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C&H

Welcome to your documentation space!

Here are a few suggestions to get started:

- Explain how this documentation space should be used by selecting the Edit button and customizing this Overview page
- Select Create  to make a new page in your space
- Add links to tools, guides, and other documentation resources
- Bookmark our [documentation guide](#) to learn how to create and improve documentation
- Explore the sample pages we've created for you

[How-to article](#) [Meeting notes](#) [Master project documentation](#)

Remove this panel once you're ready to share your space with team members.

[Documentation overview](#) | [User guide](#) | [Most viewed documents](#) | [Recently updated](#)

Documentation overview

Explain the purpose of this space and provide a high-level overview of what documentation is included.

User guide

Explain how your documentation is organized and how users should navigate this space. Type [/IMAGE](#) to add a diagram.

Most viewed documents

Add the most viewed documents by typing [/LINK](#).

Recently updated

You'll see the 5 most recently updated pages that you and your team create.

-  [2021-10-21 Meeting notes](#)
a minute ago • contributed by Yu-Wen Michael Zhang
-  [Handover](#)
5 minutes ago • contributed by Yu-Wen Michael Zhang
-  [Sprint3 Retrospective](#)
15 minutes ago • contributed by Tian Hui
-  [Sprint 3 Functional Testing](#)
44 minutes ago • contributed by Zhen Cai
-  [2021-10-19 Meeting notes](#)
yesterday at 1:26 AM • contributed by Zhen Cai

Meetings

[Expand all](#) [Collapse all](#)

Client Meetings

Client Meeting 1

Date

10 Aug 2021

8:00p.m. - 8:30p.m.

Participants

- @ Yu-Wen Michael Zhang
- @ Bingzhe Jin
- @ Tian Hui
- @ Zhen Cai
- @ Jiachen Ping
- Leo (client)

Goals

- Introduction
- Discuss requirements

Discussion topics

No.	Item	Notes
1	Team and client Introduction	
2	Discussing requirements	<ul style="list-style-type: none">• Requirements:<ul style="list-style-type: none">• Chat• Email• Online voice call• Notification• Export contact details as csv• Schedule meeting• Events Calendar• Search contacts• Search chatting record

Client Meeting 2 - Sprint1 Review

Date

06 Sep 2021

8:30p.m. - 8:50p.m.

Participants

- @ Yu-Wen Michael Zhang
- @ Bingzhe Jin
- @ Tian Hui
- @ Zhen Cai
- @ Jiachen Ping
- Leo (client)

Goals

- sprint 1 review with the client
- Discuss requirement questions

Discussion topics

No.	Item	Notes
1	Demonstrate current progress to the client and review	Problems: After log in, it's better to redirect to a frequently used page rather than just home page
2	Discussing requirements questions	Requirement clarifications: <ul style="list-style-type: none"> • Emails should be sent via the system • For notifications, show unread messages

Client Meeting 3 - Sprint2 Review

Date

06 Oct 2021

8:00p.m. - 8:15p.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Jiachen Ping](#)
- Leo (client)

Goals

- Sprint 2 review with the client

Discussion topics

No.	Item	Notes
1	Demonstrate current progress to the client	Demonstrate: chat, voice / video call, screen share
2	Client review	All good

Group Meetings

2021-08-13 Meeting notes

Date

13 Aug 2021

4:30p.m. - 5:00p.m.

Participants

- [@ Bingzhe Jin](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)

Goals

- Familiarize with Confluence

Discussion topics

No.	Item	Notes
1	Familiarize confluence	Create new documents and folders.

2021-08-17 Meeting notes

Date

17 Aug 2021

8:00p.m. - 11:30p.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Jiachen Ping](#)

Goals

- Complete user stories and requirements.
- Show how spring boot works.

Discussion topics

No.	Item	Notes
1	Assign tasks	<ul style="list-style-type: none">• Assign front end and back end.• Assign confluence management.• Assigned task login frontend @ Yu-Wen Michael Zhang & @ Jiachen Ping & @ Tian Hui.• Assigned task login backend @ Bingzhe Jin & @ Zhen Cai.
2	User stories	<ul style="list-style-type: none">• Discuss.
3	Code demonstration	<ul style="list-style-type: none">• Show how Spring Boot works.
4	Github	<ul style="list-style-type: none">• Create basic structure for spring boot and create frontend and backend branch.

2021-08-18 Meeting notes

Date

18 Aug 2021

11:00p.m. - 1:00a.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Zhen Cai](#)

Goals

- Deploy the app on Heroku.

Discussion topics

No.	Item	Notes
1	Discuss sign up / log in details	<ul style="list-style-type: none">• The web app knows who just logged in.• One email cannot be signup twice.• Email need to be actual email like : zywmichael@gmail.com, cannot use 12345 as a email.

2	Merge code and deploy	• Merge with frontend and run on Heroku.
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2021-08-20 Meeting notes

Date

20 Aug 2021

2:00a.m.-3:00a.m.

Participants

- [@ Zhen Cai](#)
- [@ Bingzhe Jin](#)

Goals

- Merge backend branches

Discussion topics

No.	Item	Notes
1	Merge	Merge backend branches: signup emails & user data service.
2	Database model	Discuss model for database.

2021-08-24 Meeting notes

Date

24 Aug 2021

12:20a.m. - 1:20a.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Jiachen Ping](#)

Goals

- Know how frontend communicate with backend

Discussion topics

Time	Item	Presenter	Notes
12:20AM	User Interface	Michael	• show how frontend communicate with backend
12:40AM	User Interface	Michael	• Discuss how to design register page and login page
1:00AM	User Interface	Michael	• Discuss how to design the user email activation page

Decisions

 plan to finish designing the register page and login page in the next couple of days.

2021-09-02 Meeting notes

Date

02 Sep 2021

8:00p.m. - 9:00p.m.

Participants

- [@ Bingzhe Jin](#)
- [@ Yu-Wen Michael Zhang](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Jiachen Ping](#)

Goals

- merge code and discuss progress at the end of sprint 1.

Discussion topics

Item	Item	Notes
1	Resolve merge conflicts	
2	Testing	no major issues
3	Discuss user interface design and code	
4	Go through checklist and prepare documents for sprint 1	
5	Email send	Who to send the email? need to ask client.
6	Peer code review	
7	Meet with client on Monday	

2021-09-06 Meeting notes - Sprint 2 Planning

Date

06 Sep 2021

8:50p.m. - 9:30p.m.

Participants

- [@ Bingzhe Jin](#)
- [@ Yu-Wen Michael Zhang](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Jiachen Ping](#)

Goals

- Assign user stories to team members for sprint 2.

Discussion topics

	Item	Notes
1	Demonstrate how to use some backend interfaces	Presenter: @ Zhen Cai
2	User stories assignment	For details, see sprint 2 sprint planning.

2021-09-09 Meeting notes

Date

09 Sep 2021

8:00p.m. - 11:30p.m.

Participants

- [@ Tian Hui](#)
- [@ Zhen Cai](#)

Goals

- Implement real-time notifications.

Discussion topics

	Item	Notes
1	STOMP sockets	
2	Discuss logic for real-time	<p>When a page is mounted, the frontend connects to the backend via sockets and disconnects when the page is unmounted. Both require the submission of a user id.</p> <p>When the backend receives a user id from a socket, it responds with the number of unread notifications. Also, from time to time, backend actively pushes new notifications to frontend, once the receiver's frontend leaves the communication channel open.</p> <p>When a user clicks the notification button, a dropdown appears, and the frontend goes to <code>/notification/fetch</code>, if the backend returns a number other than 0. After retrieving the notifications, the backend will delete them from the database.</p> <p>The frontend caches newly fetched notifications and renders them all from local storage. The number of local notifications will be displayed next to the notification button. A user can mark notifications as read, which causes the marked item to be deleted from local storage.</p> <p>When a user logs out on the frontend, the frontend also disconnects the socket for the current page with the backend, then it posts and tells backend that this user logs out. If the user opens more than one page, the backend will close all communication channels between itself and (all of) the user's pages.</p>

2021-09-11 Meeting notes

Date

11 Sep 2021

4:00p.m. - 7:30p.m.

Participants

- [@ Tian Hui](#)
- [@ Zhen Cai](#)

Goals

- Controller authentication.
- Implement real-time notifications.

Discussion topics

	Item	Notes
1	Pair coding	

2	Parse user id from JWT token	Prevents a logged-in user from changing the information of another user by using that user's id.
3	Further discuss logic for real-time notification	<p>The frontend sends an HTTP GET request to <code>/notification/connect</code> with the authorisation token present in the header every time a page is mounted after login. The backend then parses the token for the user id, returns a collision-resistant random path, such as <code>Xyl8ajJA4Hk9OekowUbLCgYg0nJam</code>, and updates a subscription map: <code>{<userId>: [<path1>, ...]}</code>.</p> <p>Now that the path has been received, the frontend connects to <code>/candh-crm-websocket</code> in backend, and subscribes <code>/topic/notification/Xyl8ajJA4Hk9OekowUbLCgYg0nJam</code>.</p> <p>Following that, after the frontend sends user id to <code>/app/notification/unread</code> via sockets, the backend responds with the number of unread notifications. In addition, if the communication channel is not closed, the backend will actively push new notifications from time to time.</p> <p>When the page is unmounted, the frontend disconnects.</p> <p>When a user clicks the notification button, a dropdown appears, and if the backend returns a number other than 0, the frontend GETs <code>/notification/fetch</code>, with the authorisation token present in the header. The backend will delete the notifications from the database after retrieving them.</p> <p>The frontend caches newly fetched notifications and renders them all from local storage. The number of local notifications will be displayed next to the notification button. A user can mark notifications as "read", which causes the marked item to be deleted from local storage.</p> <p>When a user logs out, the frontend should post to <code>/logout</code>, with the authorisation token present in the header. This tells backend to remove all subscriptions of the user. The frontend should then delete all notifications from local storage.</p>

2021-09-17 Meeting notes

Date

17 Sep 2021

6:00p.m. - 12:00a.m.

Participants

- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Bingzhe Jin](#)
- [@ Yu-Wen Michael Zhang](#)
- [@ Jiachen Ping](#)

Discussion topics

	Item	Notes
1	Pair coding	
2	Display notification time	
3	Fix dropdown glitches	
4	Improve the logic of un-subscription	The frontend now only sends an HTTP GET request to <code>/notification/connect/register</code> once right after login, next store the subscription path in local storage. This will be sent to backend when logout, then deleted.
5	Fix logout problems	
6	Fix merge inconsistency	

2021-09-24 Meeting notes

Date

24 Sep 2021

7:30p.m. - 9:30p.m.

Participants

- @ Bingzhe Jin
- @ Jiachen Ping
- @ Tian Hui
- @ Yu-Wen Michael Zhang
- @ Zhen Cai

Goals

- Resolve problems from testing.

2021-09-30 Meeting notes

Date

30 Sep 2021

8:15p.m. - 10:15p.m.

Participants

- @ Bingzhe Jin
- @ Jiachen Ping
- @ Tian Hui
- @ Yu-Wen Michael Zhang
- @ Zhen Cai

Goals

- Test video call (by Bingzhe Jin, Tian Hui, Yu-Wen Michael Zhang) on Heroku.
- Resolve problems from testing (Jiachen Ping).
- Complete sprint-2 checklist (Yu-Wen Michael Zhang).
- UI design (Presenter: Zhen Cai).

2021-10-08 Meeting notes - Sprint3 Planning

Date

08 Oct 2021

4:45p.m. - 5:00p.m.

Participants

- @ Yu-Wen Michael Zhang
- @ Bingzhe Jin
- @ Jiachen Ping
- @ Zhen Cai
- @ Tian Hui

Goals

- Plan sprint 3.

Discussion topics

No	Item	Notes
1	Improve UI	<ul style="list-style-type: none"> Homepage, Register page(loader required), schedule meetings, setting page, change password @ Yu-Wen Michael Zhang Email verification, popup notification, chat, call, navbar @ Bingzhe Jin dashboard, profile video button, change note @ Jiachen Ping login, search, email @ Tian Hui @ Zhen Cai
2	Testing	@ Zhen Cai @ Tian Hui
3	Presentation	@ Zhen Cai @ Tian Hui @ Yu-Wen Michael Zhang @ Bingzhe Jin @ Bingzhe Jin

2021-10-16 Meeting notes

Date

16 Oct 2021

8:00p.m. - 10:00p.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Jiachen Ping](#)
- [@ Zhen Cai](#)
- [@ Tian Hui](#)

Goals

- Prepare presentation.

