

Project: Social Based Interaction

Deliverable 1 Documents

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Questionnaire

The questionnaire was built upon the initial brainstorming (see Appendix A) and was created to get insight into how users organised study sessions, their preferences around study sessions, and questions about study applications.

Demographic Questions:

1. What is your age?
2. What is your current academic status and level of education?

Study preferences:

3. Do you prefer to study alone or with friends? Why?
4. How do you generally go about planning a study session?
5. Do you have preferred locations for studying with others?
6. Is it difficult for you to find a place to study together with others?

Study sessions:

7. Have you attended face-to-face study sessions before? What was that experience like?
8. Have you attempted to organise a study session before? What was that experience like?
9. If you have attended face-to-face study sessions before, what were you looking to get out of them?

Apps:

10. Have you used apps to coordinate study sessions? If so:
 - a. Which ones?
 - b. What were the best features of these apps?
 - c. What could be improved or added on these apps?
11. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?
12. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

The answers to these (from our 12 respondents) can be found in Appendix B.

Questionnaire Summary

Our 12 respondents ranged from 19 to 24 years old. Both undergraduate and post-graduate students from varying institutions (majority UNSW).

42% preferred to study with friends and their main motivations were to make learning fun, share resources, and understand complex topics. Those who preferred to work alone did so for the quiet and focus this was able to provide.

They each engage in some level of study planning, typically with a focus on setting clear and achievable goals. Most of the respondents preferred Library or somewhere quiet for studying with others or alone due to a conducive environment.

Planning times and locations was the most important/difficult parts of organising a study session for the respondents, many used multiple apps or communications apps like Facebook Messenger or WhatsApp to informally organise sessions and gather interest. Another consideration was the need to create study goals so that the users did not get distracted in the study session with friends. They were hesitant to reach out and can sometimes find making friendships in classes difficult due to issues such as cliques or different values. Users also just sometimes end up studying alone as everyone is quite busy. Thus, a common improvement mentioned was the ability to organise schedules with friends seamlessly.

Moreover, issues revolving around privacy issues for online sessions, security concerns of meeting up face-to-face with strangers, and the pricing of some of the study-together applications in the market were also brought up as concerns for new applications.

Their goals from the face-to-face study sessions include achieving longer study periods, task completion, and collaborating effectively with peers. Typical workflow was to reach out to friends through messaging apps like WeChat and Messenger, agree on a time and location, create study goals and attend the session (either online or in-person). Majority of users used multiple apps to organise the sessions and thus the need for a one-platform application was made clear.

Some suggested features such as dark mode, gamification and status updates.

17% of the users had a visual impairment and expressed the need for increased font sizes and colour contrast. Others did not report any disabilities that were relevant to the study session app proposed, however, the notion of universal accessibility was important to users.

Market Research

Based on the questionnaire summary, we explored the market for the applications related to group study, messaging/communicating, scheduling, and booking study spaces.

Group Study

Study together

Study together is an online mobile and web-based application that allows users to come together online and set common timers to study together [17]. The experience is gamified as users can customise the online rooms, view their statistics, and gain points and badges. Users have options to set goals or even study alone if they do not want to be on camera. It is a completely silent, online only forum where communication takes place over a chat box. There are also "community experts" which can jump into a room to give their perspective if users are having trouble with something [17]. Features the pomodoro technique for revision and has a community (like slack or discord) to ask questions as well. Study together addresses the user needs of making learning fun and providing a learning community. However, as it is an entirely online experience, it does not fill the gap in the market for in-person study sessions, and smaller course-focused groups.

Focusmate

Focusmate is an online virtual study session creator that allows users to create online session to focus together [19]. It has an interface like Google Calendar which allows user to create focus sessions and join existing focus sessions while building on the schema they already have for Google Calendar. It creates an automatic virtual conference link and allows users to meet in small groups to keep them focused and accountable [18]. The user needs that are met are the need to belong to a community and accountability [20]. Like Study Together users can also hold solo sessions and set timers for sprints of focus time and discussion. However, like study together, a face-to-face focus is missing from the market. This may be due to discomfort and security risks of meeting strangers in person and need to be addressed in any application that we want to create with a face-to-face focus.

