5.3. Planning for the next problems to solve

Software development is an iterative process - we're never truly finished. As we complete the development and testing of one feature, we're often then trying to understand the requirements and needs of our users to design the next set of features in our product.

For iteration 3 you are going to produce a short report in planning.pdf and place it in the repository. The contents of this report will be a simplified approach to understanding user problems, developing requirements, and doing some early designs.

N.B. If you don't know how to produce a PDF, you can easily make one in google docs and then export to PDF.

[Requirements] Elicitation

Find 2-3 people to interview as target users. Target users are people who currently use a tool like flockr, or intend to. Collect their name and email address.

Develop a series of questions to ask these target users to understand what *problems* they might have with teamwork-driven communication tools that are currently unsolved by flockr. Give these questions to your target users and record their answers.

[Requirements] Analysis & Specification - Use Cases

Once you've elicited this information, it's time to consolidate it.

Take the responses from the elicitation and express these requirements as **User Stories**. Document these user stories. For each user story, add User Acceptance Criteria as notes so that you have a clear definition of when a story has been completed.

Once documented, generate at least one use case that attempts to tell a story of a solution that satisfies the requirements elicited. You can generate a visual diagram or a more written-recipe style, as per lectures.

[Requirements] Validation

With your completed use case work, reach out to the 2-3 people you interviewed originally and inquire as to the extent to which these use cases would adequately describe the problem they're trying to solve. Ask them for a comment on this, and record their comments in the PDF.

[Design] Interface Design

Now that we've established our *problem* (described as requirements), it's time to think about our *solution* in terms of what capabilities would be necessary. You will specify these capabilities as HTTP endpoints, similar to what is described in 6.2. There is no minimum or maximum of what is needed - it will depend on what problem you're solving.

[Design] Conceptual Modelling (State)

Now that you have a sense of the problem to solve, and what capabilities you will need to provide to solve it, add at least one state diagram to your PDF to show how the state of the application would change based on user actions. The aim of this diagram is how to a developer understand the different states the user or application.

1.0   Introduction

"Software development is an iterative process - we're never truly finished. As we complete the development and testing of one feature, we're often then trying to understand the requirements and needs of our users to design the next set of features in our product."

The following report contains an approach to understanding user problems through elicitation and analysis of those cases, developing requirements to solve such problems, and creating early designs.

Group Members of thu15grape5:

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Terence Huang, z5311419

Alex Kang, z5303604

1.1   Interview Questions

Questions used to interview target uses are separated into three categories. These being general questions, questions about the usage of other software, and questions about Flockr. To question interviewees, google forms were sent to target users, https://docs.google.com/forms/d/e/1FAIpQLSdCFwbaH3Mk7EMxfbRUw_Mqngvm5QsCj7BLgALlYbWn6GpnlQ/viewform?usp=sf_link.

   General Questions:

- Name:
- Email:
- Gender:
- Age:
- Phone Number:

- Occupation:

Questions About Other Software:

- Do you use an application to communicate with colleagues or friends currently? If so, please specify which software(s):
- If you do use a communication app, what purpose do you use it for?
    o Contacting friends
    o Video conferences
    o Work related communication
    o Other, please specify
- Overall, are you satisfied with this application's services? If not, what is an aspect of this app you would alter:
- Do you face any problems using the app on a day-to-day basis?:
- Do you feel safe when sharing personal information with this application? If not, please specify what are your concerns with this app:
- Are there any features you would like to see in this app which it currently lacks?:

Questions About Flockr:

- Do you currently use Flockr? If so, please specify how often:
- Are there any features or functions which you would like to see in Flockr?:
- On a scale of 1 - 10, would you recommend Flockr to a friend? (1 being no, and 10 being yes):

2.0   **Analysis of the First Interview**

     2.1   **Elicitation**

This user's results from the interview follows as:

General Questions:

- Name: George Arsenis
- Email: georgear9@gmail.com
- Gender: Male
- Age: N/A
- Phone Number: 0423533160
- Occupation: Student

Questions About Other Software:

- Do you use an application to communicate with colleagues or friends currently? If so, please specify which software(s): Facebook Messenger, Snapchat, Zoom
- If you do use a communication app, what purpose do you use it for?
    - **Contacting friends**
    - Video conferences
    - Work related communication
    - Other, please specify
- Overall, are you satisfied with this application's services? If not, what is an aspect of this app you would alter?: Yes I am satisfied with the services.
- Do you face any problems using the app on a day-to-day basis?: No
- Do you feel safe when sharing personal information with this application? If not, please specify what are your concerns with this app: Yes
- Are there any features you would like to see in this app which it currently lacks?: No

Questions About Flockr:

- Do you currently use Flockr? If so, please specify how often: N/A
- Are there any features or functions which you would like to see in Flockr?: N/A

- On a scale of 1 - 10, would you recommend Flockr to a friend? (1 being no, and 10 being yes): N/A

2.2   Use Cases (Analysis and Specification)

From these interview results, the following User Story was documented:

"Being a student, I want to have the ability to message my friends so that I can easily plan gatherings with them."

Acceptance criteria of the above user story:

- Messages sent by users should be received by all members within that specific channel.
- Messages sent by users should have the option to be reacted to or pinned to ease the process of communicating with one another.

Use case of the above analysis and specification:

- Use Case: Sending Gathering Plans.
- Goal in Context: Using the application, users should be to send messages to channels with the intent of organising plans.
- Scope: Text messaging programs (such as messenger).
- Level: Primary Task.
- Preconditions: The user has an authenticated account and is a part of a channel.
- Success End Condition: The user has successfully sent a message to create gathering plans.
- Failed End Condition: The user is not a part of any channels or fails to send a message as their account has not be authenticated.
- Primary Actor: User who is a member of Flockr.
- Trigger: When user activates planning message.

2.3   Validation

After receiving the interview results and developing the acceptance criteria based on the user stories, the following response was recorded by the interviewee on the criteria:

"These criteria would solve the problem of easily planning gatherings, however most messaging services do this. Having an option to poll so that everyone in the group can fill it out may work better than sending messages back and forth."

2.4   Interface Design

Function Name	HTTP Method	Parameters	Return Type	Exceptions	Description
message/plan	POST	(token, channel_id, message, time)	{message_id}	**InputError** when any of: Message is more than 1000 characters **AccessError** when: the authorised user has not joined the channel they are trying to post to	Send a message from authorised _user containing gathering details to the channel specified by channel_id

2.5   Conceptual Modelling (State)

The below diagram is a conceptual model representing the various states which are changed when calling message/plan.
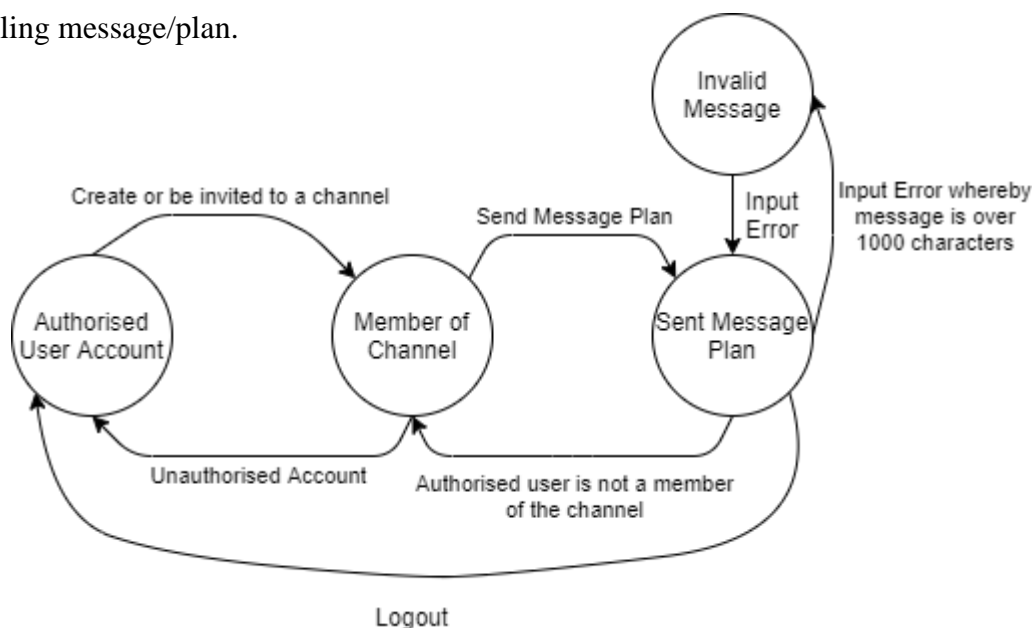
3.0   Analysis of the Second Interview

