



BAIT2203 HUMAN COMPUTER INTERACTION ASSIGNMENT REPORT

Programme :[RSDY2S1](#) (Intake:[202405](#))

Tutorial Group :[5](#)

Prototype name: [WeChat Application System](#)

Declaration : I/We declare that this assignment is free from all forms of plagiarism and for all intents and purposes is my/our own properly derived work.

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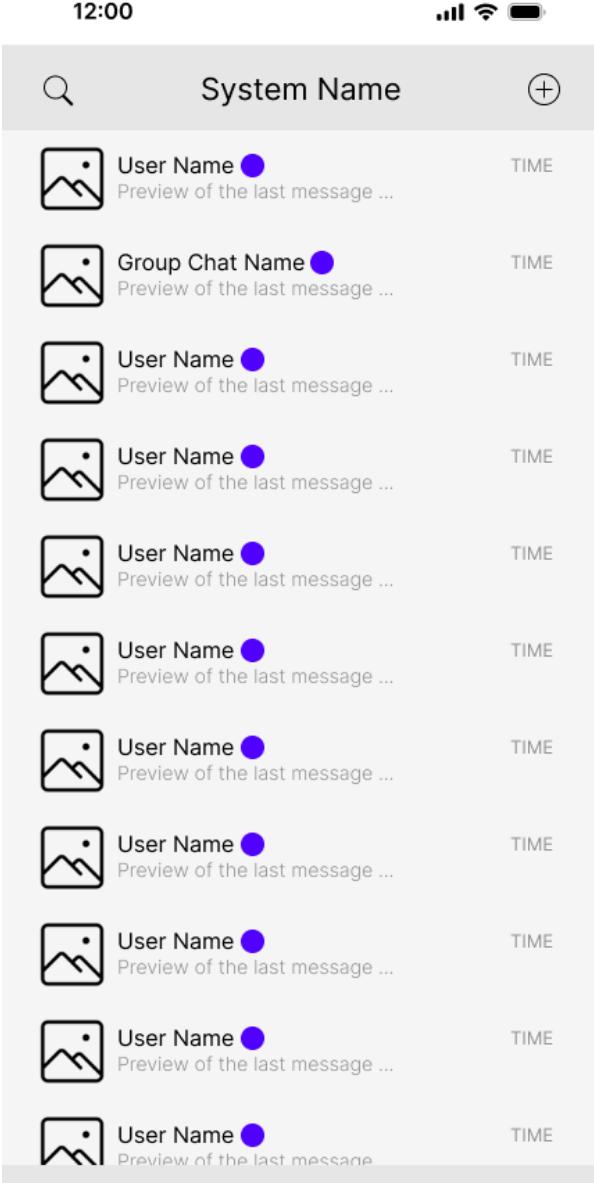
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Design & Prototyping Report (20%)- CLO1

Storyboard and Prototype:

<https://www.figma.com/design/mj2rckEOYuKuLsV032r0Q1/BAIT2203-HUMAN-COMPUTER-INTERACTION-PROTOTYPE?node-id=0-1&t=WSBMIXsdX6dkTkEv-0>

(i) Preliminary Design (5 marks)

| “Chats” page | | Visibility of User Online Status: |
|--|---|-----------------------------------|
|  <p>The screenshot shows a "Chats" page with a header displaying the time (12:00) and signal strength. Below the header is a search bar with placeholder text "System Name" and a plus icon. The main content area lists ten chat entries, each consisting of a small profile picture, a user name (e.g., "User Name"), a blue circular status indicator, and a timestamp (e.g., "TIME"). Below the timestamp is a preview of the last message. At the bottom of the screen are four navigation icons labeled "Chats", "Contacts", "Discover", and "Me".</p> | <p>Visibility of User Online Status:</p> <p>To optimize the timeliness of communication, a status box will be integrated into the user interface, located adjacent to each contact's name within the chat list and contact search results.</p> <p>The status box will utilize a green color circle to convey a user's online status. This visual cue provides a quick and intuitive understanding of a contact's availability.</p> | |

“Me” page

12:00



User Name

System ID: xxxxxxxx >



Settings >



Backups >



Chats



Contacts



Discover



Me

Cloud Storage Backup Options:

Cloud storage backup ensures data security and accessibility by automatically saving chat history and media. This feature meets modern expectations for secure data management, providing users with peace of mind and easy data recovery in case of device issues.

A new 'Backup' button will be added under the 'Settings' button, positioned for high visibility. Upon selection, users will be presented with a clear interface to:

Initiate immediate backups.

Schedule automatic backups based on their preference (e.g., daily, weekly, monthly).

View the backup status, including the last successful backup and any pending operations.

“Users call” page

12:00



Noise Cancellation in Calls:

The noise cancellation feature is designed to significantly reduce background noise, allowing the participants' voices to be heard more clearly. This enhancement is particularly beneficial in noisy settings, making it ideal for both personal conversations and business meetings.

On the user call page (top right corner), a checkbox will be added to provide users with the option to enable noise cancellation.

When selected, the checkbox indicates that noise cancellation is activated.



User Name



Mic On



Speaker Off



Camera Off

invites you to a call.

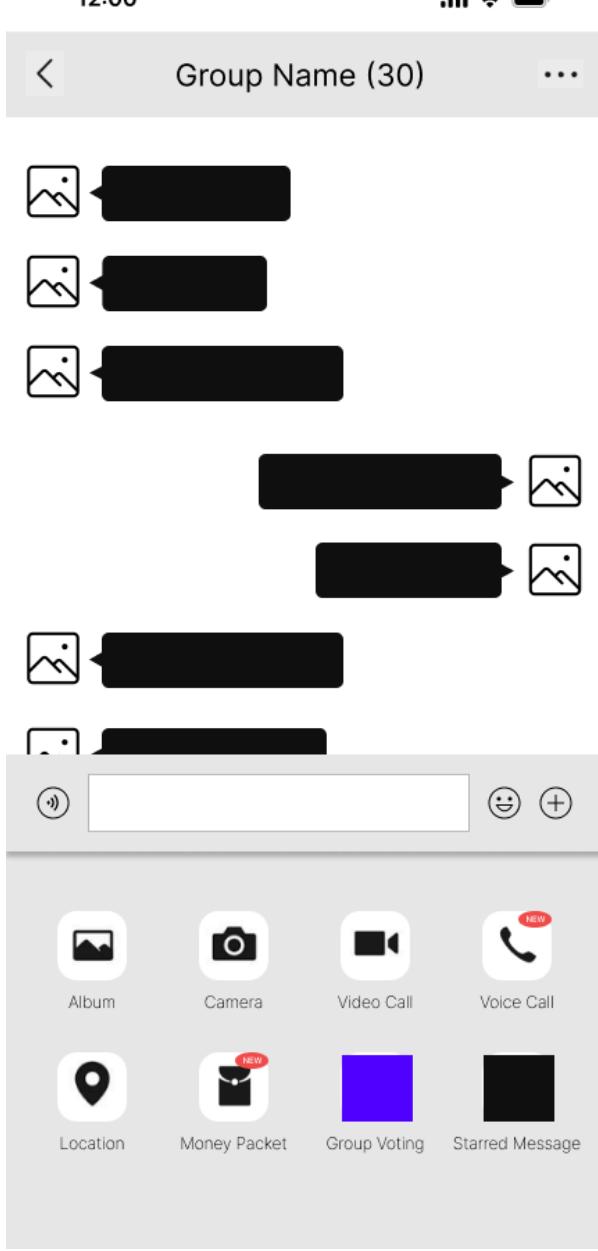


Hang Up



Accept

Group chat only



Voting in Group Chats:

This feature allows group chat participants to vote on various options, enabling a democratic and efficient process for reaching a consensus within the group.

A new group voting button will be added to the function collection menu, accessible by clicking on the plus (+) button within the group chat interface.

Upon clicking the group voting button, users will be directed to a dedicated page where they can enter the necessary information to create a poll.

