# COMP1531 Project-Backend: Planning

*Team AERO! H13B*

# Elicitation

**User 1 Interview**
Name: Leona Lee
Email: [leonalee123@gmail.com](mailto:leonalee123@gmail.com)
Communication Tool: Zoom

**What do you use your preferred communication tool for? Are there any features you use most often?**
Reason for use: tutoring students, attending events online, for working on projects with team members. Most used features: video calls, texting in the chat (during a video call), screen-sharing, screen-annotation, channels (where I communicate outside of video calls, by texting, attaching files, etc).

**What issues do you normally encounter when using this communication tool?**
Sometimes I find it difficult to use the whiteboard function, which I use often when I tutor or conduct stand-ups or brainstorming sessions with my team members - it gets cluttered and it isn't very effective when we need to work on something together at the same time.

**When engaging in team activities using this tool, what difficulties or inconveniences have you encountered? How did they hinder team collaboration?**
During team activities, I found that it was difficult to keep track of our plans or decisions made during meetings and discussions in the channel. This has often made completing project work on time difficult, as sometimes we end up doing work that another member has already worked on. As it is tiresome to communicate updates frequently through the whiteboard, this can lead to confusion and setbacks.

**What features would you like to see in this communication tool that would improve your experience?**
It would have been beneficial to have some sort of progress-tracking feature that allows us to map our progress, or make a board of things we must complete, so that we can refer to it separately.

**User 2 Interview**
Name: Lamiya
Email: [lamiya147@gmail.com](mailto:lamiya147@gmail.com)
Communication tool: Teams

**What do you use your preferred communication tool for? Are there any features you use most often?**
Usually for work, especially in group settings. It makes it easier to communicate with each other especially when my groupmates and I usually have other activities going on and so it would be harder for us to all work on our project at the same time. I usually prefer just the messaging feature in the channel, it's an easy method to get in contact with each other and it makes it easier to finish tasks without having to call each time.

**What issues do you normally encounter when using this communication tool?**
I'm not too big of a fan of the activities section where they show all the recent changes in all your different teams. It gets quite messy and confusing. Especially when i get multiple different notifications from different teams at once

**When engaging in team activities using this tool, what difficulties or inconveniences have you encountered? How did they hinder team collaboration?**
Currently teams has an abundant of features that satisfy my experience especially in group settings. The features all aid in keeping the group working well together.

**What features would you like to see in this communication tool that would improve your experience?**
Although teams has many different features that all help with keeping groups working well together, one main thing is that even if the other members are active it is hard to tell whether they have actually viewed the posts in the channel as they could just have the tab open somewhere. Sometimes, the post may be about a smaller issue that does not necessarily require a reply in confirmation. It would be really great if there was an icon that shows the message was seen similar to the private chat feature they have.

## Analysis & Specification: User Stories

**User Story One:**
As a team member working on projects, I want to be able to see that the other members have viewed my post in the channels, so that I know my ideas have been communicated even without a reply.
**Acceptance Criteria:**
- An icon to show that the message/ post has been viewed
- The user is able to hover/click on the icon to see which member(s) has viewed message

**User Story Two:**
As a team member working on projects and a tutor, I want to plan and provide updates on tasks that I am working on in a shared space, so that my team or students can stay organised.
**Acceptance Criteria:**
- There is a drop down menu under the list of channels, which when clicked on, displays a file called 'Planning & Organisation'
- Upon opening it, the file is created and is stored with a fileId and fileName (the user can rename the file)
- Here, the user is able to create checklists, tables, charts or mind maps, as well as upload files or images
- The user can add and delete from their chosen forms of organisation
- The user is able to mark tasks as 'Complete' or 'Work in Progress' from the checklist, table or chart
- All channel members can access and edit this file

**User Story Three:**
As a team member working on projects, I want the shared whiteboard to be more easily navigated, so that during meetings the entire group is able to use the whiteboard without it getting too cluttered or messy.
**Acceptance Criteria:**
- The users in the call are able to move around a blank canvas with the arrow keys on their devices
- Users are able to save the final whiteboard as a png to the files section
- Members are able to work on the whiteboard all at once
- Members can navigate around the whiteboard individually so that they can be looking at different sections on their own screens without affecting each other

## Analysis & Specification: Use Cases

**Use Case 1 for User Story 1**
Use Case Title: See Message Views
Goal in Context: The goal is to show the user a list of members who have viewed the message.
Scope: The messaging platform.
Preconditions: The message must be sent by a member of the channel with a valid token.
Success End Condition: The user is able to view who has seen their message.

