

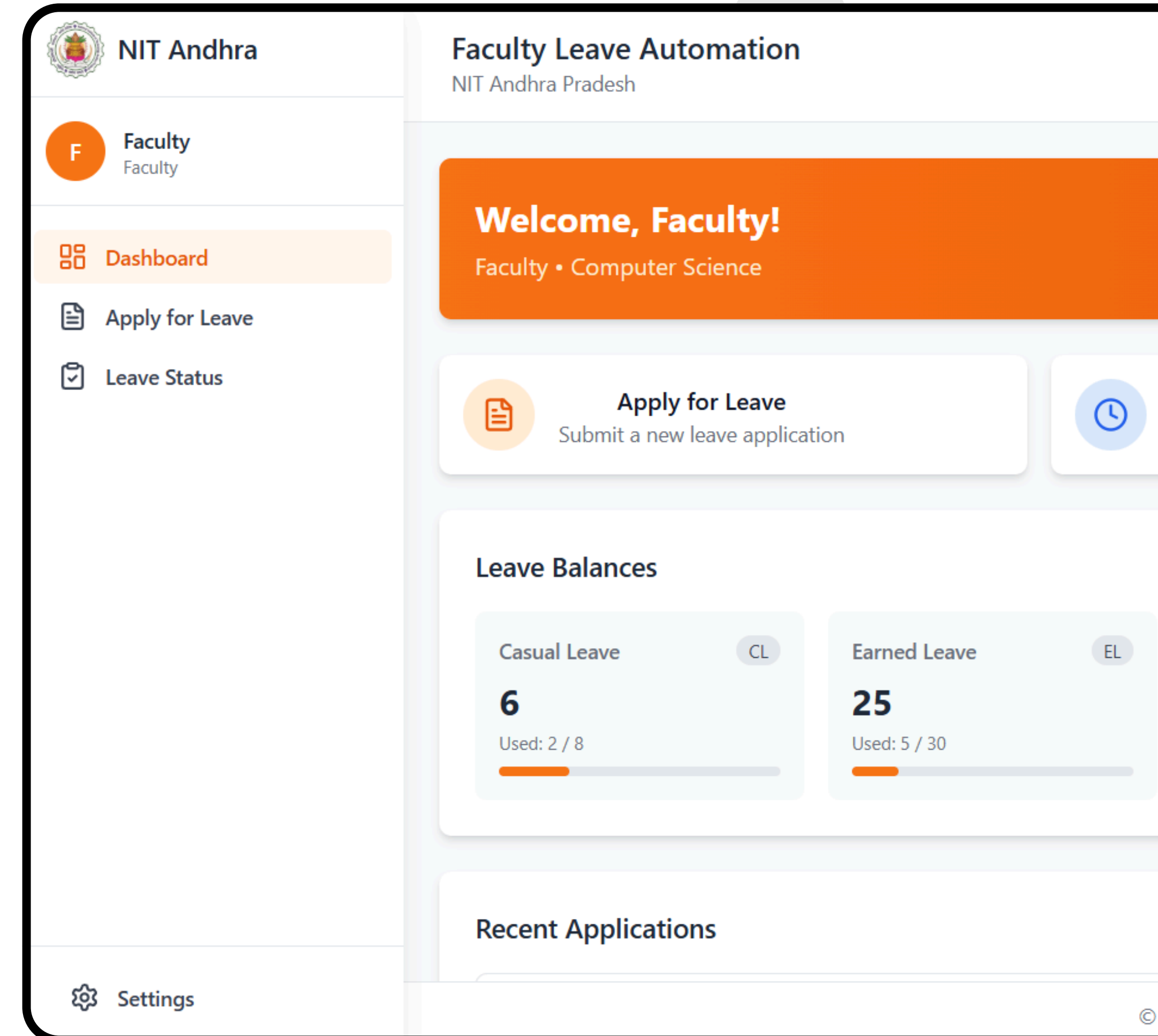
EPICS Project

Faculty Leave Automation

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Introduction

The "Faculty Leave Automation" is a digital solution designed to streamline the leave application and approval process at NIT Andhra Pradesh. Faculty, deans, and heads often face delays and inefficiencies due to manual leave management workflows. This system automates the process, ensuring transparency, accountability, and real-time tracking for both regular and adhoc employees. By aligning with NIT's institutional leave policies, the system caters to various leave types and approval hierarchies, simplifying the process while reducing administrative burden.