User chat and Group chat

12:00



User Name



5"

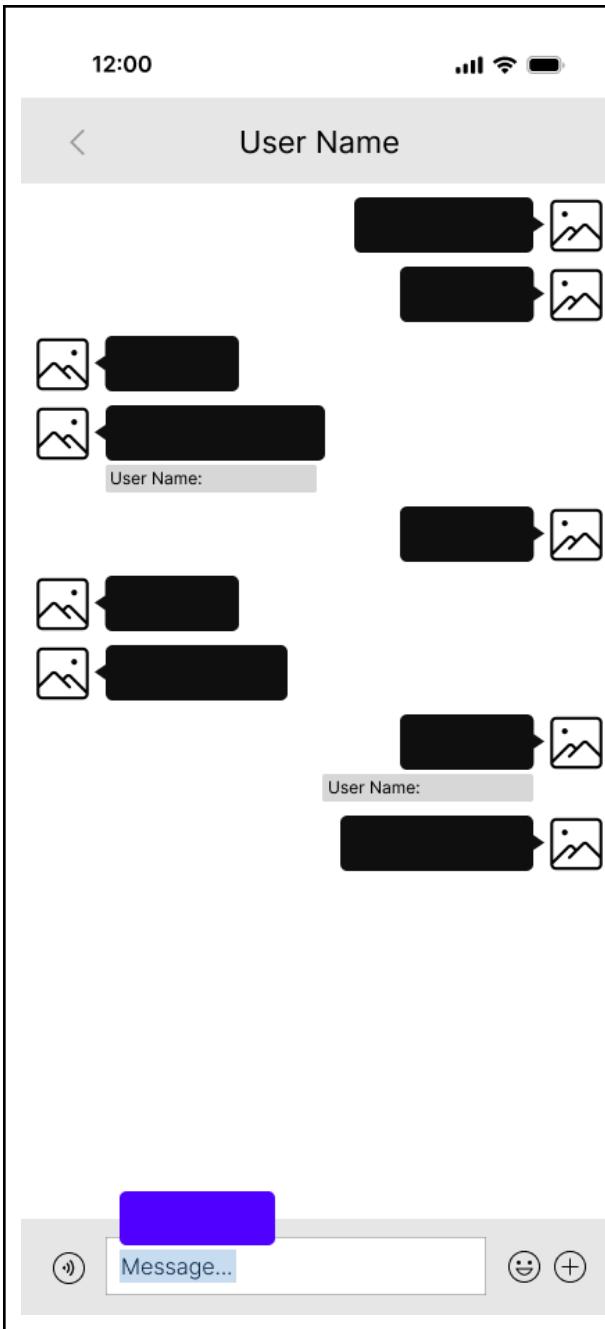


Adjust Voice Message Playback Speed:

This feature enables users to control the pace at which voice messages are played back, accommodating individual listening speeds and enhancing the overall usability of the voice messaging function.

A speed button will be integrated into the voice message interface, providing quick access to playback speed adjustments.

Users will be presented with a series of playback speed options (0.5x, 0.7x, 1.0x, 1.5x, 2.0x) that can be cycled through with each click on the speed control button.



Message Text Styling Options:

This feature provides users with the ability to apply various text styles, such as bold, italic, underline, and strikethrough, to selected portions of their messages. This enhancement aims to improve message clarity, readability, and engagement.

When a user selects text within the message input box (before sending), a contextual menu will appear, offering a range of text styling options.

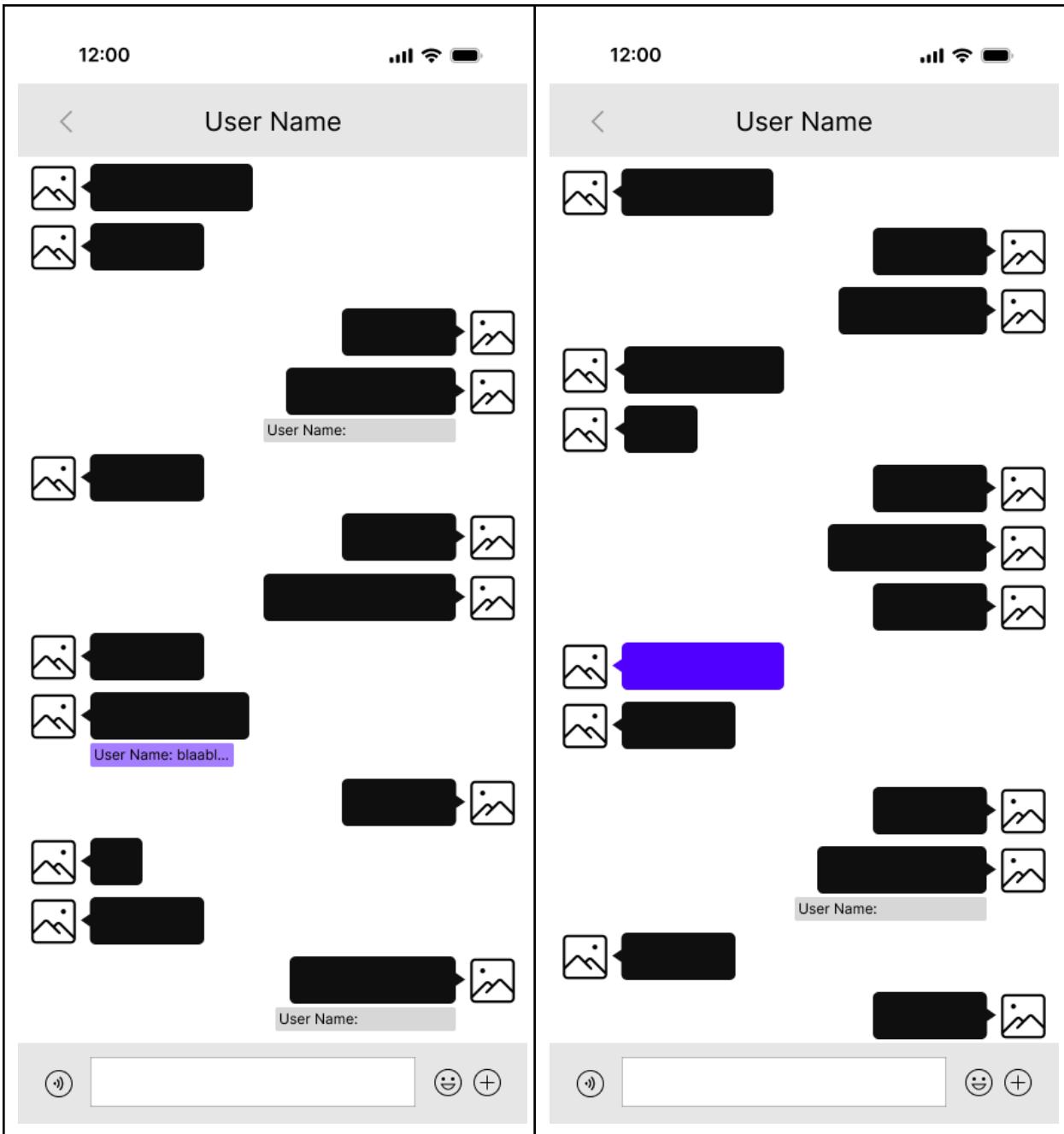
Text Styling Options:

Bold: Makes the selected text bold, drawing attention to important points or key information.

Italic: Applies italics to the selected text, often used to indicate emphasis, titles of works, or to convey a nuanced tone.

Underline: Underlines the selected text, which can be useful for highlighting links or emphasizing words without the heaviness of bold text.

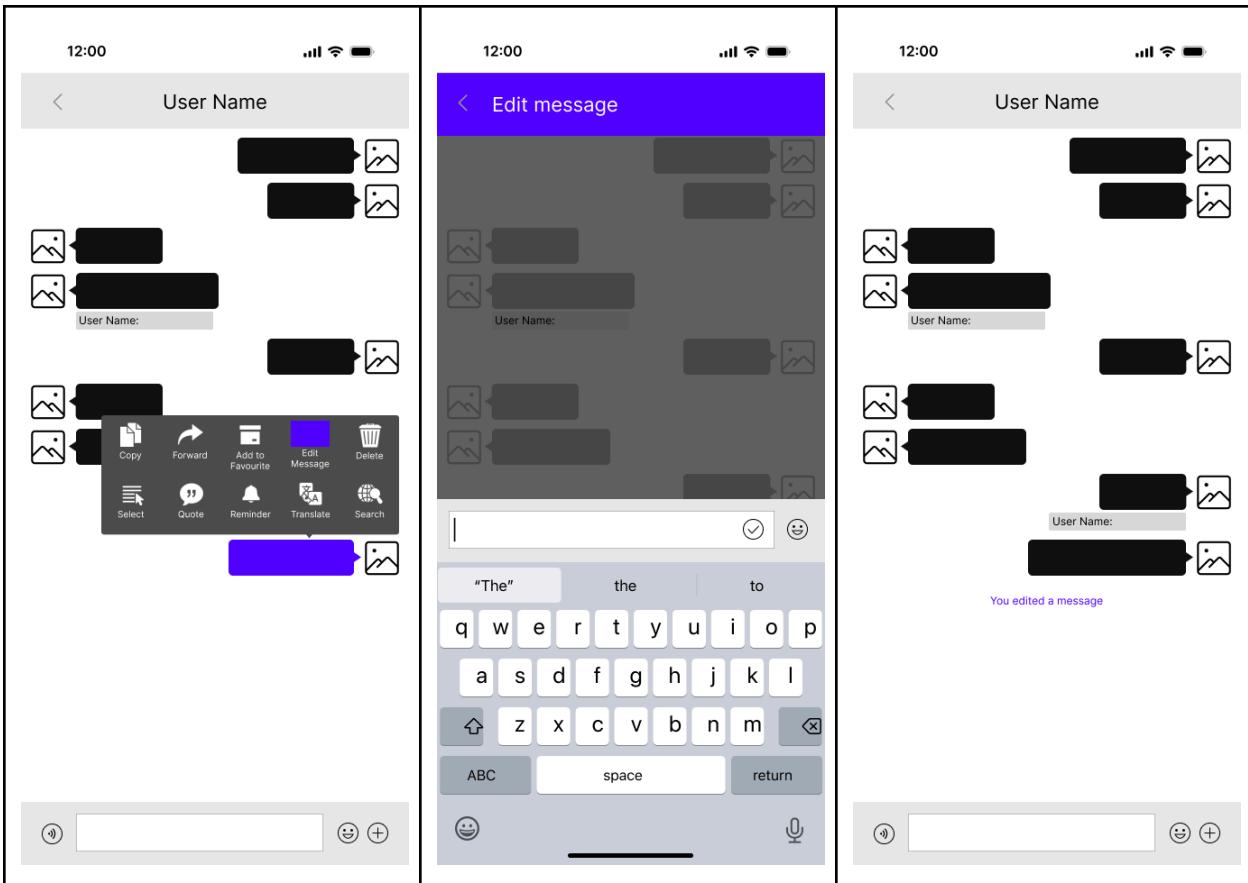
Strikethrough: Adds a line through the selected text, suitable for indicating removed or no longer relevant information.



