

Planning for the next problems to solve

H13A_AERO

Elicitation:

Interview Questions:

1. What communications software do you use the most
2. What features do like the most about your current communication software (and how can it be improved)
3. What features do you think are lacking in your communication software?
4. If these features were implemented, why would these be useful to you?

Interview 1:

Name: Liam

Email: lburnejohnston@gmail.com

Question	Response
What communications software do you use the most	Messenger
What features do like the most about your current communication software (and how can it be improved)	I like how you can send high quality images
What features do you think are lacking in your communication software?	Too much spam. I wish there was a better spam filter
If these features were implemented, why would these be useful to you?	If this feature was implemented, I would have less spam to deal with

Interview 2:

Name: Mvirian

Email: nayirivm@gmail.com

Question	Response
What communications software do you use the most	Discord and Instagram daily, Telegram and Whatsapp occasionally, Microsoft Teams for uni purposes only
What features do like the most about your current communication software (and how can it be improved)	Discord: everything's great except I don't like that you have to pay to be able to send bigger files. Instagram: I don't like the fact that people can see whether or not you've read

	<p>the message but that's more of a personal choice. Also, it would be nice to have a desktop version so that I can chat with people on different devices. Telegram: it's great; the sticker packs are great and the customizability is pretty neat. Telegram also has a feature to let you know whether someone has read your message but I prefer how it's done on Telegram because it's a two step process. So there's one checkmark when the message has been sent and two for when it's read which I prefer bc it gives me comfort knowing that my message has been sent and didn't get lost in the void Whatsapp: I don't use much so I can't comment much on it. Seems functionally the same as Telegram.</p>
What features do you think are lacking in your communication software?	Depends on the app, but I feel some that should be in a communication software are screen sharing during video calls and ability to send files and store them somewhere for later usage.
If these features were implemented, why would these be useful to you?	<p>File sharing and storage would be useful for me as I can quickly send one or multiple people anything that is relevant to them contained in a DM or group chat relevant to the topic. It being stored then makes it easier to access if it is needed on a later date.</p> <p>Screen sharing is useful for when you are explaining something on your desktop, it makes it much easier to understand what is going on if someone can see directly what is happening on screen.</p>

Interview 3:

Name: Kevin Chung

Email: kevinchungtemporary@gmail.com

Question	Response
What communications software do you use the most	Discord, phone messaging, messenger, instagram, email, teams, slack
What features do like the most about your current communication software (and how can it be improved)	Discord: Very simple and convenient video/voice call features, could be improved with increasing screen sharing quality

What features do you think are lacking in your communication software?	Notifications don't seem to work properly for me/take up a lot of space when they do arrive
If these features were implemented, why would these be useful to you?	So I am aware of the chats but I can still do stuff on my computer bc the notification hasn't completely covered everything

Proposed Solutions:

Solutions that are already in Beans (as of iteration 3)

- Users can receive notifications
- The amount of messages sent in a channel can be sent
- It is possible to view multiple channels and DMs

Solutions not in Beans (as of iteration 3)

- There is no function to show a message is 'seen'
 - This will need to be made if we were to make an option to disable it
- No way to filter channels or DMs
- No way to skip to a specific message has been installed yet

Analysis & Specification:

Use Cases:

1) Chat filter

User Story:

As a user, I want to be able to filter out unneeded spam so it is easier to see what messages were sent to me by friends.

User Acceptance Criteria:

- Able to see messages sent by friends
- Able to prevent spam from being sent

Use cases: Chat filter: user has a filter to cut-out spam or to bring messages from specific users to the top of the chat list

Goal in context: To reduce clutter and unwanted messages

Scope: Chat notification

Preconditions: Can order the chat list to have priority chats/messages from unknown users appear in any order/appear visible

Success end condition: Can make specific chats with notifications appear in a pre-arranged order/not appear

Failed end condition: Messages from chats appear in a chaotic order or in the order of most recently sent to longest sent, and an inability to make chats invisible (or to reverse that)

Primary actor: User

Trigger: When the user selects a chat to to be prioritise

1. User enters a chat
2. User selects chat settings
3. User selects chat priority options
4. User saves settings
5. User leaves settings or app

2) Message seen disabler

User Story:

As a user, I want to be able to change whether people know I had or had not seen their comments because I feel guilty having seen the message and memes but not replying yet

User Acceptance Criteria:

- Ability to enable or disable whether the function is seen or unseen
- Ability to mark a message as seen or unseen

Use cases: Message seen disabler: user restricts if other people in the chat can see if they have viewed their messages

Goal in context: To give users privacy and reduce social pressures associated with replying to a message that has been seen

Scope: DM or group chat channel

Preconditions: Being able to see if messages are seen needs to already be a feature

Success end condition: Users can prevent others from seeing on their device if the message was seen

Failed end condition: Users cannot prevent others from knowing if they had or had not seen their messages

Primary actor: User

Trigger: When a user selects a chat to make their viewership known or unknown

1. User enters a chat
2. User selects chat notifications
3. User touches a switch to enable the feature
4. User's status on the channel will be able to see that this user has enabled the feature when they view members
5. User leaves settings or app

3) Notification viewing option

User Story:

As a user, I want my notifications to not take up the entire screen when they come in because I want to be able to read them from the start and not find it manually.

