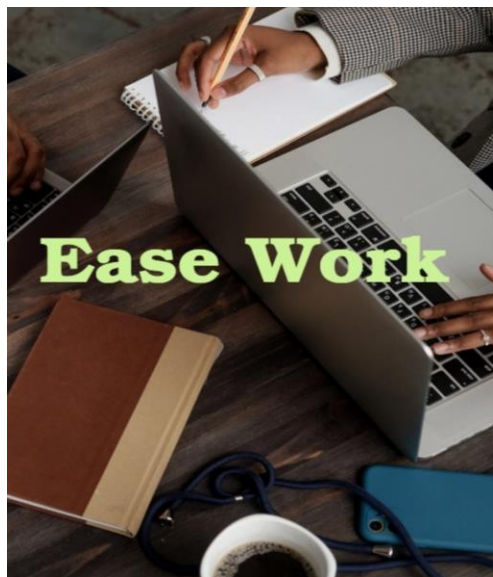
Fig 7.5 – Admin login page

In Fig 7.5 The admin logs in using a set username and predefined password to access the system.
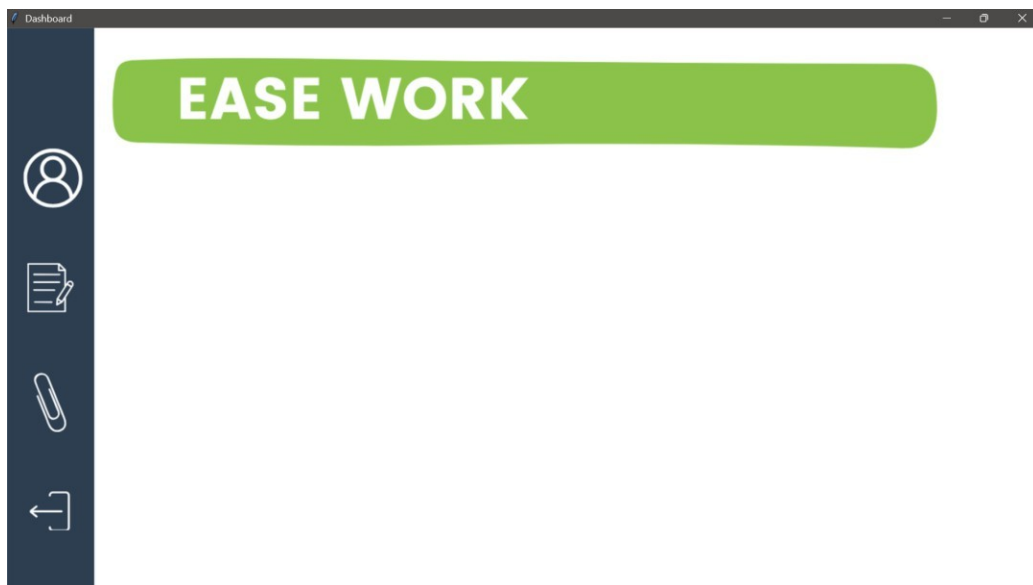
Fig 7.6 – Main dashboard page

Fig 7.6 features Dashboard page which provides easy navigation through four sidebar buttons, allowing access to the user profile, employee services, additional tools, and logout options. It serves as the main control panel for the application.
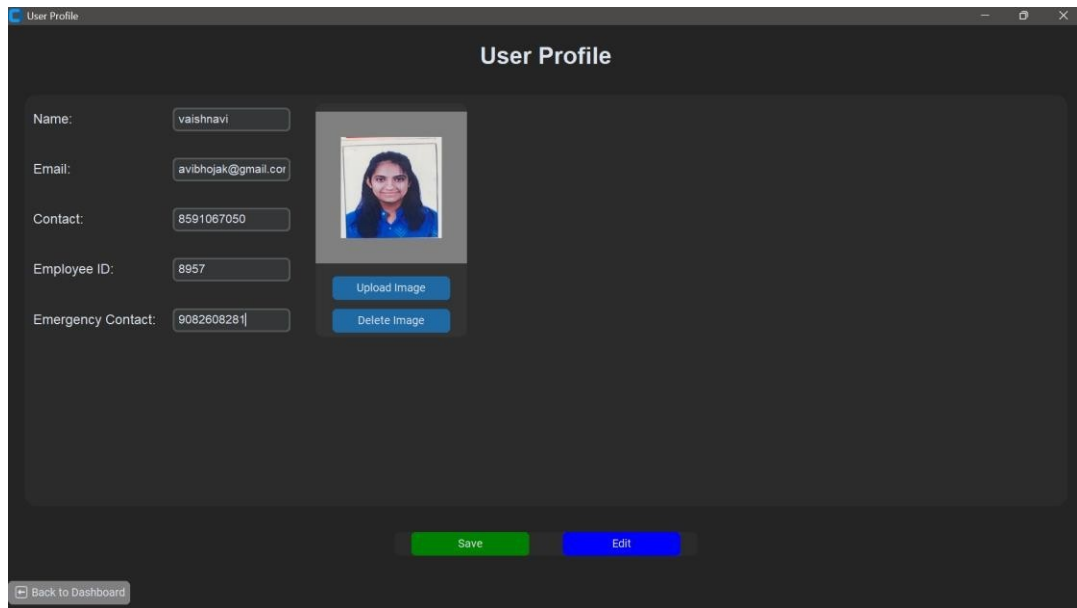
Fig 7.7 – User profile page