3.1   Elicitation

This user's results from the interview follows as:

General Questions:

-   Name: Maggie Guan
-   Email: ziyan.guan@student.unsw.edu.au
-   Gender: Female
-   Age: N/A
-   Phone Number: N/A
-   Occupation: Analyst

Questions About Other Software:

-   Do you use an application to communicate with colleagues or friends currently? If so, please specify which software(s): Slack
-   If you do use a communication app, what purpose do you use it for?
    -   Contacting friends
    -   Video conferences
    -   **Work related communication**
    -   Other, please specify
-   Overall, are you satisfied with this application's services? If not, what is an aspect of this app you would alter?: Yes very satisfied
-   Do you face any problems using the app on a day-to-day basis?: No major issues for commercial version. The free version only has limited storage and accessible messages
-   Do you feel safe when sharing personal information with this application? If not, please specify what are your concerns with this app: Yes, I feel that it handles sensitive information well
-   Are there any features you would like to see in this app which it currently lacks?: Message notifications across workspaces: Sometimes the notification is not on when the account is signed into a different workspace.

Questions About Flockr:

- Do you currently use Flockr? If so, please specify how often: N/A
- Are there any features or functions which you would like to see in Flockr?: All the features within Slack + Stronger interactions across workspaces
- On a scale of 1 - 10, would you recommend Flockr to a friend? (1 being no, and 10 being yes): N/A

3.2   Use Cases (Analysis and Specification)

From these interview results, the following User Story was documented:

"As an analyst, I am in constant touch with colleagues, as such I need to be notified across multiple accounts and devices when work is updated."

Acceptance criteria of the above user story:

- When messages are sent by anyone who is a part of the same channel by the user, it should create a notification on the user's devices
- Messages notifications should appear on all devices and linked accounts.

Use case of the above analysis and specification:

- Use Case: Notifications on linked accounts
- Goal in Context: Users who link accounts should receive notifications
- Scope: Text messaging programs (such as messenger).
- Level: Subfunction
- Preconditions: The user has an authenticated account, is a part of a channel, and has linked account.
- Success End Condition: The user has successfully received a notification on both accounts.
- Failed End Condition: The user does not have linked accounts to share notifications with.
- Primary Actor: User who is a member of Flockr.
- Trigger: When user activates linked account.

3.3   Validation

After receiving the interview results and developing the acceptance criteria based on the user stories, the following response was recorded by the interviewee on the criteria:

"This criteria on getting notifications across multiple devices and accounts will solve the problem of not being notified on multiple accounts. However, slack fails to notify me when I am logged into a separate workspace. This criteria would improve the interactions across devices Flockr.

3.4   Interface Design

Function Name	HTTP Method	Parameters	Return Type	Exceptions	Description
auth/link	POST	(token, email, password)	{is_success}	**InputError** when any of: Email entered is not a valid email Email entered does not belong to a user Password is not correct	Link accounts across platforms to have shared accounts whereby a single or multiple users can have access to a single account with easier access to those accounts.
auth/unlink	DELETE	(token, email, password)	{is_success}	**InputError** when any of: Email entered is not a valid email Email entered does not belong to a user	Unlinking accounts which were previously linked.