Navigate to the Location of the Replied Message:

This feature ensures that the context of replies is easily accessible, maintaining the integrity and flow of the conversation.

Upon clicking on a replied message (indicated by a distinct visual cue such as a quote box), the interface will automatically scroll to the location of the original message in the chat history.

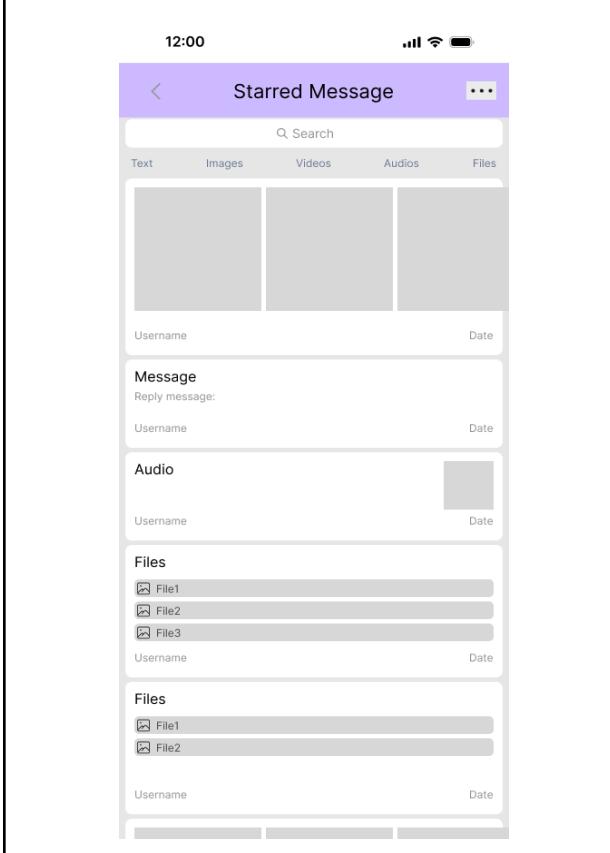
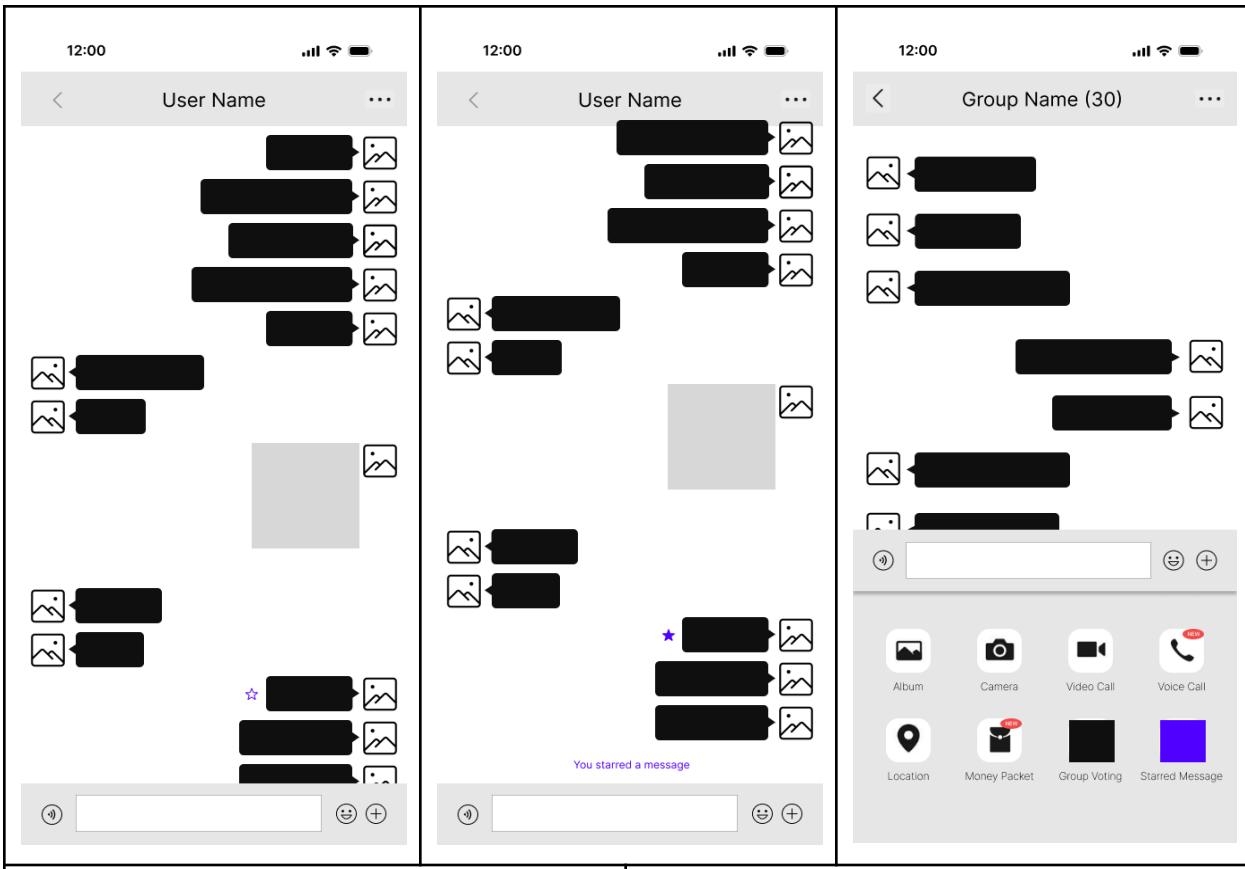


Edit Sent Messages:

This feature allows users to correct typos, grammatical errors, or update information in messages they have previously sent, without the need to resend the message.

Users can initiate the editing process by performing a short press on the sent message. Upon the short press, a contextual menu will appear, offering the new options "Edit Message". The contextual menu will be designed to be unobtrusive yet easily accessible, ensuring it does not interfere with the chat experience.

Selecting "Edit Message" will redirect the user to an edit interface where they can modify the content of their message. After editing, users can click on a tick icon button to save the changes. Once the message has been successfully edited, a subtle notification will appear, informing the user and others in the chat that the message has been updated.



Star Important Messages:

By starring messages, users can easily reference essential information without manually searching through chat histories, ensuring that important details are always at their fingertips.

A hollow star icon will be added next to each sent message, which becomes visible and interactive when a user hovers over or clicks on the message. Users can click the hollow star icon to star a message, transforming it into a filled star, indicating that the message has been marked as important. Then, users can click on the plus (+) button within the chat, and then select the "Starred Message" option to view all starred messages in the current chat.

Gestures to Reply to a Specific Message:

Quick gestures, such as swiping to reply, enhance user convenience by allowing seamless interaction with messages. This feature streamlines the user interface, enabling faster and more efficient responses, particularly in fast-paced conversations.