In Fig 7.7 the user profile page allows users to view and edit their profile details, upload or delete a profile photo, and save changes made to their information.
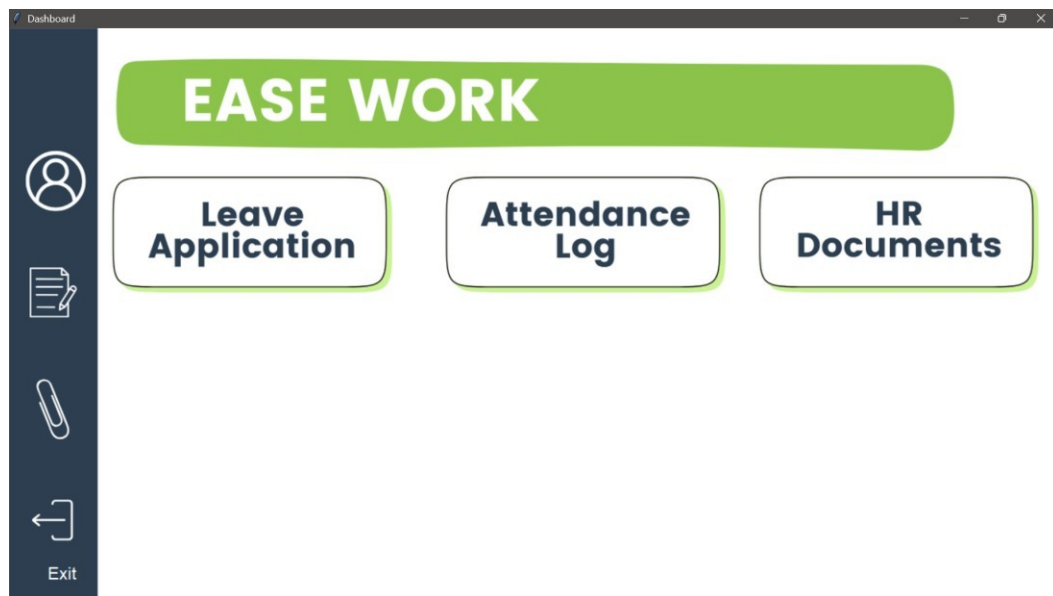
Fig 7.8 – Employee Dashboard