Discussion topics

No	Item	Notes
1	Slides	<ul style="list-style-type: none"> choose slide format merge slides
2	Prepare scripts	

2021-10-17 Meeting notes

Date

17 Oct 2021

8:00p.m. - 10:00p.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Jiachen Ping](#)
- [@ Zhen Cai](#)
- [@ Tian Hui](#)

Goals

- Prepare presentation.

Discussion topics

No	Item	Notes
1	Slides	<ul style="list-style-type: none">• create more gif demos• impove slides
2	Prepare	<ul style="list-style-type: none">• improve scripts• practice and rehearse & check time limit

2021-10-19 Meeting notes

Date

20 Oct 2021

Participants

- [@ Zhen Cai](#)
- [@ Yu-Wen Michael Zhang](#)

Goals

- Functional testing

2021-10-21 Meeting notes

Date

21 Oct 2021

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Zhen Cai](#)
- [@ Tian Hui](#)
- [@ Jiachen Ping](#)

Goals

Sprint 3 checklist and handover.

Discussion topics

Item	Notes
handover	add more detail in the handover page on confluence.
debug	improve UI
checklist	submit our checklist.

Weekly Standup

2021-08-20 standup

Date

20 Aug 2021

4.30 - 5.00pm

Participants

- [@ Bingzhe Jin](#)
- [@ Yu-Wen Michael Zhang](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Jiachen Ping](#)

Goals

- Update the project progress and plan.

Discussion topics

Item	Item	Notes
1	Things done	<ul style="list-style-type: none">• Every student gave an update of what they did in the last week• @ Bingzhe Jin backend: check validity of email and password, auto confirmation email sent after sign up• @ Zhen Cai backend: signup and login page backend, url in confirmation email• @ Tian Hui motivational model, persona• @ Yu-Wen Michael Zhang connecting frontend and backend to deploy on Heroku (in progressing)• @ Jiachen Ping frontend: signup page
2	problems	<ul style="list-style-type: none">• How to integrate front-end and back-end to deploy on Heroku in one repository
3	Plan next week	<ul style="list-style-type: none">• Implement Log in and Register Functionalities and corresponding front-end page• backend: contact list and user information update (i.e. password) @ Bingzhe Jin @ Zhen Cai• frontend: home page, signup page, login page @ Tian Hui @ Yu-Wen Michael Zhang @ Jiachen Ping• front and backend linkage passing authorised user information• Deploy on Heroku @ Yu-Wen Michael Zhang

2020-08-27 standup

Date

20 Aug 2021

4.30 - 5.00pm

Participants

- [@ Bingzhe Jin](#)
- [@ Yu-Wen Michael Zhang](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Jiachen Ping](#)

Goals

- Update the project progress and plan.

Discussion topics

Item	Item	Notes
------	------	-------

1	Things done	<ul style="list-style-type: none"> Every student gave an update of what they did in the last week @ Bingzhe Jin frontend: update the navigation bar after logged in, backend: change password, contact list, add and remove friends @ Zhen Cai backend: authentication and return access token to frontend @ Tian Hui frontend: log in page and save the access token received to localStorage, delete token when log out @ Yu-Wen Michael Zhang frontend home page, improve register page and navigation bar @ Jiachen Ping frontend: the account activation page and disabling register button during registration
2	problems	<ul style="list-style-type: none"> Register takes too long, a loading page may be required when waiting.
3	Plan next week	<ul style="list-style-type: none"> Frontend: Implement user profile and contact lists display frontend&backend: Contact list, Search page - sketchy search & detailed search @ Bingzhe Jin frontend: show user profile @ Yu-Wen Michael Zhang @ Jiachen Ping @ Tian Hui backend: new friend confirmation and list sent/received friend request @ Zhen Cai

2021-09-03 standup

Date

03 Sep 2021

4:30p.m. - 5:30p.m.

Participants

- @ Yu-Wen Michael Zhang
- @ Bingzhe Jin
- @ Jiachen Ping
- @ Zhen Cai
- @ Tian Hui

Goals

- summarise what we have done so far.

Discussion topics

Item	Item	Notes
1	Things done	<ul style="list-style-type: none"> Every student gave an update of what they did in the last week. @ Bingzhe Jin frontend: finish showing the contacts of a user; search user. @ Jiachen Ping frontend: currently designing user profile page. @ Tian Hui frontend: user can change password after login. @ Yu-Wen Michael Zhang frontend: design setting page and deploy project to heroku, UI design. @ Zhen Cai backend: search user, testing, database modelling.
2	problems	Cannot deploy heroku but fix it one hour later.
3	Plan next week	<ul style="list-style-type: none"> @ Jiachen Ping contact client and finish the profile page. @ Yu-Wen Michael Zhang @ Tian Hui Setting page. @ Zhen Cai contact page backend. @ Bingzhe Jin everything about contact i.e. add, delete, accept, reject, cancel, notes.

2021-09-10 standup

Date

10 Sep 2021

4:30p.m. - 5:00p.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Jiachen Ping](#)
- [@ Zhen Cai](#)
- [@ Tian Hui](#)

Goals

- summarise what we have done so far.

Discussion topics

	Item	Notes
1	Things done	<ul style="list-style-type: none">• Every student gave an update of what they did in the last week.• @ Bingzhe Jin frontend: send / cancel / accept / decline friend request. Show add friend button / show friend profile when clicking a user depending on they are friends or not.• @ Jiachen Ping frontend: display user profile page.• @ Zhen Cai backend: All operations of friend requests (sending / declining etc.). Add websockets to connect to frontend to push notifications.• @ Tian Hui frontend: Add websockets to connect to backend to receive notifications.• @ Yu-Wen Michael Zhang frontend: display setting page and support editing user information.
2	problems	N/A
3	Plan next week	<ul style="list-style-type: none">• @ Jiachen Ping adjusting the profile page and displaying the profile for other user's profile.• @ Yu-Wen Michael Zhang Export csv contents.• @ Tian Hui Continue working with notifications• @ Zhen Cai Continue working with notifications• @ Bingzhe Jin send emails and search contact list

2021-09-17 standup

Date

17 Sep 2021

3:45p.m. - 4:00p.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Jiachen Ping](#)
- [@ Zhen Cai](#)
- [@ Tian Hui](#)

Goals

- summarise what we have done so far.

Discussion topics

	Item	Notes
1	Things done	<ul style="list-style-type: none"> • Every student gave an update of what they did in the last week. • @ Bingzhe Jin content list service end email service • @ Jiachen Ping refine user profile page and add icons. • @ Zhen Cai backend: continue working on notifications and manage websockets. • @ Tian Hui frontend: continue working on notifications. • @ Yu-Wen Michael Zhang export contacts as csv.
2	problems	N/A
3	Plan next week	<ul style="list-style-type: none"> • @ Jiachen Ping work on implementing calender • @ Yu-Wen Michael Zhang work on implementing calender • @ Tian Hui Continue working with notifications and fine-tuning notifications display. • @ Zhen Cai Continue working with notifications and work on chatting. • @ Bingzhe Jin work on chatting.

2020-10-01 standup

Date

01 Oct 2021

Participants

- @ Yu-Wen Michael Zhang
- @ Bingzhe Jin
- @ Tian Hui
- @ Zhen Cai
- @ Jiachen Ping

Goals

Assign UI design to team members.

Discussion topics

Page Number	Item	Assigned to
1, 3, 7, 13, 14	Homepage, Register page(loader required), schedule meetings, setting page, change password	@ Yu-Wen Michael Zhang
4, 6	Email verification, popup notification, chat, call, navbar	@ Bingzhe Jin
5, 12, 15, 16	dashboard, profile video button, change note	@ Jiachen Ping
2, 8, 9, 10 (11)	login, search, email	@ Tian Hui @ Zhen Cai

2020-10-08 standup

Date

08 Oct 2021

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Jiachen Ping](#)

Goals

Update progress.

Discussion topics

No	Item	Notes
1	Things done	Most of UI
2	Next week	Testing, Continue to improve UI and prepare presentation.

2020-10-15 standup

Date

15 Oct 2021

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)
- [@ Tian Hui](#)
- [@ Zhen Cai](#)
- [@ Jiachen Ping](#)

Goals

Update progress.

Discussion topics

No	Item	Notes
1	Things done	More UI and bug fixing.
2	Next week	Presentation. Test. Write documents.

Ceremony Meetings

Sprint1 Retrospective

Date

10 Sep 2021

5:00p.m. - 5:30p.m.

Participants

- [@ Yu-Wen Michael Zhang](#)
- [@ Bingzhe Jin](#)

- @ Jiachen Ping
- @ Zhen Cai
- @ Tian Hui

Discussion topics

No	Item	Notes
1	Goals achieved	<ul style="list-style-type: none"> • Homepage / Navigation bar • Register / Log in / Log out / Account activation • User search
2	Goals not achieved	<ul style="list-style-type: none"> • User profile display not complete
3	What we did well	<ul style="list-style-type: none"> • We did lots of pair coding • We finished most of the tasks in sprint1 • We had frequent meetings
4	What can be better	<ul style="list-style-type: none"> • We could make the UI better. • We could try to communicate more effectively.

Sprint2 Retrospective

Date

08 Oct 2021

4:30p.m. - 4:45p.m.

Participants

- @ Yu-Wen Michael Zhang
- @ Bingzhe Jin
- @ Jiachen Ping
- @ Zhen Cai
- @ Tian Hui

Discussion topics

No	Item	Notes
1	Goals achieved	<ul style="list-style-type: none"> • Chat • Voice/Video call • Screenshare • Notifications
2	Goals not achieved	
3	What we did well	<ul style="list-style-type: none"> • We have efficient implementations • We finished the functional requirements
4	What can be better	<ul style="list-style-type: none"> • A more elegant and user-friendly interface should be designed. • Update more often on Trello board.

Sprint3 Retrospective

Date

21 Oct 2021

9:00 p.m. - 9:20 p.m.

Participants

- @ Yu-Wen Michael Zhang
- @ Bingzhe Jin
- @ Zhen Cai
- @ Tian Hui
- @ Jiachen Ping

Discussion topics

No	Item	Notes
1	Goals achieved	<ul style="list-style-type: none"> • UI improvement • Presentation • Testing and fixing bugs
2	Goals not achieved	
3	What we did well	<ul style="list-style-type: none"> • progressive improvements on UI • careful testing • detailed presentation
4	What can be better	<ul style="list-style-type: none"> • Presentation could be more entertaining. • Documentation could be done more timely.

Requirements

User Stories

Info

User Story Version 1.0

ID	As a <Role>	I want to <Do something>	So that <Achieve some goals>	Priority	Estimation
1	Client	sign up using email and password.	I can use the application.	High	3 days
2	Client	edit profile, such as phone number, company, name, personal summary, etc.	I can show my personality and introduce myself.	High	3 days
3	Client	log in using email and password.	I can access and manage my account	High	3 days
4	Client	be able to change the password after login.	I can change my password whenever I want.	High	2 days
5	Client	add and remove other contacts.	I can manage my contact list	High	3 days
6	Client	view contact list.	I can see my contacts.	High	2 days
7	Client	edit a contact's notes.	I remember important personal details.	High	1 day
8	Client	send text message to other contacts.	I can communicate with my contacts.	High	4 days
9	Client	search contact list.	I can discover potential contacts.	High	3 days
10	Client	logout manually.	I do not need to be in state of logged in whenever I want.	High	1 day
11	Client	be logged out automatically after one hour.	I feel safe about my account.	Low	1 day
12	Client	send email via the system.	I can communicate with my contacts formally	High	3 days
13	Client	schedule a meeting by specifying a meeting time, participants and an agenda, then send an email to participants according to a template.	I have an official virtual communication channel.	High	5 days
14	Client	view one's profile by clicking a contact in the contact list.	I can see the information of my contacts.	High	2 days

15	Client	set a head icon and a gender icon in one's profile.	I can show more personality.	Medium	2 days
16	Client	send images to other contacts.	I can communicate with my contacts in a more convenient way.	Low	3 days
17	Client	send emoji to other contacts.	I can feel more relaxed when communicating with my contacts.	Medium	2 days
18	Client	receive a notification.	I will not miss important new messages	Medium	5 days
19	Client	export contacts' information in .csv format.	I can save it for later use and feel safe about the information	High	1 days
20	Client	search other users.	I can find and view the profile of the user I'm interested in	High	2 days
21	Client	see meeting date and time on calendar.	I can better allocate my work	High	2 days
22	Client	start a voice call	I can communicate with my contacts by voice	High	3 days
23	Client	start a video call	I can see my contacts and talk to them	Low	2 days

Functional Requirements

Functionality	Description	Sub-Functionality	Example
Chat	General chat function allow users to communicate with each other	Voice chat	<ul style="list-style-type: none"> A user should be able to send a direct message (including text, image, audio) to another specific user selected. A user establishes a voice call with another.
Email	Exchange of emails between users	N/A	<ul style="list-style-type: none"> A user composes a message and send to another user in this system.
Notification	A notification should be sent to users when they receive a new message or any changes occurs	N/A	<ul style="list-style-type: none"> User A receives a text from B, and A is able to see a icon of the product on browser tab is blinking, indicating there is a new message User A receives a email regarding changes to the policy of the product
Meeting organisation	Function that allows user to create, manage meetings	<ul style="list-style-type: none"> Send email invitation to participants 	<ul style="list-style-type: none"> Andy creates a meeting scheduled on 5pm 16/08/2021, and selected Alice, Bob and Eve as participants. Emails are sent to them consequently Andy should be able to update meeting time, participant list, delete meeting. All changes made should be sent to participants as email messages
Custom notes	Allow users to add custom notes to others as key-value pairs		<ul style="list-style-type: none"> User A has B in his contact, A wishes to add more information about B on top of what he already has (Name, email and organisation). A records B's phone number by adding a new tag "phone number" and set content as "0412345678" in B's profile contained in A's contact book (can only be seen by A)
Export contact	Allow users to export contacts as CSV files and store them locally		<ul style="list-style-type: none"> A saves B's profile on his own device as "B.csv"
Search	Search for a user by choices (name, email, organisations)	Search for chat content (optional)	<ul style="list-style-type: none"> A wishes to add his friend B to his contact, he put B's full name and the page returned B's profile

Non-Functional Requirements

- Usability
 - Be succinct and aesthetic.

