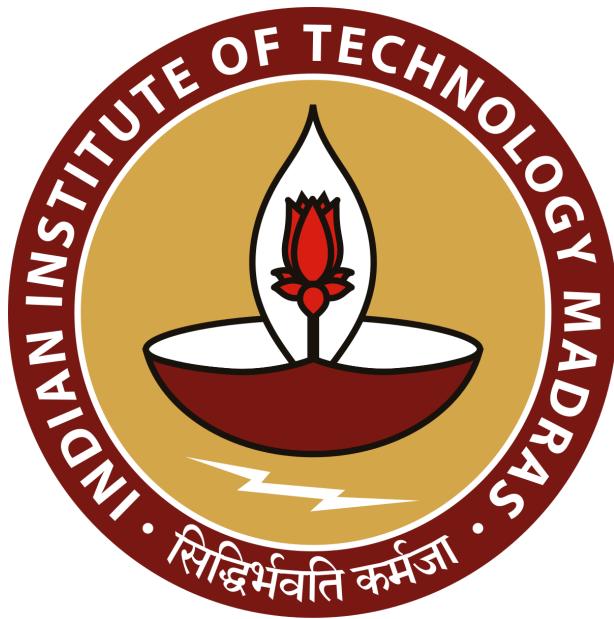


CS3001- Software Engineering (Jan-May 2024)

# Project Report

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## Group 21

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## PROBLEM STATEMENT

### Online support ticket system for the IITM BS degree program : Integration with Discourse and webhook.

The support team at the IITM BS degree program often gets overwhelmed with emails from students regarding queries and concerns. Your task is to create an online support ticketing system for the IITM BS degree program. Students can create a support ticket for a particular concern or query. Before they create a ticket, the system should also show a list of similar tickets, and allow users to like or +1 an already existing support ticket, so that duplicates are not created. This way popular concerns or queries can be prioritized by the support team.

After the support team addresses the concern, they can mark the ticket as resolved, and an appropriate notification should be sent to concerned users.

Another important feature of the ticketing system is dynamic FAQ updation. Many student concerns can be FAQs which will be useful for future students. If appropriate, the support query and response should be added to the FAQ section by support admins, and appropriately categorized, so that an updated FAQ will be readily available to students. The platform should allow users to enroll as students, support staff and admins.

- a. **Discourse Integration:** In addition to the creation and listing of tickets, your system should also have the provision to create a Discourse thread for each ticket. This will involve integrating the Discourse system with the IITM BS ticketing system. You can think of different rules and configurations to create/edit/modify Discourse threads (for example - the thread can initially be private, but then can be converted to a public topic by moderators ([link](#))). You can also think of additional features like notifications when a thread which you created has received a reply, like etc.
- b. **Webhooks Integration:** Certain tickets can be high priority and need to be addressed immediately. In such cases, the system has to integrate with webhooks to notify High Priority and Urgent tickets into GChat. This can then be used by higher authorities for handling escalations.

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## **LIST OF TABLES**

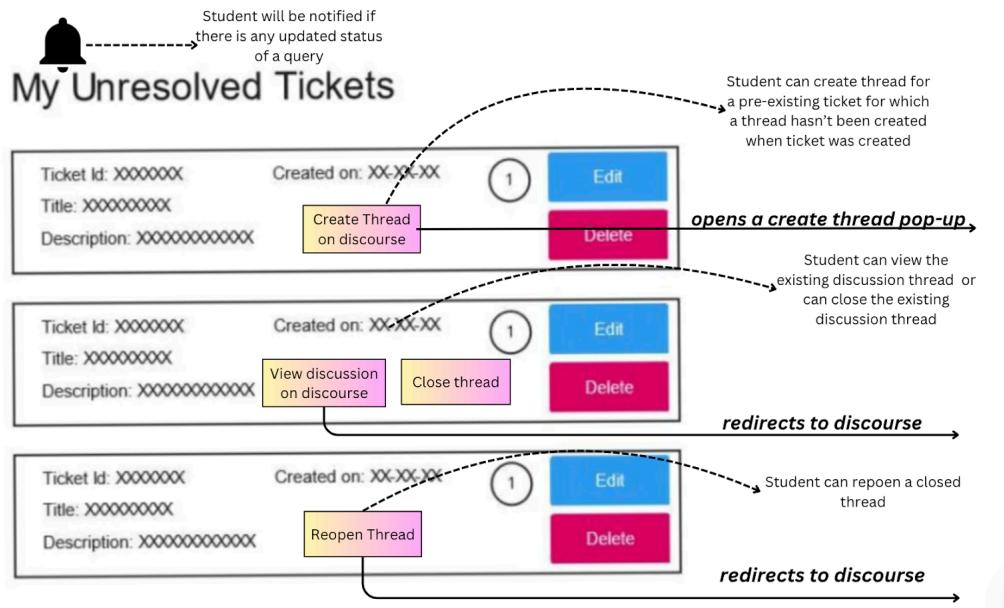
<b>Name</b>	<b>Page Number</b>
Milestone 2: Wireframe taking the user Stories	4
Milestone 2: Storyboard	9

