Leave Management System

> *Built by **Pabbu Hemalatha** for Flipkart Task-1*
> *Last Updated: **24 July 2025***

A comprehensive web-based Leave Management System built with Flask, SQLAlchemy, and modern HTML/CSS.

Overview

- The Employee Leave Management System (ELMS) is a comprehensive web application designed to streamline and automate the process of managing employee leave requests. It provides features for employees to request leave, managers to approve/reject requests, and administrators to manage the system and generate reports.

Features

- **User Authentication**: Secure login for employees, managers, and administrators
- **User Roles:** Admin, Manager, and Employee with different permissions
- **Leave Request Workflow:** Submit, approve, reject, and cancel leave requests
- **Dashboard:** Overview of leave statistics and recent requests
- **Reporting:** Generate CSV and PDF reports
- **User Management:** Admin can create and manage users
- **Profile Management:** Users can update their profiles and change passwords
- **Responsive Design:** Works on desktop and mobile devices

Technology Stack

- **Frontend**: HTML5, CSS3, JavaScript, Bootstrap 5
- **Backend**: Python, Flask
- **Database**: SQLite (with SQLAlchemy ORM)
- **Authentication**: Flask-Login
- **Reporting:** CSV, PDF generation

Installation

1. Clone the repository:

```
git clone https://github.com/pailajeevan/leave-management-system.git
cd leave-management-system
```

2. Create and activate a virtual environment:

```
python -m venv venv
source venv/bin/activate  # On Windows use `venv\Scripts\activate`
```

3. Install dependencies:

```
pip install -r requirements.txt
```

4. Initialize the database:

```
   python app.py
```

5. Run the application:

```
python app.py
```

6. Access the application at : `http://localhost:127.0.0.1:5000`

Default Users

The system creates default users when first initialized:

- Admin:

```
Username: admin

Password: admin123
```

- Manager:

```
Username: manager
Password: man123
```

- Employee:

```
Username: employee
Password: emp123
```

Project Structure

```
leave-management-system/
├── app.py                # Main application file
├── templates/            # HTML templates
│   ├── _flash_messages.html
│   ├── _leave_status_badge.html
│   ├── _pagination.html
│   ├── 404.html
│   ├── 500.html
│   ├── base.html
│   ├── change_password.html
│   ├── dashboard.html
│   ├── leave_requests.html
│   ├── login.html
│   ├── new_leave_request.html
```

```
│   ├── new_user.html
│   ├── profile.html
│   ├── reports.html
│   ├── users.html
│   └── view_leave_request.html
├── README.md              # This file
└── requirements.txt       # Python dependencies
```

Individual Features

Employee Features

- View leave balances
- Submit new leave requests
- Track request status
- View request history

Manager Features

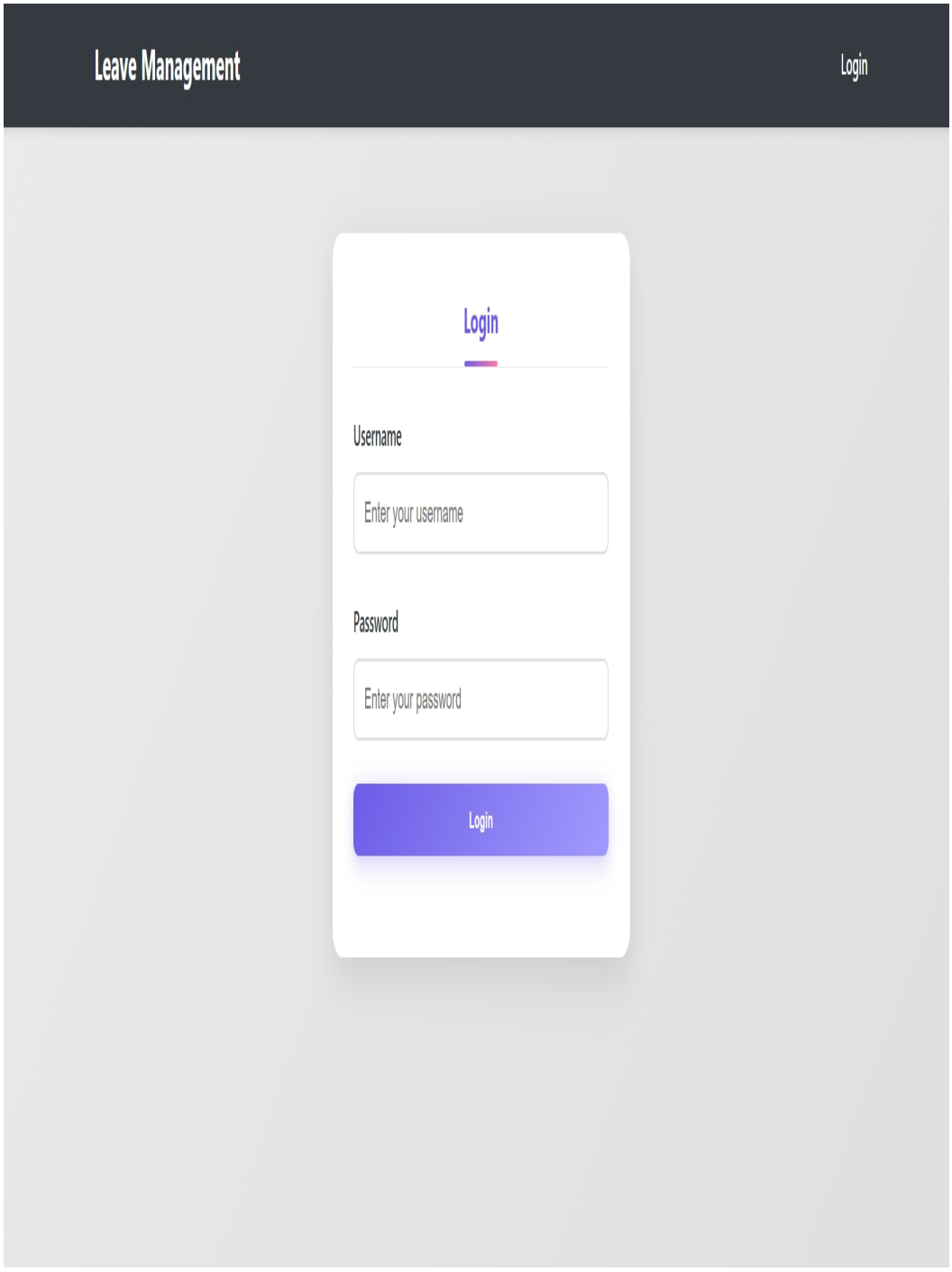
- Approve/reject leave requests
- View team leave calendar
- Monitor pending approvals