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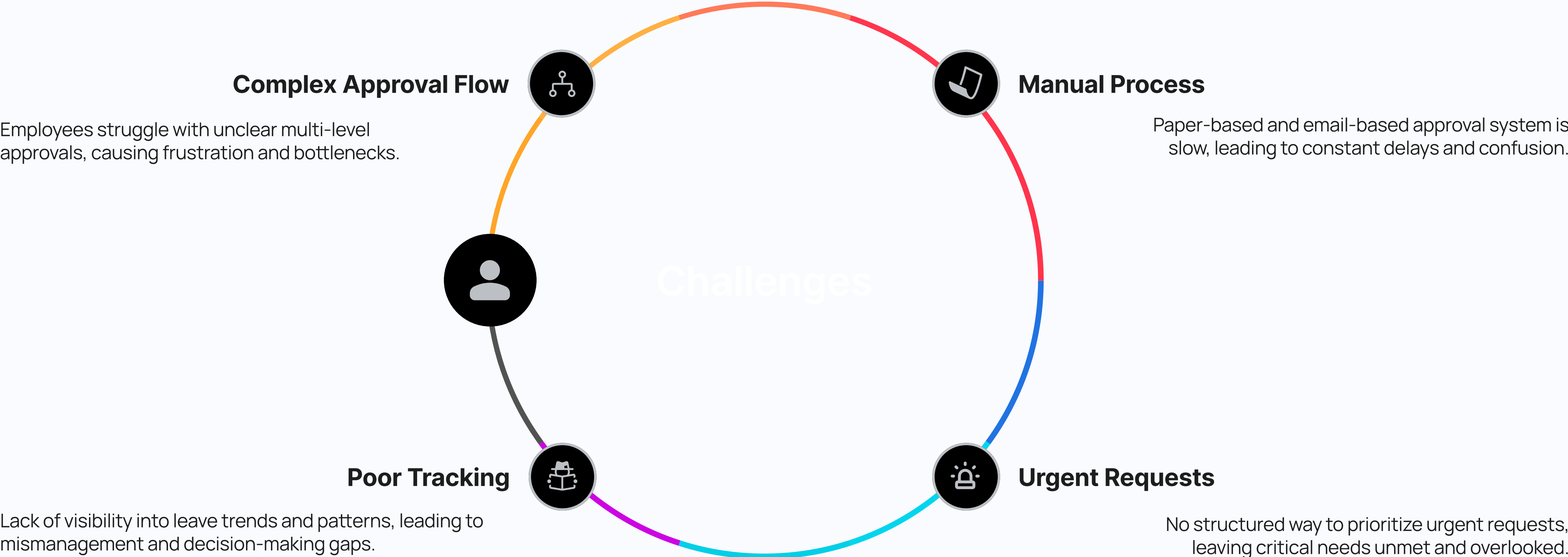
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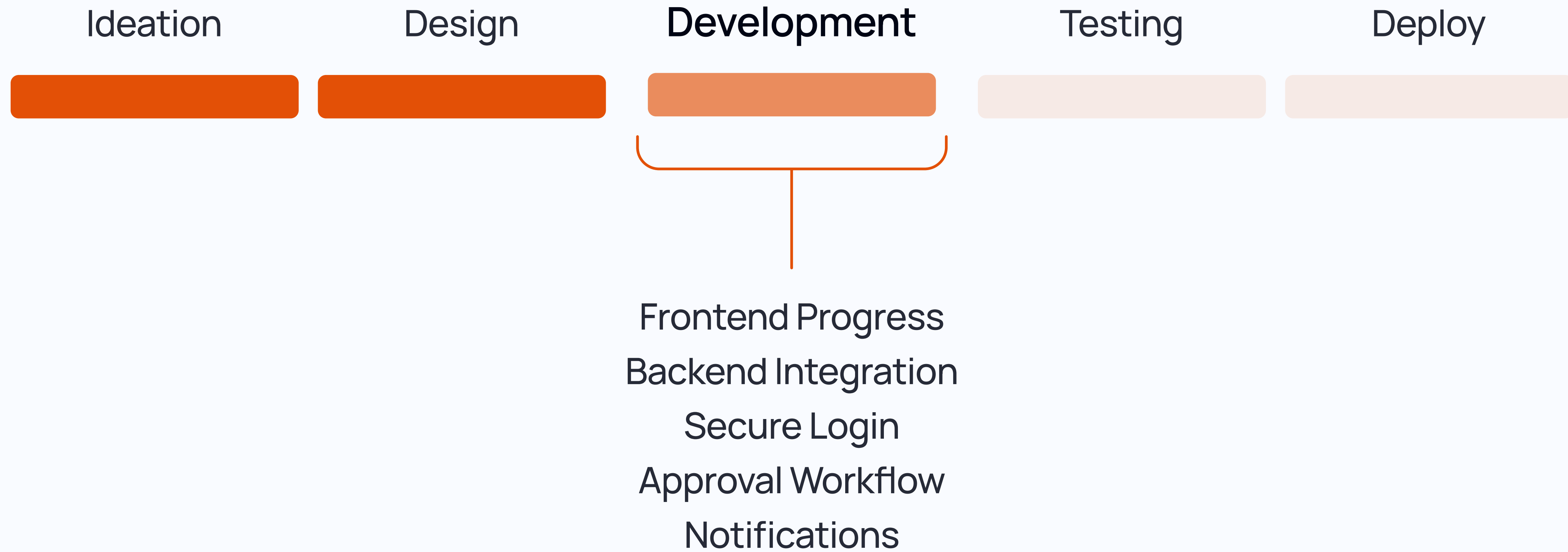
Problem Statement