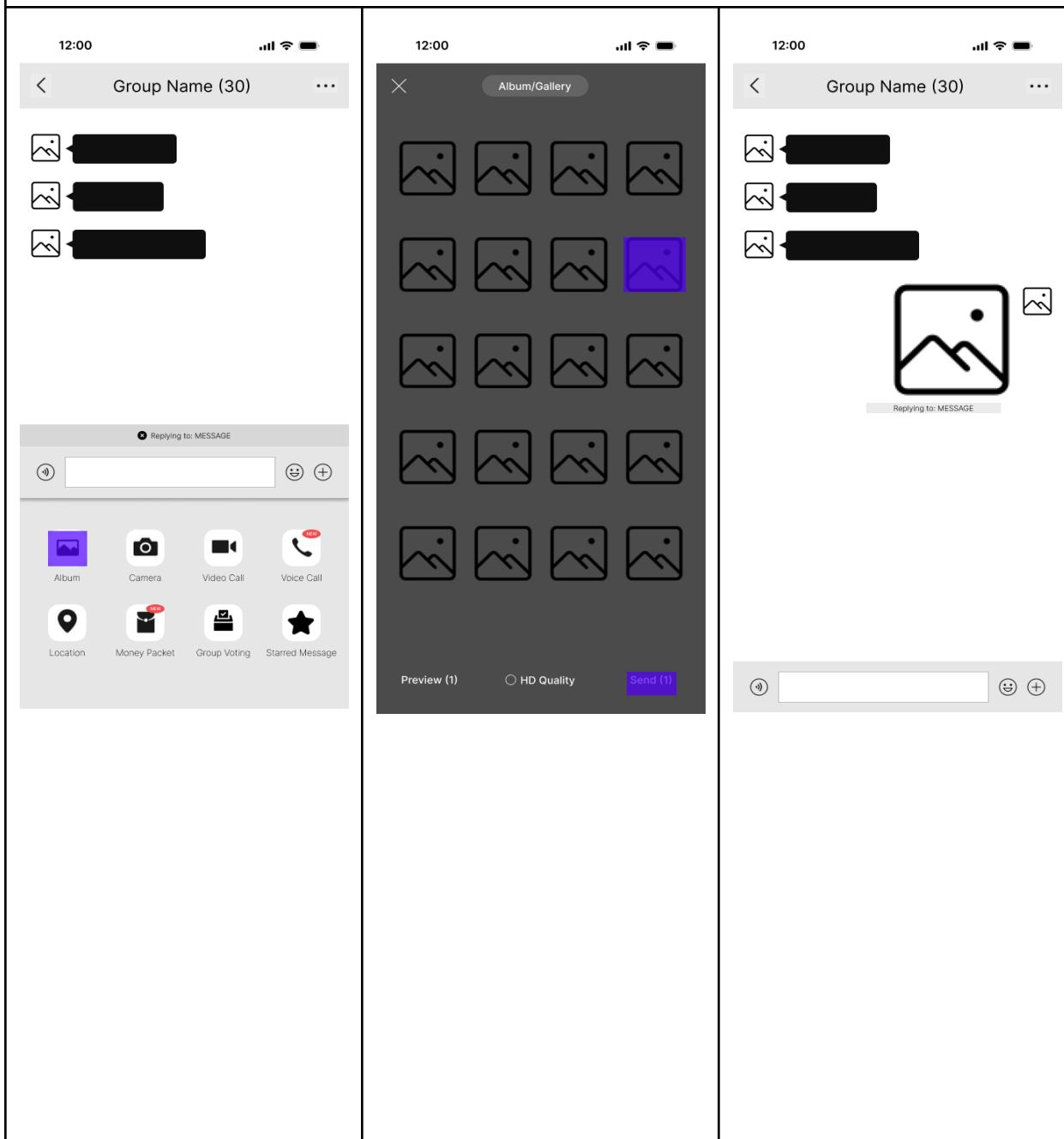
By swiping a message, the user can reply to a specific message using one of the following features: Voice Message by clicking on the record voice icon, Sticker by clicking on the smiling emoji icon, or Picture by clicking on the plus icon.



Reply to Messages by Picture:

Allowing replies with images enriches communication by adding visual expressiveness. This feature enhances user engagement and supports a more creative and nuanced communication style, making interactions more lively and enjoyable.

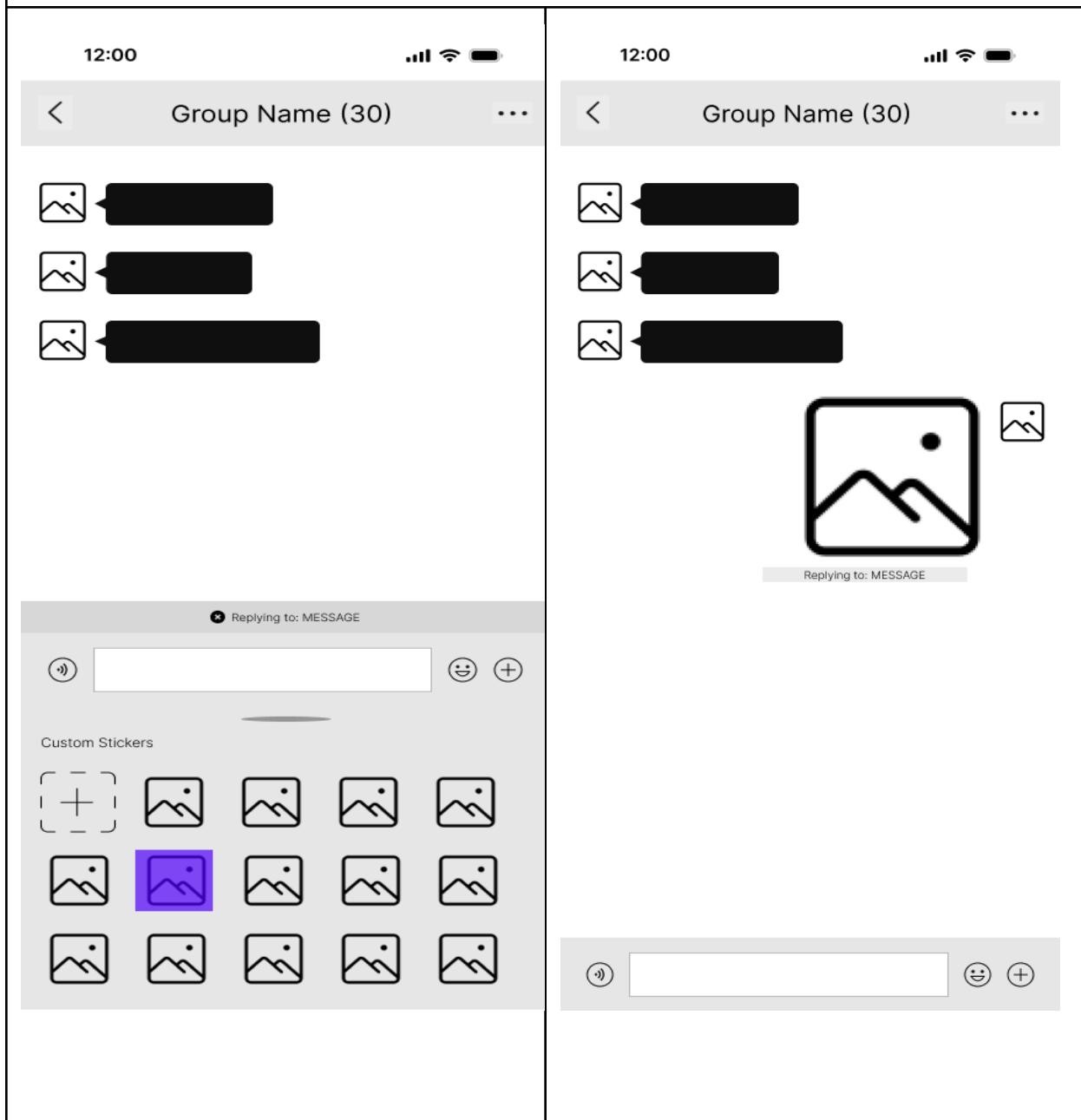
If the user chooses to reply by image, after clicking the plus icon, the user can then click on the Album button that redirects the user to the next page of selecting a picture. After selecting a picture and sending, the image message replying to the replying message will be sent.



Reply to Messages by Sticker:

Allowing replies with stickers enriches communication by adding visual expressiveness. This feature enhances user engagement and supports a more creative and nuanced communication style, making interactions more lively and enjoyable.

If the user chooses to reply by sticker, after clicking the smiling emoji icon, the user can then click on the sticker to send it as a reply to the replying message. After clicking on a sticker, the sticker message replying to the replying message will be sent.



Reply to Message by Voice Message:

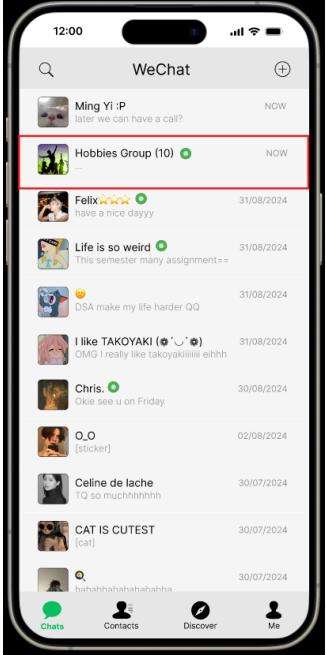
This feature supports personalized communication by enabling users to reply to messages with their own voice. It accommodates different communication preferences, allowing for richer, more natural exchanges and improving the flow of conversation.

If the user chooses to reply by voice message, after clicking the voice message icon, the user can then hold the “Hold to Talk” button to send it as a voice reply to the replying message. After recording the voice message and releasing the button, the voice message replying to the replying message will be sent.



(ii) Detail Design

High fidelity prototype (5 marks)

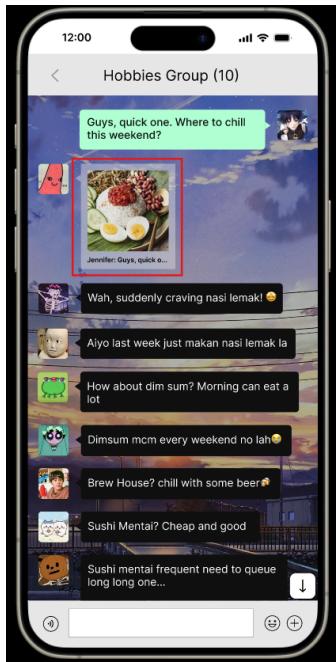


The screenshot shows the WeChat home screen at 12:00. A message from 'Hobbies Group (10)' is highlighted with a red box. Other messages visible include 'Ming Yi :P', 'Felix', 'Life is so weird', 'I like TAKOYAKI', 'Chris.', 'O_O', 'Celine de lache', 'CAT IS CUTEST', and a sticker message.



