

# PLANNING

## Interview Questions:

1. **If you were using Flockr as a platform for team-based communication, what factors would you say would limit your team's ability to work efficiently?**
2. **If you were to compare Flockr against well-established applications, what would you say is the key instances where you would pick those over Flockr?**
3. **When scheduling team meetings, would you want to use Flockr or an external program? If you would not use Flockr, what could be implemented to allow for Flockr to be able to have scheduled team meetings?**
4. **Were there any other instances where certain features that weren't implemented reduced your user experience?**

## Interviewee Responses

Interviewee Name & Emails:

Interviewee 1:

Name: Sebastien Olife

Email: seb.olife07@gmail.com

Interviewee 2:

Name: Mohammed Jawad

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1. **If you were using Flockr as a platform for team-based communication, what factors would you say would limit your team's ability to work efficiently?**

Interviewee 1: "I imagine one of the main things that would limit a team's efficiency would be the fact that you could not upload any files to any of the channels. They would have to use other ways to send files across to other users which would be fairly inconvenient. Adding that feature would probably increase efficiency so that Flockr could be used to message as well as sending files around."

Interviewee 2: "One of the smaller but inconvenient things that could affect efficiency is not being able to properly reply to messages in the channels. Some channels could quickly be filled up with messages and could get hard to keep track of what was being said, and not being able to reply to people's messages would make it kind of inconvenient when someone has an inquiry or question that they needed answered."

**2. If you were to compare Flockr against well-established applications, what would you say are the key instances where you would pick those over Flockr?**

Interviewee 1: "One of the biggest things that other applications have is the ability to call and video call. This makes it so much easier to have meetings with other members and made it easier to work together with other people online in parallel without the need of having to constantly switch between one window with work and another window to chat. The ability to call would really increase productivity."

Interviewee 2: "Not being able to call, that is a pretty big one in terms of working efficiently. It just feels as though it is a much easier way of communicating with others, especially while doing work. Also not being able to direct message certain people is also a key aspect that exists in other messaging clients that is not here. In my opinion it is a pretty important feature when you need to discuss something privately with another person."

**3. When scheduling team meetings, would you want to use Flockr or an external program? If you would not use Flockr, what could be implemented to allow for Flockr to be able to have scheduled team meetings?**

Interviewee 1: "I wouldn't use Flockr to schedule team meetings, it seemed too inconvenient since all we could do is keep track in the channels. While you could pin messages, an implementation of possibly a calendar system where we can schedule things on that calendar would make it much easier to schedule team meetings on Flockr. It would act as a really nice visual way of being able to see when team meetings and other important things are scheduled on what day on the calendar."

Interviewee 2: “ Flockr could be used to schedule team meetings by using the pin feature, but a nice thing to add would probably be a calendar that you can add schedules to so you don’t have to go around every channel trying to find the pins of when the meeting will happen.”

**4. Were there any other instances of certain features that weren’t implemented that you believe would reduce a user’s experience?**

Interviewee 1: “One feature that would be pretty useful if it was implemented would be a way to check the status of users in the Flockr. It would be easier to see if specific users are online or not so we can determine if the certain user is available at a specific moment or not.”

Interviewee 2: “The only things I can think of are the features that we have mentioned before. Those are really the main things that the Flockr is missing.”

## User Story

### Epic 1: Sending files in a channel

- **User Story 1:** As a **member of a channel**, I want to **be able to send different types of files in a channel** so that **other users in the channel can access the files and download them**.
  - **Task 1:** Add the ability to send files onto channels
- **User Story 2:** As a **member of a channel**, I want to **be able to download files that have been uploaded in a channel** so that **I can view its contents and use it**.
  - **Task 2:** Allow users to download the files that are on the channels

### Epic 2: Replying to a user's message in a channel

- **User Story 1:** As a **member of a channel**, I want to **reply to another user's message** so that **other users are aware of what message I am referring to with my reply**.
  - **Task 1:** Implement a feature that allows a user to select a particular message sent by another user and reply to it.