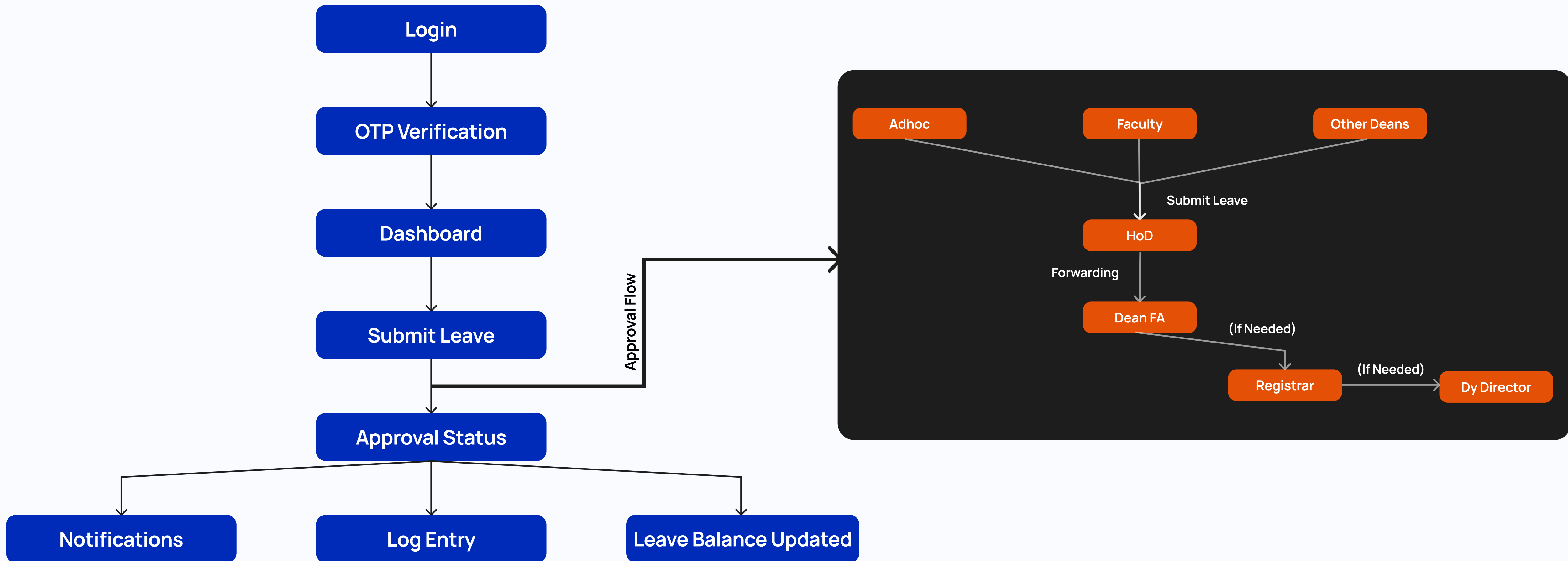
Solution

- Develop a centralized digital platform to manage leave requests and approvals.
- Implement an automated multi-level approval workflow based on employee role and leave type.
- Provide real-time tracking and status updates to applicants and approvers.
- Enable priority handling for urgent requests with faster resolution.
- Ensure secure user authentication and authorization.
- Offer a responsive user interface with easy access and navigation.