- Performance
 - Response time should be in a reasonable interval.
- Availability
 - It should be available all the time when the user is using the application.

Personas

Marli

age: 27

residence: Sydney

education: Bachelor of Fine Art

occupation: Designer

marital status: Single | No children



Design is a language, an expression and a solution!

Marli prefers to co-design her product with users or customers. She believes good design is the design that users like. She follows best practices in the industry but she is never afraid to learn new technologies.

Comfort With Technology

INTERNET



SOFTWARE



MOBILE APPS



SOCIAL NETWORK



Criteria For Success:

When a project achieves its goals on time and on budget while delighting users.

Needs

- Set crazy goals and make it happen
- Customers are involved in the Design Process

Wants

- Co-design with users
- Review user feedback before any major decision

Values

- Detailed communication
- Empowering users
- Decisions backed up by user research

Fears

- Users unsatisfied
- Fail to meet deadline



Daniel

age: 31

residence: Melbourne

education: Bachelor

occupation: Sales Manager

marital status: Married



I got to where I am today by being me

Previous was a blogger, now is a sales manager and a proud father with two kids. Passionate about sharing success and meeting new clients from different backgrounds. Enjoys football and cooking at home.

Comfort With Technology

INTERNET



SOFTWARE



MOBILE APPS



SOCIAL NETWORK



Criteria For Success:

Increase the number of customers subscribing to the company newsletter by 5% within three months

Sell 1500 new products in a year after market introduction

Needs

- To keep track of everything
- Find unique product stories
- Build comfortable relationship with customers

Wants

- Long-term loyal customers
- Productive and effective team
- Cozy atmosphere at work

Values

- Bring Happiness to customers
- Cater to different people
- Help customers make informed decisions

Fears

- Not have enough time
- Data crashes

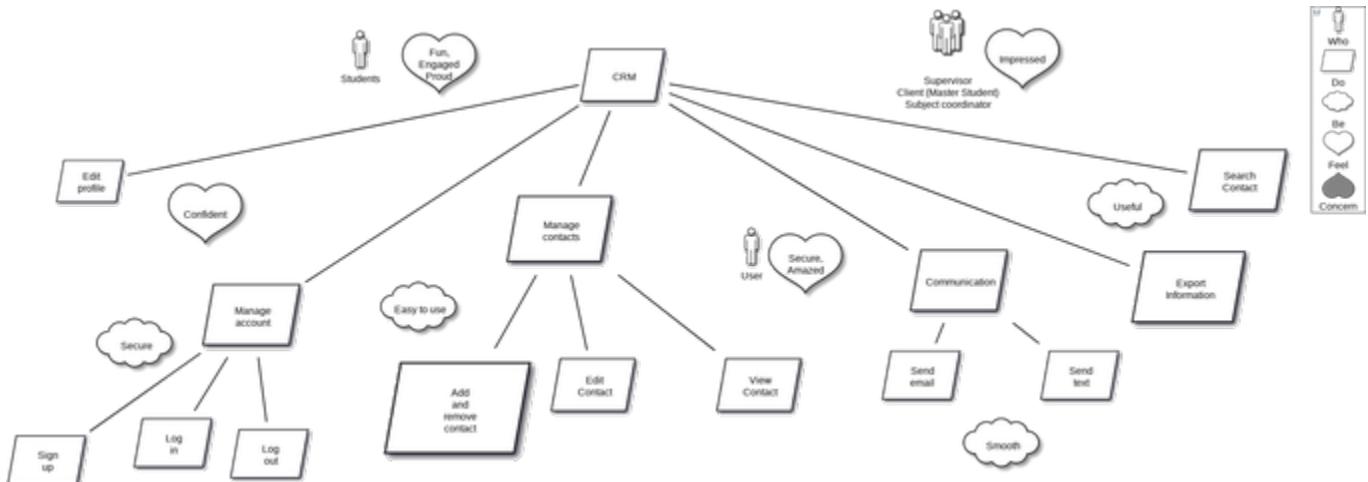


Motivation Models

Do-Be-Feel

Do	Be	Feel	Who
Sign up	Convenient	Happy	User
Log out	Secure	Safe	User
Edit profile	Easy	Confident	User
Send text	Reliable	Comfortable	User
Search contacts	Useful	Amazed	User
Building project	Engaged	Fun	Students
Export information	Quick	Safe	User

Motivational Model



Sprints

Sprint 1

User stories that will be included in sprint 1:

ID	Story	Task Assigned to	Priority	Finished?
1	sign up using email and password.	@ Yu-Wen Michael Zhang @ Jiachen Ping	High	Y
2	edit profile, such as phone number, company, name, personal summary, etc.	@ Bingzhe Jin @ Zhen Cai	High	N

3	log in using email and password.	@ Tian Hui @ Yu-Wen Michael Zhang	High	Y
4	be able to change the password after login.	@ Tian Hui @ Jiachen Ping	High	Y
6	view contact list.	@ Bingzhe Jin @ Zhen Cai	High	Y
10	logout manually.	@ Bingzhe Jin @ Yu-Wen Michael Zhang	High	Y
11	be logged out automatically after 24 hours.	@ Zhen Cai @ Tian Hui	Low	Y
14	view one's profile by clicking a contact in the contact list.	@ Bingzhe Jin	High	N
20	search other users.	@ Bingzhe Jin	High	Y

Sprint 1 Functional Testing

ID	Use Cases / Test Cases	Test Steps	Expected Results	Problems
1	Signup Invalid email	<ul style="list-style-type: none"> Go to Register page. Enter "email@") or 1==1---" in "Email". Click "Register". 	<p>i A part following '@' should not contain the symbol ''.</p>	
2	Signup Invalid password	<ul style="list-style-type: none"> Enter "x" in "Password" and "Confirm Password". Click "Register". 	<p>i Please match the format requested.</p>	
3	Signup Wrong confirm password	<ul style="list-style-type: none"> Enter inconsistent password in "Confirm Password". Click "Register". 	<p>i Password Are Not The Same. Please retry.</p>	
4	Signup Unhide passwords	<ul style="list-style-type: none"> Click the visibility slider. 	"Password" and "Confirm Password" are shown.	
5	Signup Existing email I	<ul style="list-style-type: none"> Enter an existing and enabled account in "Email". Click "Register". 	<p>i Email is already taken.</p>	<p>Resolved.</p> <p>i Email is already taken.</p> <p>and</p> <p>Email Has been taken. Please login.</p>
6	Signup Existing email II	<ul style="list-style-type: none"> Enter an existing and but non-enabled account in "Email". Click "Register". 	<p>i Sign up was successful. Check email for verification link!</p> <p>Verification email should be resent.</p>	<p>Resolved.</p> <p>Good for the first time. Second time failed with an alert:</p> <p>i an error occurs...</p>
7	Signup Normal	<ul style="list-style-type: none"> ... 	<p>i Sign up was successful. Check email for verification link!</p>	
8	Login Non-existing email	<ul style="list-style-type: none"> Go to Login page. ... 	<p>i Email not found.</p>	
9	Login Wrong password	<ul style="list-style-type: none"> ... 	<p>i Wrong password!</p>	
10	Login Unhide password	<ul style="list-style-type: none"> ... 	"Password" is shown.	

11	Login Normal	• ...	<p>Info Login succeeded. Welcome!</p> <p>Page redirects. Navigation bar changes, with user's first name on it.</p>	<p>Resolved.</p> <p>Info Login succeeded. Welcome!</p> <p>...</p>
12	Manual Logout	<ul style="list-style-type: none"> Log in Log out Visit https://crm-c-and-h.herokuapp.com/contact 	<p>Info Login required to access the page.</p>	
13	Change Password Wrong old password	<ul style="list-style-type: none"> Log in Go to "Change Password" Enter wrong old password. Fill with valid "New Password" and "Confirm New Password" Click "Submit". 	<p>Info Wrong old password.</p>	
14	Change Password Invalid passwords	<ul style="list-style-type: none"> Enter "x" in "New Password" and "Confirm New Password". Click "Submit". 	<p>Info Please match the format requested.</p>	
15	Change Password Wrong confirm password	<ul style="list-style-type: none"> Enter inconsistent password in "Confirm New Password". Click "Submit". 	<p>Info Confirm New password does not match New Password!</p>	
16	Change Password Unhide passwords	• Click the visibility slider.	All three passwords are shown.	
17	View Contact List	<ul style="list-style-type: none"> Log in. Go to Contacts. 	Display.	
18	Search User Sketchy	<ul style="list-style-type: none"> Log in. Go to Search User. Type "@GmAiL" in search bar. 	Display results, with a slider bar.	
19	Search User Detailed search with regex	<ul style="list-style-type: none"> Click "Sketchy" slider Type in 6 different search bars. Click "Search". 	Slider shows "Detailed". Display results, with a slider bar.	
20	Search User Empty Detailed search	<ul style="list-style-type: none"> Leave all search bars empty. Click "Search". 	<p>Info At least one field must be filled!</p>	
21	Login Access pages that must require login before we login	<ul style="list-style-type: none"> Visit https://crm-c-and-h.herokuapp.com/... 	<p>Info Login required to access the page.</p> <p>or</p> <p>redirects to home.</p>	<p>Resolved.</p> <ul style="list-style-type: none"> https://crm-c-and-h.herokuapp.com/  <ul style="list-style-type: none"> https://crm-c-and-h.herokuapp.com/searchUser shows empty page.
22	Buttons	• Test all buttons.	Functionalities and redirects.	
23	Email confirmation	<ul style="list-style-type: none"> Register. Find confirmation email. Click the link. Click "Click Here to Verify Your Email". 	<p>Info Your email has been verified! Please login.</p> <p>Redirects to Login page.</p>	

Sprint 2

ID	Story	Task Assigned to	Priority	Finished?
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2	edit profile, such as phone number, company, name, personal summary, etc.	@ Tian Hui @ Yu-Wen Michael Zhang	High	Y
5	add and remove other contacts.	@ Bingzhe Jin @ Jiachen Ping @ Zhen Cai	High	Y
7	edit a contact's notes.	@ Bingzhe Jin @ Zhen Cai	High	Y
8	send text message to other contacts.	@ Bingzhe Jin @ Tian Hui @ Zhen Cai	High	Y
9	search contact list.	@ Bingzhe Jin	High	Y
12	send email via the system.	@ Bingzhe Jin	High	Y
13	schedule a meeting by specifying a meeting time, participants and an agenda, then send an email to participants according to a template.	@ Jiachen Ping @ Yu-Wen Michael Zhang @ Bingzhe Jin	High	Y
14	view one's profile by clicking a contact in the contact list.	@ Bingzhe Jin @ Jiachen Ping	High	Y
15	set a head icon and a gender icon in one's profile.	@ Jiachen Ping @ Tian Hui	Medium	Y
16	send images to other contacts.	@ Zhen Cai	Low	N
17	send emoji to other contacts.	@ Bingzhe Jin	Medium	Y
18	receive notification.	@ Tian Hui @ Zhen Cai	Medium	Y
19	export contacts' information in .csv format.	@ Yu-Wen Michael Zhang	High	Y
21	see meeting date and time displayed on calendar.	@ Jiachen Ping @ Yu-Wen Michael Zhang @ Bingzhe Jin	High	Y
22	voice call with other contacts	@ Bingzhe Jin	High	Y
23	video call with other contacts	@ Bingzhe Jin	Low	Y