# WIREFRAMES BASED ON USER STORIES

## Discourse Integration

### 1.1.1] USER: STUDENT

#### [1.1]Unresolved tickets page



#### [1.2]Create ticket page

The wireframe shows the 'Create a Ticket' form and the 'Search Ticket' results page side-by-side.

**Create a Ticket Form:**

- Fields: Title, Description, Attachment, Priority (Low, Medium, High).
- Action: Submit.
- Buttons: Tag (repeated), Create Thread on discourse.

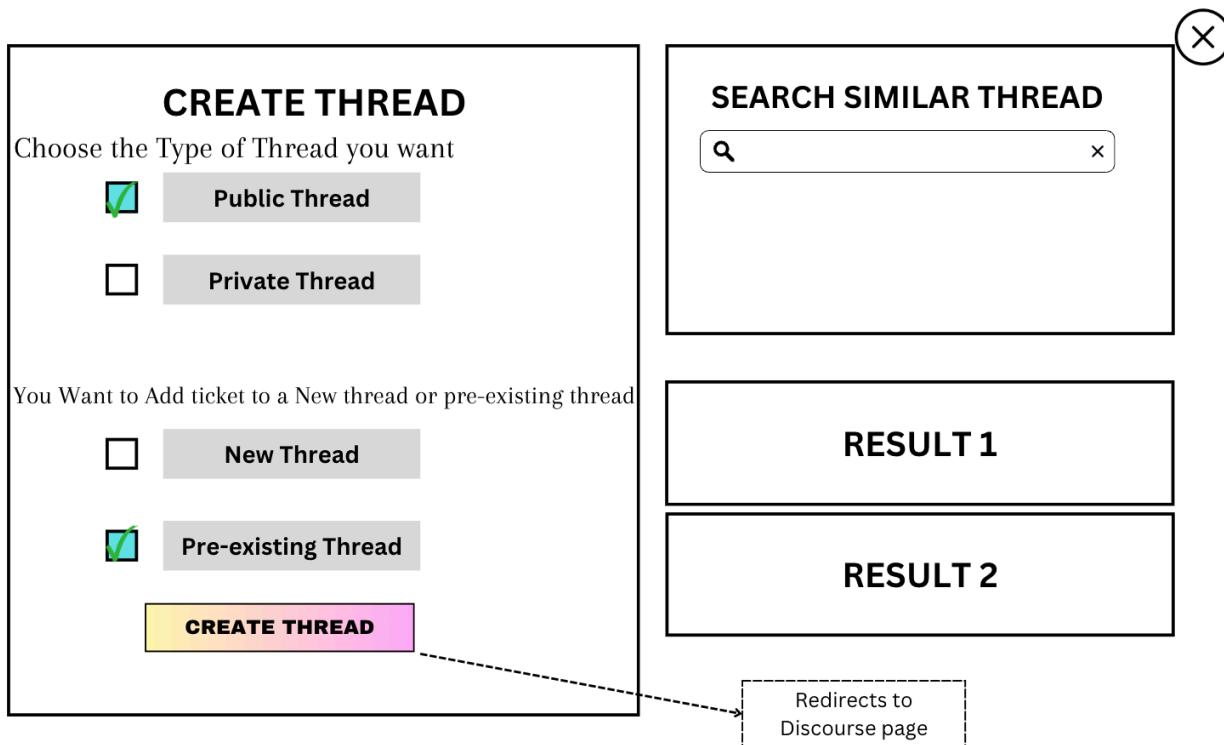
**Search Ticket Results:**

- Search bar.
- Filter and Sort options.
- Results list: Result 2, Result 3.
- Actions: View, Update.

Annotations and interactions:

- A dashed arrow from the 'Create Thread on discourse' button on the left points to a callout: "Open a create thread pop-up".