Messaging/Communicating

Discord

Discord is an online platform that offers instant messaging regardless of your location. As such, it provides large scale communication systems through video calling, voice calling, screenshare and text-based forms of communication [1]. What makes discord unique is that users can add themselves to private or public communities known as servers through which they can interact with other users in real-time [1]. As a result, there are a plethora of study servers that users can add themselves into or they can create one. Students can join voice or video calls to organise and take part in study sessions. Users can utilise the text-based chat to set up goals, share study materials or even utilise server-specific bot commands such as a pomodoro timer to get most out of their study session. Discord also offers a range of accessibility features that targets visual, motor and auditory disabilities to ensure that no one is left behind in the experience [4]. A market gap discord has is that due to it being designed for a chat for gamers, it lacks study tools such as to-do-lists, calendars and have gamified reward systems to keep users motivated. Moreover, since it relies on a stable internet connection, users who do not have access to the internet may not be able to use it to organise face to face study sessions.

Microsoft Teams

This is a platform for collaboration and communication and is designed to facilitate teamwork and enhance productivity [14]. It allows users to have a real-time communication, create and manage different teams, file sharing etc [14]. The most important part for Microsoft Teams is the integration with other applications, such as Trello and Outlook calendar, thereby expanding its functionality and adaptability [13]. However, even though it is good for team meetings, it does not provide the multi-person sharing features for group study and is not for face-to-face meetings [15].

Zoom

Zoom is an online video conferencing platform that allows users to conduct virtual meetings, webinars, and web conferences [11]. It offers features such as video and audio conferencing, multi-person screen sharing, chat, and recording capabilities. Zoom gained widespread popularity, especially during the COVID-19 pandemic, as it provided a convenient way for people to connect remotely for work, education, and social purposes [12].

However, it's worth noting that the free version of Zoom has a time limit for meetings, which can be a limitation for users who prefer not to purchase a premium subscription [12]. This also does not offer a schedule face-to-face meeting.

Scheduling

Doodle

Doodle is an online scheduling tool primarily known for its simplicity and effectiveness in finding suitable meeting times [9]. It integrates with popular calendars, set automatic reminders and even customize their scheduling preferences. However, Doodle has free and paid version. Free version provides only the basic functionality, such as basic scheduling, limited customization, but it comes with advertisements that some users may find annoying or distracting [8]. On the other hand, the paid version offers advanced features like calendar integration, participant tracking, and an ad-free experience [8]. Doodle also does not provide real-time communication feature. Users often rely on external messaging platforms for discussions related to the scheduled events [9].

Google Calendar

This is an online calendar application that is designed for time-management and scheduling tasks [2]. To address the meets and challenges associated with organising a study session, google calendar allows students to schedule events at specific days, given a time which has a notification system to remind students of upcoming scheduled tasks. Google calendar is also accessible in a range of devices including mobile devices allowing students to schedule a study session from anywhere. Moreover, the application allows for collaboration allowing users to join shared calendars, create shared calendars or even share their own calendars. This in turn allows students to schedule a study session around a time where everyone is free. It also provides many accessibility features such as screen reader support and keyboard shortcuts [3] which allows students with visual and motor disabilities to take full advantage of the software. Current market gaps in the calendar application market are not providing a study session event template that students can easily fill out rather than creating it from scratch. Moreover, google calendar doesn't effectively display study statistics that students can use to analyse their progress.

Trello

Trello is a popular project management and collaboration tool that uses a card-based system to help users organize tasks and projects. It provides a visual way to create and manage to-do lists, tasks, and projects on customizable boards. Trello allows users to create cards for individual tasks or items, which can be moved across boards and lists to represent progress or workflow stages. It is known for its simplicity and flexibility, making it a versatile tool for personal and team productivity [16]. However, it lacks native support for tracking task dependencies and time tracking, both of which require third-party integrations for full functionality. Hence, it is not ideal for complex projects [16]. Moreover, it's important that the pricing has constraints on the platform's functionality and accessibility [16].

When2meet

When2meet is a simple online platform that allows users to see all available times for a group of people. One user creates a calendar and users select all times they are available [6]. The UI is quite simple; however, it serves its purpose [7]. However, the app does not work on phones, and the UI could be more additionally appealing. Additionally, there is no way to specify where a time works well or only sort of well [7].