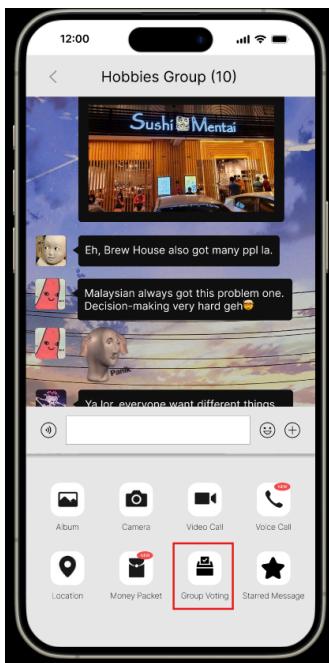
The screenshots show a transition from the WeChat home screen to a group chat named 'Hobbies Group (10)'. In the group chat, a message from 'Jennifer' is highlighted with a red box. The message reads: 'Guys, quick one. Where to chill this weekend?'. Below this message is a photo of food. The group chat also contains other messages and a sticker.

After Jennifer returned home from class, she opened WeChat and navigated to the group chat. She quickly found the message where someone had replied to her earlier message by using the **"Navigate to the location of the replied message"** feature.



By viewing the **picture that her friends had used to reply**, she understood that the topic for tomorrow's gathering had already been decided.

Steps



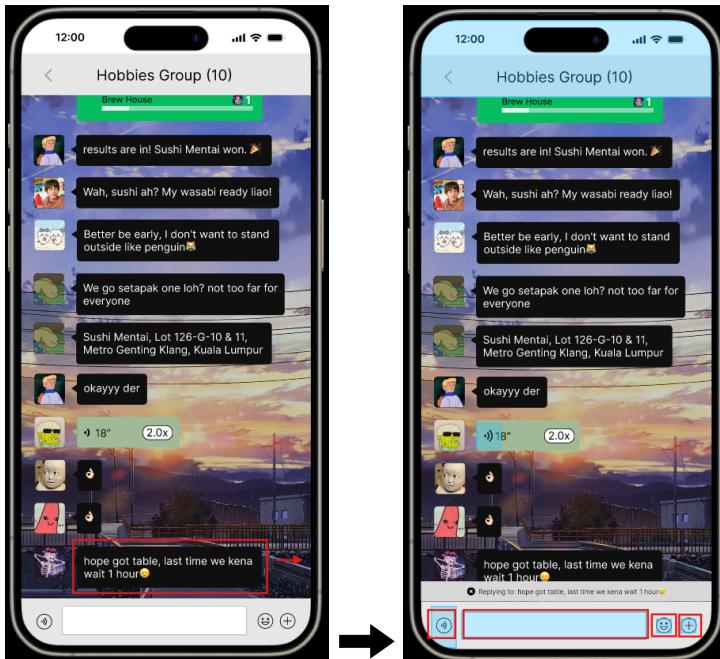
Seeing that her friends were still debating what to eat, Jennifer initiated a "**voting in group chats**" poll and then went to freshen up

Results





Afterward, Jennifer noticed that Xiaomei had sent a voice message. She adjusted the playback speed using the **"Adjust voice message playback speed"** feature to quickly listen to Xiaomei's reply.



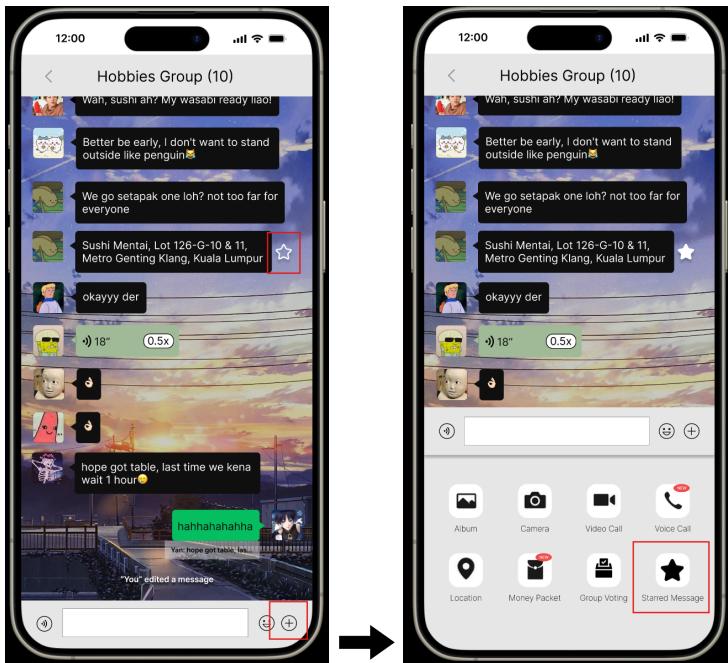
Once she was done, Jennifer used a gesture (**swipe**) to reply, enabling her to reply to a message by any of the following: **text message/ voice message/ picture/ sticker.**



However, she then realized she made a typo in one of her previous messages. Fortunately, she could use the "**Edit Sent Messages**" feature to quickly fix it.

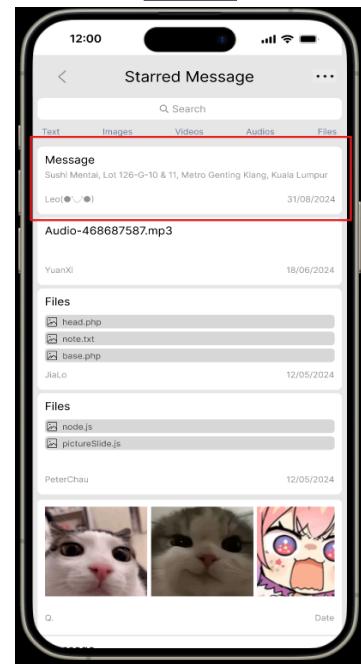
Results

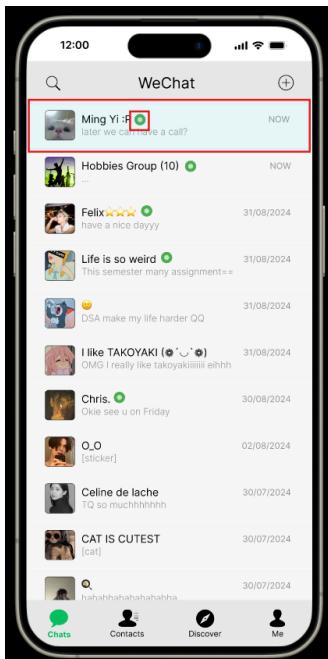




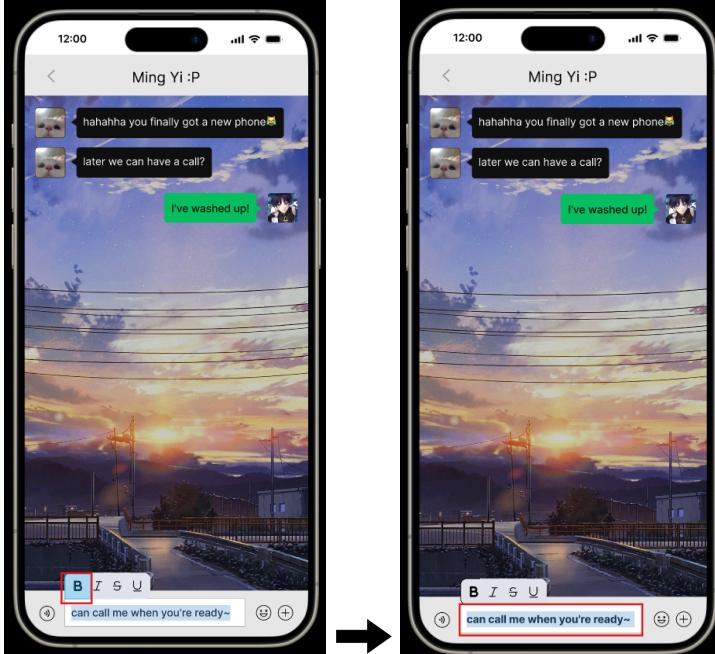
Seeing that the poll result pointed to a specific restaurant, she starred the message containing the restaurant's address using the "Star message" feature.