The Fig 7.8 provides access to key employee features including Leave Application, Attendance Log, and HR Documents for efficient workforce management.
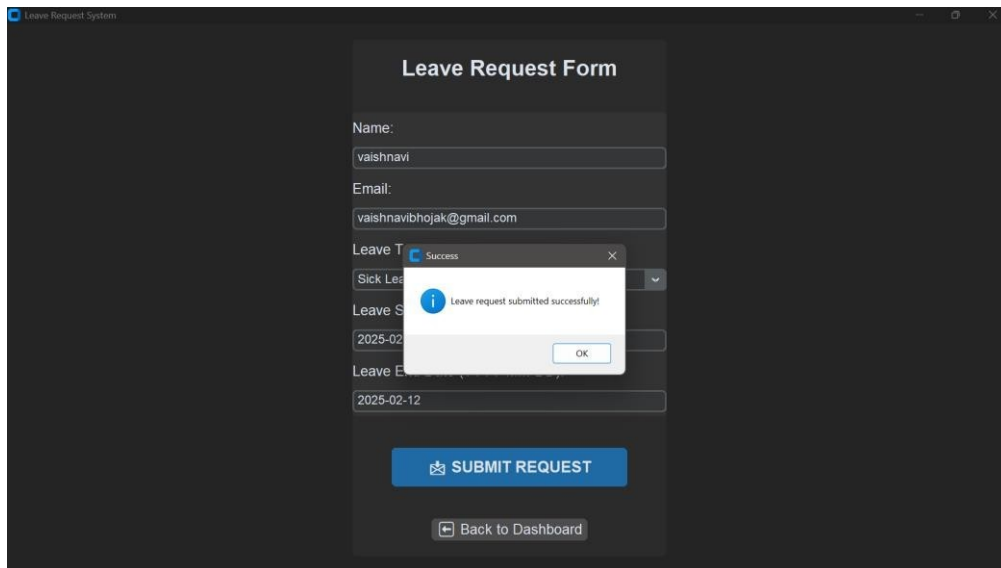
Fig 7.9 -Leave Application page

Fig 7.9 allows users to apply for leave by filling in their details, selecting the leave type, and specifying the start and end dates. A confirmation popup is shown upon successful submission.
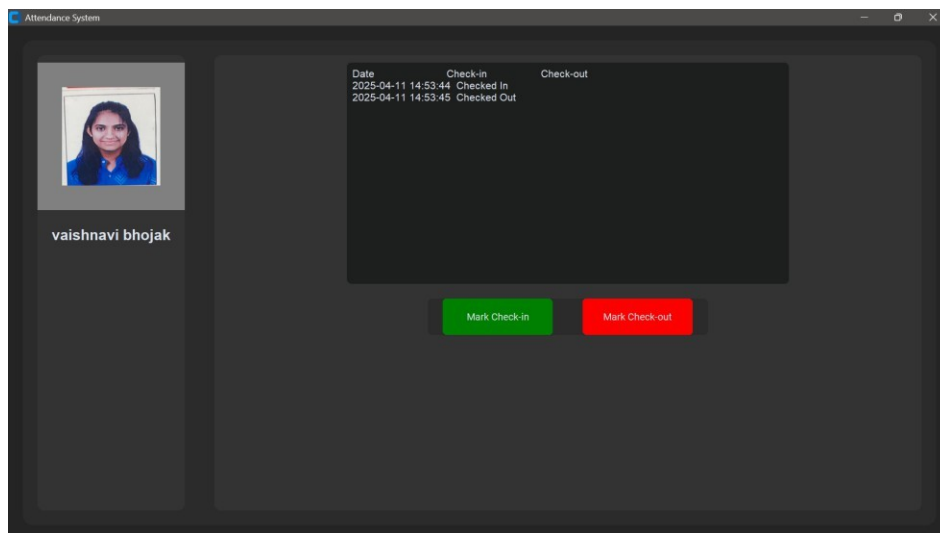
Fig 7.10 – Attendance page

Fig 7.10 enables users to manage daily attendance by marking check-in and check-out times. It displays a log of attendance records along with the user's name and photo for easy identification.
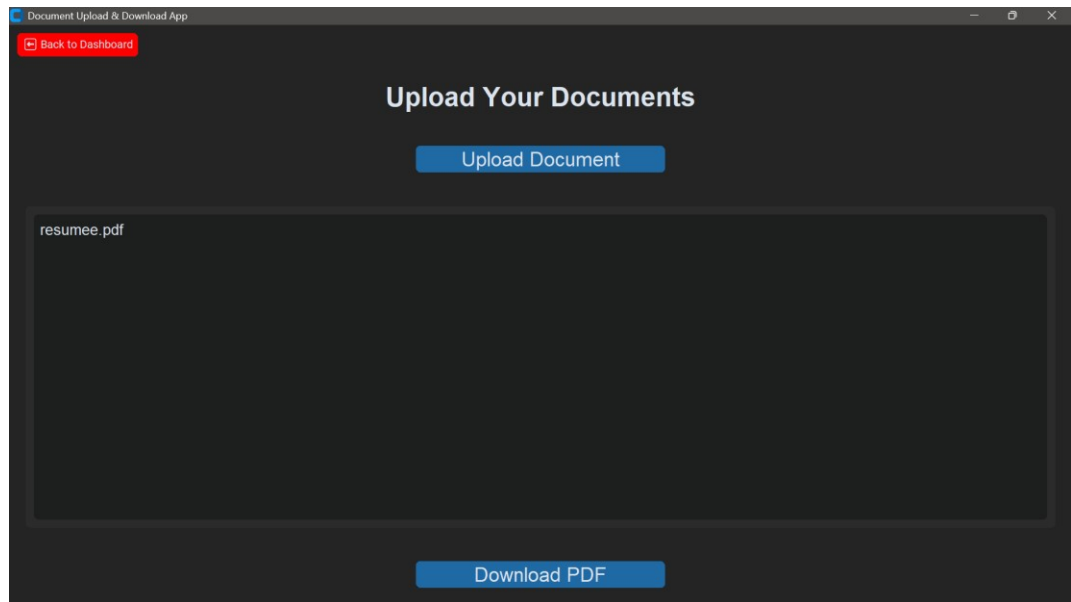
Fig 7.11 – HR document page