Sprint 2 Functional Testing

ID	Use Cases / Test Cases	Test Steps	Execution Results	Problems
1	Profile Fields			<p> Resolved.</p> <p>'\n' not allowed in personal summary and friend notes.</p> <p>There needs to be a length limit.</p> <p>Too long notes or summary should be broken into multiple lines.</p>

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			Aft er na me cha ng es, ne w na me sho uld be dis pla yed im me dia tely.
2	Pr ofile Pa ss wo rd ch an ge	<ul style="list-style-type: none"> Cl ic k 'E di ord M y P cha ro ng fil e' in P filli ng fil in e, re di Pa re ss ct wor e d", d "Ne to w <i>/s</i> et ti wor ng Cl ic nfir k m 'C Ne h a n sw ord e p a s clic s kin w or d' <p>(1) Th e old pas sw ord is cor rec t.</p>	<p>Th e pas sw ord sho uld be dis pla yed im me dia tely.</p> <p> <i>Resolved.</i></p> <p>After change, redirected to profile.</p> <p>If old password is incorrect, redirected to https://crm-c-and-h.herokuapp.com/profile/change-password.</p> <p>Need to tell the user what is the correct format, 5-10 letters or numbers.</p>

		<ul style="list-style-type: none"> Ent (2) er Th c e or ne re w ct pas /i sw n ord c an or d re the ct con ol fir d ma p tio a n s sho s uld w be or the d, sa a me. n d (3) n Th e e w ne p w a pas s sw s ord w sho or uld d sati wi sfy th the c pas or sw re ord ct for /i ma n t c crit or eri re ct fo r m ats 	
3	Profile Passwo rd ch ange	<ul style="list-style-type: none"> Go to /s et ti n g /c h a n n g e-p a s s w ord <p>It is expect ed to be abl e to dir ectl y acc ess this cha ng e- pas sw ord pa ge by typi ng the rou te.</p>	<p> Resolved.</p> <p>No router.</p>
4	Profile	<p>Aft er clic kin g an ico n</p>	<p> Resolved.</p> <p>Possible improvements:</p> <p>(1) When clicking an icon, the icon becomes grey to signify being selected, but this signification disappears after clicking the blank background.</p> <p>(2) The icon in the navigation bar is not changed immediately after saving changes. Needs a refresh.</p>

He ad ico n ch an ge	<ul style="list-style-type: none"> • Cl ic k 'C h a n g e ng lc o n' in P ro file • Cl ic k see a n ic on • T h e n cli c k “ S a v e C h a n g e g e s“ be refl ect ed thr ou gh out the pa ges wh ere the ico n is dis pla yed incl udi ng the use r pro file, nav iga tio n bar , cha t etc .Th i s cha ng e sho uld per sist aft er 	(3) It would be more natural if the website redirects or provides a button to redirect to profile after successfully changing the icon.

- Right-clicking "Save Changes" without selecting a navigation option

5	Fri en d Re qu est	A clicks "Add friend" in B's profile	Ca se 1 & 3 & 4: Se nd	• C a s e 1: N or m al d • C a s e 2: S e nt b ut B h a s n ot re s p o n d e d y et • C a s e 3: D e d' cli n ed	B rec eiv es req ues or t m an al d 'Ne w Re qu est' not ific ati on. Ca se 2: Not hin g ha pp ens. Ca se 5: Bot h rec eiv es 'Ne w Fri en d' not ific ati on.	Ca se 1

- Case 4: Canceled
- Case 5: Received request from B, either declined or has not responded yet

6	Fri end Re quest Ca ncel	A clicks "X" next to B on the sent panel.	A recalls the sent friend request. <ul style="list-style-type: none"> • Cases 1: If B has a status update received the notifications, the notifications are deleted. • Cases 2: Deleted.
7	Fri end Re quest Ac cept	A clicks "tick" next to B on the received panel.	A and B become friends.
8	Fri end Re quest De cline	A clicks "X" next to B on the received panel.	A refuses B.
9	Fri end Re quest Del ete	A clicks "unfriend" in B's profile.	A and B will not see each other in contact list.

10	Edit Friend Notes	<ul style="list-style-type: none"> Click "cancel" button changing notes in the user's profile file in a page and will appear when hovering over the profile picture on the user's page. Write in the contact page. <p>and click save changes.</p> <ul style="list-style-type: none"> Try cancel. Try empty notes. 	
11	Search Contact List	Search by name.	Filter contacts.

12	Friend Profiles	Click a friend in the contact list.	Show the profile page of that friend.
13	Receive Notifications	<ul style="list-style-type: none"> • Receive notifications on any page after logging in. A ctively fetch them message when clickson inbox. • Mark notifications to read 	Re-al-time.

14	Email	<ul style="list-style-type: none"> • Email is sent correctly. • Search results by partial email. • Multiple receivers. • Duplicate receivers. • Remove a receiver. • Try email template subject and body. 	<p>Resolved.</p> <p>No template provided.</p>
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15	Ex po rt Co nta ct Inf or ma tio n as .csv	Click "export contacts" in the contact page	A csv file containing the contacts' information will be download automatically. Cannot be downloaded until all friends are loaded.	
16	Ch at Po p-up	<ul style="list-style-type: none"> • Go to a page that has a redirect to /chat. • Recieve real-time messages in notifications. Click 'Go' 	<p> <i>Resolved.</i></p> <p>There needs to be a length limit for each chat message.</p> <p>Cannot display the first message after redirect properly.</p> <p>Not all pop-ups disappear after click 'Go'.</p>	

17	Chat	<ul style="list-style-type: none"> RealtimereviewedListenedtobesortedsuggestedcanceledbytime. Wherencoreviewingwithmedssagewithoutchatwin. done withmemberdesnotashowgwegotwithherwiseshown,anerdercutoffingwiressumesotheusersember. List getresorted. 	
18	Chat	Scroll up. View history	Each time fetched 10 more.

19	Ch at	<ul style="list-style-type: none"> • G Me <i>Resolved.</i> o ssa to ge `n' and space not allowed. c sho h uid at be p sen a t ge exc Cl ept ic em k pty o me n ssa e ge. of Bot th h e you fri an e d nd the <ul style="list-style-type: none"> • T rec y eiv p er e sho in uld m see e you s r s me a ssa g ge e in a the n cha d t cli pa c nel k . 's List e get n re- d'. sor ted.
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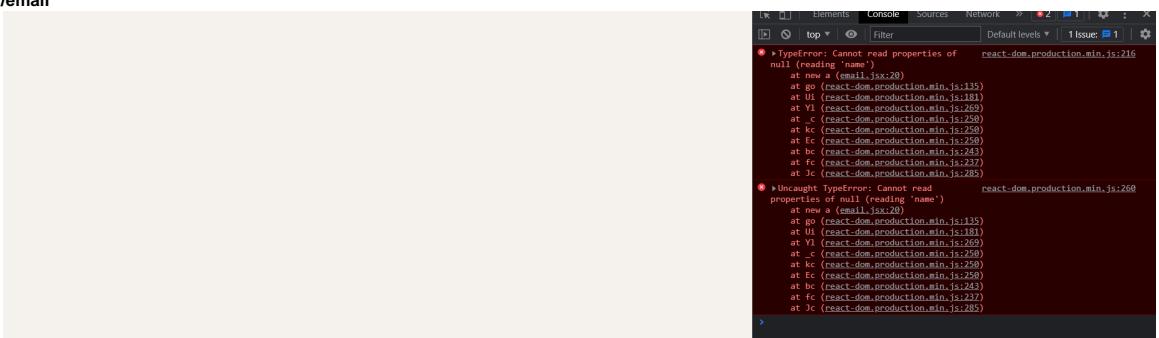
20	Me eti ng	<ul style="list-style-type: none"> • G o to /s et E v e nt • Tr y e m pt y m e et in g tit le a n d e r m pt e y d e s rep cr ip ti o n. • Tr y to s et . • Tr y n o p ar ti ci p a nt s e x c e pt th e h o st s el f. 	<p>Me eti ng title can not be left empty but the descriptions cannot be empty.</p> <p>Event with other participants is allowed.</p> <p>No participant is selected.</p>	<p> <i>Resolved.</i></p> <p>Description cannot be set to empty.</p>
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21	Cal en dar	<ul style="list-style-type: none"> • G o to see <i>/c</i> al e, des n crip tio n, ar hos ic k an o d n par a tici s c h e d u l e d e v e nt • Cl hos t k an o d n par a tici s c h e d u l e d e v e nt • Tr y d a y, m o nt h, y e ar vi e ws 	<p>Ca n tim e, des n crip tio n, ar hos ic k an o d n par a tici s c h e d u l e d e v e nt</p> <p>Resolved.</p> <p>No host.</p> <p>Too long title, description, participant names need to be broken into multiple lines.</p> <p>Participant names are suggested to be separated by spaces.</p> <p>An event over two days is not displayed by day and month views.</p>
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22	Me eti ng Del ete at ho st	<ul style="list-style-type: none"> • G o to <i>/c</i> al e n d ar et e d at hos t an d all par tici pa nts. • Cl ic k o n a s c h e d u l e d e v e n t • A s a h o s , d e l e e v e n t , c o nf ir m. 	Ev ent is del ete d at hos t
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23	Meeting Delete at participant	<ul style="list-style-type: none"> Go to /calendar delete d at the current participant. Click on a schedule event. As a participant, delete event, confirm. 	Event is only delete d at the current participant.
24	Access before login	<ul style="list-style-type: none"> Go to /profile and /settingNote/{id} and /setEvent redirects to /, but /setting and /calendar redirects to /home. 	<p> <i>Resolved.</i></p> <p>/changeicon and /contact alerts “Login required to access the page. received”, “Login required to access the page. sent”, “Login required to access the page contact.” And the following appears for a second:</p>

```

• /profile
  • /requestReceived.jsx:27
    ✘ ▶ Uncaught (in promise) TypeError: Cannot read properties of undefined (reading 'push')
      at a.<anonymous> (requestReceived.jsx:27)
      at u (2.4ebdb58d.chunk.js:sourcemap:2)
      at Generator._invoke (2.4ebdb58d.chunk.js:sourcemap:2)
      at Generator.next (2.4ebdb58d.chunk.js:sourcemap:2)
      at r (2.4ebdb58d.chunk.js:sourcemap:2)
      at l (2.4ebdb58d.chunk.js:sourcemap:2)
      at 2.4ebdb58d.chunk.js:sourcemap:2
      at new Promise (<anonymous>)
      at a.<anonymous> (2.4ebdb58d.chunk.js:sourcemap:2)
      at a.<anonymous> (main.78404a4b.chunk.js:1)
  • /requestSent.jsx:27
    ✘ ▶ Uncaught (in promise) TypeError: Cannot read properties of undefined (reading 'push')
      at a.<anonymous> (requestSent.jsx:27)
      at u (2.4ebdb58d.chunk.js:sourcemap:2)
      at Generator._invoke (2.4ebdb58d.chunk.js:sourcemap:2)
      at Generator.next (2.4ebdb58d.chunk.js:sourcemap:2)
      at r (2.4ebdb58d.chunk.js:sourcemap:2)
      at l (2.4ebdb58d.chunk.js:sourcemap:2)
      at 2.4ebdb58d.chunk.js:sourcemap:2
      at new Promise (<anonymous>)
      at a.<anonymous> (2.4ebdb58d.chunk.js:sourcemap:2)
      at a.<anonymous> (main.78404a4b.chunk.js:1)
• /contact
• /search
  • /Usser
    • /email
      /email
        

react-dom.production.min.js:216



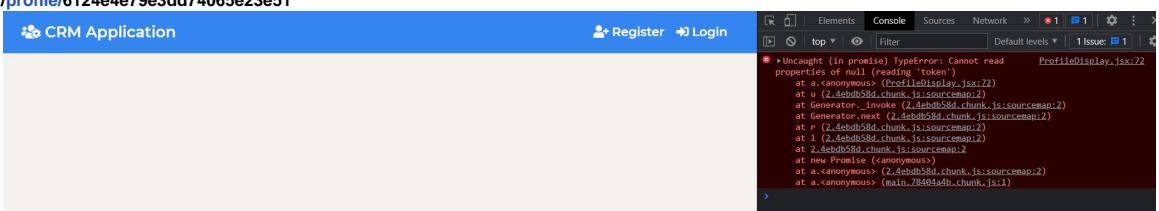
react-dom.production.min.js:285



/setting/change-password has no router for it.



/profile/6124e4e79e3dd74065e23e51



ProfileDisplay.jsx:72