User Acceptance Criteria:

- Set the chat to either take a user to the most recent messages or to the messages they saw last time they were online
- An option when messages come in to go to the start or end of a conversation

Use cases: Notification viewing option: user decides if they see the most recent messages sent or the first messages sent after they left the group chat or DM

Goal in context: To give the user the ability to control either skip to where they initially had left the chat or to see the most recent messages

Scope: DM or group chat channel

Preconditions: Enough messages had been sent to make the start of the conversation (since the user left) and the most recent message are unable to fit on a screen

Success end condition: The user can skip to the end of a conversation or to where they left it

Failed end condition: The app sets the user to the most recent messages or the first ones since they left the conversation

Primary actor: User

Trigger: When messages flood a chat and cannot be all shown on one screen

1. The user receives enough messages to prevent the first messages since they logged on and the last from both appearing on the same screen
2. User receives notifications telling them that they have a lot of messages
3. User opens the chat
4. User gets given an option to go to the first message that was sent when they logged off or the most recent one
5. The user makes a decision
6. The user goes to the specified message

Validation:

Validation Interview Question:

1. Do you think a chat filter will help you clear clutter from spam?
2. Do you think a feature to disable others seeing that you saw their message would be useful?
3. Would you find the option of choosing where to start reading a chat from a useful feature?

Name	Comments
Liam	1. Yes. I think it will enable me to filter out spam

	2. Maybe. It might be helpful to avoid awkward situations. It might also be unhelpful, if you were worried a message wasn't going through
	3. I don't really understand what you mean by that feature. I tend to think not, usually best to just start from the start, but I'm just not sure if that is what you mean
Mviriyan	1. Yes, I think it would help with easily finding specific chats. Blocking is still better for removing messages from people you don't want to talk to entirely
	2. Yes, having the option to would be great for people like me that prefer the additional layer of privacy
	3. Yes, because then I won't have to scroll through a wall of unnecessary text to find what I need
Kevin	1. I think this is the most useful, but I didn't really understand its purpose when it was first explained
	2. I think this feature is useful, but the least useful out of the ones listed
	3. I would find this pretty useful

Interface Design:

Input for the new interface design:

Variable name	Type
Has suffix id	Number
Has prefix is	Boolean
chatNotifications	Array of message

Design for: Chat filter

Name & Description	HTTP Method	Data Types	Exceptions
user/changepriority/v1 Sets priority level of user	PUT	Body parameters: (uld, isPriority) Header parameters: (token)	400 Error <ul style="list-style-type: none"> Invalid uld isPriority is not given 'true' or 'false'

		Return if no error was found: { }	403 Error <ul style="list-style-type: none"> Invalid token
<p>channels/messages/v4</p> <p>Given a channel with ID channelId that the authorised user is a member of, returns up to 50 messages between index start and "start + 50". Message with index 0 (i.e. the first element in the returned array of messages) is the most recent message in the channel. This function returns a new index end. If there are more messages to return after this function call, end equals "start + 50". If this function has returned the least recent messages in the channel, end equals -1 to indicate that there are no more messages to load after this return. UPDATE: When isPrioritised is true returns messages array only with users that have been prioritised by user</p>	GET	<p>Query parameters: (channelId, start, isPrioritised)</p> <p>Header parameters: (token)</p> <p>Return if no error was found: { messages, start, end }</p>	<p>400 Error:</p> <ul style="list-style-type: none"> channelId does not refer to a valid channel start is greater than the total number of messages in the channel <p>403 Error:</p> <ul style="list-style-type: none"> channelId is valid and the authorised user is not a member of the channel Invalid
<p>dm/messages/v3</p> <p>Given a DM with ID dmId that the authorised user is a member of, returns up to 50 messages between index start and "start + 50". Message with index 0 (i.e. the first element in the returned array of messages) is the most recent message in the DM. This function returns a new index end. If there are more messages to return after this function call, end equals "start + 50". If</p>	GET	<p>Query parameters: (dmId, start, isPrioritised)</p> <p>Header parameters: (token)</p> <p>Return if no error was found: { messages, start, end }</p>	<p>400 Error</p> <ul style="list-style-type: none"> dmId does not refer to a valid DM start is greater than the total number of messages in the channel <p>403 Error</p>

<p>this function has returned the least recent messages in the DM, end equals -1 to indicate that there are no more messages to load after this return. UPDATE: When isPrioritised is true returns messages array only with users that have been prioritised by user</p>			<ul style="list-style-type: none"> • dmId is valid and the authorised user is not a member of the DM • Invalid token
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Design for: Message seen disabler