### Epic 3: Direct messaging a user

- **User Story 1:** As a **user of Flockr**, I want to **directly message a single user** so that **I can have private discussions with that user where other people cannot see**.
  - **Task 1:** Implement a feature that allows a user to privately message other users of Flockr (one on one discussion).

### Epic 4: Changing member status

- **User Story 1:** As a **user of Flockr**, I want to **be able to see the status of all the members, whether they are online, offline, busy, or away** so that **I can determine whether or not it is a good time to have a discussion**.
  - **Task 1:** Add the ability for users to set their status.
- **User Story 2:** As a **user of Flockr**, I want to **be able to change my status** so that **other members can determine if I am available or not**.
  - **Task 2:** Allow users to change their status.

#### Epic 5: General calling capabilities

- **User Story 1: As a member of a channel, I want to be able to call members in the channel so that I can have more engaging and productive discussions with everyone.**
  - **Task 1:** Create a voice calling capability inside channels.
- **User Story 2: As a user in a call, I want to be able to enable my video so that I can emulate a face to face meeting setting with other members when we cannot meet.**
  - **Task 2:** Within the voice calling capability mentioned above, integrate an enable video option.
- **User Story 3: As a user in a call, I want to be able to mute my microphone so that whenever a situation arises, other members in the call are not inconvenienced or interrupted by it.**
  - **Task 3:** Within the voice calling capability mentioned above, integrate a mute and unmute microphone option.

#### Epic 6: Scheduling on calendar

- **User Story 1: As a user of Flockr, I want to be able to schedule team meetings on a calendar so that all other users are able to easily keep track of when each team meeting is occurring.**
  - **Task 1:** Implement a calendar where users can schedule and remove team meetings and other events
- **User Story 2: As a user of Flockr, I want to be able to view all team meetings on a calendar so that I can see when team meetings are scheduled**
  - **Task 2:** Allow for users to view other user's scheduled meetings and events on the calendar

## User Acceptance Criteria

### 1. Sending files in a channel

- a. A button that attaches a file to a message is placed next to the 'Send' button.
- b. When the button is clicked, a file browser is opened that allows the user to select a file from their system to attach to a message
- c. When a file is selected, an 'attach' button will light up in the file browser.
- d. When the 'attach' button is pressed, attach the file to the message allowing the user to also type a message if necessary.
- e. Pressing the 'Send' button will finally send the file and a message if there was one with it.
- f. Additionally, include a 'Open' button that allows you to open the file, then a 'Download' button enables the user to download the file to their device.

## **2. Replying to a user's message in a channel**

- a. A 'Reply' button is placed next to each message near the side.
- b. When the button is pressed, the user and message being replied to is quoted in the replying user's message box.
- c. When the user types in their message and sends it, the message in the channel will include a quoted message which is the message being replied to, and a regular message which is the reply.

## **3. Direct messaging a user**

- a. In the member list for a channel, there is a button next to each member for directly messaging them.
- b. When the direct message button is clicked, a new page is opened allowing for private messaging.
- c. All the features of messaging will be the same and will essentially act like a channel with only two users.

## **4. Changing member status**

- a. A drop-down box for the user's 'Status' is placed in the profile page
- b. When the drop-down box is selected, the options 'Online, Offline, Away, Busy' are given.
- c. When the user selects a status, their status is updated on all channels such that all other members can see the user's status.

## **5. General calling capabilities**

- a. A 'Call' button is placed underneath the channel title.
- b. When the button is pressed, the channel beings a call and all users get a prompt to join or decline the call
- c. In the call, users have the option to either have their video on or just use their voice, a mute option is also given for when a user needs to mute their microphone. The above features can be enabled/ disabled by using the camera icon/button and the microphone icon/button respectively.
- d. When the call ends, all users exit the call.