Booking Study Space

UNSW Study Space Bookings

UNSW Study Space Bookings is a service provided by the University of New South Wales (UNSW) that allows students to reserve study spaces on campus [5]. This service is designed to help students find and secure a quiet and conducive environment for their studies. Students can book study spaces in libraries, study halls, and other designated areas on the UNSW campus [5]. It offers a convenient way for students to plan their study sessions, ensuring they have a dedicated space to focus on their academic work. However, it's important to note that the availability of study spaces may be limited, especially during peak study periods, so students are encouraged to book in advance to guarantee their spot. Additionally, it does not provide integration with calendar, only send email notifications to inform the users and there are restrictions on the duration of each booking to ensure fair access for all students.

Personas

Persona 1



ADITI DAS
(They/Them)

Description

Studies Bachelor of Engineering (Software) at UNSW

22 years old

Works part time at Commonwealth Bank

Personality and Interests

Introvert

Loves to play video games

Badminton

Needs

Wants to feel a part of the learning community for her classes

Find others to study with for exams

Make learning fun and interesting

Get feedback on the understanding of the course content

Brands

Instagram

TikTok

Moodle


Challenges

Time-Poor

Finds it difficult to find people to study with outside of university classes

Struggling with some of her courses this trimester

Persona 2



Julia Jones
(She/ Her)

Description

Math Professor at UNSW

Personality and Interests

Math

Hiking

Pets

Needs

Desires an easy way to book weekly study sessions for students

Mobile Activity

Messages

Google Calendar

Safari

Challenges

Not great with technology

Very busy

Schedule constantly changes

Persona 3



Emily Yee
(She/Her)

Description

Master of
Computing
(ANU)

24 years
old

Volunteer at
Study NSW
& Help
Organise
Volunteer
Activities

Personality and Interests

Efficiency
Enthusiast

Organized
Leader

Academically
Driven

Tech-Savvy

Needs

Simplified
Scheduling

Time
Management

Seamless
Integration

Brands

MS Teams

Zoom

Trello

Challenges

Juggling academic studies, volunteer work, and social life can be overwhelming. Finding efficient time management strategies is essential.

Balancing academic and extracurricular commitments requires effective multitasking and time management.

Persona 4



James Smith
He/Him

Demographics

Age: 35

Currently studying: Masters in Cybersecurity (University of Melbourne)

Occupation: Full-time Software Engineer at Atlassian

Income: Greater than \$100,000AUD

Location: Melbourne, Aus

Disabilities: Visual impaired due to having red-green colorblindness

Description

James is a student who currently works full-time from home, which means he needs to juggle his work, study and personal life together. Currently James uses his free-time to hang out with his friends trying to get a study session with them whenever he can to try to stay on top of his assessments at university. He wishes to better plan out his study sessions in order to maximise his concentration and efficiency at getting tasks done, while maintaining a balanced social life to prevent burning out. As such he is looking for something that facilitates face-to-face study sessions as he spends most of the day at home working.

Personality and Interests

- Loves to spend his free time relaxing and studying with his friends
- Is a photographer
- Has 3 dogs and loves animals
- Spends most of his time in front of a computer
- Love watching movies

Needs

- To study with a group of people in person to feel motivated to get on top of his work and socialise more
- Take adequate breaks whenever necessary to prevent burning out at work/university
- Since he has a visual impairment he needs specific accessibility features such as resizable content and high contrasting colours for improved visibility
- Expects his privacy to be respected at all times as he has a lot of sensitive personal and work content

Mobile Activity

1. YouTube (2 hrs 45 mins)
2. Instagram (2 hrs 10 mins)
3. Reddit (1hrs 10 mins)
4. Pomodoro timer (1 hrs 05 mins)
5. Google Calendar (20 mins)

Challenges

- Finds it very hard to keep up with university content, working full-time
- Gets easily distracted
- Since he is visually impaired, he finds it hard to differentiate between red-green colours and applications with poor colour contrast
- Finds it very hard to maintain a balanced social life due to the intensity of university and work
- Struggles to get outside more as he works from home

Scenarios

Persona 1: Aditi Das

Aditi is a 22-year-old who is a second-year Computer Science student in UNSW who has mainly taken on online classes as they started university during the pandemic. They are introverted, love to play video games with friends, and their favourite sports is badminton. They are struggling with university work and having a part-time job at the same time. Aditi prefers studying together with friends as it allows them to understand concepts better and make studying fun. However, finding people from the course to study with is always difficult as they are not used to making friends in their classes.