Admin Features

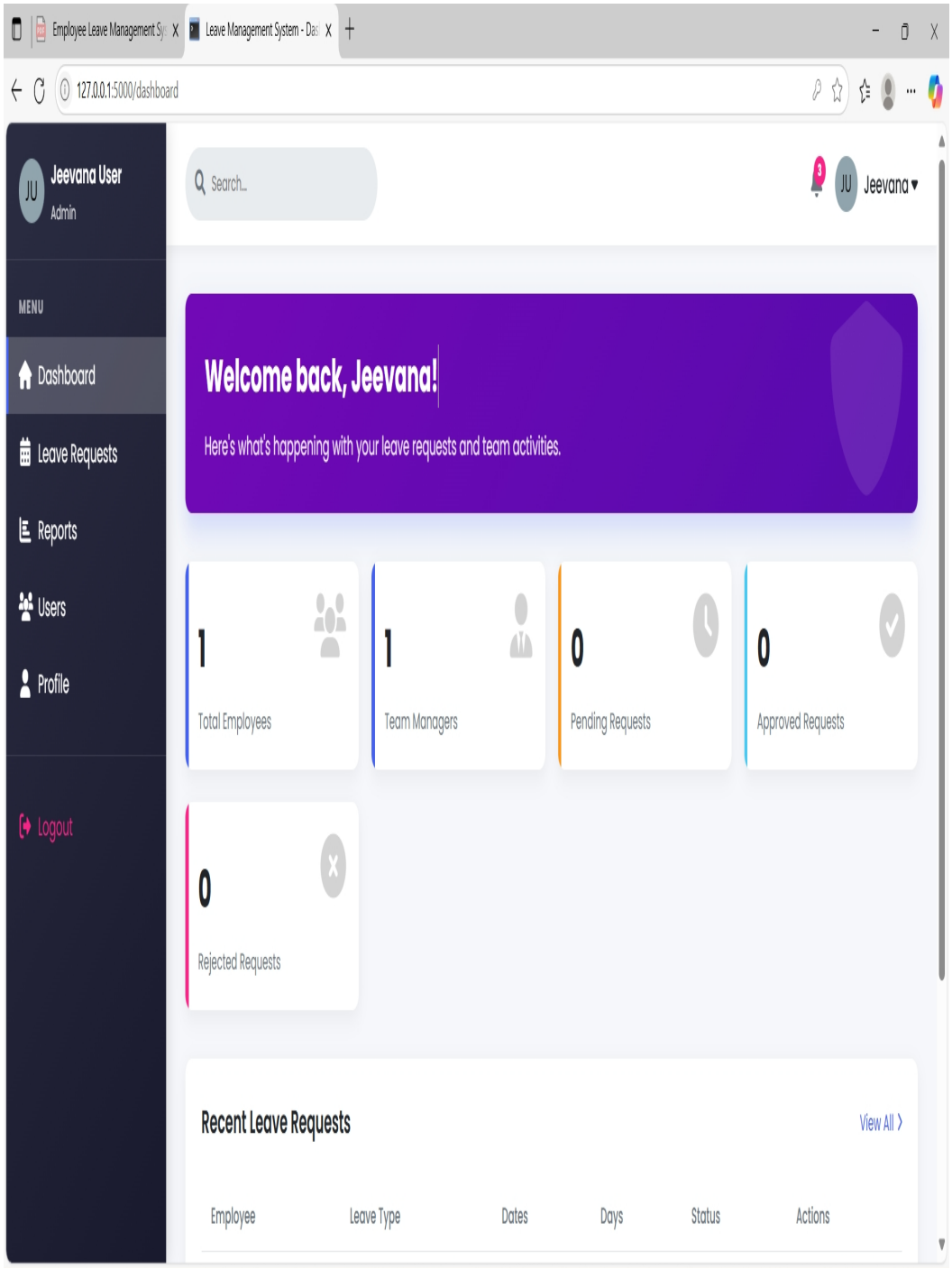
- Manage all users
- Configure leave types
- Generate system reports
- Monitor system activity

