

Component Design and Class Diagrams

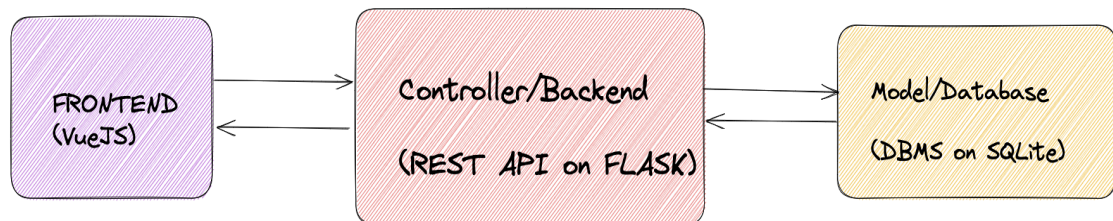
In this document, we have described the different components of our ticketing system, as well as added a few sample class diagrams for the same. (Revision 1)

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Components



MVC ARCHITECTURE OF THE TICKETING SYSTEM

The overall ticketing system comprises of the following basic components:

- **Authentication component:** This manages the auth-tokens and authorisation-related methods.
- **User registration component:** This component deals with the user registration, and acts as a common onboarding point for all types of users.
- **Ticket management component:** This is the API controller for ticket management. It contains methods for ticket creation, upvoting, closing tickets and more.

- Support staff management component: API controller for support staff, this component deals with the creation, promotion, and deletion of support staff for the ticketing system.
- Administrator management component: API controller for administrator management. This component deals with the creation, deletion, and management of administrators for the ticketing system.
- Analytics component: API controller that computes and displays various analytics related to the ticketing system.
- User profile management component: This component allows users to edit and add information related to their accounts, e.g changing of profile pictures, names, email IDs, etc.
- Escalation and notification management component: This component manages the notifications and escalation mechanisms for the ticketing system.

Primary Modules for Backend

- Flask: The WSGI web server used for serving the RESTful API.
- SQLAlchemy: ORM module used for the SQLite database.
- Flask-Security: Flask add-on used for handling user registration and authentication.

Frontend Components (Vue.js)

- Vue Components
- Bootstrap for Responsive Design

Database Models

- User
- Student (inherits from User)
- Support Staff (inherits from User)
- Admin (inherits from Support Staff)
- Super Admin (inherits from Admin)

Please refer to the following page for the UML diagram corresponding to the aforementioned database models.