```

Sprint 3

Item No.	Task	Assigned to
----------	------	-------------

1	Improve UI	<ul style="list-style-type: none"> Homepage, Register page(loader required), schedule meetings, setting page, change password @ Yu-Wen Michael Zhang Email verification, popup notification, chat, call, navbar @ Bingzhe Jin dashboard, profile video button, change note @ Jiachen Ping login, search, email @ Tian Hui
2	Testing	@ Zhen Cai @ Tian Hui @ Bingzhe Jin
3	Presentation	@ Zhen Cai @ Tian Hui @ Yu-Wen Michael Zhang @ Bingzhe Jin @ Jiachen Ping

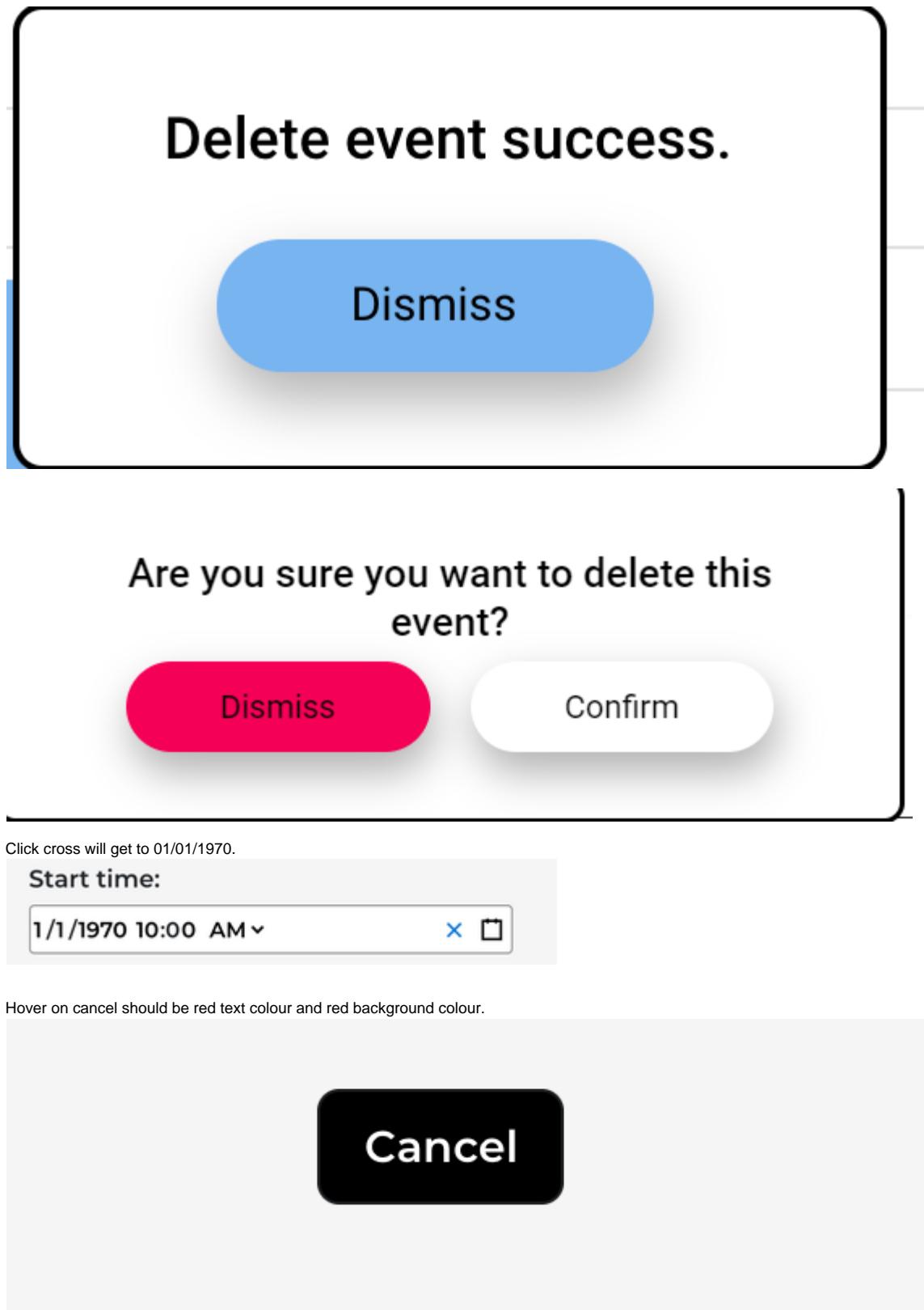
Sprint 3 Functional Testing

ID	User Cases	Test Steps	Problems
1	User Profile	<p>1. Click 'Change icon' and then click 'Save'.</p> <p>2. Click 'Change icon' and then click 'Cancel'.</p>	<p>Resolved. 3, 4, 5 does not redirect to /profile.</p> <p>Not selecting any icon and click 'Save' will result in 400 Bad Request.</p>

3. Click 'Edit My Profile' and change your profile picture.
4. Click 'Edit My Profile' and add a description including other text files and click 'Save changes'.
5. Click 'Edit My Profile' and click cancel.
6. Change password.

		7. Change peers on al sum mary and friend notes, try long word and newline.
2	Email	<p>1. Better if there's a newline after name. Default head icon.</p> <p>The colour of the To Emails field should be better.</p>
3		<p>Resolved.</p> <p>Change the colour of the dismiss button</p>

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Time interval between day view and week view is different.

Maximum height of the pop up screen should be set.

5. Add an event by selecting participants in the participants list.

6. Add an event and save the event.

7. Add an event and cancel the event.

younice to meet younice to meet
younice to meet you

Time:

19 Oct 2021 23:36 PM – 19 Oct 2021 23:40 PM

Description:

Host Name:

Michael zhang

Participants: (1 in total)

MichaelUNIMELB Zhang

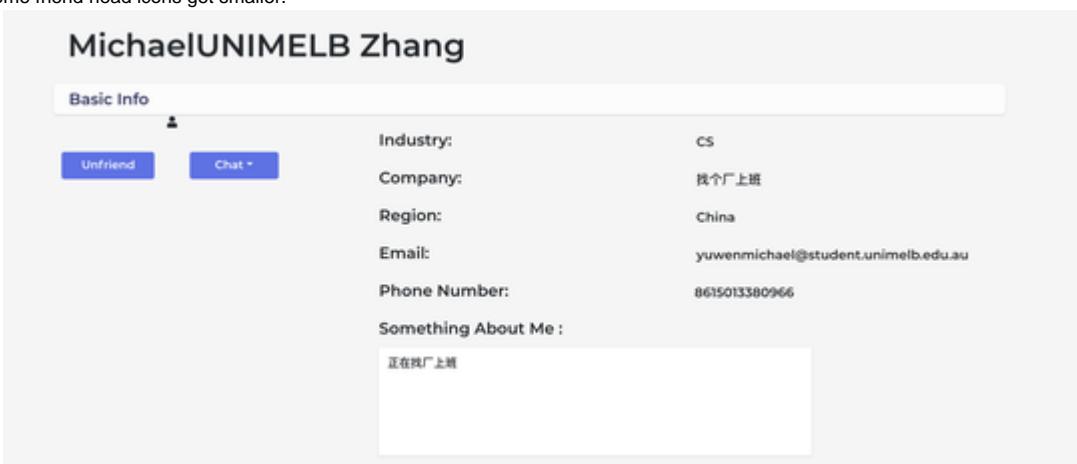
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Calendar

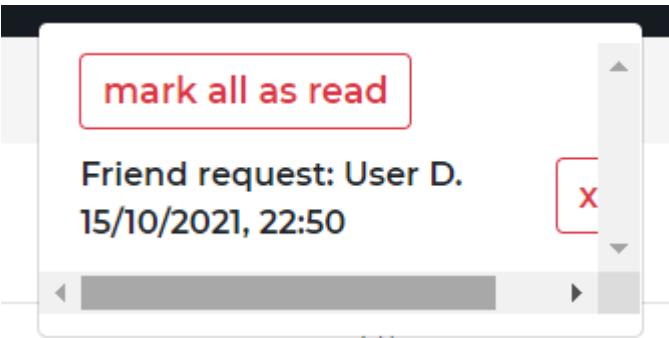
or past

5.

- When hovering over one even, if there is no description, then nothing will show up.
 - Click add button beside the search input box.
 - Search someone who is in the contact list.
-
- The screenshot shows the CandHCRM application interface. At the top, a dark header bar displays the title "CandHCRM". To the right of the title are links for "Dashboard", "Chat", and a user icon. A vertical sidebar on the right contains a navigation menu with options: Profile, Search, Calendar, Email, Edit Profile, Change Icon, Change Password, and LogOut. The main content area features a large, abstract geometric background graphic. Below this, a "Sent" section lists two items: "Zhenli.mill@student.unimelb.edu.au" and "User D", each with a red 'X' icon to its right. Further down, a "Received" section is partially visible. On the far right, a circular clock icon indicates "No upcoming or next". Below the clock, a time comparison section shows "Local Time" as "12:04:34 AM, Wednesday" and "UTC Time" as "1:04:34 PM, Tuesday".

		<p>4. Reject / accept / cancel / send a friend request.</p> <p>5. Long name.</p>
5	Contact	<p>1. Download contacts' info or migration.</p> <p>2. When click on a user in the contact list, redirect to a profile page of this user.</p> <p>2. Some friend head icons get smaller.</p> 

3. Click 'Create' and then click 'Next' in the dropdown menu.
4. Click 'Create' and then click 'Voice', in the dropdown menu.
5. Click 'Create' and then save changes.

		6. Click 'Cancel' and then click 'Cancel'.
		7. Download Content. cs v.
6	Search /Detailed search.	<p>Better if there's a newline after name.</p> 
7	Inbox	
8	Chat	
9	Call	

10	Sign up	<p>1. Try invalid email.</p> <p>2. Try already taken name email.</p> <p>3. Try different password s.</p> <p>4. View button.</p> <p>5. Loading animation.</p> <p>6. Redirect?</p>	<p>Loading animation never ends for 3.</p>
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11	Login	<ul style="list-style-type: none"> 1. Email not found. 2. Wrong password. 3. Account not enabled. 4. View button. 5. Loading animation. 	Should redirect to /dashboard.
12	Email Verification	<ul style="list-style-type: none"> 1. Fake verification path. 2. Deep created verification path. 3. Amimation. 	
13	Access without Login		<p>/profile, /settingNotes/{id}, /setEvent, /profile/{id} /</p> <p>/calendar, /dashboard /home</p> <p>/setting/change-password, /email, /searchUser alert + /</p> <p>/changelcon, /setting no redirect</p> <p>/contact, /user/{id} to be removed</p>

14	Locks and Loading Animation					
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Performance Testing

We created 1000 testing threads, i.e. 1000 simulated users access our system at the same time, with ramp-up period of 10 second.

We don't think the performance is too bad, considering we don't pay for the current MongoDB and Heroku servers.

