

# SOFTWARE ENGINEERING MILESTONE 3

SUBMITTED IN THE PARTIAL FULFILLMENT OF THE  
REQUIREMENTS OF THE COURSE:

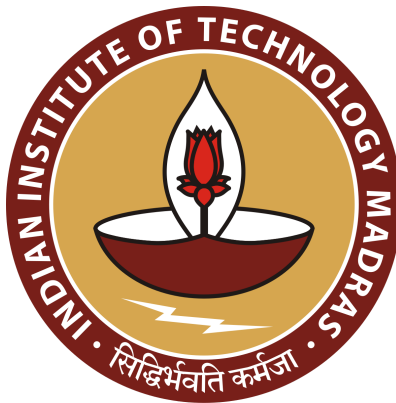
**BSCSS3001: Software Engineering**

By:

**Arya Bhattacharyya (21f2000436)**

**Varun Venkatesh (21f1000743)**

**Chirag Goel (21f2000540)**

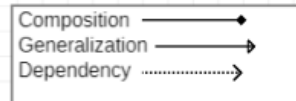
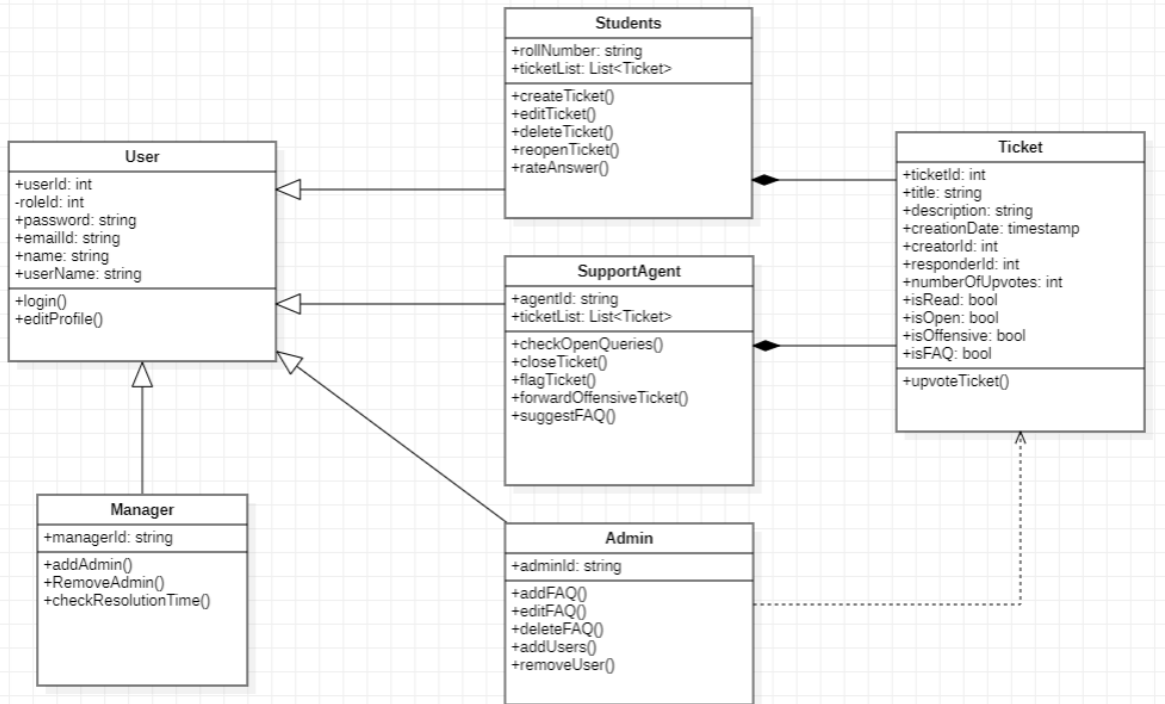


INDIAN INSTITUTE OF TECHNOLOGY, MADRAS  
March, 2023

# Design of Components

- **Student View(APIs/Export Jobs)**
  - Create a new ticket
  - Edit an existing ticket (Or upvote an existing one, rate the resolution if already responded to, reopen a closed ticket)
  - Delete an existing ticket
  - Student Dashboard (Read their tickets)
  - Similar queries must be retrieved from the database
  - Celery Task for Notification for query response (within 10 mins)
- **Support Agent View(APIs/Export Jobs)**
  - Retrieve active queries from the backend (Sorting can be taken care of in the frontend, filter tickets based on username to be done on frontend)
  - Edit an existing ticket (Mark as closed/resolved, mark a particular ticket to be added to FAQ section, flag a post as rude/offensive, forward offensive post to admin)
  - Celery task for notification on query resolution (Notification should reach to upvoted students as well)
- **Admin View**
  - Dynamically Update (CRUD) the FAQ section
  - CRUD for user management (Enroll new people using their email IDs, delete user by username)
- **Manager View**
  - CRUD on admins
  - Celery Task (Cron Job) to check for queries unanswered for 72 hours and send notification.
  - Celery Task (Cron Job) to list support agents whose average resolution time is more than 48 hours in the last 30 days (monthly cron job mainly)
  - Resolution times of different queries.

