

## [Requirements] Elicitation

Person	Sinead Jolliffe	Hannah Cheah	India Jolliffe
Email	<a href="mailto:jolliffesinead@gmail.com">jolliffesinead@gmail.com</a>	<a href="mailto:hla.cheah@gmail.com">hla.cheah@gmail.com</a>	<a href="mailto:indiajolliffe21@gmail.com">indiajolliffe21@gmail.com</a>
What teamwork messaging / productivity applications do you currently use for university?	Moodle Forum Teams Google Docs / Sheets	Moodle forum Blackboard Collaborate Messenger chats	Messenger chat
What frustrations do you have with current messaging platforms?	Teams was methodical, could have less steps to get where you wanted to go.	Moodle forum – signs out after very quick period of inactivity. Blackboard crashes unexpectedly.	People have the option to not respond, people often don't respond.
What features could be added to your messaging platform to make it easier to communicate with other people?	Teams – hard to communicate, comments aren't specific to where it is.	Moodle can't do mini group chats	Something like messenger already has pretty much all the features you'd need
What features could be added to your messaging platform to help you to be more organised and productive throughout a project?	Meetings should have chat icons by themselves. Want to have all the video platforms integrated. Having important features like the chat should be separate and easily accessible during a meeting.	Add checkbox lists for tasks to do – lists to tick off stuff when you've completed tasks. Similar thing is missing from messenger Alarm reminder alerts – notifications – plug in deadlines and it will send reminders without people manually sending reminder messages	Calendar – notifications in the chat about upcoming events such as deadlines. Set how often reminders are sent.
What features could be added to your messaging platform that would let you collaborate easier with team members?	Voice recordings. Difficult to upload, need to transfer to multiple places multiple times when sharing files around.	Integrations with Google Docs (live editing), possibly word online.	Inbuilt Google Docs like interface? Have easy access to particular types of data like links, photos etc without needing to scroll through message history. Inbuilt tables and other excel / word like features in the chat.

## [Requirements] Analysis & Specification - Use Cases

User story for Sinead Jolliffe.

As a first-year university student, I want to be able to communicate and collaborate with other group members easily so I can work efficiently without getting too overwhelmed.

Acceptance criteria:

- Important information and core messaging functionality is easy to find and navigate to from anywhere in the application.
- Variety of communication options including existing Microsoft Teams functionality, with extras such as voice messages.
- Can reply directly to other messages.
- Have a simple way to share files with other group members.

#### User story for Hannah Cheah

As a second-year university student who is frustrated by inefficiencies like crashes and sign-outs, I want to communicate and work with other group members while staying organised and efficient so I can finish university work faster.

#### Acceptance criteria:

- Stays signed in for a long time to prevent logouts interrupting productivity.
- Reliable, the messaging platform does not crash.
- Standard Microsoft Teams feature set with additional extra features such as deadline notifications and checklist for tasks to complete.
- Integration with other team collaboration applications such as Google Docs or Microsoft Word
- Ability to create smaller groups.

#### User story for India:

As a third-year university student, I want the people in my group to know what is happening and be incentivised to communicate well and stay on track during a project, so assignments can be finished without too much stress.

#### Acceptance Criteria:

- Notifications that get the attention of the user.
- Calendar function / integration to schedule notifications for deadlines.
- Easy access to different types of information sent in messages, different sections for sent images, links.
- Functionality to integrate with productivity applications like Google Docs and Microsoft Word

#### **[Requirements] Validation**

##### Comment from Sinead:

"I think that's an accurate representation of my issues and how to fix them. If all that existed in Teams then it would make my life a bit easier."

##### Comment from Hannah:

"Ahh yeah, that matches what I said earlier. Those features fit with the ones I suggested, that would help with my assignments if it works out as promised."

##### Comment from India:

"Checks out. The biggest problem with the platform is still going to be people not wanting to contribute and intentionally ignoring the work, but this looks like it could at help a bit."