### [1.3] Create thread page

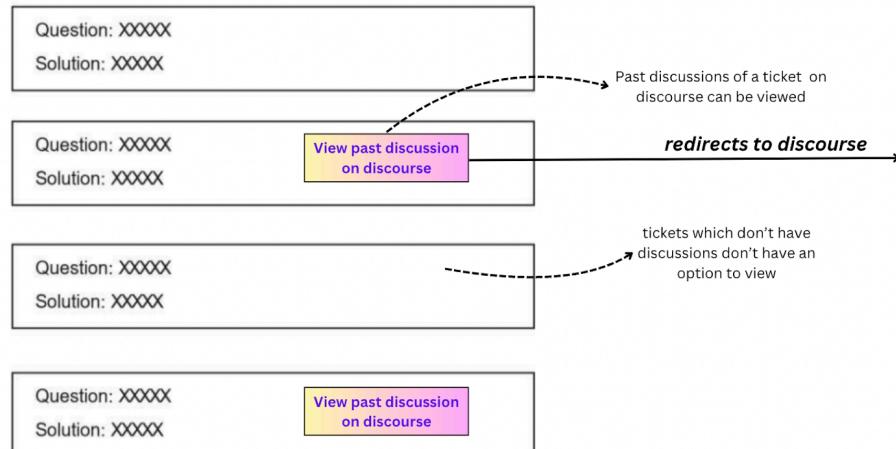


### [1.4] My tickets page

The screenshot shows the 'My Tickets' page with a navigation bar including Home, Create Ticket, My Tickets (selected), FAQ, and Logout. A user profile icon is also present. The main area features a 'Filter' section with checkboxes for Open (checked), Closed, and Upvoted status, and High, Medium, and Low priority levels. Buttons for 'Filter' and 'Show All' are available. Below the filter are three ticket cards, each with a 'Reopen Thread' button highlighted in pink. A callout bubble points to the 'Reopen Thread' button on the second ticket card, stating: 'Closed threads can be reopened for additional assistance'.

## [1.5] FAQ Page

Home Create Ticket My Tickets **FAQ** Logout



## 1.1.2] USER: Support Staff

### [1.6] Home page

Home Logout



**Unresolved Tickets**

Sort ▾ Filter ▾

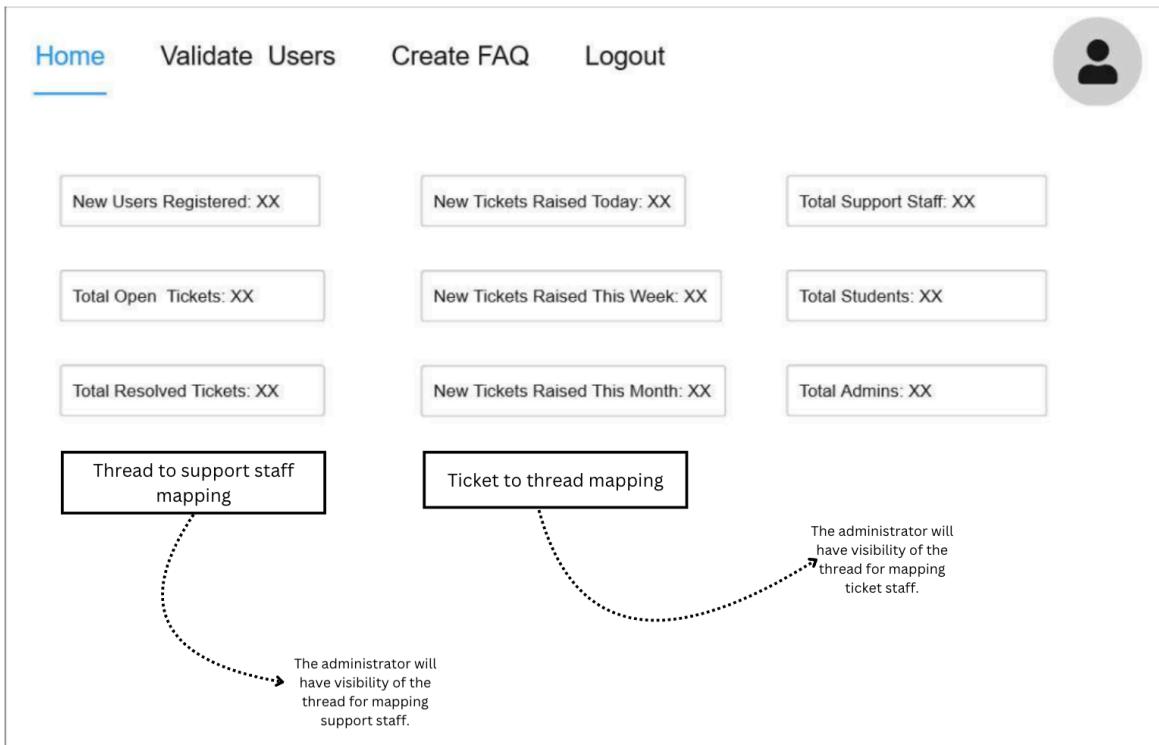
Ticket Id	Created on	Actions
XXXXXXX	XX-XX-XX	<a href="#">Create Thread on discourse</a> (3)
XXXXXXXXXX	XX-XX-XX	<a href="#">View discussion on discourse</a> (4)
XXXXXXXXXXXX	XX-XX-XX	<a href="#">Close thread</a> (2)

