

COMP1531 Iteration 3: TUE13C_CACTUS [Uditha Jith, Ebubekir Clark, Tanit Pan-Anuruk, Muhammad Khalik Humar]

[Requirements] Elicitation

Note: additional edits by the authors have been added in square brackets

Questions to Ask Target Users

1. Which communication tools do you currently use or intend to use?
2. What is the biggest strength of these tools? What is your favourite feature?
3. Which feature do you use the most?
4. What would you believe to be the biggest drawback of the tool and how would you fix it?
5. How do you find the ease of communication on these tools?
6. How would you rate the accessibility of these tools?
7. How would you analyse the reliability of these tools?
8. How effective do you find these tools?
9. How easy is it to integrate these tools with other apps?
10. Can you access these tools and accounts on different devices?

Target User 1

Name: Sreejith Sreenilayam

Email: ssjith90@yahoo.com

1. Which communication tools do you currently use or intend to use?
 - I currently use Microsoft Teams for work tasks and sometimes use Microsoft Lync [Skype for Business], although it's nearly phased out now.
2. What is the biggest strength of these tools?
 - a. I like the overall performance and reliability of Microsoft Teams in facilitating communication with team members. I like how we can integrate emails with the server thread calling as well as it makes our work more streamlined.
 - I like the way Lync can be integrated with phone numbers, with it being a convenient service for video calls and supporting different devices, including both Android and Apple.
3. Which feature do you use the most?
 - The meeting features of Lync and the general conversations with team members in Teams
4. What would you believe to be the biggest drawback of the tool?
 - I think Microsoft Teams sometimes lacks interactivity with other users and is quite limited on that front. I would like an option to increase this and also allow for more feedback among the team.
 - Lync has performance issues as it can be easily stuck if there are too many people [more than 50] in a meeting, and improving the connectivity would be a good step.

5. How do you find the ease of communication on these tools?
 - Both are fairly easy to communicate with, besides the performance issues of Lync. I did think Lync offered a better quality call than Teams, but there's no big difference. That being said, I didn't find Lync that effective for team communication with it better for one to one communication such as voiceovers.
6. How would you rate the accessibility of these tools?
 - Both were implemented using a company laptop so I'm not sure about the prices [Microsoft Teams's Business Standard package costs \$17.20 per month: <https://www.microsoft.com/en-au/microsoft-teams/compare-microsoft-teams-options>]. But they were both simple enough to use.
7. How would you analyse the reliability of these tools?
 - Both were able to function for a long time [over the course of years] without any major issues. Besides being easily stuck, I thought Lync was quite reliable but had no concerns with Teams.
8. How effective do you find these tools and how would you improve it?
 - Both were effective for communicating with teams without any major delays in normal situations, with each member receiving the necessary notifications.
9. How easy is it to integrate these tools with other apps?
 - Both were easy to integrate with Microsoft Office tools, especially Outlook which is what I primarily used.
10. Can you access these tools and accounts on different devices?
 - I think so [yes, it is possible], but I primarily used it on my work monitor. I did get Teams on my phone [This feature works for both Android and iPhone].

Target User 2

Name: Resmi Jith

Email: resmijith@gmail.com

1. Which communication tools do you currently use or intend to use?
 - I use Slack primarily and use Zoom for team calls
2. What is the biggest strength of these tools?
 - I like how both these tools are reasonably priced and have a high quality of performance. Zoom is very effective for video calling over the pandemic. It's quite easy to call overseas teammates, friends and family using Wifi calling, as that's integral to our meetings.
 - Comparatively, Slack is really easy to share files and screenshots, with it easy to comment on a particular file and offer feedback without making the thread too busy.
3. Which feature do you use the most?
 - Zoom- video calling
 - Slack: channels for communicating