Password is not

correct

3.5   Conceptual Modelling (State)

The below diagram is a conceptual model representing the various states which are changed when calling auth/link
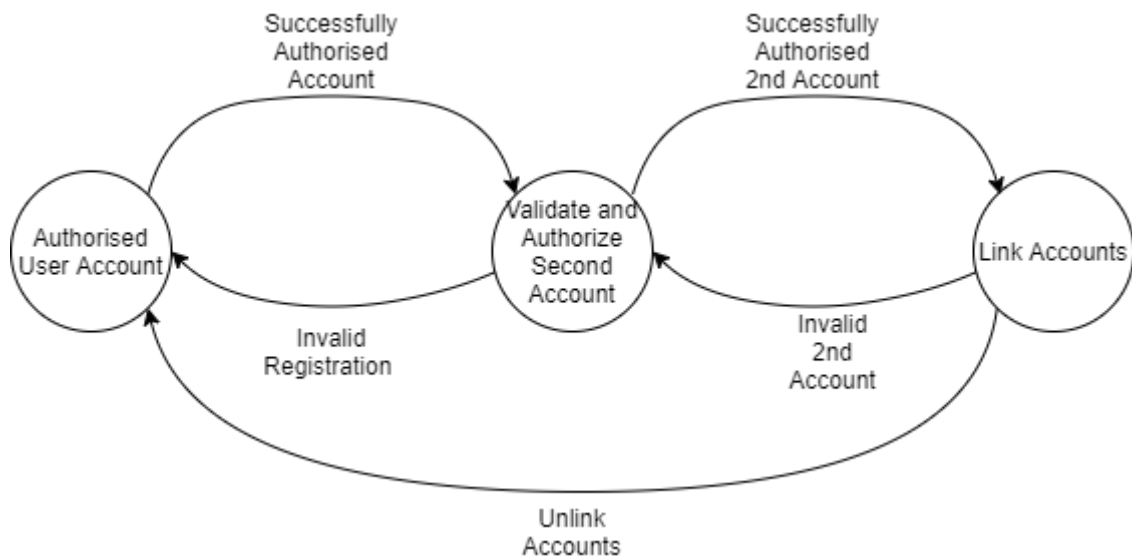
4.0   Analysis of the Final Interview

4.1   Elicitation

This user's results from the interview follows as:

General Questions:

- Name: Henry Rouke
- Email: hrouke1856@gmail.com
- Gender: Male
- Age: N/A
- Phone Number: N/A
- Occupation: Student

Questions About Other Software:

- Do you use an application to communicate with colleagues or friends currently? If so, please specify which software(s): Messenger, Snapchat
- If you do use a communication app, what purpose do you use it for?
    o **Contacting friends**
    o Video conferences
    o Work related communication
    o Other, please specify
- Overall, are you satisfied with this application's services? If not, what is an aspect of this app you would alter?: I would like to know how these companies handle my personal information

- Do you face any problems using the app on a day-to-day basis?: No
- Do you feel safe when sharing personal information with this application? If not, please specify what are your concerns with this app: No. I've experienced being hacked previously and would like to have my information be more securely held.
- Are there any features you would like to see in this app which it currently lacks?: I would like to know how these companies handle my personal information

Questions About Flockr:

- Do you currently use Flockr? If so, please specify how often: N/A
- Are there any features or functions which you would like to see in Flockr?: To have ethical and safe handling of my information and a clean design.

On a scale of 1 - 10, would you recommend Flockr to a friend? (1 being no, and 10 being yes): N/A

4.2 Use Cases (Analysis and Specification)

From these interview results, the following User Story was documented:

"As a customer, I want my personal information to be handled ethically, such that my personal details are being protected and not misused."

Acceptance criteria of the above user story:

- Personal details especially passwords should be encrypted and protected
- Personal details should not be shared with other users without permission from the owner of those details

Use case of the above analysis and specification:

- Use Case: Two Factor Authentication
- Scope: Text messaging programs (such as messenger).
- Level: Subfunction
- Preconditions: The user is registered with Flockr
- Success End Condition: The user has confirmed details for two-factor authentication
- Failed End Condition: The user does not register with Flockr or does not offer details for two-factor authentication
- Primary Actor: User who is registered with Flockr
- Trigger: When user attempts to setup two-factor authentication

4.3 Validation

After receiving the interview results and developing the acceptance criteria based on the user stories, the following response was recorded by the interviewee on the criteria:

"Using two-factor authentication would help prevent my details from being stolen. These criteria help prevent theft of details. However, it does not reassure me that information will not be used for other purposes.

4.4   Interface Design

Function Name	HTTP Method	Parameters	Return Type	Exceptions	Description
auth/authentication	POST	(token, phone_number)	{is_success}	**InputError** when any of: Phone number must include area code Phone number must contain only integers	Given a user's phone number and token, setup two-factor authentication whereby user's information is confirmed using their phone number.

4.5   Conceptual Modelling (State)

The below diagram is a conceptual model representing the various states which are changed when calling auth/authentication.