## **6. Scheduling on calendar**

- a. A 'Calendar' option is added to the left sidebar of the Flockr, underneath 'Profile' but above the channels.
- b. When the option is pressed, the user is greeted with a calendar that has all the currently scheduled events
- c. the user is able to schedule an event on the calendar by clicking on the create calendar event button
- d. The user is also able to edit and remove calendar events that they have created.
- e. When an event is created, it appears on the calendar for all the other users.

## Use Cases

1.

**Use Case:** Send a file in a channel.

**Goal in Context:** Multiple members in a channel need to access a file that only a single user currently has on their system.

**Scope:** Flockr, server storage.

**Level:** Subfunction.

**Precondition:** The user sending the file is a member of the channel, and same with other users who want to receive the files.

**Success End Condition:** All the members in the channel can access and download the file sent by a user.

**Failed End Condition:** The members in the channel cannot see and access the file attempted to be sent by a user.

**Primary Actor:** Member of a channel.

**Trigger:** User wants to send a file on the Flockr.

**Main Success Scenario:**

**Step 1:** The user goes to a channel and clicks the file attachment icon.

**Step 2:** The user gets a prompt to select the files they want to upload.

**Step 3:** The user selects their files and then uploads them.

**Step 4:** The user then clicks send on the channel and the files are sent into the channel.

**Step 5:** The other users can view the files in the respective channels and download them if they wish.

2.

**Use Case:** Reply to another user's message in a channel.

**Goal in Context:** There is a lot of discussion going on in the channel and a user wants to reply to a certain message that was sent a while back to make an inquiry.

**Scope:** Flockr channel.

**Level:** Subfunction.

**Precondition:** A message is sent, that the user wants to reply to.

**Success End Condition:** The user is able to reply to the message where the specific message is quoted, and the user is also able to make a reply in reference to it.

**Failed End Condition:** A reply could not be made, and the message being replied to isn't quoted.

**Primary Actor:** Member of a channel intending to reply to another user's message.

**Trigger:** A situation where a message is sent a while back and a user wants to talk about that message.

**Main Success Scenario:**

**Step 1:** A user sends a message in a channel.

**Step 2:** Another user clicks the reply button on the side of the message.

**Step 3:** The message is then quoted in the text box where the user enters their message.

**Step 4:** The user then types their message and sends it into the channel.

**Step 5:** The sent message will have a quoted message as well as the written message itself on the channel.



3.

**Use Case:** Send a direct message to a user in a channel.

**Goal in Context:** In the middle of a discussion in a channel, a user has some specific questions for the team director that is private and doesn't regard other users.

**Scope:** Flockr.

**Level:** Primary task.

**Precondition:** The users wanting to message each other directly are registered users on Flockr.

**Success End Condition:** The user can properly send a message directly to a user where other users cannot see.

**Failed End Condition:** A direct message could not be sent to a specific user.

**Primary Actor:** A user intending to privately message another user.

**Trigger:** A situation where a user needs to have a private discussion with another user where other users cannot see.

**Main Success Scenario:**

**Step 1:** The user goes to a channel to see the members list

**Step 2:** The user then clicks on another user and selects the option to direct message that user.

**Step 3:** The user sends their direct message to that user.

**Step 4:** The direct message is sent to the other user and only that user and the sender can see the messages.

4.

**Use Case:** A user wants to start a call in a channel.

**Goal in Context:** channel members would like to engage in a verbal team discussion as it would be easier than to just message in the channel.

**Scope:** Flockr.

**Level:** Subfunction.

**Precondition:** All members that want to call are in the same channel.

**Success End Condition:** A call is initiated, and users can talk to each other with or without video and are able to mute their microphones.

**Failure End Condition:** The call failed to start in the specified channel.

**Primary Actor:** A user wanting to start the call.

**Trigger:** A situation where verbal communication would be the more preferred and easier method of communicating with other members.

**Main Success Scenario:**

**Step 1:** A user selects a channel that they want to call.

**Step 2:** The user clicks the call button on the channel and all other users in that channel get a prompt to join or decline the call.

**Step 3:** Users get the option to turn on their video and the option to mute or unmute their microphone.

**Step 4:** Users also get the option to leave the call.

5.