Results



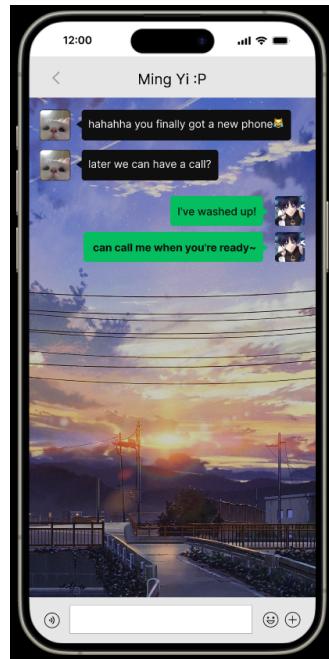


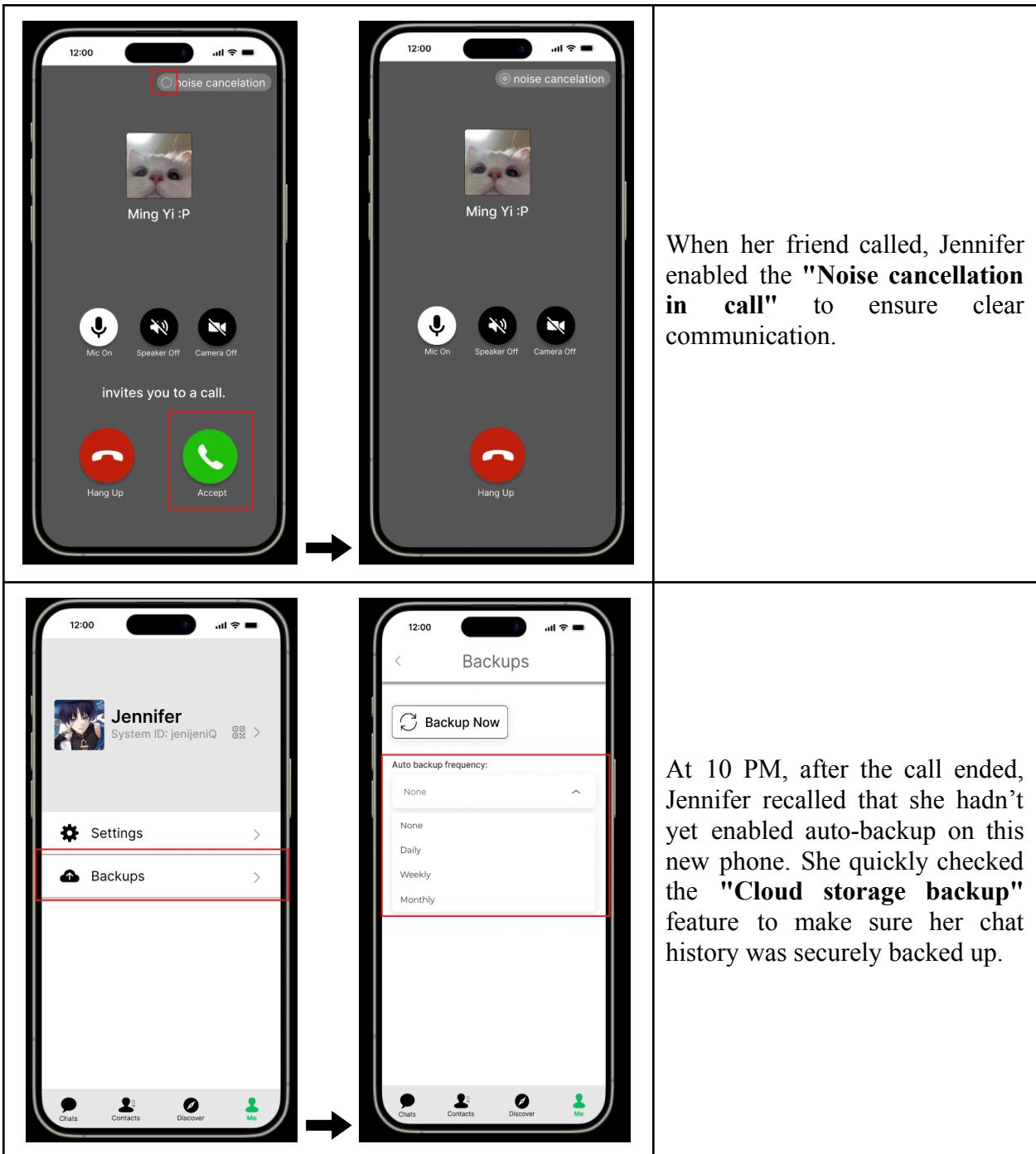
Later, Jennifer remembered she had planned to call a friend around 8 PM. She checked WeChat and saw that her friend was online, thanks to the "**Online status**" indicator.



Jennifer sent a quick message to remind them of the call using the "**Message text styling options**" to make sure it stood out.

Results





Design decisions (10 marks)

Effectiveness

1. Edit Sent Messages:

Problem: Communication accuracy can be compromised when messages contain errors, leading to potential misunderstandings and the need for message deletion and resending.

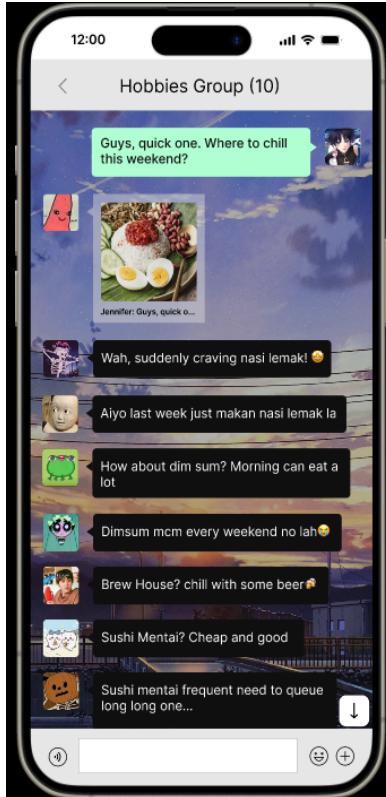
Solution: The inclusion of the ability to edit sent messages was made to enhance communication accuracy. This feature reduces the need for message deletion and resending, allowing users to make quick corrections, which streamlines communication and minimizes potential misunderstandings.

| | | |
|---|---|---|
| Click message will appear a menu, click the redbox will | go to a edit message page, edit done can click the redbox | then will shown edited message and a line of notification |
| | | |

2. Navigate to the Location of the Replied Message:

Problem: In complex or lengthy discussions, it can be challenging to maintain conversation continuity when users need to reference earlier messages.

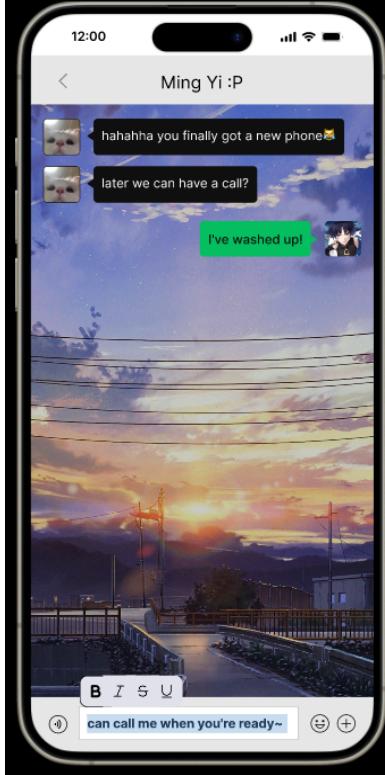
Solution: Implementing navigation to the original message in a reply was chosen to maintain conversation continuity. This design choice allows users to easily trace back to the context of the conversation, ensuring that the communication flow remains coherent, especially in complex or lengthy discussions.

| Red box indicate that the replied message | (quick effect indicate which is replied messages) | After effect: |
|--|---|--|
|  |  |  |

3. Message Text Styling Options:

Problem: Communicating key points effectively can be difficult without the ability to visually emphasize important information, which may reduce message clarity.

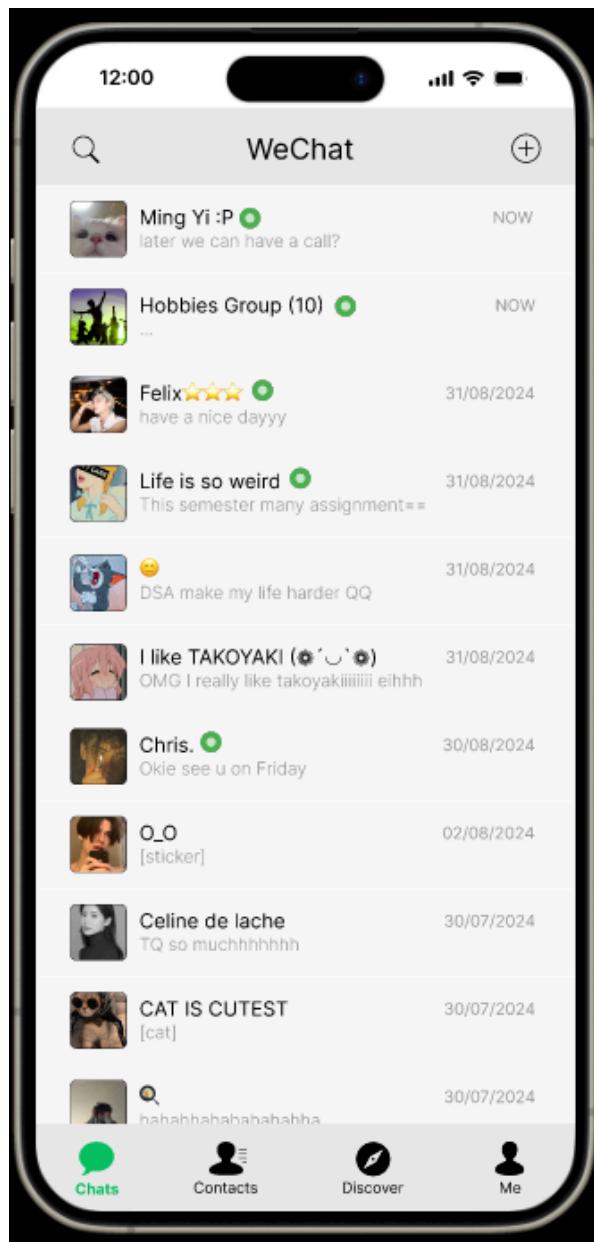
Solution: Offering text styling options like bold, italic, underline, and strikethrough was decided to improve the clarity and impact of communication. This feature was included to enable users to emphasize key information and convey their messages more effectively, enhancing the overall readability of conversations.

| Select text will appear a text styling menu | Can click to select style that want to applied | Sent will see the selected style |
|--|---|--|
|  |  |  |

4. Visibility of User Online Status:

Problem: Timely communication can be hindered when there is uncertainty about whether a contact is available to respond, leading to delays and missed opportunities for interaction.