4. What would you believe to be the biggest drawback of the tool?
 - Zoom doesn't really have a platform to have more detailed conversations, however, I don't think that it was the developer's main agenda with the tool. For example, you can't really send a file as an attachment and have a place to comment on this efficiently.
 - With Slack, I don't always get the notifications all the time, despite them being turned on.
5. How do you find the ease of communication on these tools?
 - a. I find these platforms to be really effective communicators, despite their differing roles [Slack was noted to be more of a workspace, while Zoom is more of a video calling service]. If I had to complain, I would like to combine some of the features of both applications as Zoom could possibly benefit by having a better way to send attachments in the middle of a meeting as we often have to send it through Slack instead.
6. How would you rate the accessibility of these tools?
 - a. These platforms are easy to navigate, requiring little instructions when first using it.
7. How would you analyse the reliability of these tools?
 - a. I've had no problems with the functioning of either app and neither have any members in any teams I have worked in. They are also frequently updated when any problems do rise.
8. How effective do you find these tools and how would you improve it?
 - a. I've been using the free version of Slack and the Pro version of Zoom and both are working well. They are easily integrated into the team environment and am able to do their required tasks.
 - b. A tool that could make it more efficient is through using reminders so the team all are informed about meetings and can quickly join.
9. How easy is it to integrate these tools with other apps?
 - Our work integrates Zoom and Slack together in an efficient manner and the process is quite understandable.
10. Can you access these tools and accounts on different devices?
 - a. Yes it is possible to use the same accounts on my mobile and desktop. It might be nice if they could be integrated with a phone number instead of an account possibly, although I understand the advantage of a wifi-call.

[Requirements] Analysis & Specification - Use Cases

User Stories and User Acceptance Criteria

1. As a user, I would like reminders across the messaging platforms to ensure our team is productive.
 - a. There will be an option on the platform side to start a reminder.
 - b. Users can click on this tool and then will be directed to choose a channel they want to send a reminder to.
 - i. They will also have the option of sending it to all channels they are a member of
 - c. After clicking the channel, they will have to type the message they would like to send as a reminder.
 - d. They can also schedule the reminder message to be sent out at a particular time.
 - e. However, this time will have to be in the future.
 - f. The message will not be able to be longer than 1000 characters in length.
 - g. The channel they choose must be both valid and a channel they are a member of.
2. As a user of multiple tools, I would want my apps to be integrated with commonly accessed platforms and devices to allow for streamlined usage.
 - a. The platform will have an option on the side menu to add other applications.
 - b. The user can click on this feature to see a list of applications that can be integrated.
 - c. The user can click on one of these applications.
 - d. The integration of the application will be started once the user clicks on the tool they wish to employ.
 - e. The user can employ as many applications as they desire as long as it has been added to the list of tools.
3. As a team member, I would like my applications to use interactive tools, such as polls, to allow for maximum team engagement.
 - a. The platform will require a user to click on a channel.
 - b. Once they do, they can click on the menu to implement a poll
 - c. The poll can be given a title by the user.
 - d. The user can add questions and answer options
 - e. They will have a maximum of 1000 characters for each title and question
 - f. They will be only able to implement 10 questions to allow the app to not be overloaded.
4. As a new user, I would like my application to be easily understandable through the use of a help page so I can maximise its usage.
 - a. The side menu will have an option to click 'help page'.

- b. If the user does click this, it opens a help page containing instructions concerning common issues with the application.
 - c. This document will be divided into different sections [users, channels, channel, messages, dm, standups, admin, etc].
 - d. Each section will be displayed in a table of contents and will be linked to a hyperlink
 - e. The user will be able to access this information.
5. As a group member, I would like my application to send attachments and files effectively to minimise any delay.
 - a. In both the sending messages and DMs option, the platform will have an option to 'Attach applications'.
 - b. A user can click on this option to view their possible options: importing a file from their personal device or integrated application, such as Google Docs.
 - c. Once they select an option from the above, they can click their desired file.
 - d. They will be asked if they are sure about sending it.
 - e. If they click yes, they will be able to send this file across.
 - i. Otherwise, this process will cancel itself.
 - f. There will be a limit on sending files over 5MB to allow for fast usage of the application.
6. As a user, I would like high performance video calls as it allows us to easily communicate, maintain efficiency and gain a connection with other members of the team.
 - a. A user can click on either the messages or DM section.
 - b. Both sections will have a clickable option to start a video call.
 - c. Once the user clicks start, other members can also join the call
 - d. They will have had an option to turn on their cameras and microphone
 - e. There is no maximum length for a phone call.
7. As a user, I would like my application to be affordable so it is accessible to all members.
 - a. The app will be free to use for all members