**Use Case:** A user wants to set their status on the Flockr.

**Goal in Context:** Other users on the Flockr can see and keep track of the availability of the particular user by viewing their status.

**Scope:** Flockr

**Level:** Subfunction

**Precondition:** User is logged onto the Flockr so that they can change their status.

**Success End Condition:** The user was able to successfully change their status, and all other members can see the status of the given user.

**Failure End Condition:** The user was not able to change their status, and other members are not able to see the correct status of the particular user.

**Primary Actor:** The user wanting to change their status

**Trigger:** the user is in a scenario where they need to change their status so every other user in the Flockr is aware of their availability.

**Main Success Scenario:**

**Step 1:** A user goes clicks on their profile page on the left sidebar.

**Step 2:** The user than goes to the 'Status' drop down menu and gets to select from the statuses "Online, Offline, Busy, Away".

**Step 3:** The user selects the status they want, and all other users can see the user's status in the member lists of the channel the user is a part of

6.

**Use Case:** User wants to schedule a team meeting on the calendar.

**Goal in Context:** All the other users in the Flockr will be able to see the scheduled team event in one place without needing to go through all the channels.

**Scope:** Flockr

**Level:** Primary Task

**Precondition:** The user is a valid and logged on user on the Flockr.

**Success End Condition:** The team meeting is successfully scheduled on the calendar and all other users of the Flockr can see the scheduled event.

**Failure End Condition:** The other users of the Flockr are not able to see the event scheduled.

**Primary Actor:** The user wanting to schedule the event.

**Trigger:** A team meeting needs to be conducted at a later date and the user needs to schedule it so that all other users are notified of the date of the team meeting.

**Main Success Scenario:**

**Step 1:** The user clicks on the calendar option on the left sidebar

**Step 2:** The user is greeted with a calendar that they can assign event dates to.

**Step 3:** The user selects a particular date and fills in the details and time for which the event will take place.

**Step 4:** the user confirms it and every other user on the Flockr is able to view the event on the calendar.

## Validation

**“Knowing that there were issues brought up previously on how a platform like Flockr was inconvenient for team-based communication, do you think while reviewing the following documentation, have we solved the issues brought up originally?”**

Interviewee 1 Response:

“One of the main issues I had previously was the inability to upload any type of files to the channels, which would have made team collaboration difficult when images and files were required. However, when looking at the documentation, I can see that the ability to send files was implemented and pretty much covers the cases that I spoke about previously.”

Interviewee 2 Response:

“Being able to directly respond to messages in channels was my biggest concern with using a platform like Flockr for teamwork. I can see that you guys have approached this issue and as it was implemented, I don’t think I have any more issues for using a Flockr for potential future team projects.”

**“Holding potential meetings on Flockr, was an issue that was brought up considerably in the previous interview. Looking at the current proposal with user stories and all, what are your thoughts on our approach?”**

Interviewee 1 Response

“The one thing that really stopped me from looking at Flockr for potential meetings was the inability to call and video call. While reviewing your proposals, the implementation of a call and video call feature was to me highly regarded. I also realised that you included a mute function, which can be used during the calls and I am pretty happy with what I am seeing.”

Interviewee 2 Response:

“Yeah, looking at what you guys have written, especially on how you took on my idea of being able to directly message a person, makes things a lot easier if I am looking at using Flockr for work. I like the proposals you guys wrote.”

**“You guys brought up the inability to schedule team meetings on a platform like Flockr. When reviewing our intended proposals for this, to what extent would you say we have accommodated for this aspect?”**

Interviewee 1 Response:

“Reading through your proposal, the calendar system would definitely help out a lot when it comes to keeping all work-related activities on something like Flockr. It limits the hassle we need to take to use other applications such as google calendar and such. So, I would say you guys have covered most of my concerns on it.”

