

[Requirements] Elicitation

Interviewee 1: Jayden Xian

Email: jaydenxian@outlook.com

Q: I've noticed that during the summer of 2021/2022, you worked as an intern in Assurance, and I assume that majority of the communication must have been virtual, given the state of the COVID-19 pandemic. What were the main issues you experienced with this method of communication?

A: The main problem I faced was that because I was getting so many messages from different managers every day, it was easy to lose track of important files or tasks I needed to do. I would also lose track of deadlines I needed to meet.

Q: What sort of feature do you think we could add which would help you out?

A: I think it would be extremely handy if there was a task board with deadlines in every chat. This way I could click on my chat with every manager and be able to see instantly what work I have outstanding.

Q: Do you think a task board tab in each chat would be a good solution to your problem?

A: Yes, I think that's a great idea.

Interviewee 2: Sanchay Kalra

Email: sanchay.kalra1@gmail.com

Q: I've noticed that during the summer of 2021/2022, you worked as an intern in Mergers and Acquisitions, and I assume that majority of the communication must have been virtual, given the state of the COVID-19 pandemic. What were the main issues you experienced with this method of communication?

A: Given the fast-paced nature of the job, the most difficult part was keeping up to date with deadlines. I would have so many tasks, it was really hard to remember or keep track of deadlines.

Q: What sort of feature do you think we could add which would help you out?

A: I think an automatic notification would help significantly. Perhaps there could be some way I could mark a task on a to do list in the chat and set a deadline for it. Then, perhaps it would give me a notification before the task was due.

Q: Do you think creating a task board tab in each chat would help? This way you can log your tasks in there. We can also create a notification feature, similar to an alarm app, where you can set when you receive notifications reminding you the task is due.

A: That sounds great.

[Requirements] Analysis and Specification

User Story:

As a user, I want to be able to keep track of my tasks and deadlines through a task board in a chat, where I can set reminders to notify me to complete the task, and tick off these tasks once finished. Additionally, it would be helpful if the other user in the chat could also add or remove task, as well as edit deadlines.

Acceptance Criteria (Functional):

The user must be able to:

- Add tasks to a task board in the chat
- Set deadlines for these tasks
- Set alarms/notifications to be reminded when these tasks are due
- Tick off these tasks once finished
- Let the other member of the chat add and remove tasks from the task board

Successful Use Case:

- 1) User 1 logs in (Assume User 1 is an employee)
- 2) User 2 logs in (Assume User 2 is a manager)
- 3) User 1 and 2 exchange text messages or video call, where User 1 is assigned tasks from User 2
- 4) User 1 opens the task board tab and adds tasks into the to do list (create taskboard and add task function required)
- 5) User 1 assigns a deadline for all tasks and sets a reminder notification (deadline should be parameter of adding task)
- 6) User 2 looks at the task board and sees that the deadline is wrong and changes it
- 7) User 2 changes his mind and decides to allocate one of the assigned tasks to another employee, so he removes a task off the task board (deleting task off taskboard)
- 8) The task board should show all the updates User 2 has made (a list function that lists all outstanding tasks)

[Requirements] Validation

Interviewee 1: Jayden Xian

Q: Does the above user story and successful use case example solve the issues you dealt with while you were working in a virtual environment?

A: Yes, it does. I think your solution is perfect. I think this feature would revolutionise the way that virtual teams operate. If I had this feature when I was working, I doubt I would have missed any deadlines as this task board makes it extremely simple to stay on the ball when it comes to tasks given from seniors.

Interviewee 2: Sanchay Kalra

Q: Does the above user story and successful use case example solve the issues you dealt with while you were working in a virtual environment?