Use Case

Use Case 1

- Use Case: Send Reminders
- Goal in Context: As they are busy individuals, team members need to be prompted about certain repeating tasks, which can be done through as a reminder message.
- Scope: channel, reminder message
- Level: Primary task
- Preconditions: the user, who will be passing in their token, will be a member of the valid channel.
- Success End Conditions: The user will be able to create and send the reminder at whichever time they have set

- Failed End Condition: The user will not be able to deploy a reminder message and inform their team members about their issue
- Trigger: The customer inserts their token, channel id they wish to send a message in, the message and the time that the reminder will be sent out

Main Success Scenario

1. The user registers an account in the Dreams application, entering in their first and last name, email and password.
2. They then log into the application using the password and login details
3. The user can pass in their channel name and is_public detail to create a channel
4. On the side of the Dreams frontend, they will have a clickable option to create a reminder.
5. The user passes in their token, the channel_id of the created channel, a reminder message and time of the reminder.
6. The create reminder feature checks with the inputted data whether the token is valid.
7. The create reminder feature verifies the token as belonging to the current user.
8. This application also checks with the data frame whether the channel_id belongs to a valid channel, which has been created, and checks that the user is a channel member.
9. The message will be sent to the create reminder feature to check whether it is less than 1000 characters. If successful, it will be passed back.
10. The time of the reminder will also be checked to ensure it is in the future.
11. The application will then store the reminder, returning the id of the reminder to the user.
12. The application will wait until the inputted time has occurred.
13. At the correct time, this will be posted to the channel

Use Case 2

- Use Case: Create a Poll
- Goal in Context: To gauge the opinions of all team members and enhance interactivity, polls can be posted in channels and answered by the team
- Scope: channel, poll
- Level: Primary task
- Preconditions: the token will be authorised; the token will belong to a user who is a member of this valid channel
- Success End Conditions: The user can create a poll in the channel, which they and other users can respond to successfully
- Failed End Condition: The user cannot create a poll and is more limited in developing a team culture
- Trigger: The customer inserts their token, the channel id that they wish to create a poll in and the questions and options of the poll.

Main Success Scenario

1. The Dreams application asks the user to register an account
2. The user enters their first and last name, email and password.
3. They then log into the application using the password and login details
4. They should next create a channel, passing in a channel name and whether it is public or not.
5. They can then click onto the Poll feature on the side bar, which gives them the option to send a poll to a channel;.
6. The user will now use as arguments their token, their channel_id, the poll title, questions and options, and the closing time of the poll.
7. The application will check if their token has been authorised by the application and belongs to the current user.
8. The application also checks whether the channel id is valid and that the user is a member of the channel. Like the above details, this will be passed back.
9. The poll title, questions and options are all checked to make sure they do not exceed the character limit of 1000 characters.
10. The poll will be deployed onto the channel.
11. Other users can fill in the details of the poll, as per the options
12. The poll will close once the closing time has elapsed.
13. The results of the poll will be returned

[Requirements] Validation

User 1:

Yes, I think these ideas in the three sections will be able to mitigate the main issues of each respective tool. I especially liked the suggestion to implement interactive polls and feel like this will be able to raise the team's interest in a particular idea and maintain accountability regarding engagement. Implementing file sending is positive as it is a common part of most applications in enhancing the team dynamic and it is important that people are able to share their ideas and work in a common hub. I think Microsoft Teams does a decent job at doing that and it is not the main focus of my issues, but it is always nice for these files to be accessible afterwards as you have described.

