Planning for Future Problems

Major Project: Iteration 3 — Documentation

Wednesday 'Grape' Group 4

2020, T3

Group members:

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1. Requirements

1.1 Elicitation

Interview Questions:
- What platform(s) do you currently use to communicate online, through messages, voice and/or video?
- What is the primary purpose for which you use the platform(s) for?
- Which platform do you like the best to use, and which do you like the least (and why)?
- What is the most important thing for you when deciding which platform to use to communicate?
- Do you find the program(s) easy to use, interact with and understand?
- Which feature on the program(s) do you use the most?
- If you could add or change one thing in a platform you use, what would it be?

Target user 1: Jack Hibbard — jackhibbard9922@gmail.com

What platform(s) do you currently use to communicate online, through messages, voice and/or video?
Messenger, Discord, Zoom, Whatsapp and Instagram

What is the primary purpose for which you use the platforms for?
Communicating with friends, and Zoom for video calls for uni.

Which platform do you like the best to use, and which do you like the least?
I really enjoy using discord and messenger, whatsapp is right down there with apps I do not like.

Could you elaborate more on what you dislike about Whatsapp?
It is unintuitive in its communication method, the telephone numbers system doesn't really work the way I feel it should. Additionally, it lacks some of the great features of messenger and discord, and has some extra annoying ones.
Whatsapp doesnt let you view media such as images without downloading them, which clogs up my gallery on my phone with things I only wanted to see once. Whatsapp lacks any polling system, nicknames and is all around less aesthetic than its competitor, messenger. For an app that im using all day, I want it to look good
It is also tied to your phone contacts, which isn't great for a group messaging platform where you could be interacting with people you may only need to see a few times and dont need in your contacts.

What is the most important thing for you when deciding which platform to use to communicate?
For me, it is mostly surrounding the people who are using it. Some people don't have Facebook for example and therefore need to use Whatsapp, so I will go there. But the user experience (aesthetics and ease of use) are prime in my eyes.

Regarding discord and messenger, do you find them easy to use, interact with and understand?

Yeah for sure, all the systems are intuitive to me, and the extra features are never far away.

On discord, what feature do you use most?

The @everyone feature, which mentions every in the channel, followed closely by the bots. The bots allow you to play music and unlock a whole load of fun ways to use discord. But it is mostly a voice communication method for me, when I'm playing games.

If you could add or change one thing in either discord or messenger (or both), what would it be?

I would want to add discord's global mention (@everyone) to messenger and messenger's polls to discord.

What feedback do you have on this implementation of a Flockr app?

(Conversation and ideas paraphrased for sake of an efficient response)

Jack's main feedback for the app was aesthetic based. He mentioned that he would like a dark mode, and "a more robust searching system cuz i can see this getting cluttered quickly". He would also like the ability to add channel pictures, have the members list as a side bar, rather than at the top, and smaller profile pictures in order to fit more messages on the page. He didn't have any issues with the functionality of the app, saying that "other than a lack in some of the functionality offered by the programs on the market this looks pretty good." These features include image sharing (which is being implemented), tagging and polls (both of which we will plan to accommodate).

User story: As a uni student, Jack wants to communicate with his friends and colleagues to organise and work efficiently and simply.

Acceptance criteria (poll):

- **Scenario:** Create a poll
- **Given:** The user is in a channel they can send a message to
- **When:** The user selects the poll option
- **Then:** The poll interface is opened for the poll to be created
- **When:** The poll options are input
- **And:** The poll is sent
- **Then:** The message containing the poll is sent
- **Given:** The poll is sent correctly
- **When:** Another user opens and responds to the poll
- **Then:** The poll is updated to include the new response

Acceptance criteria (tagging):

- **Scenario:** Tagging another user
- **Given:** The user can send a message to the channel
- **When:** A message is sent, containing a tag in the form @user
- **Then:** A notification is sent to the tagged user

Target user 2: Kainat Chaudhry — kainat.c@hotmail.com

What platform(s) do you currently use to communicate online, through messages, voice and/or video?
Instagram, Snapchat, iMessage/text messages, Messenger, Whatsapp and Zoom.

What is the primary purpose for which you use the platforms for?
Mostly talking to friends and family, and Zoom for uni.

Which platform do you like the best to use, and which do you like the least? Why?
I like and use iMessage the most because it doesn't reduce the quality of photos and videos sent as much as other apps do. You can also customise the way messages and voice messages are sent like screen effects and Memojii. Whatsapp is my least favourite because I don't use it much. It reduces the quality of photos and videos. It's also the least aesthetically pleasing compared to the other apps I use.

What is the most important thing for you when deciding which platform to use to communicate?
It depends on what I am using it for. If I want to talk to my friends, the app should be able to send messages and voice messages. If I want to send photos and videos, the app shouldn't reduce the quality too much.
For uni and educational purposes, being able to share my screen is probably the most important.
In general, the most important thing is having a lot of features like customising messages and chats, polling, tagging people. It shouldn't be too simple, I mean *only* being able to send messages.