Fig 7.11 allows users to upload and manage their documents. Uploaded files are listed for review, and users can download them directly using the "Download PDF" button. A "Back to Dashboard" button offers easy navigation.
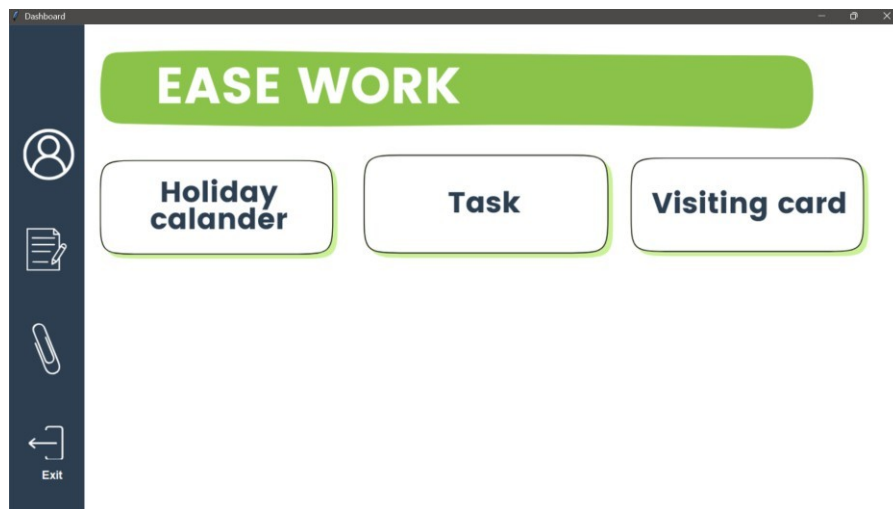
Fig 7.12- Employee dashboard page

Fig 7.12 provides access to key employee features including Holiday Calendar, Task, and Visiting Card for efficient workforce management.
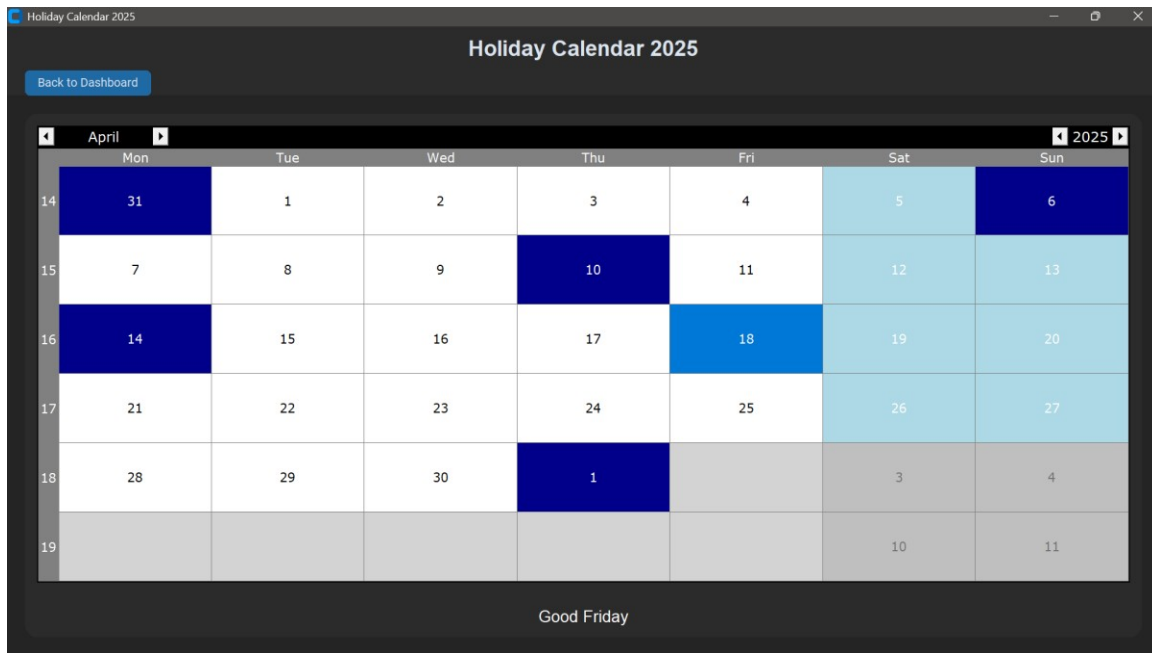
Fig7.13- Holiday calendar page