# Class Diagram



# Sprint Schedule

- ❖ **Sprint 1:** Identify the types of users
  - Date: 06/02/2023 - 10/02/2023
- ❖ **Sprint 2:** SMART User Stories
  - Date: 11/02/2023 - 16/02/2023
- ❖ **Sprint 3:** Vetting & Submission
  - Date: 17/02/2023 - 19/02/2023
- ❖ **Sprint 4:** Storyboarding, Wireframe, Applying Usability Principles to Wireframe, Vetting Submission, Final Submission
  - Date: 20/02/2023 - 26/02/2023
- ❖ **Sprint 5:** Jira Roadmap Setup, Design of Components, UML Diagrams, Vetting Submission, Final Submission
  - Date: 27/02/2023 - 05/03/2023
- ❖ **Sprint 6:** Database Schema, Database Models, User Class, Students Class (Code, Debug, Raise Issues & Code Review)
  - Date: 06/03/2023 - 12/03/2023
- ❖ **Sprint 7:** Ticket Class, SupportAgent Class, Admin Class, Manager Class (Code, Debug, Raise Issues & Code Review), OpenAPI 3.0 YAML for all endpoints
  - Date: 13/03/2023 - 19/03/2023
- ❖ **Sprint 8:** Design and Describe 15 test cases and perform unit testing in pytest
  - Date: 20/03/2023 - 26/03/2023
- ❖ **Sprint 9:** Design and Describe the remaining test cases and perform unit testing in pytest, Frontend Login and Signup Views
  - Date: 27/03/2023 - 02/04/2023
- ❖ **Sprint 10:** Finish Frontend, Integrate Frontend with Backend, Detailed report and record presentation
  - Date: 03/04/2023 - 16/04/2023

# SCRUM Meetings Schedule and Minutes

**SCRUM Meetings: Every Monday, Wednesday, and Friday 19:00-20:30**

## **Minutes from Sprint 1 SCRUM Meetings:**

Identified and discussed the different types of users (primary, secondary, and tertiary). Discussed a few User Stories associated with the aforementioned users and agreed to come up with at least 10 user stories each.

## **Minutes from Sprint 2 SCRUM Meetings:**

Discussed our User Stories and applied SMART Guidelines to refine the User Stories.

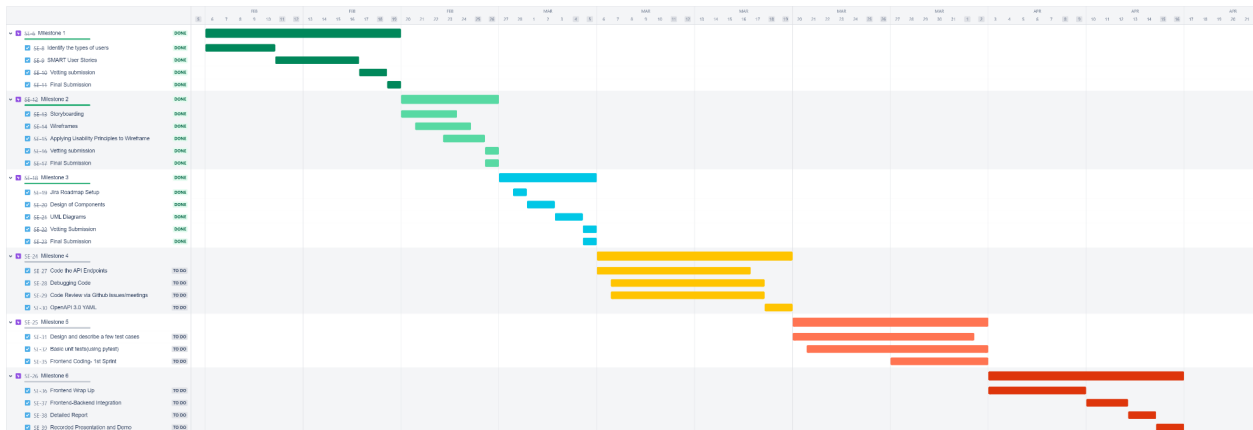
## **Minutes from Sprint 4 SCRUM Meetings:**

Discussed the software to design the storyboards and wireframes. Also worked on the initial draft of our wireframe. Chirag was tasked to mainly refine the wireframe; Varun and Arya were tasked to come up with a few storylines for our storyboards to discuss in our next SCRUM meeting. Discussed our storylines for our storyboards and agreed on a few to take further. Applied design heuristics and found our present software inadequate to express the same. Thus decided to switch to a different software to design our wireframe.

## **Minutes from Sprint 5 SCRUM Meetings:**

Came up with a schedule for our project and an appropriate project scheduling tool, which was decided to be **Jira**. We then designed the components on pen and paper and finally used StarUML to produce the digital version of the same.

# GANTT Chart



## (Partial) Kanban Board

Projects / Software Engineering

### SE board