Stages



System Workflow



Tech Stack

Frontend Technologies

- React.js – Builds a dynamic and responsive user interface.
- Vite.js – Provides fast builds and hot module replacement.
- TypeScript – Ensures type safety and reduces runtime errors.

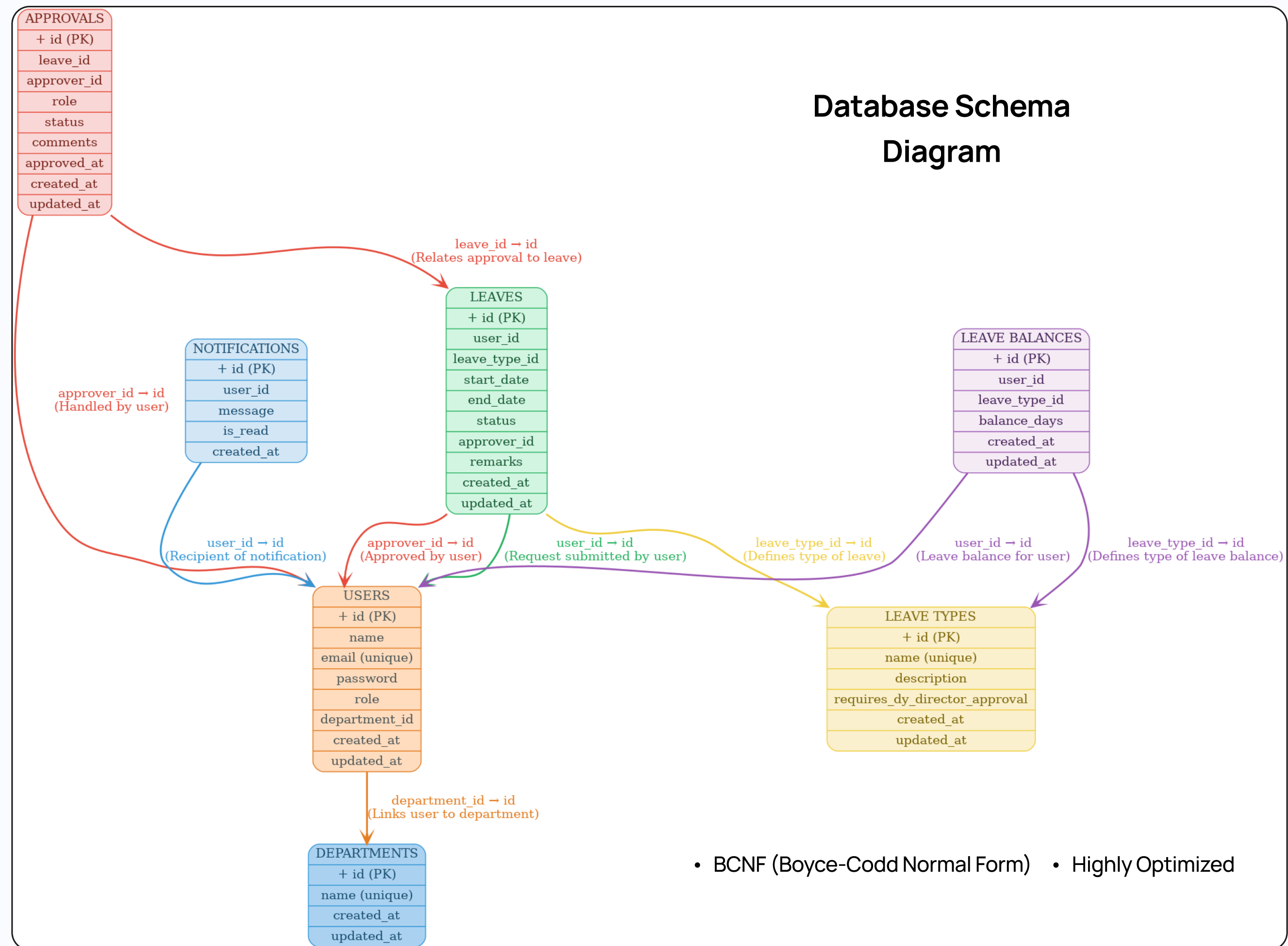
Backend Technologies

- Django – Manages backend logic, routing, and data handling.
- Django REST Framework (DRF) – Enables structured communication between frontend and backend.
- PostgreSQL – Handles complex data storage and querying.