Screenshots

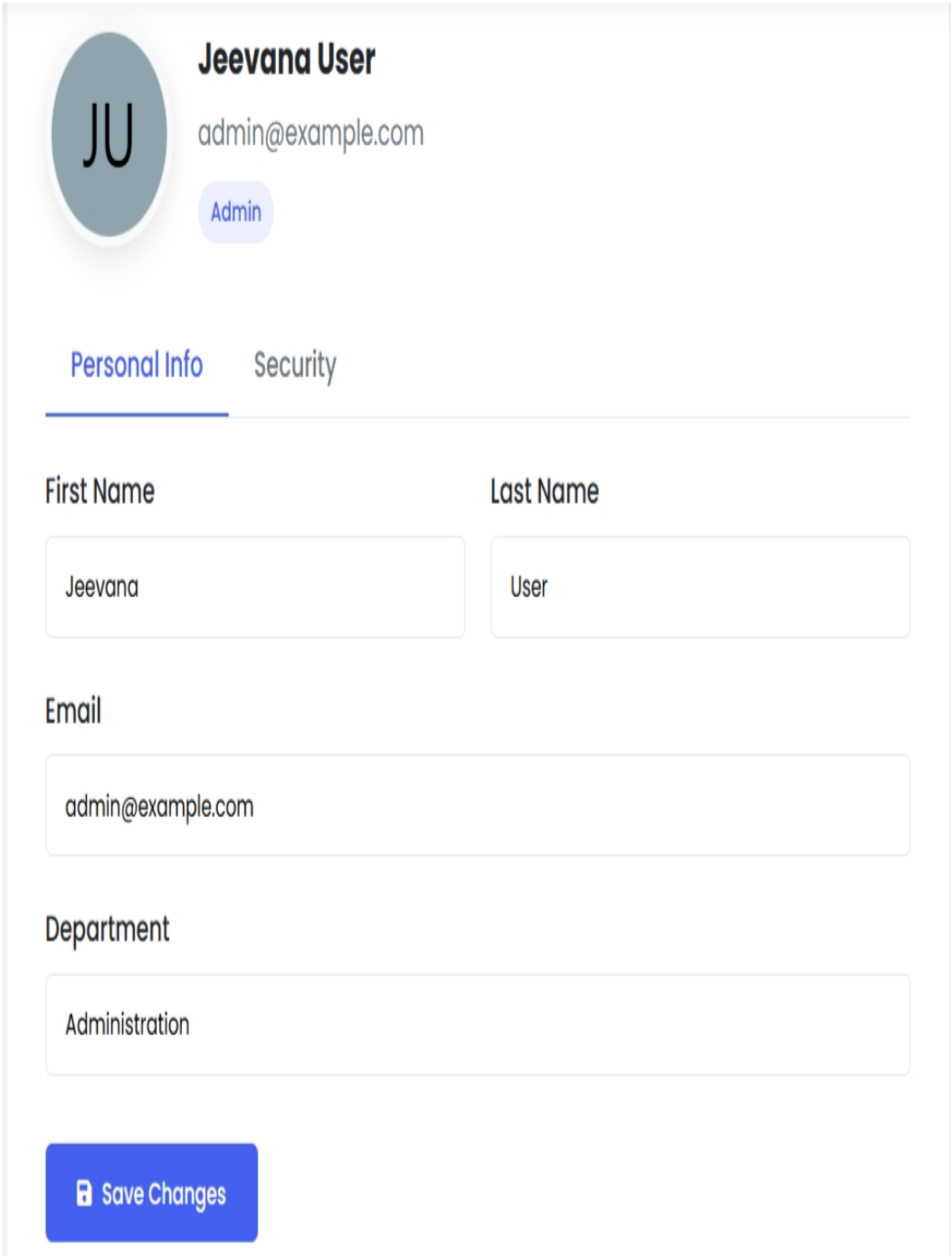
- **Login Page**



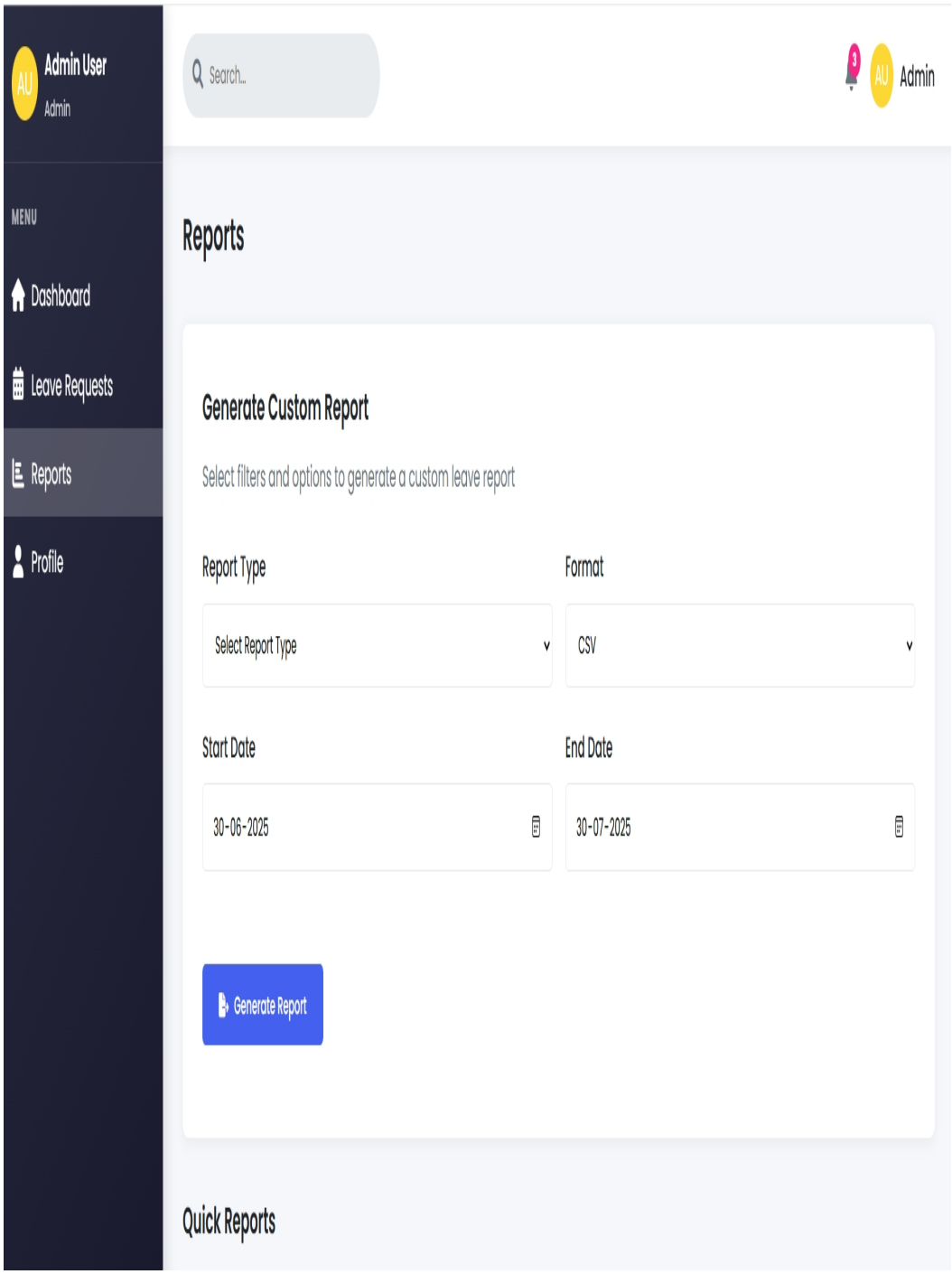
- **`Admin_Dashboard`**



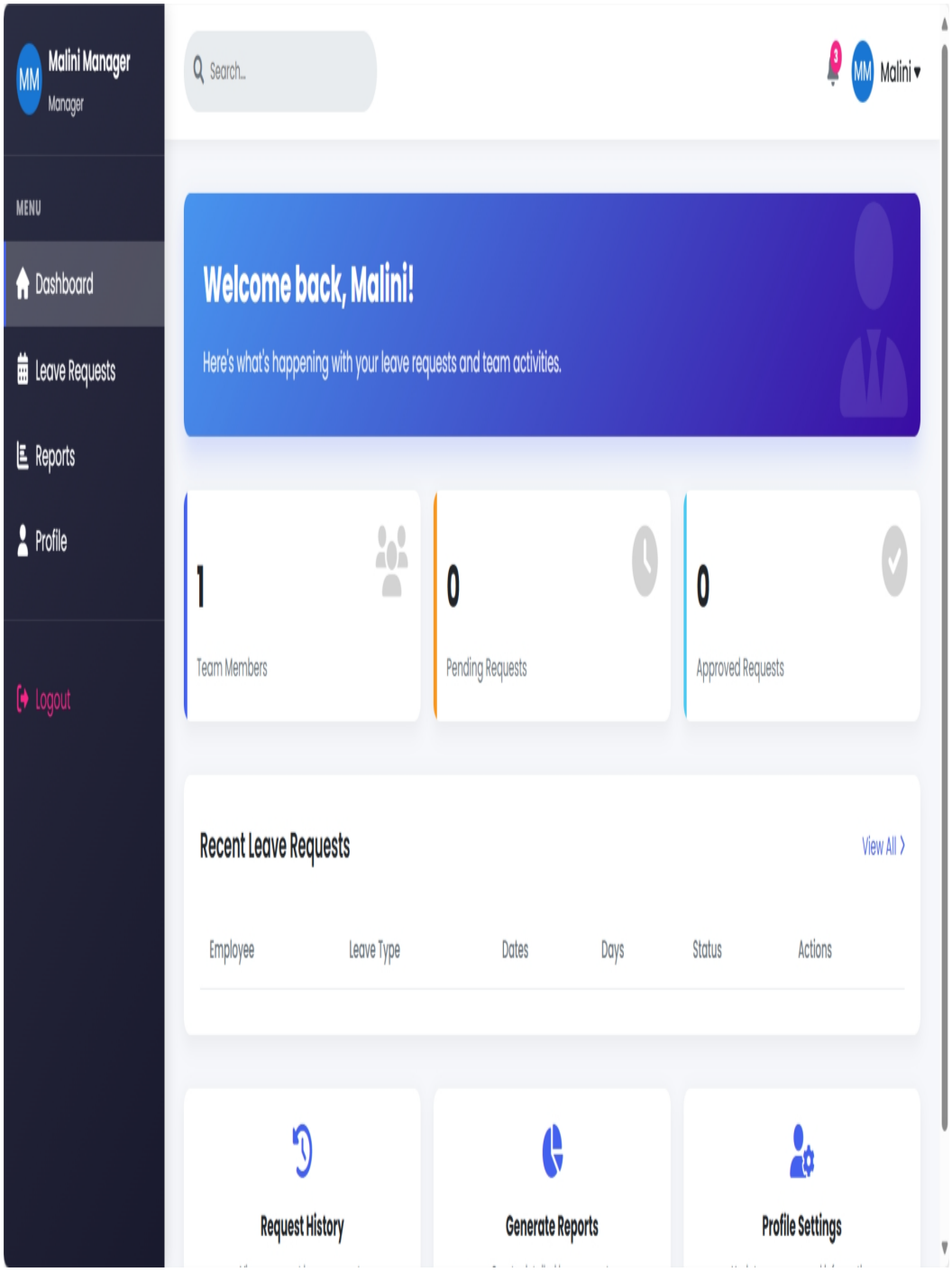