Solution: The decision to display the online status of contacts was made to optimize communication timing. By providing visibility into when someone is available, this feature facilitates more spontaneous and timely interactions, aligning with the goal of improving communication efficiency.



Efficiency

5. Gestures to Reply to a Specific Message:

Problem: In fast-paced communication environments, responding to messages can be slowed down by complex or cumbersome reply methods.

Solution: Introducing quick gestures, such as swiping or tapping to reply, was designed to streamline user interaction with messages. This decision enhances user convenience, allowing for faster responses in conversations, and is particularly beneficial in fast-paced communication environments.

6. Reply to Messages by Picture or Sticker:

Problem: Text-based communication alone may not always capture the full range of expression needed in conversations, leading to less engaging interactions.

Solution: Allowing replies with images or stickers was included to enrich the communication experience. This design choice adds a visual and expressive dimension to conversations, meeting the need for more engaging and dynamic interactions in messaging.

7. Reply to Voice Messages:

Problem: Some users may find it difficult to convey tone and emotion through text, which can reduce the expressiveness of their replies.

Solution: The decision to enable voice replies to voice messages was made to accommodate different communication preferences. This feature was chosen to provide a more natural and expressive mode of interaction, enhancing the overall flow and personalization of conversations.

8. Adjust Voice Message Playback Speed:

Problem: Listening to voice messages at a fixed speed may not suit all users, potentially leading to inefficiency in how they process auditory information.

Solution: Implementing playback speed control for voice messages was designed to cater to diverse listening needs. This feature was included to give users flexibility in how they consume voice content, supporting both quick skimming and detailed listening.

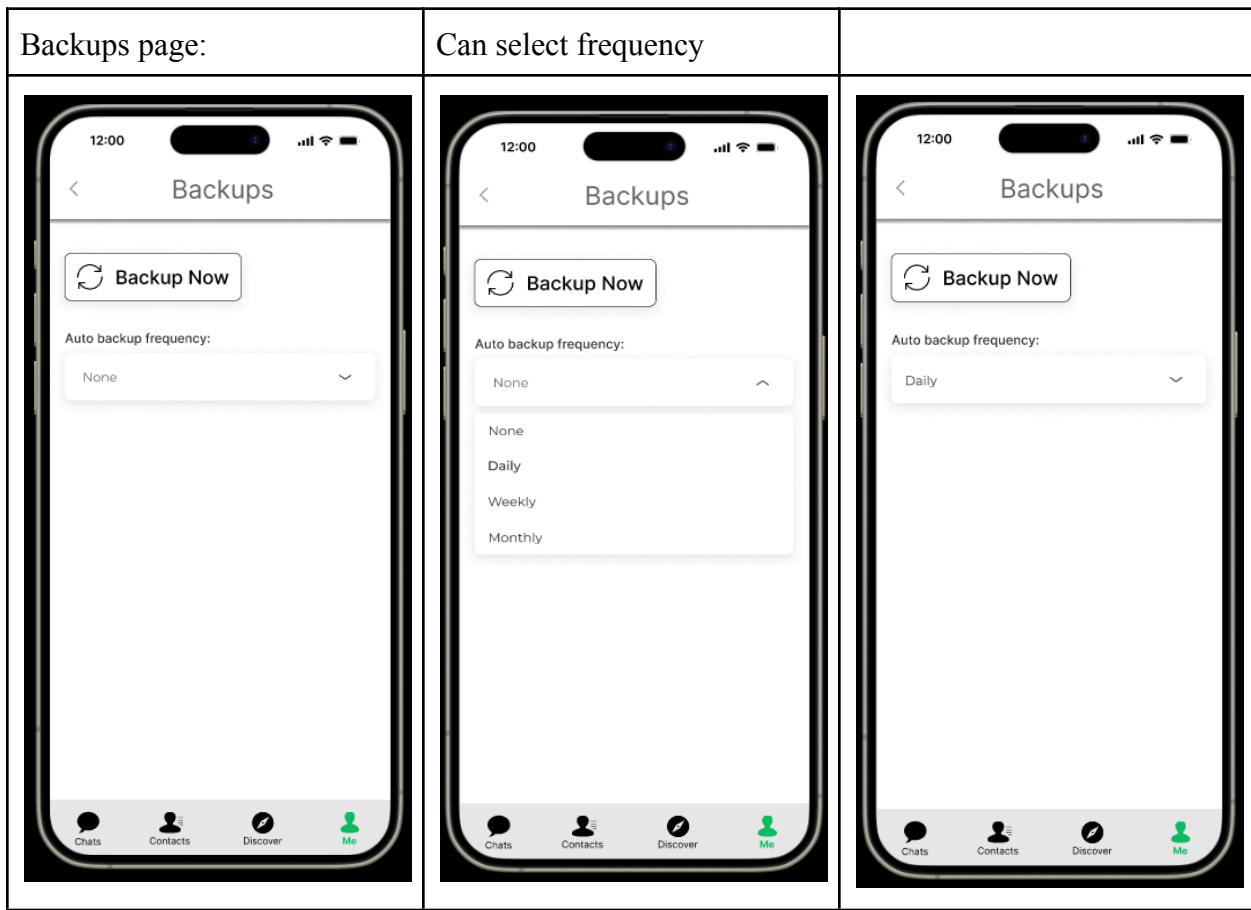
| Before swipe to reply | After swipe to select message | Replied by sticker |
|-----------------------|-------------------------------|--------------------|
| | | |
| Replied by picture | Replied by voice | Replied by text |
| | | |

Satisfaction

9. Cloud Storage Backup Options:

Problem: Data loss due to device issues can cause significant disruption and concern, especially if important messages and media are lost.

Solution: The inclusion of cloud storage backup was a deliberate choice to ensure data security and accessibility. This feature was designed to meet modern expectations for data management, providing users with confidence that their information is safe and can be easily recovered if needed.