Name & Description	HTTP Method	Data Types	Exceptions
<p>messages/seen/sender</p> <p>Allows users to know when the user who received the message has seen it</p>	GET	<p>Query parameters: (messageId)</p> <p>Header parameters: { token }</p> <p>Return if no error was found: { isViewed }</p>	<p>400 Error</p> <ul style="list-style-type: none"> • Invalid messageId <p>403 Error</p> <ul style="list-style-type: none"> • The user is not in the channel/dm with the corresponding message • Invalid token
<p>messages/seen/receiver</p> <p>Updates the message to be seen</p>	PUT	<p>Query parameters: (messageId)</p> <p>Header parameters: { token }</p> <p>Return if no error was found: { }</p>	<p>400 Error</p> <ul style="list-style-type: none"> • Invalid messageId <p>403 Error</p> <ul style="list-style-type: none"> • The user is not in the channel/dm with the corresponding message • Invalid token
<p>channel/messages/seen/disable/v1</p> <p>Allows the user to turn off or on the messages/seen feature for a specific channel</p>	PUT	<p>Body parameters: (channelId, isDisabled)</p> <p>Header parameters: { token }</p> <p>Return if no error was found: { }</p>	<p>400 Error</p> <ul style="list-style-type: none"> • Invalid channelId • The function isDisabled is trying to set it to its current setting <p>403 Error</p> <ul style="list-style-type: none"> • The user is not in the channel with

			the corresponding message <ul style="list-style-type: none"> Invalid token
dm/messages/seen/disable/v1 Allows the user to turn off or on the messages/seen feature for a specific channel	PUT	Body parameters: (dmId, isDisabled) Header parameters: (token) Return if no error was found: {}	400 Error <ul style="list-style-type: none"> Invalid dmId The function isDisabled is trying to set it to its current setting 403 Error <ul style="list-style-type: none"> The user is not in the DM with the corresponding message Invalid token

Design for: Notification viewing option

Name & Description	HTTP Method	Data Types	Exceptions
channel/messages/v4 Given a channel with ID channelId that the authorised user is a member of, returns up to 50 messages between index start and "start + 50". Message with index 0 (i.e. the first element in the returned array of messages) is the most recent message in the channel. This function returns a new index end. If there are more messages to return after this function call, end equals "start + 50". If this function has returned the least recent messages in the channel, end equals -1 to indicate that there are no more messages to load after this return. UPDATE: if isViewingRecent is true,	GET	Query parameters: (channelId, start, isViewingRecent) Header parameters: (token) Return if no error was found: { messages, start, end }	400 Error <ul style="list-style-type: none"> Invalid channelId 403 Error <ul style="list-style-type: none"> The user is in the channel with the corresponding message is unauthorised Invalid token

start is now where the user left off.			
<p>dm/messages/v3</p> <p>Given a DM with ID dmId that the authorised user is a member of, returns up to 50 messages between index start and "start + 50". Message with index 0 (i.e. the first element in the returned array of messages) is the most recent message in the DM. This function returns a new index end. If there are more messages to return after this function call, end equals "start + 50". If this function has returned the least recent messages in the DM, end equals -1 to indicate that there are no more messages to load after this return. UPDATE: if isViewingRecent is true, start is now where the user left off.</p>	GET	<p>Query parameters: (dmId, start, isViewingRecent)</p> <p>Header parameters: (token)</p> <p>Return if no error was found: { messages, start, end }</p>	<p>400 Error:</p> <ul style="list-style-type: none"> dmId does not refer to a valid DM start is greater than the total number of messages in the channel <p>403 Error:</p> <ul style="list-style-type: none"> dmId is valid and the authorised user is not a member of the DM Invalid token
<p>channel/notification/ask/v1</p> <p>Asks the user if they want to see the latest message or the first message to be sent since they later viewed the channel. isFull is when too many messages have been received from channel to display</p>	PUT	<p>Body parameters: (channelId)</p> <p>Header parameters: (token)</p> <p>Return if no error was found: { isViewingRecent }</p>	<p>400 Error</p> <ul style="list-style-type: none"> Invalid channelId <p>403 Error</p> <ul style="list-style-type: none"> The user is in the channel or DM with the corresponding message is unauthorised Invalid token
<p>dml/notification/ask/v1</p> <p>Asks the user if they want to see the latest message or the first message to be sent since they last viewed the DM. isFull is when too many messages have</p>	PUT	<p>Body parameters: (dmId, isFull)</p> <p>Header parameters: (token)</p> <p>Return if no error was found:</p>	<p>400 Error</p> <ul style="list-style-type: none"> Invalid dmId <p>403 Error</p> <ul style="list-style-type: none"> The user is in the channel or DM with the

been received from the DM to display.		{ isViewingRecent }	corresponding message is unauthorised <ul style="list-style-type: none"> Invalid token
user/channel/notification/v1 For a given channel retrieves user's notifications and messages	GET	Body parameters: (channelId) Header parameters: (token) Return if no error was found: { chatNotifications, isFull }	400 Error <ul style="list-style-type: none"> Invalid channelId 403 Error <ul style="list-style-type: none"> Invalid token
user/dm/notification/v1 For a given DM retrieves user's notifications and messages	GET	Body parameters: (dmId) Header parameters: (token) Return if no error was found: { chatNotifications, isFull }	400 Error <ul style="list-style-type: none"> Invalid dmId 403 Error <ul style="list-style-type: none"> Invalid token

Conceptual Modelling - State Diagrams:

Diagram for spam/message filtering