ID	Path	Input	Median Response Time (ms)	Error Rate	#Sample at the First Error	Comments
1	/login	{ "username": "A@mail.com", "password": "54321" }	13989	0%		
2	/jwt/checkExpired	{ "authToken": "eyJhbGciOiJIUzUxMiJ9.eyJzdWlOiJhZG1pbisImhdCI6MTYzNDI5MTM5NiwiZXhwIjoxNjM0Mzc3Nzk2fQ.MLSQPzuw_vt_2W1Uh9FCzkCfD3daDZjkghK-cOle96bBy57cljBvB1ONIGjHToQGPhrdr3V0qGTMkDgh14dfw" }	937	0%		
3	/signup	{ "email": "H@mail.com", "password": "13579", "first_name": "User", "last_name": "H" }	14011	87.2%	11	
4	/changePassword	{ "oldPassword": "admin", "newPassword": "admin" }	959	0%		We're testing 1000 threads on a single user, so using same old password and new password. The real median response time should be longer.
5	/chat/sendText	{ "id": "6124e5229e3dd74065e23e54", "message": "Performance Testing New Message" }	23181	30%	692	
6	/chat/overview	Get	30997	94.7%	53	This is not used that frequently, so OK.
7	/chat/fetchNew	{ "id": "6124e5229e3dd74065e23e54" }	18611	7.1%	78	

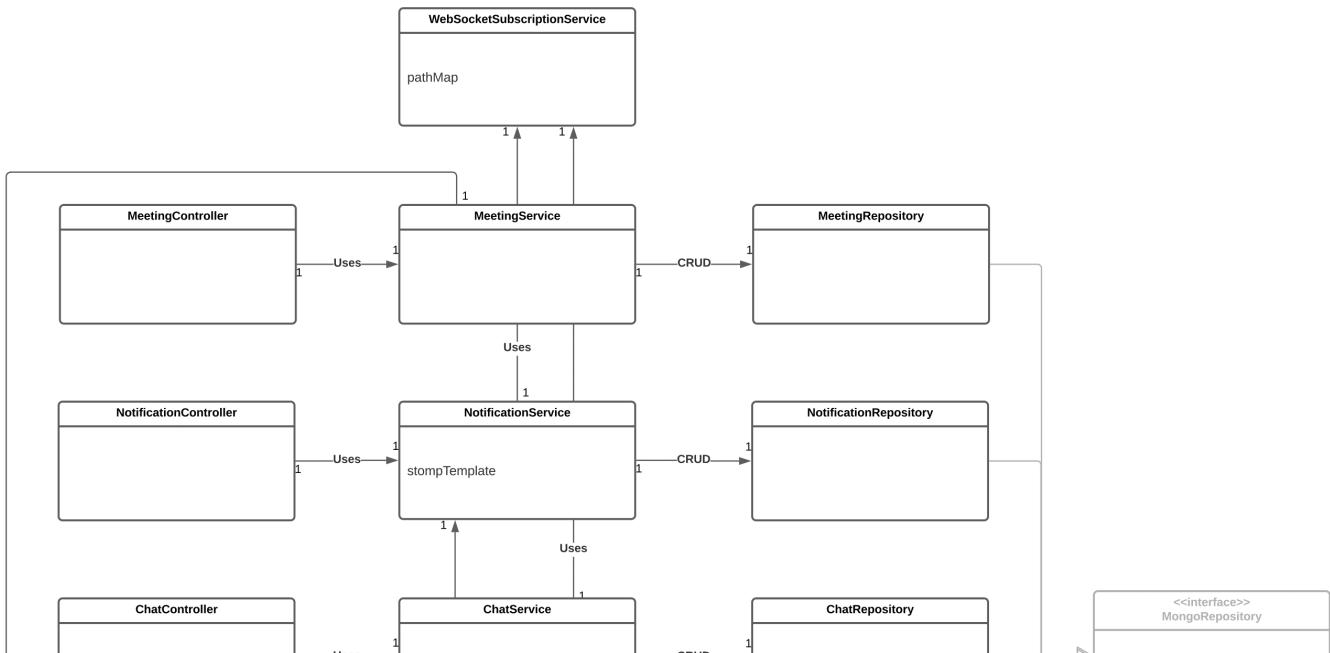
8	/chat/fetch	{ "id": "6124e5229e3dd74065e23e54", "until": "2021-10-15T11:27:36.972+00:00" }	19288	80.4%	23	
9	/friend/verifyFriendship	{ "id": "6124e5229e3dd74065e23e54" }	25123	36.4%	637	
10	/friend/listFriends	Get	30913	63.9%	337	
11	/friend/listSentRequests	Get	30928	63.5%	325	
12	/friend/listReceivedRequests	Get	26588	38.7%	569	
13	/friend/sendRequest	{ "id": "6124e5229e3dd74065e23e54" }	24633	34.5%	649	
14	/friend/confirmRequest	{ "id": "6124e5229e3dd74065e23e54" }	24991	36.5%	634	
15	/friend/declineRequest	{ "id": "6124e5229e3dd74065e23e54" }	24305	35%	651	
16	/friend/cancelRequest	{ "id": "6124e5229e3dd74065e23e54" }	24667	37.6%	622	
17	/friend/delete	{ "id": "6124e5229e3dd74065e23e54" }	18618	0%		
18	/friend/changeNotes	{ "id": "6124e5229e3dd74065e23e54", "notes": "Performance Testing New Notes" }	29718	45.5%	556	
19	/user	{ "id": "61239830b384af76c113bc3a" }	10063	0%		
20	/user/changeRealName	{ "first_name": "admin", "last_name": "admin" }	17734	0.5%	966	
21	/user/changePhone	{ "mobileNumber": "12332113579" }	17251	0.4%	928	

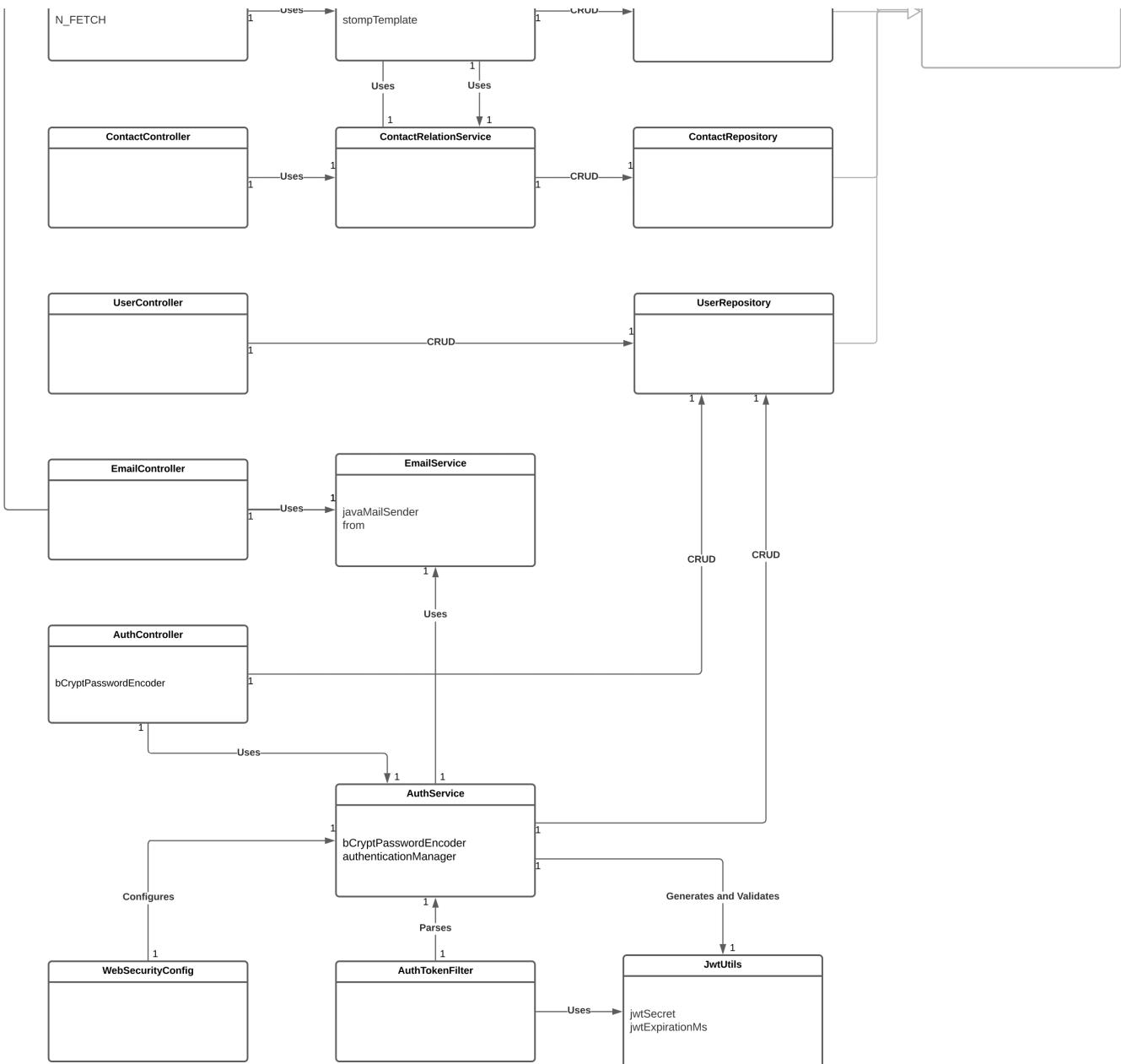
22	/user/changeAreaOrRegion	{ "areaOrRegion": "Melbourne" }	17603	0.4%	969	
23	/user/changeIndustry	{ "industry": "University" }	17438	0.4%	954	
24	/user/changeCompany	{ "company": "University" }	17299	0.5%	947	
25	/user/changePersonalSummary	{ "personalSummary": "Performance Testing Summary" }				
26	/user/sketchySearch	{ "searchKey": "unimelb" }	30943	73.3%	240	
27	/user/search	{ "email": "@", "first_name": "e", "last_name": "", "areaOrRegion": "", "industry": "", "company": "" }	22325	20%	800	Actually beyond our expectation!

Design Diagrams

Domain Model Diagram

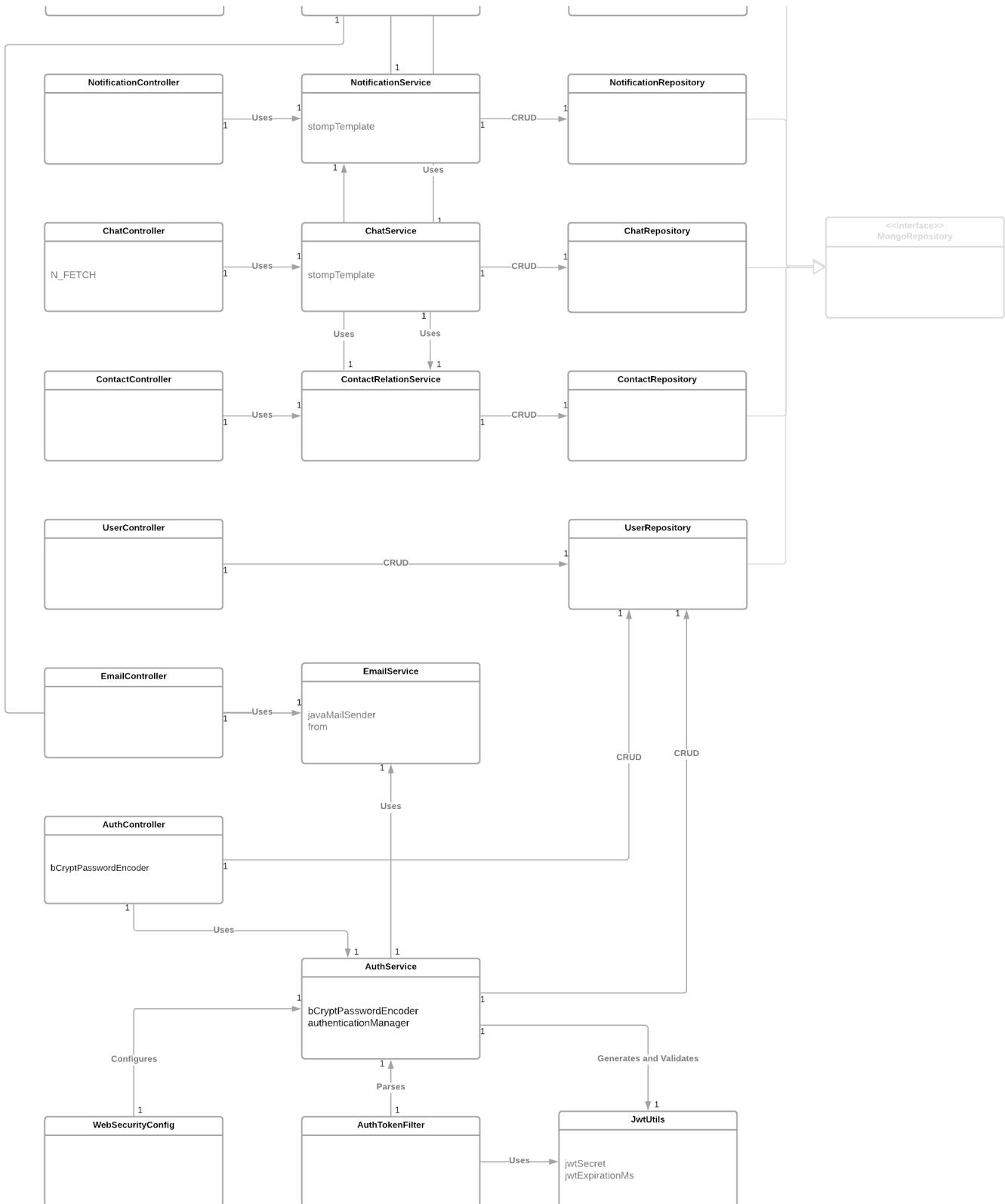
Sep 21, 2021:





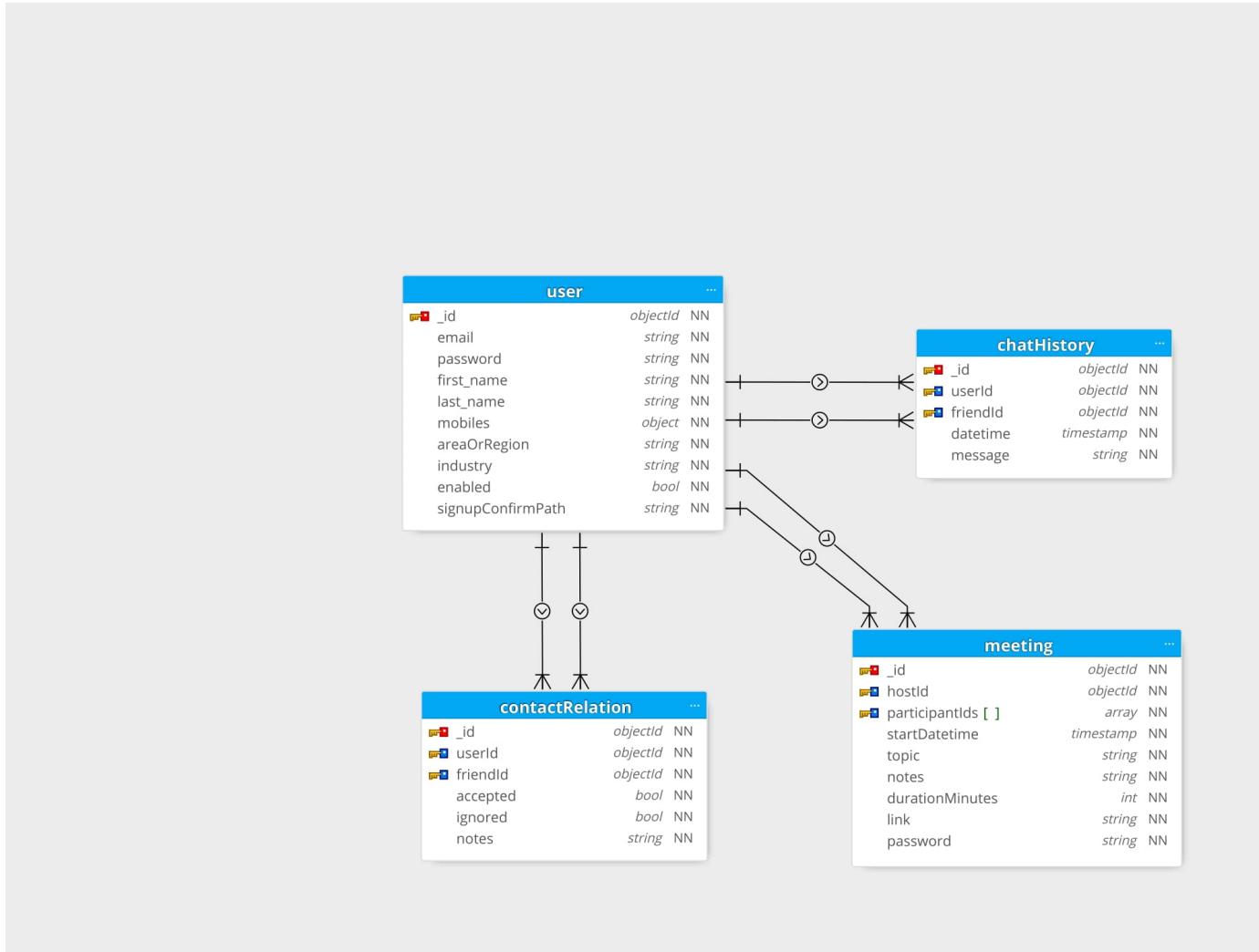
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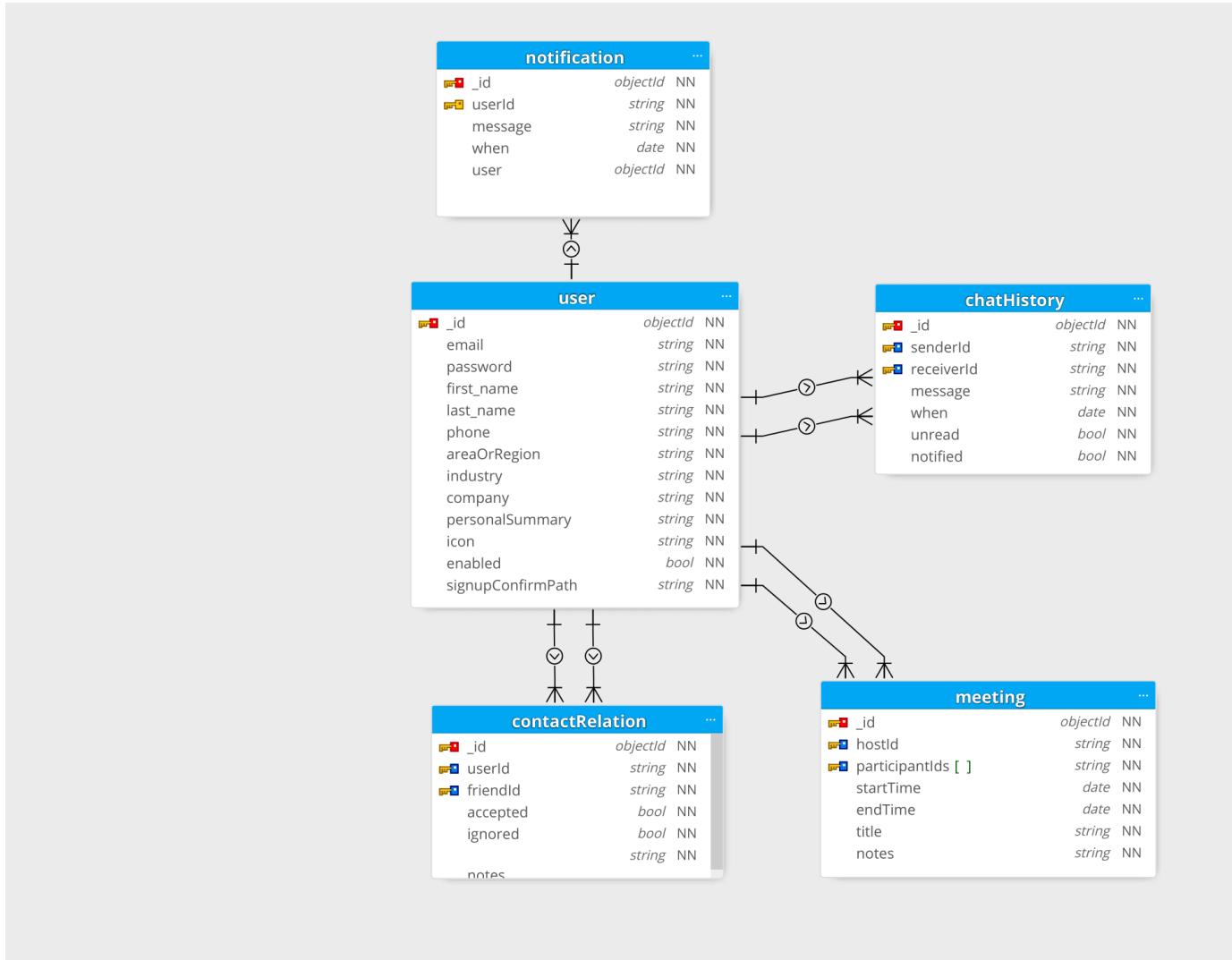


Database Model

Sep 6, 2021



Sep 27, 2021:



UI Design



Deployment

Deployment General Info

- We merge frontend and backend branches to main once after every standup.

- After all the branches are merged, Michael will deploy the main branch on Heroku and test whether the frontend and backend are working properly
- Heroku URL: <https://crm-c-and-h.herokuapp.com/>

Deployment Details

1. Monorepo

As we have frontend and backend in the same repository, we need to set our repo to be a **Monorepo** so that it can deploy the frontend and the backend as a collective to Heroku. The detail of how to create a **Monorepo** can be found here: <https://medium.com/softup-technologies/how-to-deploy-a-monorepo-to-multiple-heroku-apps-using-github-actions-65e87dc27878>

2. Deployment Pipeline (Continuous Deployment)

A file call `deploy.yml` is placed in our repository with path: `./github/workflows/deploy.yml`

The structure of the file is as follows:

```

name: Deploy

on:
  push:
    branches:
      - main

jobs:
  build:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v2
      - uses: akhileshns/heroku-deploy@v3.12.12 # This is the action
        with:
          heroku_api_key: ${secrets.HEROKU_API_KEY}
          heroku_app_name: "crm-c-and-h-backend" #Must be unique in
          Heroku
          heroku_email: ${secrets.HEROKU_API_KEY}
      - uses: actions/checkout@v2
      - uses: akhileshns/heroku-deploy@v3.12.12
        with:
          heroku_api_key: ${secrets.HEROKU_API_KEY}
          heroku_app_name: "crm-c-and-h" #Must be unique in Heroku
          heroku_email: ${secrets.HEROKU_API_KEY}

```

This file can automatically deploy to Heroku every time we push our commits into the main branch(specified at [line 3 to line 6](#)).

As our repo is **monorepo**, it connects to two Heroku app and hence we need to repeat the code at [line 12 to line 17](#) so that we deploy our repo to both frontend and backend.

The `HEROKU_API_KEY` is set in our repo as a secret key so that our repo can connect to Heroku successfully.

The details of how to do this can be found here: <https://github.com/AkhileshNS/heroku-deploy>

Also, you can view our history of deployment and pipeline in the [Actions](#) section of our repository.

A screenshot of the GitHub Actions interface. At the top, there are navigation links: Code, Issues, Pull requests, Actions (which is underlined), Projects, Security, Insights, and Settings. Below this, a header bar has 'Workflows' and 'New workflow' buttons, with 'All workflows' being the active tab. The main area is titled 'All workflows' and shows 'Showing runs from all workflows'. A search bar at the bottom is labeled 'Filter workflow runs'.

Coding Standards

Git

- Commit messages should start with an uppercase letter.

Documentation/Comment

- Major classes should have documentation briefly describing its function.
- Simple helper classes need not be documented.
- Important arguments or the return value should be mentioned for each method so that others can use the code without reading through it.

Class, Function, and Variable Naming

- All names should be descriptive.
- Classes should begin with a capital letter.
- Functions or methods or variables should begin with a lowercase letter.
- Words in Naming should follow the CamelCase convention.

Java

- Proper documentation for all methods and important classes.
- A Controller class must not access the repository directly, instead, delegate this to Service classes.
- Comments should be brief and to the point. Comments above a code section begin with // or /**/. Comments at the end of a line beginning with //, with 3 spaces put before.
- Two successive methods should be separated by one empty line.
- Put one empty line to separate code sections if needed.
- The method should not be too long or too short.
- A line should be less than 80 characters. If a line is too long, break this line into two lines, and the second line should be indented by 8 spaces, or align with ", (, etc.
- Other indentation puts 4 spaces.

JavaScript

- Proper documentation.
- Comments should be brief and to the point. Comments above a code section begin with // or /**/. Comments at the end of a line beginning with //, with 3 spaces put before.
- Two successive methods should be separated by one empty line.
- Use 2 spaces indentation.
- A line should be less than 80 characters. If a line is too long, break this line into two lines, and the second line should be indented by 8 spaces, or align with ", (, etc.
- Put one empty line to separate code sections if needed.
- space should be around variable assign and equality, for example, const friends = this.state.
- space should not be added around the properties of a tag, for example, <div className="col-7" id="column-left" style={{ paddingTop: 80 }}>
- .js file should start with a capital letter like: HomePage.js and the .jsx file should start with a lowercase letter.