Fig 7.13 displays the Holiday Calendar offering essential holiday information, for efficient planning.
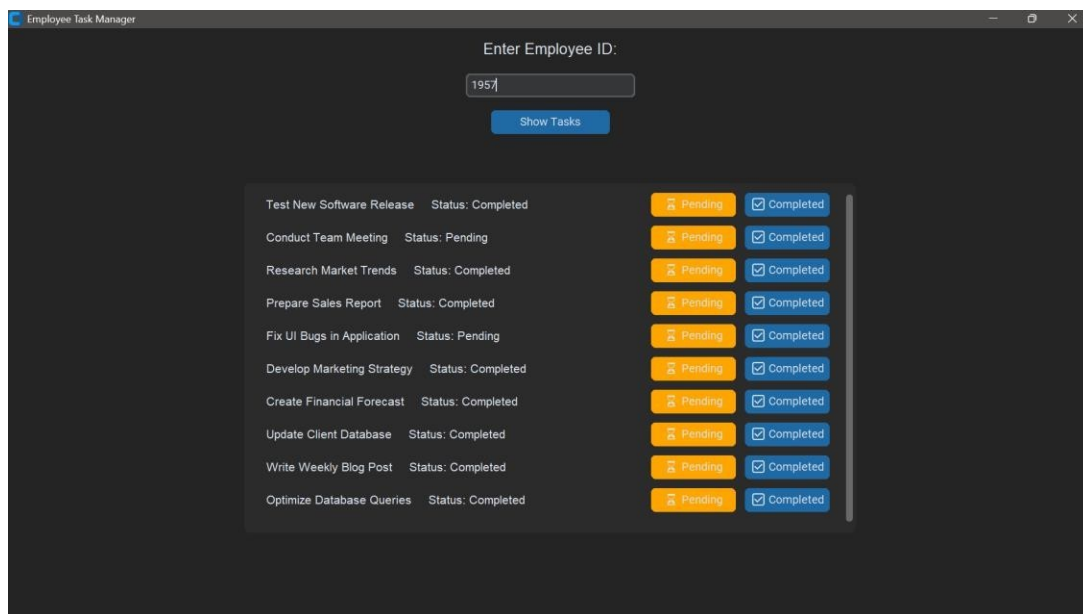
Fig 7.14 Task page