## [Design] Interface Design

Name, Description	HTTP Method	Data Types	Exceptions
notification/recurringChannelReminder  Given a date and a time, sends a recurring notification to everyone in the channel leading up to a particular date with a set frequency.	POST	Parameters: {token, channel_ID, date, time, frequency, content} Return Type: { reminder_ID }	InputError when: <ul style="list-style-type: none"> <li>Invalid channel ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the channel</li> </ul>
notification/recurringDMReminder  Given a date and a time, sends a recurring motivation to everyone in the channel leading up to a particular date with a set frequency.	POST	Parameters: {token, dm_ID, date, time, frequency, content} Return Type: { reminder_ID }	InputError when: <ul style="list-style-type: none"> <li>Invalid channel ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the DM</li> </ul>
notification/removeReminder  Given a reminder ID, removes the reminder	DELETE	Parameters: {token, reminder_ID} Return Type: { }	InputError when: <ul style="list-style-type: none"> <li>Invalid reminder ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>Reminder is not accessible to the user</li> </ul>
document/createDocChannel  Hooks into the Google Docs API to create a new shared Google Doc with access to everyone in the channel.	POST	Parameters: {token, channel_ID} Return Type: { doc_link }	InputError when: <ul style="list-style-type: none"> <li>Invalid Channel ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the channel</li> </ul>
document/createDocDM  Hooks into the Google Docs API to create a new shared Google Doc with access to everyone in the DM.	POST	Parameters: {token, dm_ID} Return Type: { doc_link }	InputError when: <ul style="list-style-type: none"> <li>Invalid DM ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the DM</li> </ul>
search/filesChannel  Returns all files in the channel (Front-end can play voice files directly)	GET	Parameters: {token, channel_ID} Return Type: { files }	InputError when: <ul style="list-style-type: none"> <li>Invalid channel ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the channel</li> </ul>
search/filesDM  Returns all files in a DM (Front-end can play voice files directly)	GET	Parameters: {token, dm_ID} Return Type: { files }	InputError when: <ul style="list-style-type: none"> <li>Invalid DM ID</li> </ul> AccessError when:

			<ul style="list-style-type: none"> <li>User is not a member of the DM</li> </ul>
search/imagesChannel  Returns all images in a channel	GET	Parameters: {token, channel_ID} Return Type: { images }	InputError when: <ul style="list-style-type: none"> <li>Invalid channel ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the channel</li> </ul>
search/imagesDM  Returns all images in a DM	GET	Parameters: {token, dm_ID} Return Type: { images }	InputError when: <ul style="list-style-type: none"> <li>Invalid DM ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the DM</li> </ul>
messages/checklistChannel  Creates new checklist in a channel	POST	Parameters: {token, channel_ID, items[ ]} Return Type: { checklist_id }	InputError when: <ul style="list-style-type: none"> <li>Invalid channel ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the channel</li> </ul>
messages/checklistDM  Creates a new checklist in a DM	POST	Parameters: {token, dm_ID, items[ ]} Return Type: { checklist_id }	InputError when: <ul style="list-style-type: none"> <li>Invalid dm ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User is not a member of the dm</li> </ul>
Messages/checklistAppend  Appends a new item to a checklist	POST	Parameters: {token, checklist_ID, items[ ]} Return Type: { }	InputError when: <ul style="list-style-type: none"> <li>Invalid checklist ID</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User does not have access to the checklist</li> </ul>
Messages/checklistComplete  Ticks an item off the checklist	POST	Parameters: {token, checklist_ID, items[ ]} Return Type: { }	InputError when: <ul style="list-style-type: none"> <li>Invalid checklist ID</li> <li>Item to delete not in checklist</li> </ul> AccessError when: <ul style="list-style-type: none"> <li>User does not have access to the checklist</li> </ul>

## [Design] Conceptual Modelling (State)

Here is the state model for the added functionality to channel for user functionality. Exactly the same logic can be applied for DM cases instead of Channel.