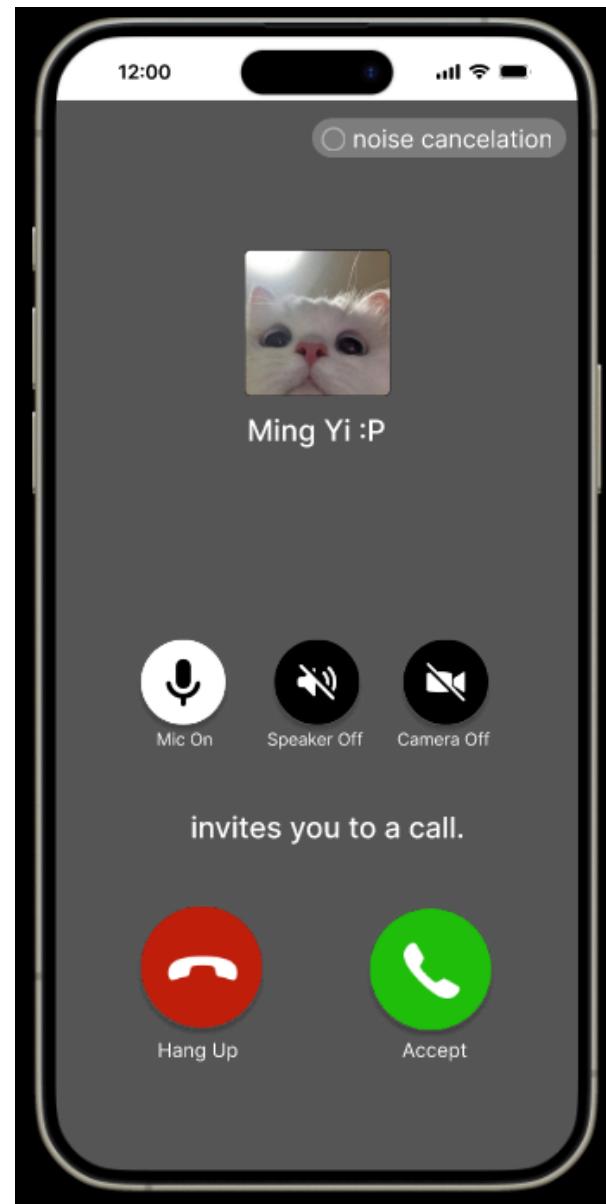


10. Noise Cancellation in Video Calls:

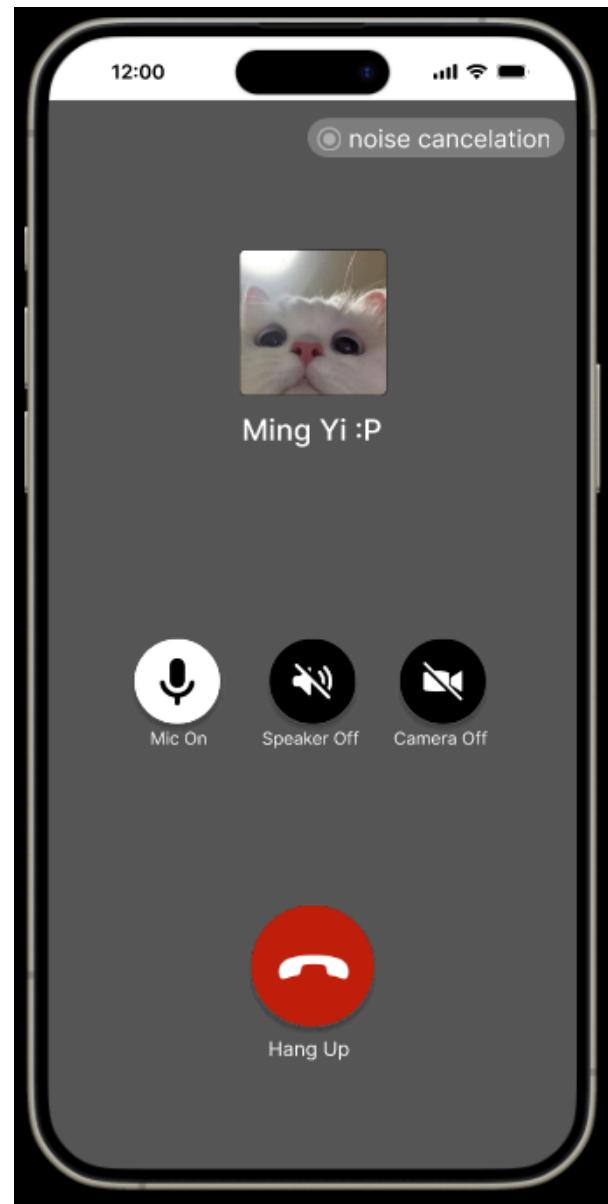
Problem: Background noise during video calls can disrupt conversations, making them less clear and reducing the professionalism of remote communication.

Solution: Integrating noise cancellation technology into video calls was decided to improve audio clarity. This design decision was made to ensure that conversations are more focused and professional, even in noisy environments, thus enhancing the overall communication experience.

Can enable the cancelation before accept call



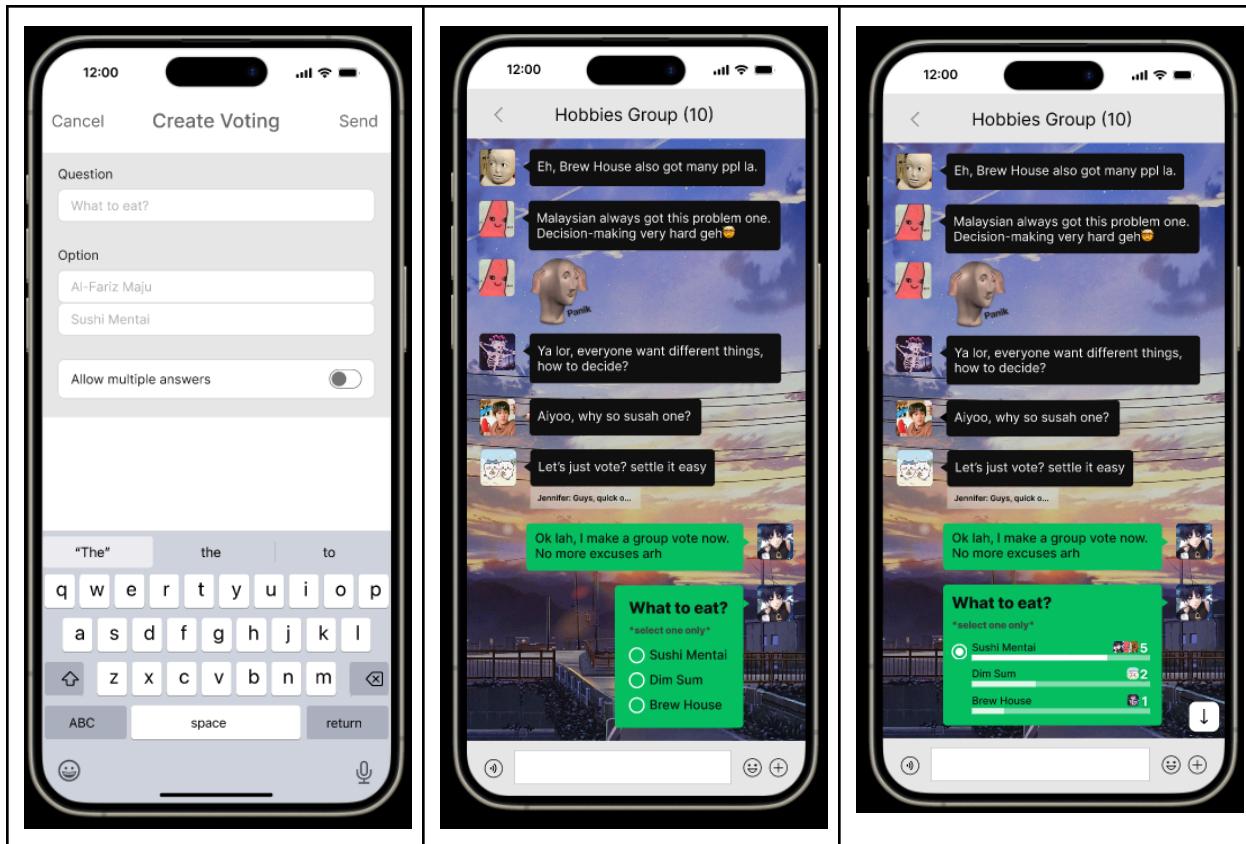
During call also can select



11. Voting in Group Chats:

Problem: Making group decisions can be time-consuming and difficult when there is no structured way to gather and tally opinions.

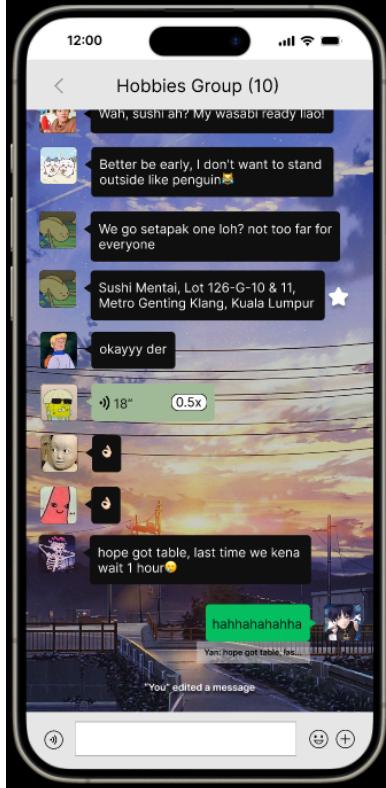
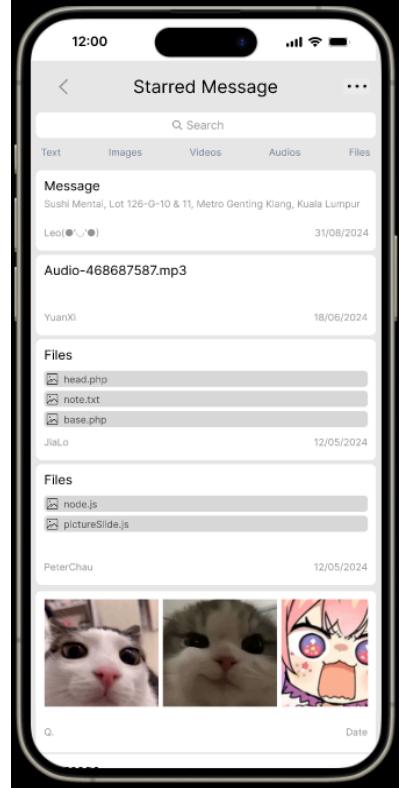
Solution: The decision to include a voting feature in group chats was made to facilitate collaborative decision-making. This feature was designed to encourage participation and streamline the decision-making process, making group interactions more efficient and inclusive.



12. Star Important Messages:

Problem: Important information can be difficult to find in lengthy or active chats, leading to inefficiencies when users need to reference specific messages

Solution: Allowing users to star important messages was a strategic choice to improve information retrieval. This feature was designed to help users quickly access key details, reducing the time spent searching through chat history and ensuring that critical information is always easily accessible.

| Hover to message will have star(unfilled) | After select will change to filled star | Got starred message listing: |
|--|---|--|
|  |  |  |