Fig 7.14   is an Employee Task Manager where users can view and update tasks assigned to an employee. Enter an Employee ID to see tasks and mark them as "Pending" or "Completed.".
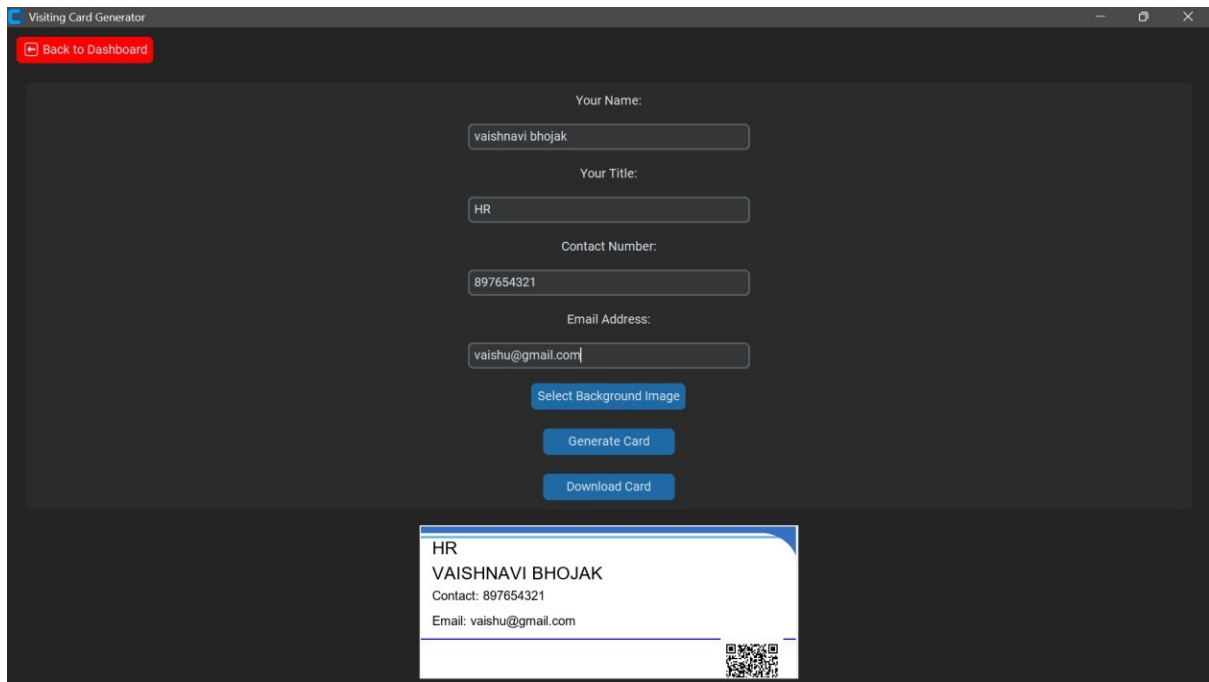
Fig 7.15- Visiting card page

Fig 7.15 is a Visiting Card Generator where users can input personal details, choose a custom background, generate a card preview, and download the final card.
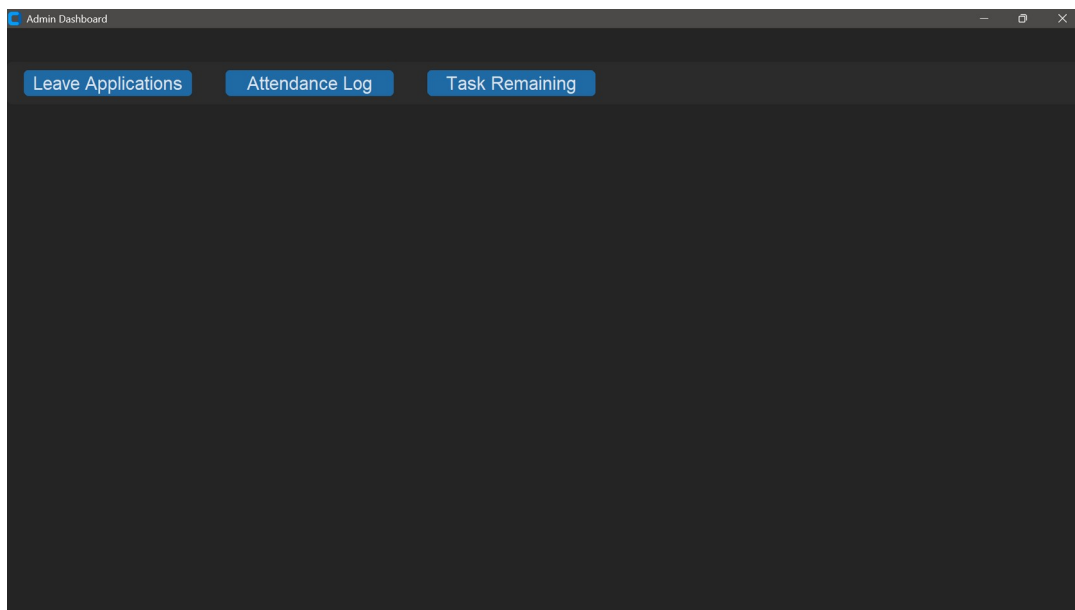
Fig7.16- Admin dashboard page