Aditi is unsure how to go about asking others if they would like to study with them. They have tried to message on course forums and on group chats to gauge interest but, as these spaces are not designed to help with co-ordination of schedules, it is often a frustrating experience. Once they have some interest, the next task is to set up a time and location that works for all. As Aditi also has a part-time job, communicating their availabilities with a group of others is difficult in group chats. However, as there is not a better alternative, Aditi utilises messaging apps to communicate their availabilities. The overall experience of finding others and co-ordinating is frustrating, however, studying together allows Aditi to better understand the concepts, feel like they are part of a learning community, and make learning fun. Thus, they put up with the less than stellar experience in order to achieve these needs but would like to try other alternatives.

Persona 2: Julia Jones

Julia is a UNSW researcher (45-year-old) who is looking to book a library space. Julia usually uses the UNSW library bookings app. She believes the experience using the website could be a lot better. She says the booking site is not very clean and could display what potential rooms are available in a more user-friendly manner. As she did not grow up with technology, this can be very difficult for her to navigate. Additionally, she wishes there were other study spaces on campus she knew about.

Typically, Julia does work in her office, but she wants to have a space to hold additional study sessions for students. She does not know where to host them, as the university is the one who does bookings for tutorials and lectures. She finds it very frustrating to book rooms on a weekly basis, as there is no option to do so. However, since space is limited on campus, Julia finds it crucial to have a space to hold additional office hours/ study sessions. She often has her tutors book sessions for her, but she finds it difficult communicating to them changes in her schedule, and she wishes she could just have an easier website to book sessions herself.

Persona 3: Emily Yee

Emily, a 24-year-old Master student at the Australian National University (ANU) pursuing a degree in Computing. She also actively volunteers with Study NSW, playing a crucial role in organizing volunteer activities and events. Emily leads a multifaceted life, managing her academic commitments, extracurricular activities, and social interactions with efficiency and precision. Her passion for optimization and productivity drives her to excel in all areas of her life.

However, Emily faces her own set of challenges. Juggling academic studies, volunteer work, and a vibrant social life can be overwhelming at times. Finding effective time management strategies has become essential to maintain balance. With responsibilities ranging from coursework to event coordination, she needs to optimize her schedule to maximize productivity.

One of Emily's primary needs is Simplified Scheduling. As she navigates her busy life, she requires a tool or solution that can help her streamline her schedule seamlessly. Coordinating academic commitments, volunteer work, and social engagements requires meticulous planning and efficient time allocation.

Another critical need for Emily is Time Management. With a demanding academic program and volunteer responsibilities, Emily must make the most of her time. She seeks strategies and tools that can aid her in managing her time effectively, ensuring that she can meet both academic and volunteer commitments.

Lastly, Emily values Seamless Integration. Her digital life revolves around academics, volunteer work, and social interactions. She needs a tool or platform that can seamlessly integrate with her academic calendar, messaging apps, and communication platforms. This integration would enable her to stay organized and connected across all aspects of her life.

Persona 4: James Smith

James is a 35-year-old Work-From-Home (WFH) Software Engineer who also is doing a Masters in Cybersecurity at the University of Melbourne (UoM) which keeps him busy throughout the day.

While not working, he loves spending his free time relaxing, spending time with his friends and his three dogs. Currently he is finding it a challenge to get through all his work at university and needs a way to better manage his time to get his work done more efficiently by getting out more rather than studying alone at home. As a result of being visually impaired due to being red-green colour blind, he finds it hard to make out content with poor colour contrast and size. As such, James needs a way to effectively plan out his study sessions and find a group of people who motivate him to complete his work to allow him to better balance his work, study and social life.

Typically, James, after working for 8 hours, is exhausted but he has upcoming assessment tasks to complete so he needs to be efficient with his time. He tries to contact his friends through Instagram to organise a study session, but they are all busy and cannot make it most of the time. He finds it difficult to use Instagram due to the lack of effective colour contrast coupled with a small default font-size, making it hard for him to navigate it.