Do you find the program(s) easy to use, interact with and understand?
Yes, all the programs are easy to use.

Which feature on the program(s) do you use the most?
Apart from actually messaging, I use the message react feature the most. It's helpful when the message doesn't need an actual reply.

If you could add or change one thing in a platform you use, what would it be?
I would add the ability to delete or unsend a message for everyone on iMessage, not just myself and also being able to reply to a specific message. I would change that a 'you deleted a message' message doesn't appear when you delete a message on Snapchat and Messenger, like Instagram does.

User story: As a user, Kainat wants to send, react to and delete messages and media, so she can communicate with friends and family.
Acceptance criteria:
- When a message is created, the option to add video, images or audio is available.
- When selected, the user can upload an attachment.
- The message is sent with the attachment. Quality is retained in the download.
- The message can be reacted to by other users.
- It can also be deleted by the sender for all users without leaving a receipt.

Target user 3: Kerrie Rendina — kerrierendina@gmail.com

What platform(s) do you currently use to communicate online, through messages, voice and/or video?
> WhatsApp, Messenger, Instagram, Google Classroom, Zoom, and iMessage

What is the primary purpose for which you use the platforms for?
> Professional/educational purposes: to give instructions, provide information and feedback to students. The platforms were also particularly useful this year while school-from-home was made mandatory for all students and teachers.
> Socially: to privately share stories and events with friends and family.

Which platform do you like the best to use, and which do you like the least? Why?
> I most enjoy WhatsApp for its simplicity, ease-of-use, and ability to easily create group chats to stay in contact with distant members of family. It's also free and easy to create an account.
>
> Messenger, on the other hand, is overloaded with features I won't use, and lacks privacy and security. In particular, features like polls, theme customisation and reacts add unnecessary clutter to the platform, and I know I'll never use them. I'd rather a platform which prioritizes simplicity and privacy to keep it focused on the actual conversation at hand.

What is the most important thing for you when deciding which platform to use to communicate?
> In general, privacy is most important for me. After that, simplicity and ease-of-use are key aspects I look for in both social and professional online communication tools. If a tool or platform is easy to use and understand, especially in the teaching environment, then it doesn't get in the way of teaching and helping students.

Do you find the program(s) easy to use, interact with and understand?
> Yes, but I really only use the features that I need/know how to use.

Which feature on the program(s) do you use the most?
> Other than general messaging: sharing documents, collaborative editing, integrated Google services, providing instant feedback and making suggestions for students are particularly useful features for me as a teacher.

If you could add or change one thing in a platform you use, what would it be?
> Improved security and privacy is always a number one priority, so Messenger's (and Facebook's) security/privacy methods should be improved upon. For example, cross-app tracking and a timeline which shows your recent activity to all your contacts should be updated for better privacy.

User story: As a teacher, Kerrie wants a secure, private and easy to use messaging system, to share messages, documents and feedback with her students

Acceptance criteria:
- **Scenario:** Send a document
- **Given:** The user has navigated to the channel and has the document saved to their computer
- **When:** The user selected to send attachment
- **And:** Selects the document to send
- **Then:** The system uploads the document and sends a message with it
- **Given:** The message sends successfully
- **When:** Another user selects the "download" option on the file
- **Then:** The file is downloaded to their computer