Interviewee 2 response:

“It looks pretty sweet with everything you have written. Going from the use of messages to schedule meetings and pinning it to a calendar system is really beneficial, it will make it much easier to find all the scheduled meetings rather than to just be going through every channel looking for the pinned messages. Not much could be further improved on the issue.”

## Interface Design

Function name	HTTP Method	Parameter	Return Type	Exceptions	Descriptions
Message/file_send	POST	(token, channel_id, file_name)	{ file_id }	<b>InputError:</b> When no file is given  <b>AccessError:</b> When the authorised user has not joined the channel they are trying to post to	Send a file from an authorised user to the channel specified by channel_id

message/reply	POST	(token, channel_id, quoted_message_id)	{}	<b>InputError:</b> Message being replied doesn't exist or is invalid  <b>AccessError:</b> When the authorised user has not joined the channel they are trying to post to	Quote a specific message from a specific user in a channel
call/start	POST	(token, channel_id)	{}	<b>InputError:</b> - Channel ID is not a valid channel - An active call is currently running in this channel  <b>AccessError:</b> - When the authorised user has not joined the channel they are trying to start a call in.  -	In a given channel, start a call where users in the channel can communicate via voice and where they can join and leave at will while the call is active
call/active	GET	(token, channel_id)	{is active, active_length}	<b>InputError:</b> - Channel ID is not a valid channel	For a given channel, return whether a call is active in it as a boolean, and how long the call has been active for. If no call is active, then active_length is none

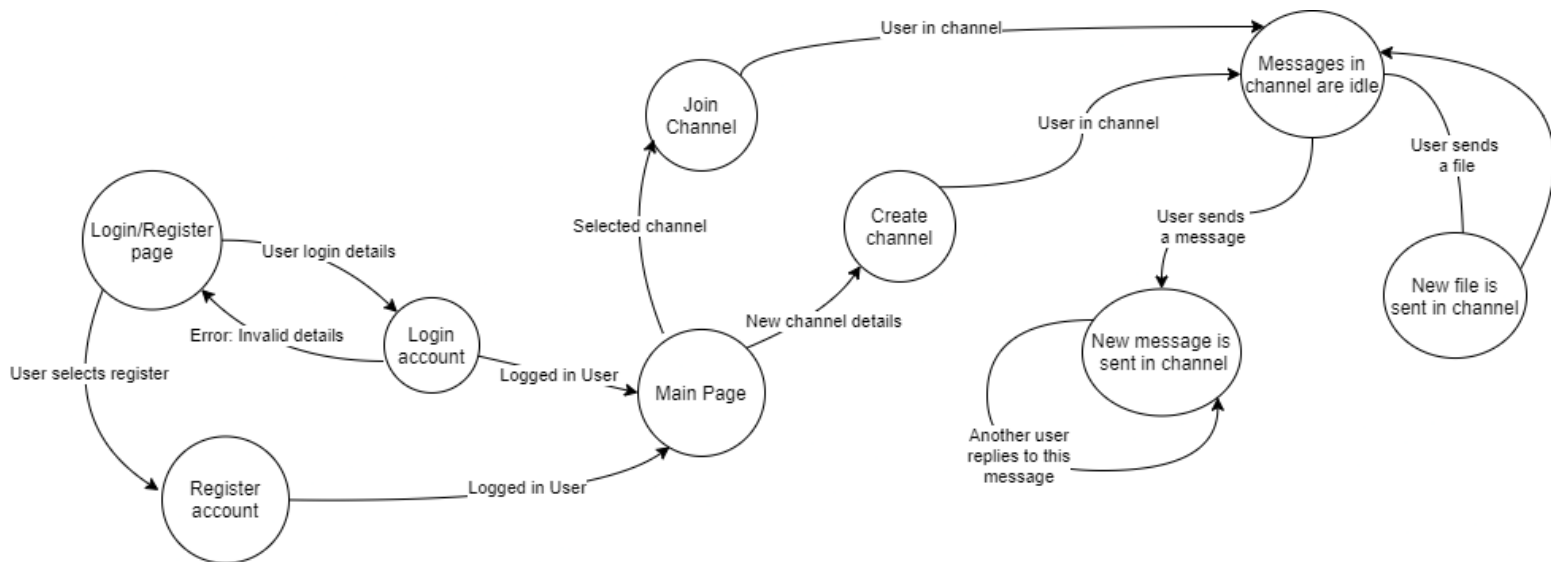
call/end	POST	(token, channel_id)	{}	<b>InputError:</b> - Channel ID is not a valid channel  - No active call in the channel	End an active call in a channel. Only the host that started the call can end the call.
call/join	POST	(token, channel_id)	{}	<b>InputError:</b> An active call is not currently running in this channel	Given a channel_id of a channel, the authorised user can join an active call
call/leave	POST	(token, channel_id)	{}	<b>InputError:</b> - An active call is not currently running in this channel  - User is not currently in an active call	Given a channel_id, the user is removed from an active call.
calendar/schedule_event	POST	(token, date, time, event_name, event_description)	{ event_id }	<b>InputError:</b> - a date in the past is given  - a time in the past is given  - the event name is longer than 100 characters  - the event description is longer than 1000 characters	Given a date, time, event_name and event_description, the user can schedule an event to the calendar such that all the other users in the flockr will be able to see the event on the calendar.