Failed End Condition: The user is unable to view who has seen their message.
Primary Actor: The user who has created the message.
Trigger: User sends message.

1. User sends message
2. If other members are in the channel or click into channel, system displays icon to show that message has been seen
3. System records which members have seen the message
4. User can hover/click on the icon to display which members have seen the message

**Use Case 2 for User Story 2**
Use Case Title: Create a Plan
Goal in Context: To create a space under the channels subsection that the user can access at any point after the channel's creation (up until it is deleted), where the user may create diagrams and attatch files to plan their project.
Scope: The plan-creating function (organisation/create).
Preconditions: There is a placeholder name ("Planning & Organisation") that appears as a subsection in the related channel's details, prompting the user to create a planning file.
Success End Condition: The user has created a planning file, with diagrams and/or other file attatchments.
Failed End Condition: The user is unable to access the Planning & Organisation subsection, or was unsuccessful in creating diagrams in the file.
Primary Actor: A member of a channel who wishes to create a file for specifically organisation-related purposes, such that all channel members can access and edit it.
Trigger: A channel member clicks on the Planning & Organisation subsection.

1. User clicks on the Planning & Organisation subsection, if they are recognised as a member of the channel
2. This opens a file, which has an associated id and name stored in the system (as fileId and fileName)
3. User can choose to change the file name - once the name is changed, the initial name is replaced by the new one in the system - after which the file is saved to the data store of the channel
4. From this point onwards, other channel members can access and edit this file
5. User adds new diagrams of their preferred type and/or file attatchments
6. The changes to the planning file is saved to the data store of the channel

## Validation

**User 1's comment:**
I like the idea of having an icon that shows who has viewed my messages and posts. It really helps when we are on a time crunch and not everyone has the time to be replying to every single post we make.

**User 2's comment:**
That represents my issues well I think. It would be cool if the organisation section was not limited to diagrams and checklists however, as I might like to add images or written annotations in digital ink as well. But as long as all my team members can also access this section, it sounds like a useful collaboration space.

# Interface Design

| Variable Name | Type |
|---|---|
| planFileId | integer |
| planFileName | string |

| Interface Design | | | |
|---|---|---|---|
| Name & Description | HTTP Method | Data Types | Exceptions |
| **message/seen**<br><br>Given a message within a channel or DM the authorised user has sent, changes the status of a message from 'sent' to 'read' when another member opens the message. | POST | Body Parameters:<br>{ messageId }<br><br>Return Type (if no error):<br>{ } | 400 Error when:<br>- the messageId is invalid<br>- all members have already seen the message (number of 'read' = number of members)<br>403 Error when:<br>- user is not a member of the channel or DM |
| **message/seen/list**<br><br>Produces a list of channel or DM members who have seen a message, which updates itself every second until every member in the channel has seen it. | GET | Query Parameters:<br>{ messageId }<br><br>Return Type (if no error):<br>{ members } | 400 Error when:<br>- the messageId is invalid<br>403 Error when<br>- user is not a member of the channel or DM |
| **plan/create**<br><br>Allows a user who is a member of a channel or DM to access the Planning & Organisation subsection and create a diagram (a table, flowchart, checklist etc), attach a file or upload an image. | POST | Body Parameters:<br>{ channelId, fileName, data }<br><br>Return Type (if no error):<br>{ fileName, fileId } | 400 Error when:<br>- the channelId is invalid<br>- fileName is shorter than 1 character or greater than 100 characters<br>403 Error when:<br>- user is not a member of the channel |

# Conceptual Modelling: State Diagram

## State Diagram: Use Case 1

User (who is a member) sends message → Updated channel screen with newly sent message → [Message read by a member] → "Read" icon appears → [User clicks on icon] → List of channel members who have viewed the message