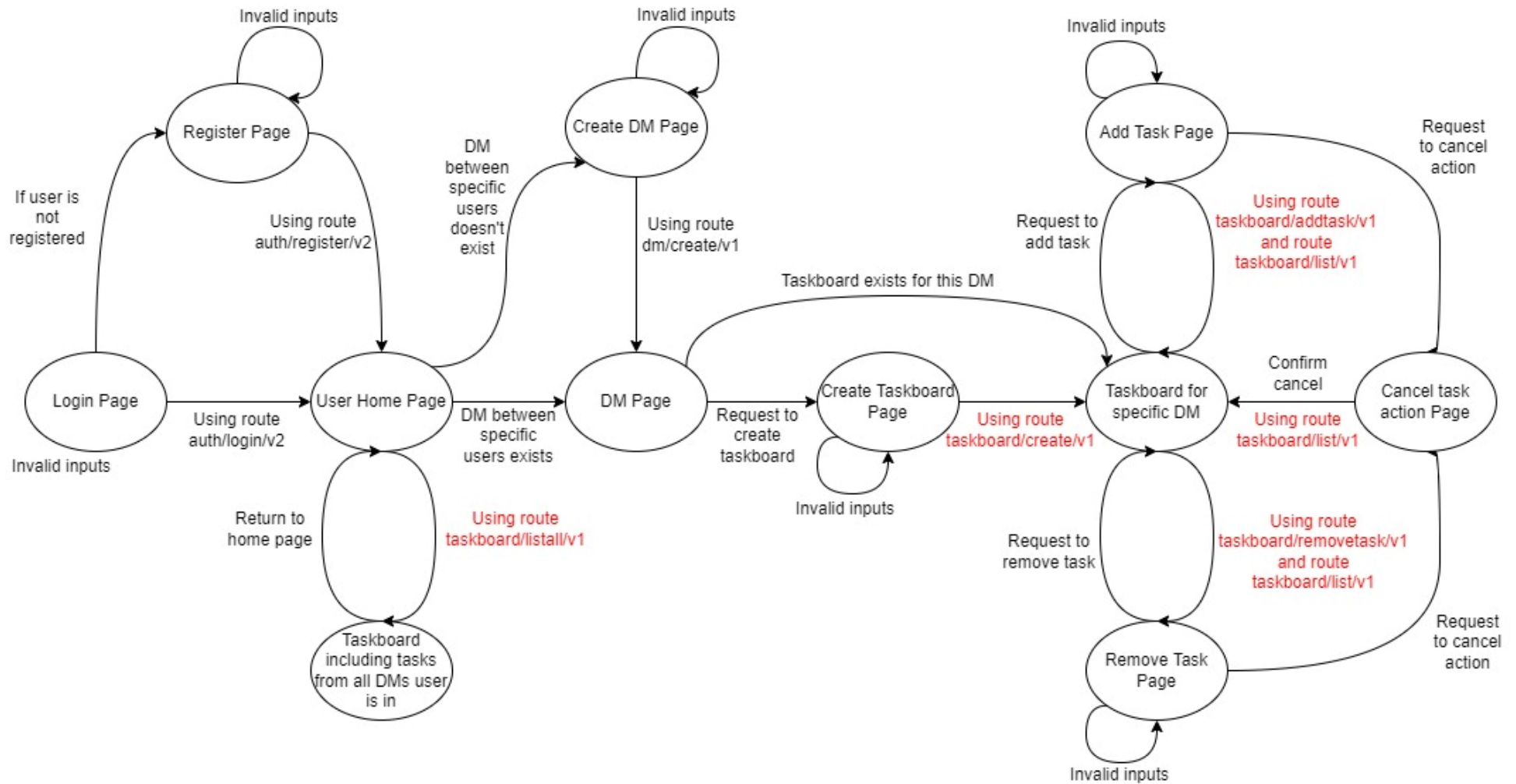
A: Yes, I think your idea would be a great way to keep up to date with deadlines, especially when they come on a rolling basis. The task board and notification features would make it extremely easy to stay up to date.

[Design] Interface Design

| Name & Description | HTTP Method | Data Types | Exceptions |
|--|---------------|--|---|
| taskboard/create/v1 <ul style="list-style-type: none"> creates a new taskboard in a specific dm | POST | Parameters: (token, dm_id) Return Type: {taskboard_id} | InputError: <ul style="list-style-type: none"> dm_id is not valid AccessError: <ul style="list-style-type: none"> token is not valid |
| taskboard/addtask/v1 <ul style="list-style-type: none"> adds a new task into the taskboard | POST | Parameters: (token, taskboard_id, task_name, u_ids, deadline) Return Type: {task_id} | InputError: <ul style="list-style-type: none"> taskboard_id is not valid task_name is not between 1 and 1000 characters any u_id in u_ids does not refer to a valid user there are one or more duplicates in u_ids deadline is not in the correct format (yyyy-mm-dd hh:mm) deadline has already passed AccessError: <ul style="list-style-type: none"> token is not valid taskboard_id is valid but user is not a member of that taskboard any u_id in u_ids is not a member of the dm in which the taskboard is in |
| taskboard/removetask/v1 <ul style="list-style-type: none"> checks off a task after it has been finished | DELETE | Parameters: (token, task_id) Return Type: N/A | InputError: <ul style="list-style-type: none"> task_id is not valid AccessError: <ul style="list-style-type: none"> token is not valid task_id is valid but the user is not a member of the taskboard in which the task_id is in |
| taskboard/list/v1 <ul style="list-style-type: none"> lists all outstanding tasks that need to be finished in the taskboard given | GET | Parameters: (token, taskboard_id) Return Type: (taskboard – list of tasks) | InputError: <ul style="list-style-type: none"> task_id is not valid AccessError: <ul style="list-style-type: none"> token is not valid task_id is valid but the user is not a member of the taskboard in which the task_id is in |

| | | | |
|--|-------------------|--|---|
| <p>taskboard/listall/v1</p> <ul style="list-style-type: none">- lists all outstanding tasks that need to be finished in every tasboard the user is a part of but only includes tasks in which the user is included in the list u_ids | <p>GET</p> | <p>Parameters: (token)</p> <p>Return Type: (taskboard – list of tasks)</p> | <p>AccessError:</p> <ul style="list-style-type: none">- token is not valid |
|--|-------------------|--|---|

[Design] Conceptual Modelling (State)



N.B. The new routes being implemented are highlighted