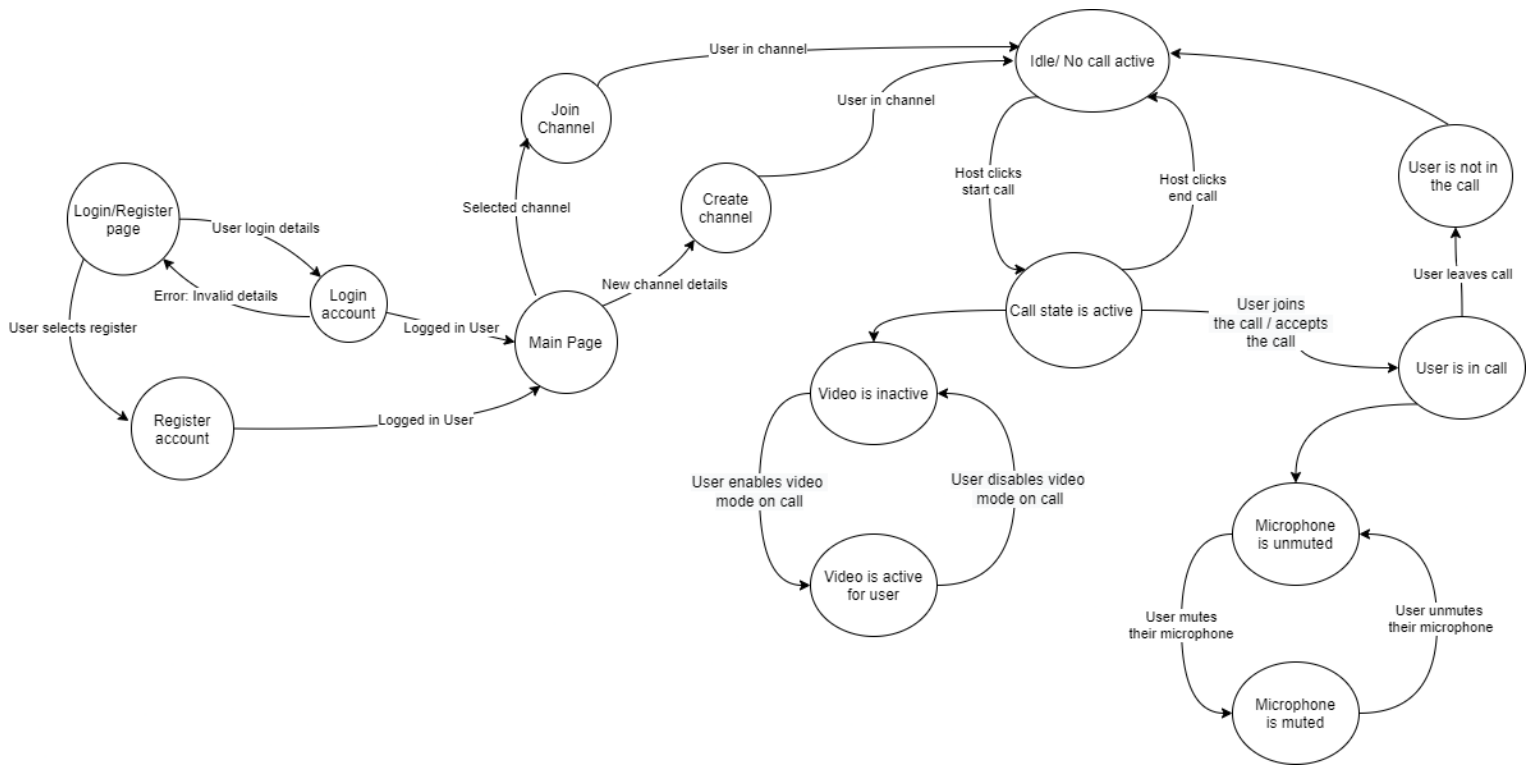
calendar/edit_event	PUT	(token, event_id, date, time, event_name, event_description)	{}	<b>InputError:</b> - the given event_id is invalid.  - a date in the past is given  - a time in the past is given  - the event name is longer than 100 characters  - the event description is longer than 1000 characters  <b>AccessError:</b> - The current user is not the user that originally created the event	Given the event_id, edit the event on the calendar with the date, time, event_name and event_description given.
calendar/remove_event	DELETE	(token, event_id)	{}	<b>InputError:</b> - the given event_id is invalid  <b>AccessError:</b> - the current user is not the user that originally created the event	Given the event_id, remove the specified event from the calendar.