User 2:

I like all of the ideas in the use stories and application criteria and feel as though they will benefit the overall flow between different tools by integrating Slack's channel feature and application sending in a platform like Zoom. This will be able to solve many of the problems I am currently facing and make the tool more streamlined and functional. The detailed user case is also something that would be necessary in such a tool.

[Design] Interface Design

Problem 1: Making the Application More Interactive

Name and Description	HTTP Method	Data	Exceptions
<p>poll/create/v1</p> <p>An authorised user can create a poll in a particular channel. This will take in the user's token, the channel_id they wish to deploy, the questions and options the user has to choose from, and the closing time of the poll. This returns the unique id of the particular poll</p>	POST	<p>Parameters: {token, channel_id, title, [questions, options], finish_time}</p> <p>Return {poll_id}</p>	<p>Input Error:</p> <ul style="list-style-type: none">- The channel_id does not belong to a valid channel.- The title is more than 1000 characters- Any of the questions or options are more than 1000 characters- The finishing time of the poll is not in the future- There are more than 10 questions in the poll <p>AccessError:</p> <ul style="list-style-type: none">- The token does not belong to a valid user- The user is not a member of the channel
<p>poll/get/v1</p> <p>With the arguments of a token, channel_id and poll_id, the poll can be deployed to a particular channel, showing the questions and options. This returns a dictionary showing each of the questions, their ids and their respective options.</p>	GET	<p>Parameters: {token, channel_id, poll_id}</p> <p>Return {poll_questions_options}</p>	<p>Input Error:</p> <ul style="list-style-type: none">- The channel_id does not belong to a valid channel.- The title is more than 1000 characters- The poll_id is invalid and does not exist in the channel <p>AccessError:</p> <ul style="list-style-type: none">- The token does not belong to a valid user
<p>poll/answer/v1</p> <p>The user passes in their token, the poll_id of the</p>	POST	<p>Parameters: {token, poll_id, [{question_id: answers}]}</p>	<p>Input Error:</p> <ul style="list-style-type: none">- The channel_id does not belong to a valid channel.

poll they wish to add questions to, and a list containing dictionaries, with the key value being an ID and value being the answer. If this has been successfully deployed,		Return {is_success}	<ul style="list-style-type: none"> - The title is more than 1000 characters - The poll_id is invalid <p>AccessError:</p> <ul style="list-style-type: none"> - The token does not belong to a valid user
poll/result/v1 Inputting in the user's token and poll_id, this return a list containing a dictionary with each question_id and answer	GET	Parameters: {token, poll_id} Return [{question_id, answers}]	<p>Input Error:</p> <ul style="list-style-type: none"> - The channel_id does not belong to a valid channel. - The poll_id is invalid <p>AccessError:</p> <ul style="list-style-type: none"> - The token does not belong to a valid user

Problem 2: Increasing the Application's Productivity

Name and Description	HTTP Method	Data	Exceptions
reminder/create Given the token, channel_id, reminder_message and time of deployment, the application creates and stores a reminder. This returns to the user a unique reminder_id.	POST	Parameters: {token, channel_id, message, send_time} Return reminder_id	<p>Input Error:</p> <ul style="list-style-type: none"> - The channel_id does not belong to a valid channel. - The message is more than 1000 characters - The time of the reminder is not in the future <p>AccessError:</p> <ul style="list-style-type: none"> - The token does not belong to a valid user - The user is not a member of the channel
reminder/publish This function publishes the reminder as a message in the channel, having had passed the	GET	Parameters: {token, channel_id} Return { message, timestamp}	<p>Input Error:</p> <ul style="list-style-type: none"> - The channel_id does not belong to a valid channel. <p>AccessError:</p>