- **`Admin_Profile`**



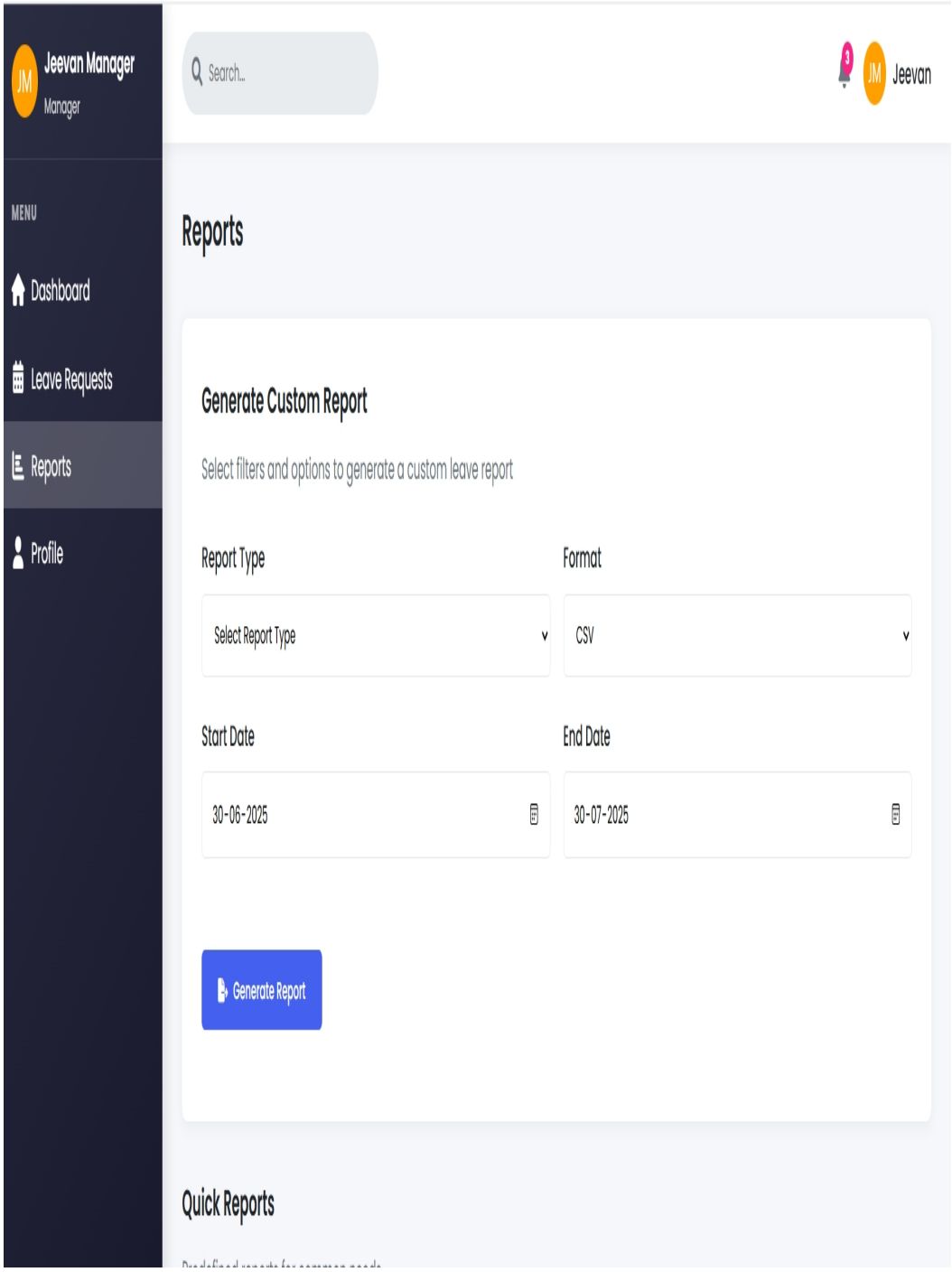
- **`Admin_Reports`**



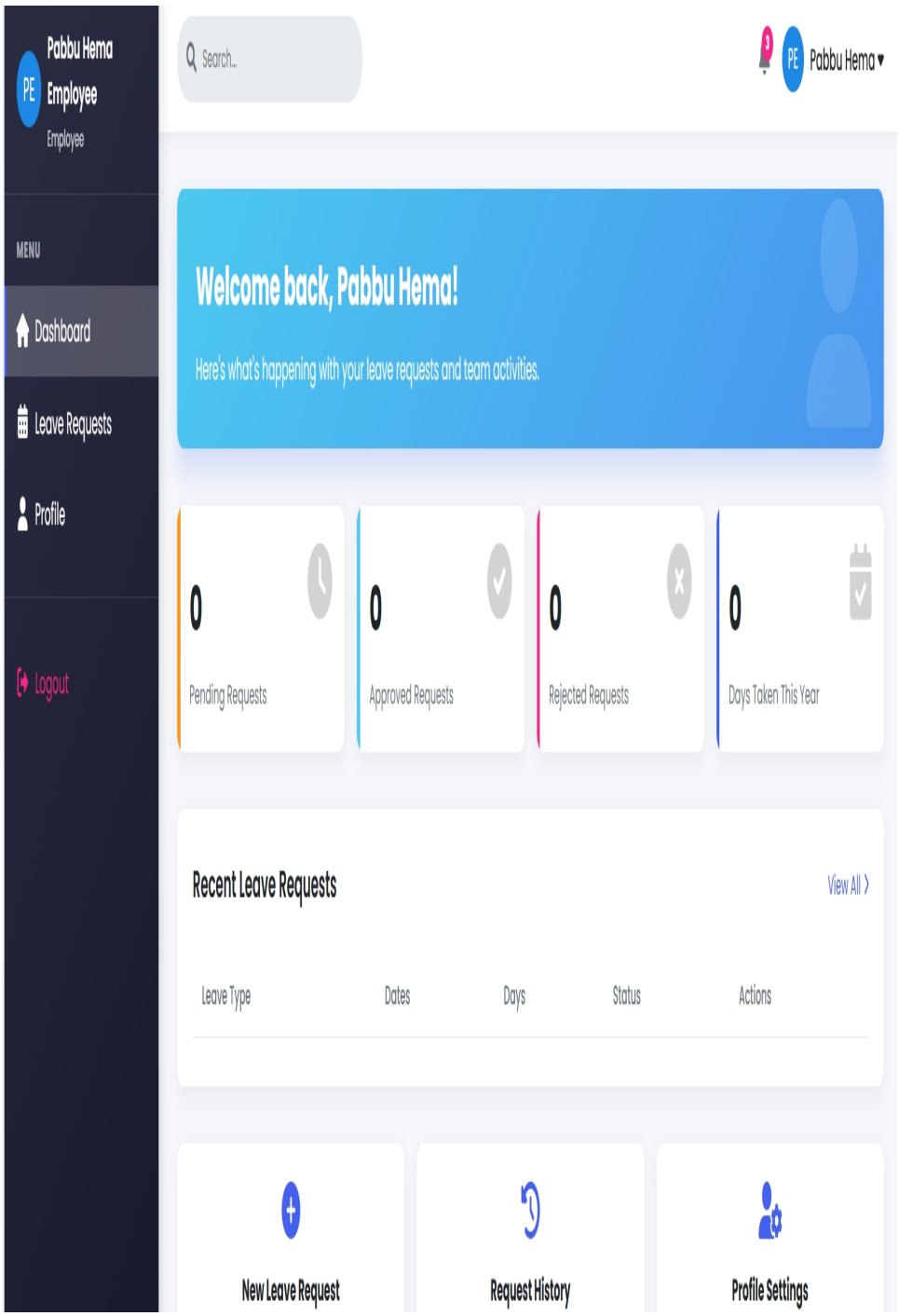
- **Manager Dashboard**



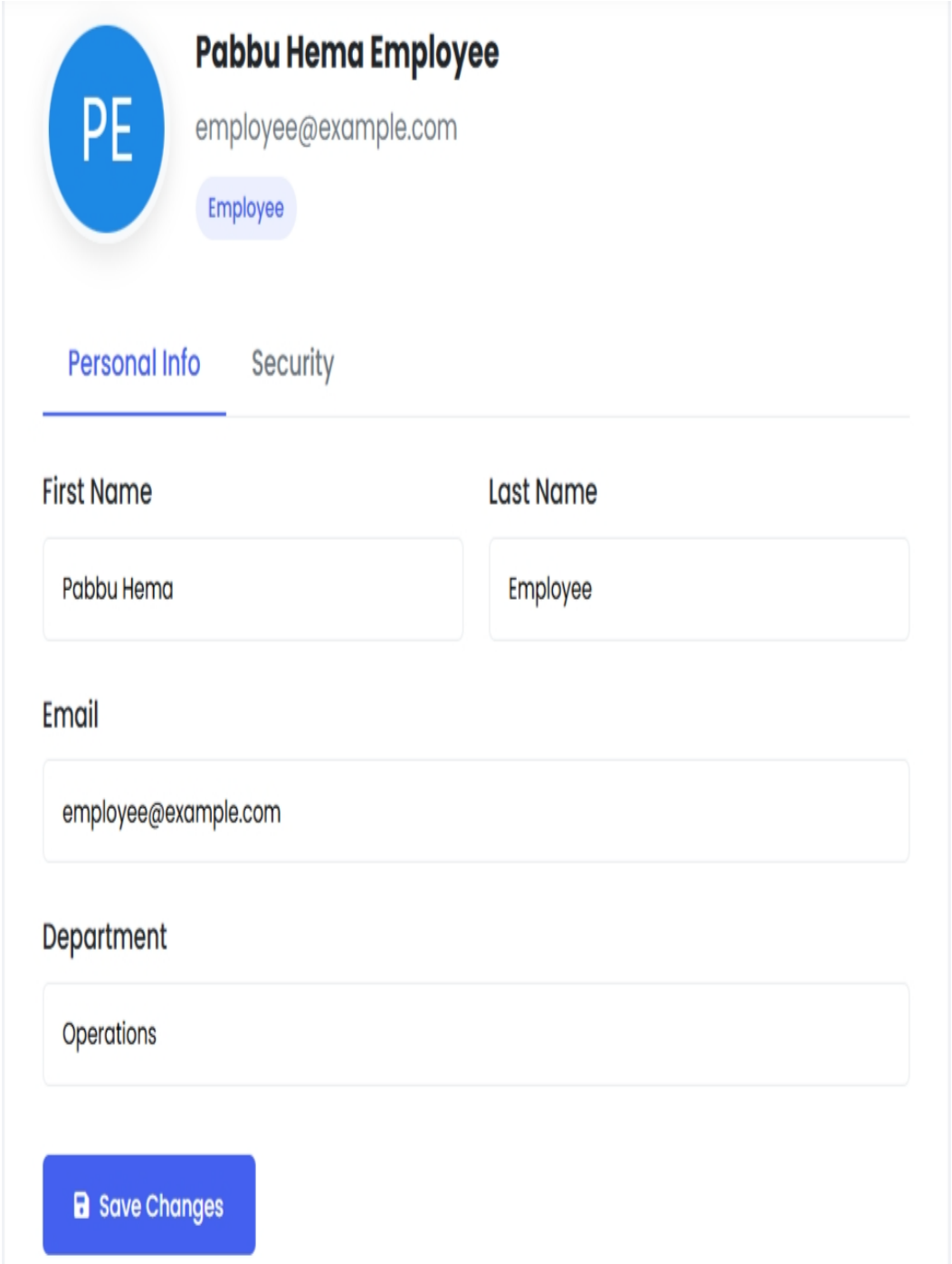