**My Activity**

- Tickets Resolved: XX
- Tickets Open: XX
- Tickets Upvoted: XX

## 1.1.2] USER: Admin

### [1.7] Home page



## Webhook Integration

### 1.2.1] User: Student

[1.8] Create ticket and start Gchat

The screenshot shows a user interface for creating a ticket. On the left, there's a "Create a Ticket" form with fields for Title, Description, Attachment, Priority (Low, Medium, High), and a "Submit" button. To the right of the form is a "Search Ticket" section showing a single result with ticket details (Ticket Id: XXXXXXXX, Created on: XX-XX-XX, Title: XXXXXXXXX, Description: XXXXXXXXXXXXX). Below the search results are two purple boxes: "Create Thread on discourse" and "Start chat in G-chat". A dashed arrow points from the "Start chat in G-chat" box to a callout on the right labeled "Interact in Gchat Option for high priority tickets". The top navigation bar includes Home, Create Ticket (which is underlined), My Tickets, FAQ, and Logout.

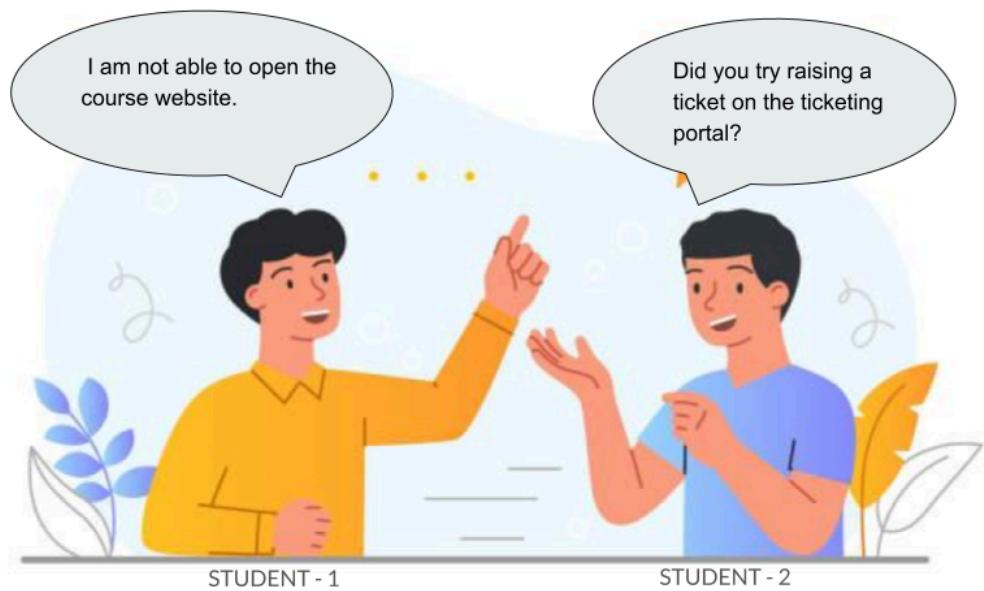
### 1.2.2] User: Support Staff

The screenshot shows a dashboard for support staff. On the left, there's a "Unresolved Tickets" section listing three tickets. The first ticket has a "HIGH PRIORITY" label and a bell icon above it, with a callout stating "Marks a ticket as high priority and notify authorities using Gchat". The second ticket has a "Solve" button with a circled number 3 above it. The third ticket also has a "Solve" button with a circled number 4 above it. To the right is a "My Activity" section with summary boxes for Tickets Resolved, Tickets Open, and Tickets Upvoted. A red bell icon is positioned between the two main sections. A callout on the right side states "When a new thread has been created, support staff will be notified along with the Ticket Id". The top navigation bar includes Home, Logout, and a user profile icon.

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# **STORYBOARD**

Let's have a look at 2 students  
discussing their problems...



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Two support staffers in a discussion....



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In an alternate scenario.....