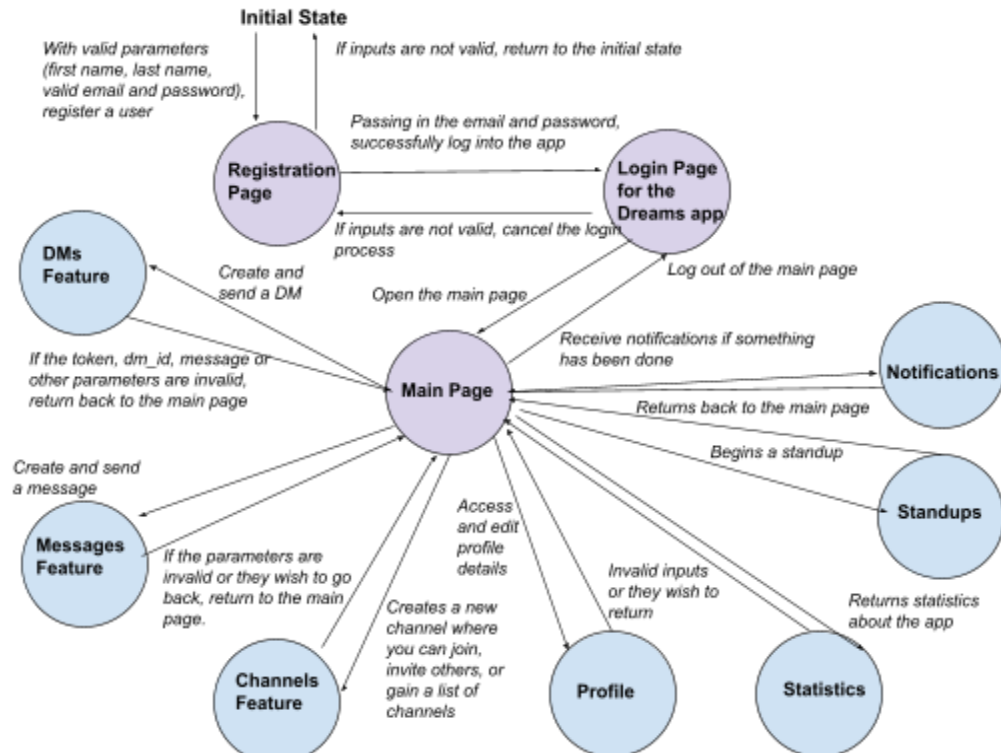
token and channel id			<ul style="list-style-type: none"> - The token does not belong to a valid user - The user is not a member of the channel
reminder/edit With the parameters of an authorised token, valid reminder_id, a new message and new send time, the user can edit a reminder message. They will be given the reminder_id of the new message.	POST [or PATCH]	Parameters: {token, reminder_id, new_message, send_time} Return {reminder_id}	Input Error: <ul style="list-style-type: none"> - The channel_id does not belong to a valid channel. - The reminder_id passed in is invalid - The new message is more than 1000 characters - The new_date of the reminder is not in the future AccessError: <ul style="list-style-type: none"> - The token does not belong to a valid user - The user is not a member of the channel
reminder/cancel With the token and reminder_id being passed in as arguments, the reminder will be deleted from the server and will not be sent out when it was first scheduled.	DELETE	Parameters: {token, reminder_id}	Input Error: <ul style="list-style-type: none"> - The reminder_id is invalid AccessError: <ul style="list-style-type: none"> - The token does not belong to a valid user - The user is not a member of the channel

Problem 3: Increasing the Application's Accessibility

Name and Description	HTTP Method	Data	Exceptions
help_page/get Having given the application a valid token, the application returns a help page with instructions	GET	Parameters: {token} Returns {help_information}	AccessError: <ul style="list-style-type: none"> - The token does not belong to a valid user

[Design] Conceptual Modelling (State)

Existing Application



New Features to Solve Problems