- **`Manager_Reports`**



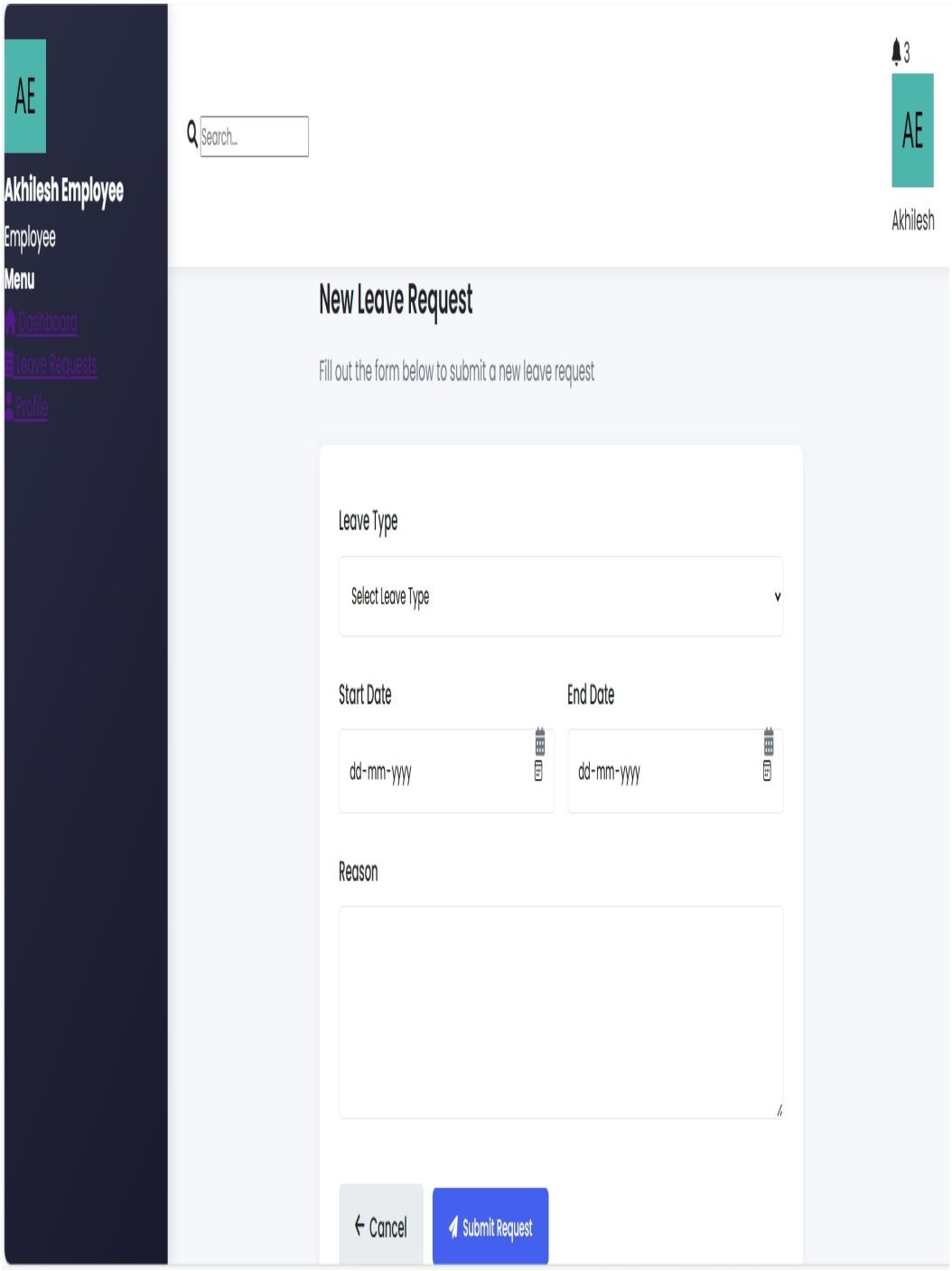
- **Employee Dashboard**



- **Employee Profile**



- **`Employee Leave_Request`**



Database Schema

The system uses the following database tables:

- `User` : Stores employee information
- `LeaveType` : Defines different types of leave
- `LeaveRequest` : Tracks all leave requests
- `LeaveBalance` : Maintains leave balances for employees

License

This project is licensed under the MIT License. See the LICENSE file for details.

Contributing

Contributions are welcome! Please fork the repository and submit a pull request with your changes.

Contact

For questions or support, please contact the project maintainer at hemalatha@example.com