Leave Management System

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

Overview

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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/malini-30/leave-management-system.git cd leave-management-system

```
2. Create and activate a virtual environment:
```bash
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: mng123
```

- Employee:

```
Username: employee
Password: employee123
```

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 Profile**

- **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

Future Enhancements:

- Email notifications for leave request status changes
- Calender view of approved leaves
- Leave balance tracking
- Multi-language support
- API endpoints for mobile applications

Acknowledgements

- Flask documentation
- Font Awesome for icons
- Various open source projects that inspired this work

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 23jr1a4494@gmail.com