1.2 Analysis and Specifications — Use cases

Use case name: Organising an event

Actors:
- Jack, a user of Flockr
- The other team members
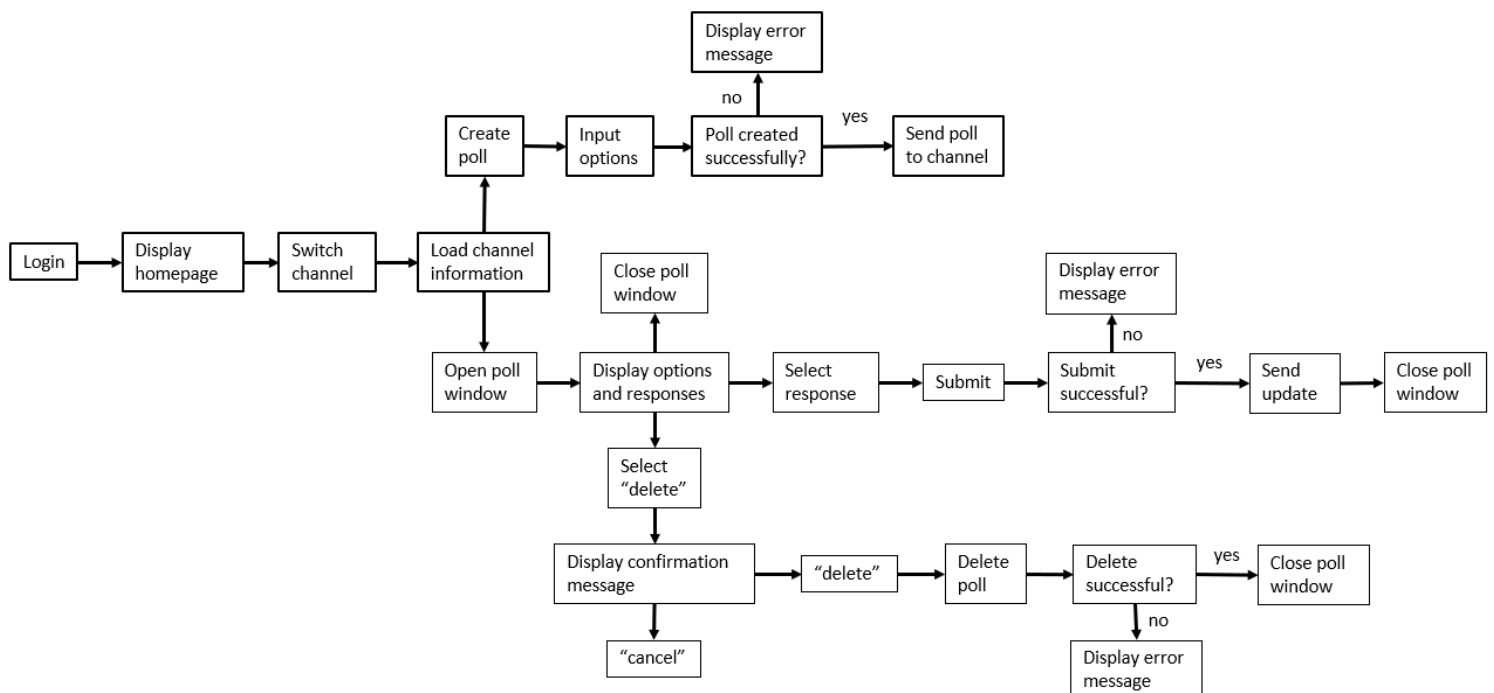- The Flockr system

Precondition: Opening the Flockr app
Postcondition: Logging off after successfully sending messages and creating a poll
Triggers: logging in → requests to create poll → requests to send messages

Main success scenario
- Jack logs in to his Flockr account and opens up a channel
  - The system displays the messages and other data in the channel
- He types and sends a message
  - The system adds the message to the channel's data
  - It displays the message to other users
- Jack creates a poll
  - The system prompts him to enter the poll options
- He adds poll options are added and sends the poll
  - The system adds the poll to the channel's data
  - The poll is displayed to other users
- Other users in the channel respond to the poll
  - Their responses are added to the poll's data
  - The poll is updated for all users

Basic flow to demonstrate usage of the polling feature:

1.3 Validation

- Target user 1 – Jack Hibbard
    - Jack confirmed that the user story and acceptance criteria accurately describe the solutions to the problems he raised.
    - "Yep, those seem right to me"

- Target user 2 – Kainat Chaudhry
    - Kainat validated that the acceptance criteria includes all the features she wanted to change in the platforms she currently uses, stating that "Yeah that solves the problems I have with iMessage".

- Target user 3 – Kerrie Rendina
    - Kerrie verified that her user story "accurately reflects" her needs, and is satisfied with the acceptance criteria provided, adding that "being able to share documents directly on a communication platform would be useful in all sorts of scenarios"

2. Design

2.1 Interface design

Function	HTTP Method	Parameters	Return Type	Exceptions	Description
poll/create	POST	(token, channel_id, poll_options)	{poll_id, message_id}	**InputError** when: - any poll option is longer than 100 characters **AccessError** when: - User not in the channel they're trying to post to	Given a list of strings (poll options), create a poll with the strings as options and send it to the channel as a message
poll/delete	DELETE	(token, poll_id)	{}	**InputError** when: - Poll or message doesn't exist **AccessError** when: - User is not the creator of the poll or owner of Flockr/channel	Delete a poll and the message that contained it
poll/respond	PUT	(token, poll_id, option)	{}	**InputError** when: - Invalid poll_id - Option not in the poll **AccessError** when: - The user isn't in the channel	Add a response to the poll
message/tag	POST	(token, message_id, user_id)	{}	**InputError** when: - Invalid message ID or user_id **AccessError** when: - sending user or tagged user not in channel	When the message containing the tag is sent, a notification is sent to the tagged user

NOTE: There is also an *AccessError* raised for each function when the token is invalid

2.2 Conceptual Modelling (State diagrams)

- States/pages
  - Login
  - Reset password
  - Home page
  - Channel
  - Poll creation
  - Poll interface
  - Attach media

- Transitions between them
  - Submit correct login information
  - Submit invalid login information
  - Select channel
  - Select "create poll"
  - Select poll
  - Select a response
  - Delete poll
  - Select "attach file"