Fig 7.16 Admin Dashboard page that provides access to employee records, including leave applications, attendance logs, and remaining task details for effective workforce management.
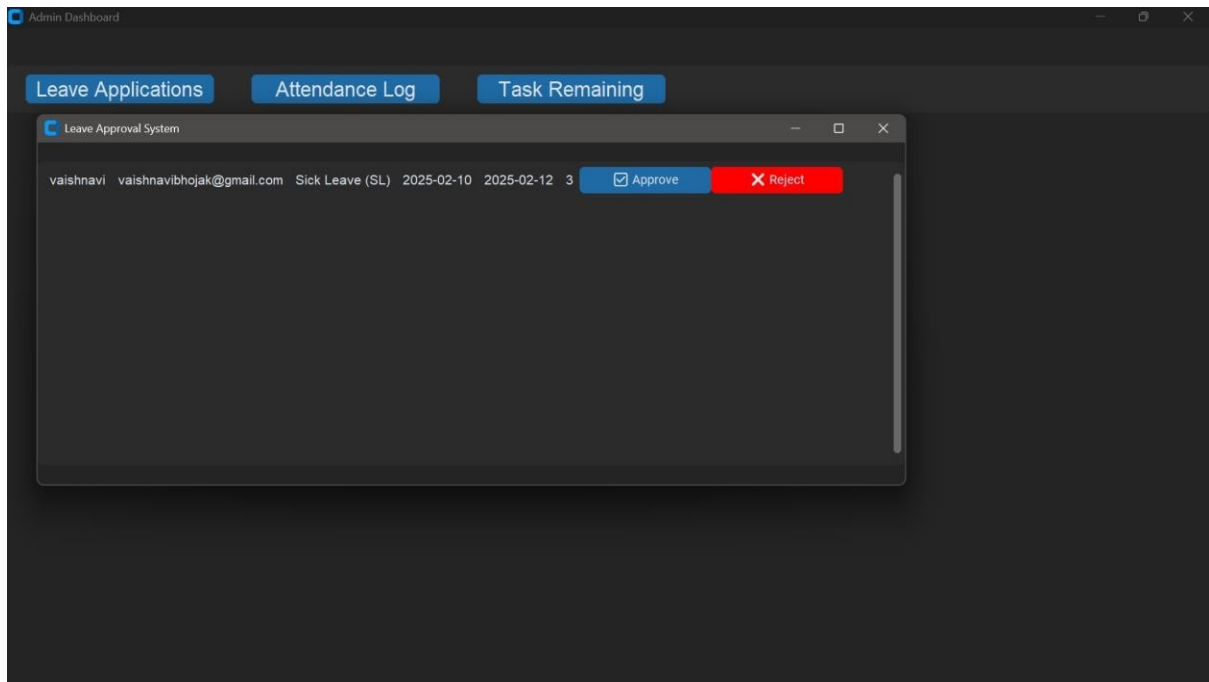
Fig 7.17- Admin leave application page

Fig 7.17 is the Leave Approval page for admins, where they can review and approve or reject leave requests submitted by employees through the leave application system.

Fig 7.18- Admin attendance page

Fig 7.18 is the Admin Attendance page, where the admin can view employee check-in and check- out records, along with names, emails, and employee IDs for attendance monitoring.

Fig 7.19 Admin Task Management Page

Fig 7.19 allows the admin to enter an employee ID and view a Gantt chart showing task progress—green for completed and orange for pending tasks.

Chapter 8

Conclusion

The implementation of the employee management system has successfully streamlined various organizational processes, including employee profile management, attendance tracking, leave applications, networking, and performance monitoring.

By integrating automation and digital tools, the system enhances operational efficiency, reduces manual workload and improves communication across all levels of the organization. The centralized admin dashboard allows for efficient management of employee records, leave requests, and performance tracking, ensuring better decision-making and improved productivity. Additionally, features like digital visiting cards with QR codes facilitate seamless networking, fostering professional connections within and beyond the organization.

Overall, the system provides a comprehensive, user-friendly, and efficient solution that optimizes workflow, enhances employee engagement, and contributes to a well-structured and productive work environment. Its ability to automate routine tasks and centralize management functions makes it a valuable tool for modern businesses seeking efficiency and digital transformation.

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