# **Ticketing System**

### Overview

The Ticketing System Project is a part of the final project for the 'FUTURE COLLARS BOOTCAMP PYTHON DEVELOPER' course. It is a simplified ticketing system designed to be deployed in a production environment and can be customized to meet the needs of the end-users.

The project utilizes Python Flask as the web framework and SQLAlchemy as the ORM (Object-Relational Mapping) tool for database interactions. It provides basic ticket management functionalities such as ticket creation, status updates, and comments.

### **Key Features**

- User authentication and authorization
- Ticket creation with title, description, and status
- Ticket status updates (e.g., New, In Progress, Resolved, Closed)
- Adding comments to tickets
- Different dashboard views for users, HR personnel, and administrators
- Email notifications for ticket creation and updates

# Technologies used

- Python Flask: Web framework for building the application.
- SQLAlchemy: ORM tool for interacting with the database.
- Flask-WTF: Integration of WTForms for form handling.
- Flask-Mail: Extension for sending email notifications.

### Installation

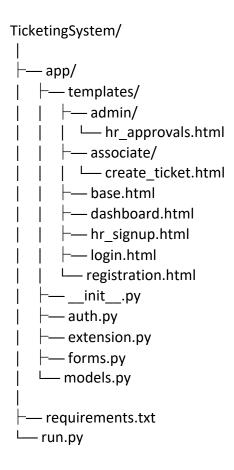
- 1. Clone the Repository:
  - git clone https://github.com/LuisMhaske/Ticketing System.git
- 2. Navigate to project directory:
  - cd cproject directory>
- 3. Install dependencies:
  - pip install -r requirements.txt

#### Usage

- 1. Run the application:
  - > python run.py
- 2. Access the application in your web browser:
  - http://localhost:8080/

# Project Structure

The project directory is organized as follows:



- app/: Contains the main application files, including models, forms, routes/\_\_init\_\_, and templates.
- run.py: Script to run the Flask application.
- requirements.txt: List of dependencies required to run the project.

#### Workflow

The workflow of the Ticketing System can be summarized as follows:

### 1. Home Page:

- The Home Page serves as the entry point for users.
- Users can navigate to various sections of the system, such as Sign Up, Login, and Ticket Creation.

### 2. Sign Up:

- Users can register for an account by providing necessary information.
- Differentiate between Associates, HR, and Admin during the sign-up process.

# 3. Login:

• Registered users can securely log in to their accounts using their credentials.

### 4. Ticket Creation:

- Once logged in, users can create new tickets to report their concerns or issues.
- Users provide details such as title, description, and possibly category or priority level for the ticket.
- Tickets are associated with the user who created them and are stored securely in the database.

#### 5. User Dashboard:

- Associates have access to their dashboard, where they can:
- View their previously opened tickets.
- Monitor the progress of their tickets.

#### 6. HR Dashboard:

- HR team members have access to the HR dashboard, where they can:
- View tickets from all users.
- Start working on tickets assigned to them.
- Change the status of tickets based on their progress (e.g., New, In Progress, Resolved, Closed).

### 7. Admin Portal:

- Admins have special privileges to manage user roles and permissions.
- Admins can:
- Approve or disapprove HR sign-up requests.
- Manage user roles and permissions, including granting access to the HR portal.
- Overall, the Ticketing System ensures privacy and security by segregating user roles and providing appropriate access controls. It streamlines the process of issue reporting and resolution within the organization.

# **Future Improvements**

- Improve user interface and user experience.
- Implement advanced features such as file attachments, ticket assignments, and priority levels.
- Enhance security measures such as input validation and user permissions.
- Conduct thorough testing and debugging to ensure reliability and stability.