There are a range of applications in the market to meet new people, but they are hard to use and confusing. James uses discord and joins a study community to meet new people but runs into another issue where they are from different time-zones, and they can't always make it. Regardless he finds a couple of people that study whenever he gets off.

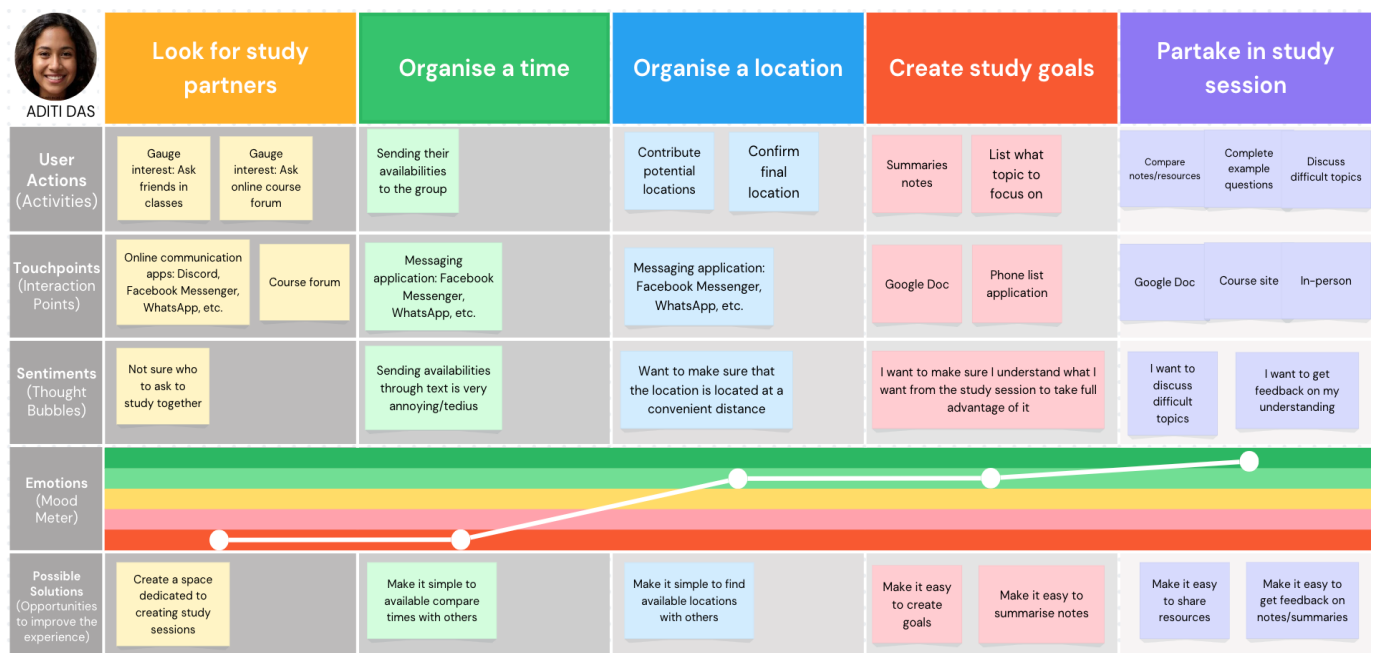
He now doesn't know how to setup study session goals, time blocking certain tasks and settings up a pomodoro timer. He then had to navigate and download respective apps for each and found it very time consuming and each app had a learning curve which he wasn't comfortable with.

He then messages each person a desired location they would like to meet up in and after some options that were far away, they came to an agreement of a location that was near him.