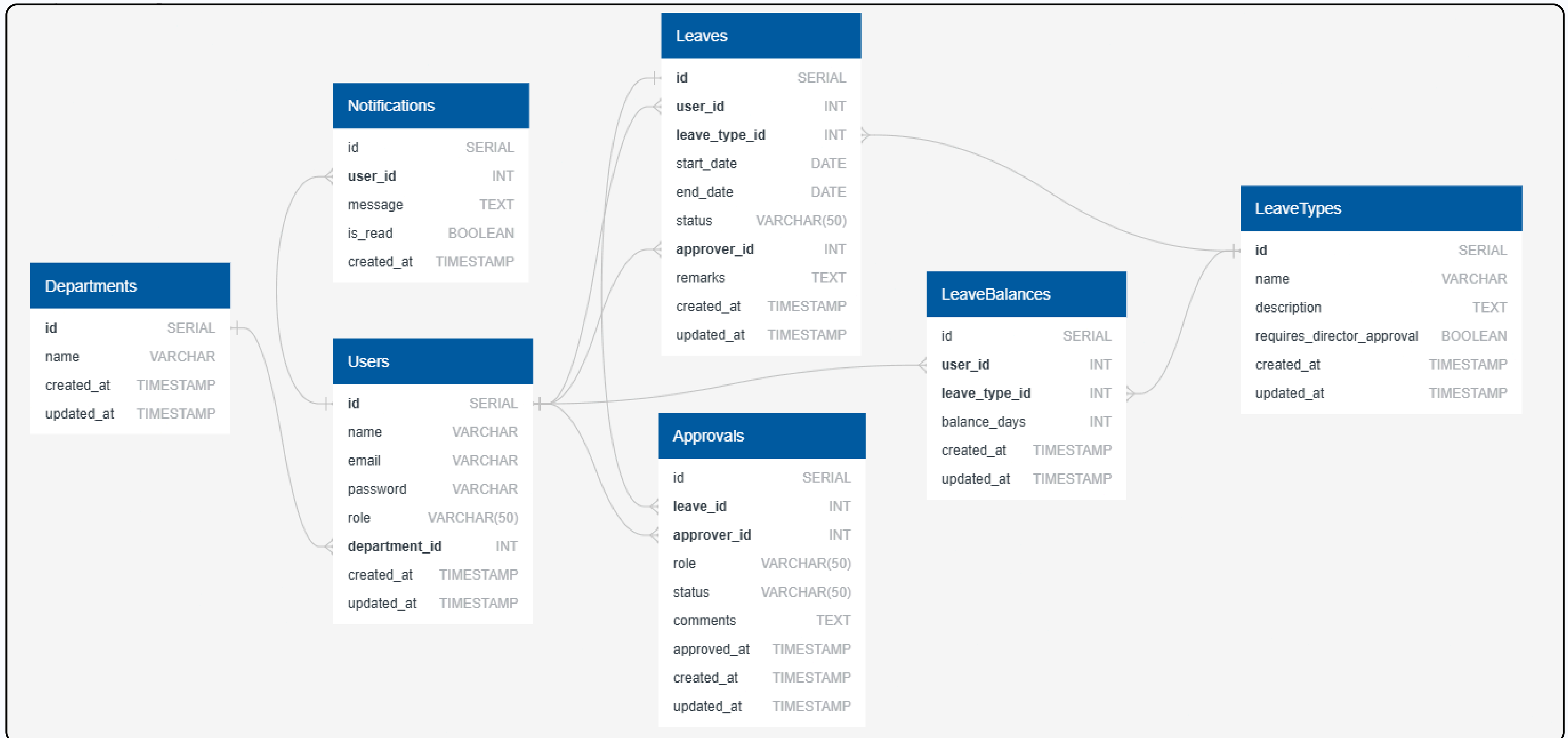
Infrastructure

- Fly.io – Simple and scalable platform for deployment.
- Django Allauth – Handles secure user authentication and social logins.

Database Schema Diagram



ERD Diagram



Features

Role-Based Access

Approval Hierarchy

Secure Login

Priority Handling

Real-Time Notifications

Approval Logs

Interactive Dashboard

Customized Leave Forms

Administrative Reports

Audit Trail

Conclusion

- The Faculty Leave Automation streamlines the entire leave management process, reducing delays and improving efficiency.
- The system ensures real-time tracking, structured approvals, and transparency for both applicants and approvers.
- The integration of role-based access and priority handling enhances decision-making and simplifies complex approval flows.
- By automating the workflow, the system reduces administrative workload and provides valuable data insights for better policy management.
- The project is designed to be scalable and adaptable to future requirements.

Thank You