Handover

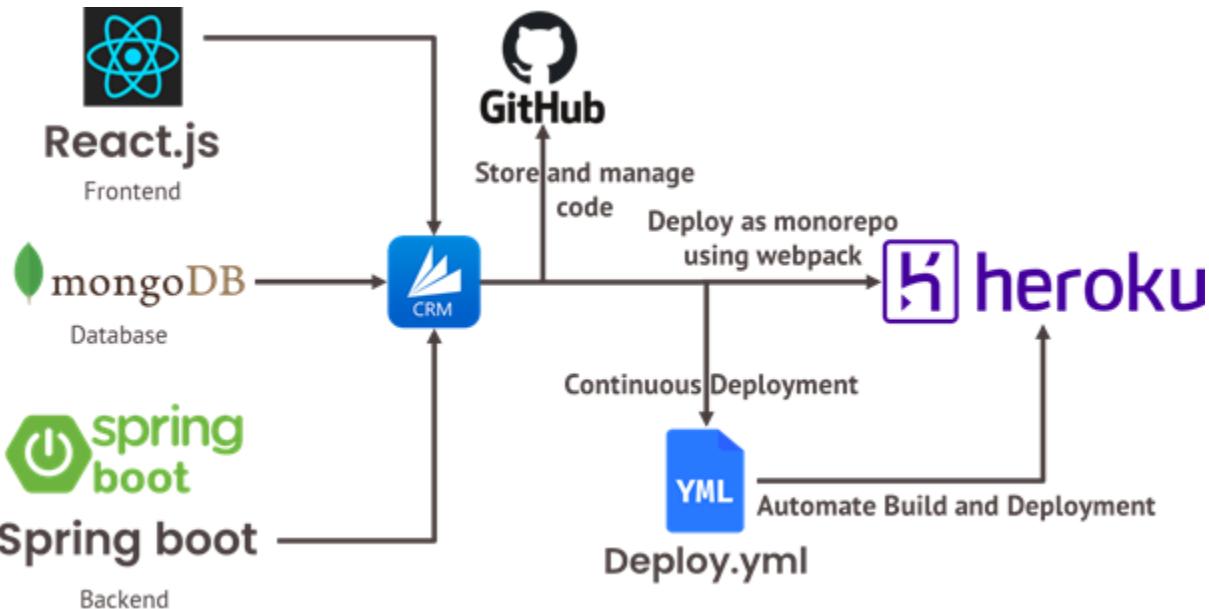
Our product CandHCRM supports a variety of functionalities, e.g. contact management, mass mailing, online chat, voice/video call, screen share, meeting scheduling, and real-time notification.

Architecture

The backend server uses Spring Boot framework and provides restful API service that the React frontend uses. The database used is MongoDB. The project is deployed to two Heroku apps from a multi-language monorepo. With the secret key HEROKU_API_KEY set in our GitHub repository, the file .github/workflows/deploy.yml runs automatic deployment to Heroku once there's a push in main.

GitHub: <https://github.com/C-and-H/comp30022>

Heroku URL: <https://crm-c-and-h.herokuapp.com>



Requirements

1. Download node.js and npm from <https://nodejs.org/en/download>
2. Download IntelliJ IDEA from <https://www.jetbrains.com/idea/download>
3. Update JDK to version 16 or later.
4. Has a valid Gmail and MongoDB account.
5. Packages requirements: <https://github.com/C-and-H/comp30022/network/dependencies>

Run

Server:

1. Open /backend folder in IntelliJ IDEA, and load pom.xml to link maven project.
2. Create 5 MongoDB collections that follows /backend/src/main/java/candh/crm/model/*.java in crm database.
3. Edit run configuration > Environment variables > Apply.
4. Run CrmApplication.java.

App:

1. Go to directory /frontend.
2. Create a new file .env of environment variables, or run echo REACT_APP_API_URL=http://localhost:8080 > .env.
3. Run npm install to install packages.
4. Run npm start.
5. Browser visits localhost:3000.

Environment Variables:

Frontend

```
REACT_APP_API_URL=http://localhost:8080
```

Backend

```

MONGO_USERNAME=<mongo-username>
MONGO_PASSWORD=<mongo-pwd>
MAIL_ADDRESS=<gmail-address>
MAIL_PASSWORD=<gmail-pwd>
APP_URL=http://localhost:3000
JWT_SECRET=crm

```

Design

See <https://bingzhej.atlassian.net/wiki/spaces/CH/pages/12157334/Design+Diagrams> for details.

Deployment

See <https://bingzhej.atlassian.net/wiki/spaces/CH/pages/10452999/Deployment> for details.

Highlight

Contact Relations

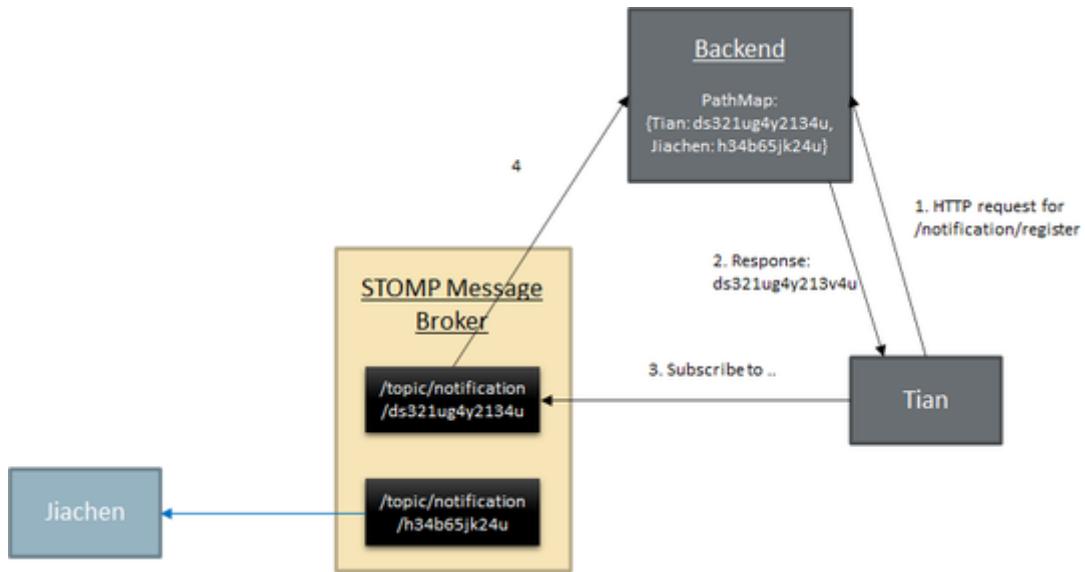
User Accepted	User Ignored	Friend Accepted	Friend Ignored	Results
T	F	T	F	Friends
T	F	F	F	user sent request but not yet responded
F	F	T	F	user received request but not yet responded
F	T	T	F	user received request and declined
T	F	F	T	user sent request and was declined
F	F	F	F	one of user and friend sent request and cancelled
NULL	NULL	NULL	NULL	user and friend has never sent request to each other

Real-Time Logic

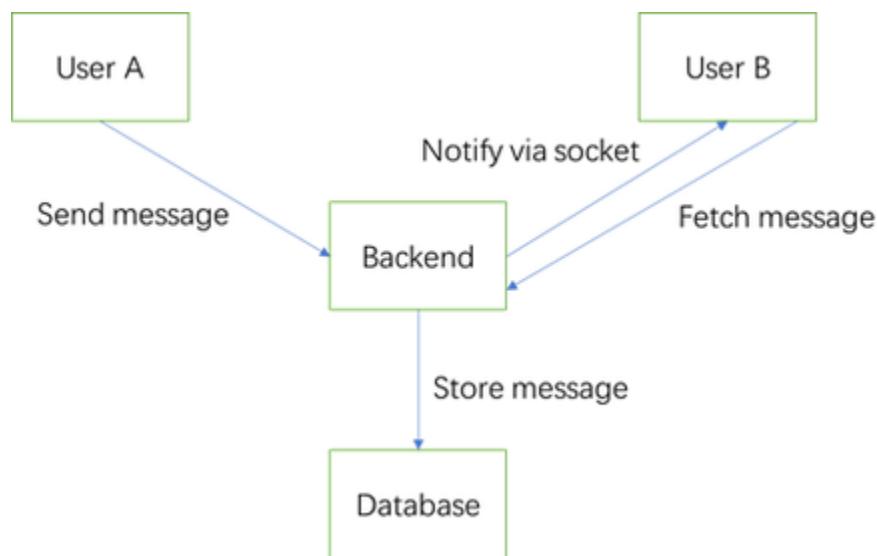
To implement this functionality of real-time notification, we utilised STOMP websockets for connection.

Firstly, a frontend sends an HTTP request to backend to register itself, and the backend responds with a path for the frontend to subscribe to and stores the key-value pair of that frontend user and the path. Then the frontend subscribes to that path.

When an event like sending a new friend request occurred, the backend can let the STOMP message broker to push the information to that specific user's frontend.



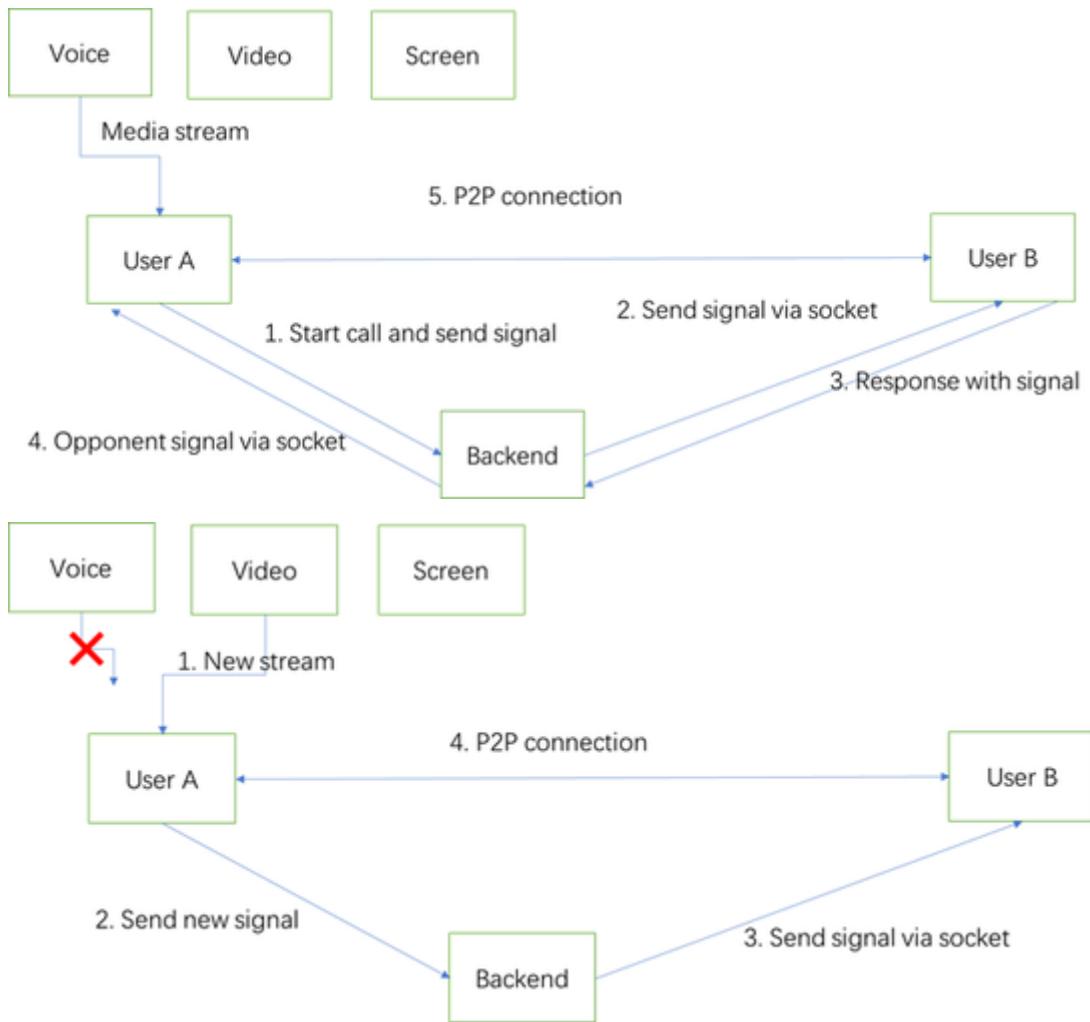
Chat Logic



Call Implementation

Our CRM established P2P connection between two user so they can talk to each other. This requires both user having opponent's signal. So socket is used to exchange signals between user.

Our call can also switch between different media streams, and switch will create a new signal. Socket will forward the new signal to opponent to create a new P2P connection.



Future Improvement Insights

1. Missed call notification.
2. Connect with real meeting creation API (e.g. Zoom).
3. Users can search participants' names when scheduling a meeting.
4. Deleting friends should also delete the chat history between them.
5. Forget password.
6. The current logic of contact relations makes it fast for an update but slow for search, while there are more searches than updates.
7. Multiple accounts could be allowed in a single browser.
8. Meeting re-schedule.
9. Call does not record voice when sharing the screen. Tried to add one more voice stream, but this would affect the screen to show on the opponent side.