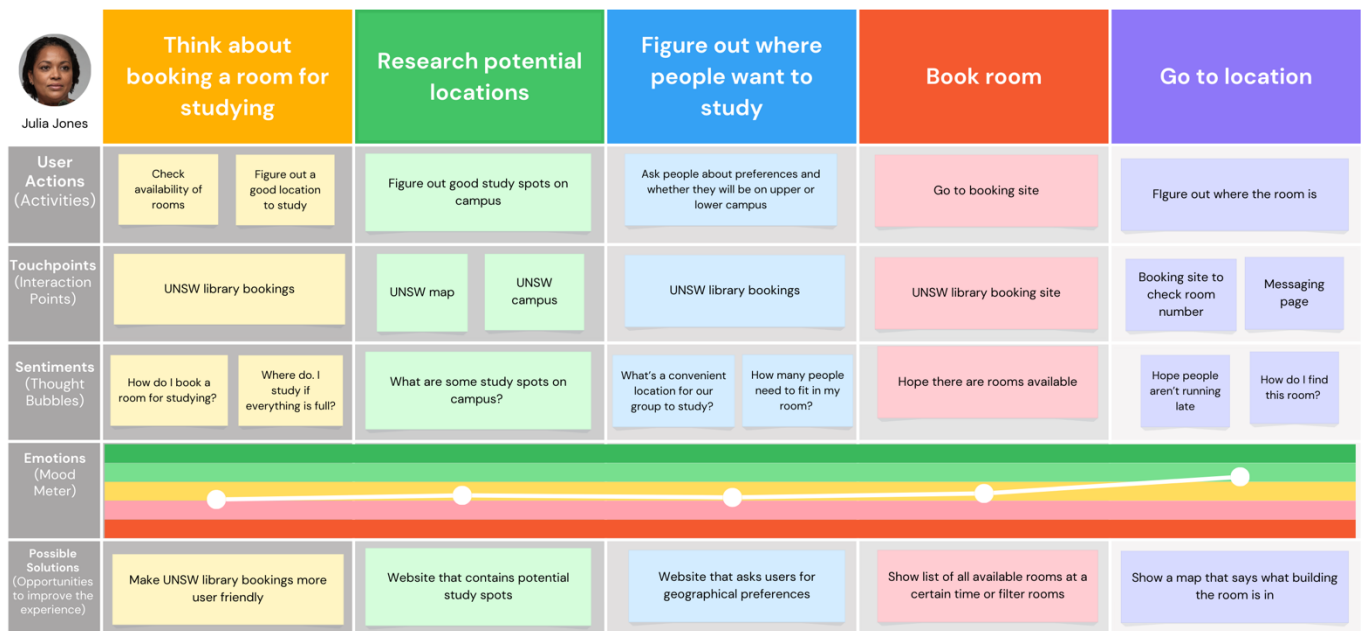
Although, current online study applications in the market are decent, James needs something that allows him to have all study-related features such as a timer, goal setter and calendar like scheduling system all built into the application itself. As a result, this leads to him to waste less time configuring various applications, when he could just study and get his work done with other motivated individuals.