## Conceptual Modelling (State)

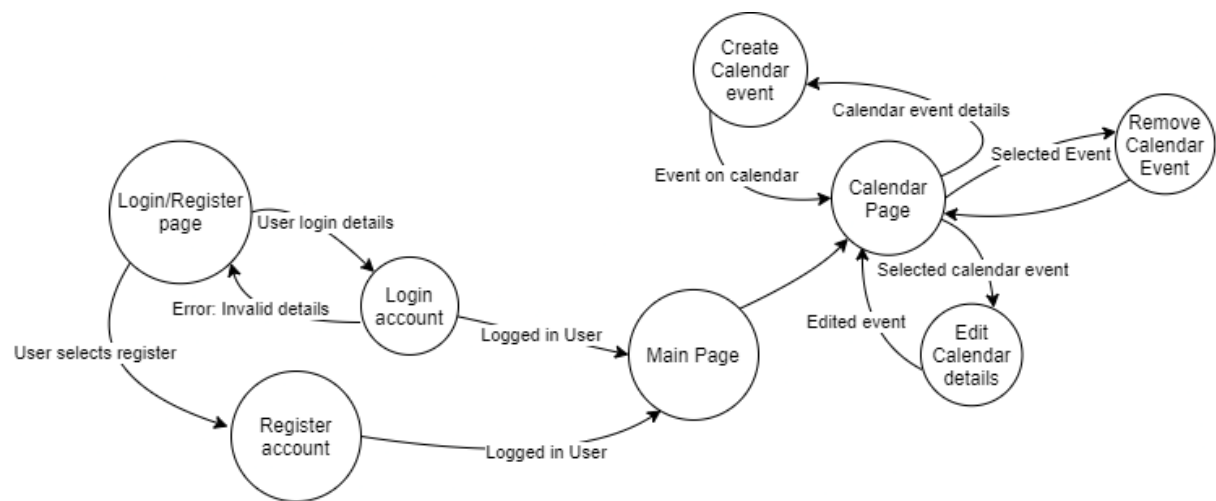
State Diagram with replying to messages and sending files implementation



## State Diagram with calling implementation



## State Diagram with calendar implementation



## State Diagram with user status implementation