Journey Map

Persona 1: Aditi Das





Persona 2: Julia Jones



Persona 3: Emily Yee

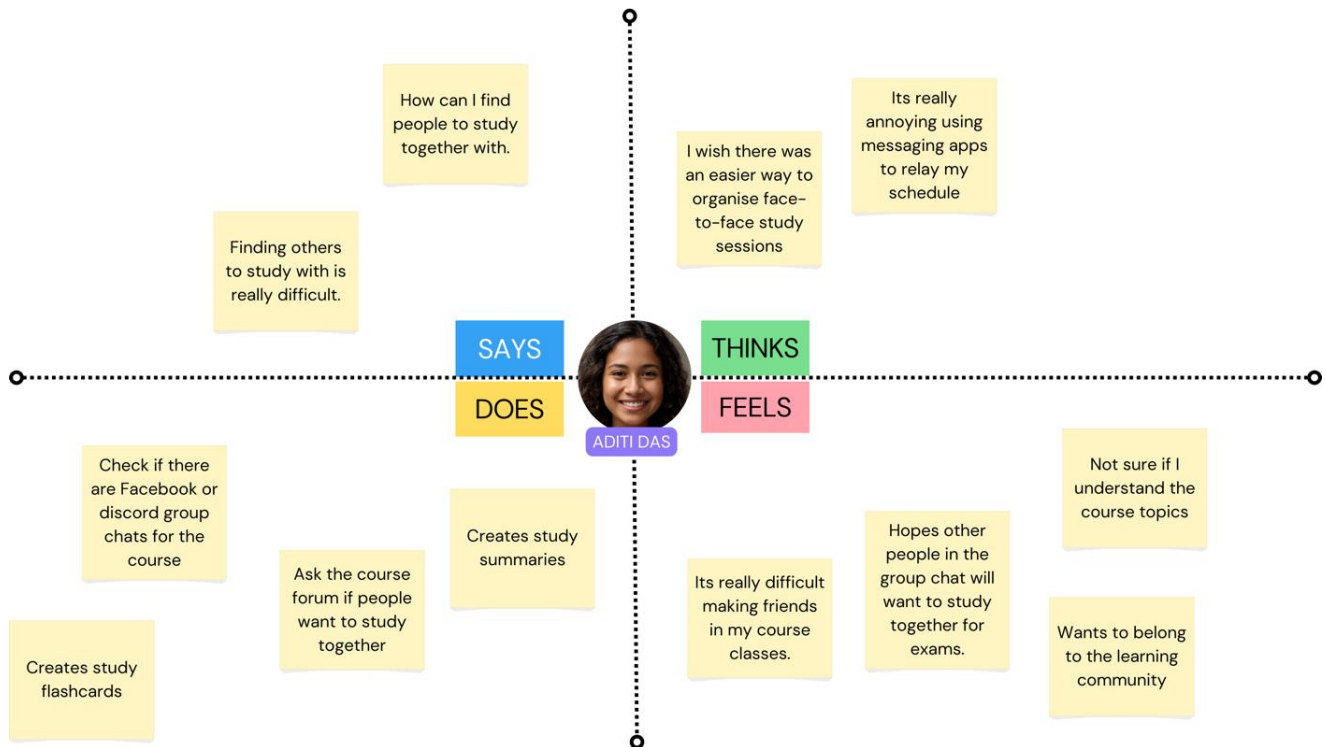
Emily Yee	Daily Planning		Messaging Peers	Organise Study Sessions	Organise Volunteer Activities
User Actions (Activities)	Checks her personal calendar and to-do list to plan the day.	Prioritizes tasks based on deadlines and importance.	Uses messaging apps to communicate with her peers for both academic and social purposes.	Organise study sessions for peers/partners within the same course	Update the status of each volunteer activity or create a bunch of new activities
Touchpoints (Interaction Points)	MS Teams and Calendar for Academic Task	Trello and Volunteer Website for organising and participate in Volunteer Activity	Messaging application: WhatsApp, WeChat, Messenger	Messaging application: WhatsApp, WeChat, Messenger Find availability for Meeting platform: Voting function inside messaging app, check availability platform	Communitree Website
Sentiments (Thought Bubbles)	Each task has to be planned in a fix time slot, which needs a lot of thinking	Academic and volunteer tasks are not integrated together in one platform	Academic: The process of messaging peers for study plans and checking project progress can become time-consuming, primarily because of the wait for replies. Volunteer: Always pay attention to message notification, sending message to the team leader volunteer for checking the attendance of the day, and record it can be tedious and frustrated	Messaging: Receive everyone's availability and find the best time slot could be quite annoying and is not very efficient Find Availability: This saves my time, but it is frustrated when some people's availability have changed, leading to cancellation of the study sessions.	Cannot create bunch of activities at the same time, the process is very tedious and time-consuming
Emotions (Mood Meter)					
Possible Solutions (Opportunities to improve the experience)	A good/smart task planner application that based on the provided tasks and times	Integration of academic calendar and volunteer schedule with personal calendar.	Everyone can edit their availability in one shared calendar, exclude the need for asking/messaging.	Apart from showing the availability of the day, break down the categories, i.e. 100% available, 50% available.	Create bunch of same activities at once

Persona 4: James Smith

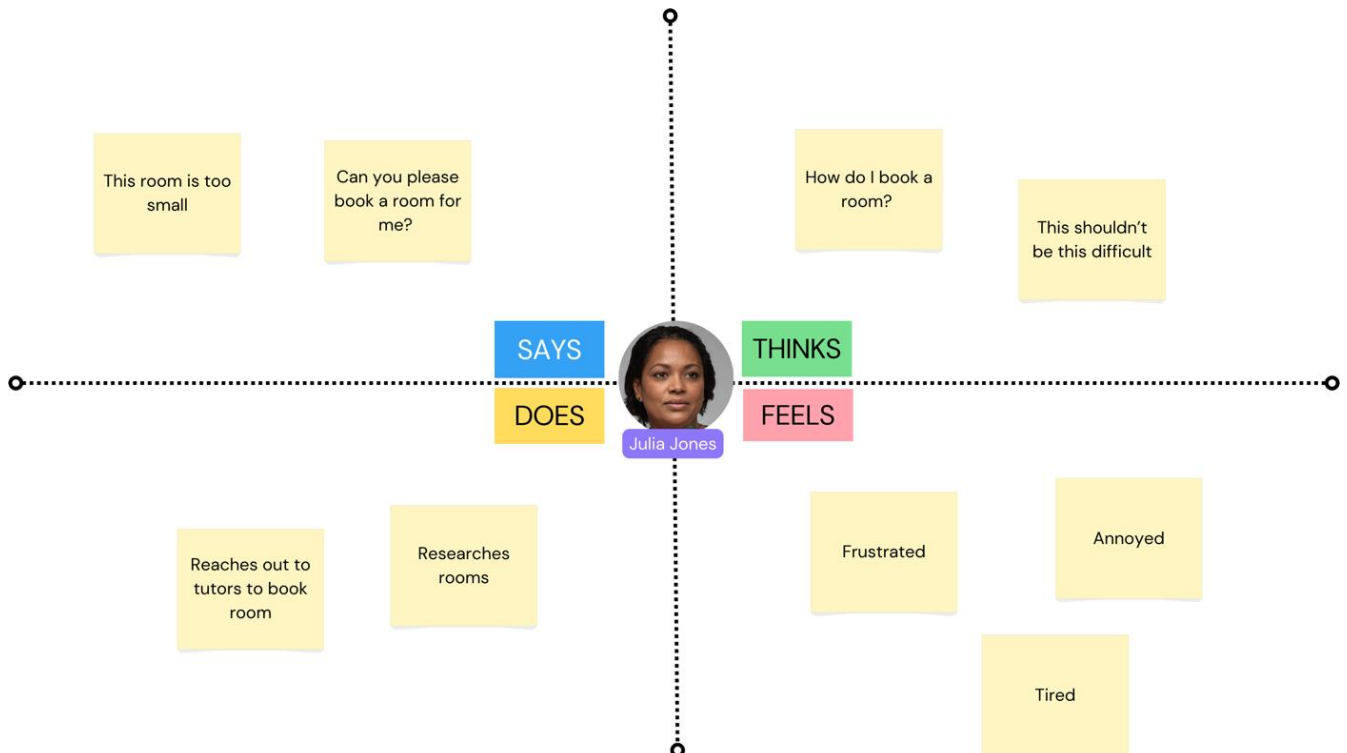
 JAMES SMITH	Understanding the intensity of the task		Discovering a study group and scheduling a time		Meeting others and scheduling workflow		The study session			
User Actions (Activities)	1. Identify what tasks need to be complete 2. Estimate the difficulty and potential duration based on current knowledge 3. Communicate with friend's if they are available to organise a study session		1. Messaging people from a discord community for when they are available		1. Confirm a location that everyone can meet up 2. Use a shared calendar to plan out tasks we will perform in the session		1. Opens up all his resources he will use during the session (laptop, notes, books, etc.) 2. Sets up a pomodoro timer 3. Participates in discussions at break time to socialise 4. Takes breaks when things get too intense			
Touchpoints (Interaction Points)	1. Check assessment task specification to assess the intensity of task 2. Open up social media applications such as Instagram, Whatsapp and Discord to message friends if they are available		1. Joined a community server on discord to ask other students when they are free to study together 2. Checking work roster to decide good time to study		1. Messaged a good and safe location on discord and everyone agreed 2. Made a shared google calendar to plan out all the tasks we need to complete in the study session		1. Open up calendar and check tasks for this session 2. During break time he talks to group members about his pets 3. Studying for too long was mentally taxing so he took a break			
Sentiments (Thought Bubbles Pain points)	"Friends are all busy I have no one to study with"	"I have a lot of work pending and not a lot of time"	"Why do current messaging apps have such small text it is hard to read"	"Lots of people but they are all from different time-zones"	"I met a lot of new people and finally have study buddies near me"	"I finally met my new study mates and they seem awesome"	"I wish we didn't have to use three separate apps just to conduct a study session"	"Sharing calendars is really useful"	"It's been so long since I had a productive study session"	"I didn't feel burned out today at all as I usually do"
Emotions (Mood Meter)										
Possible Solutions (Opportunities to improve the experience)	1. Can join online communities to find study buddies 2. Join or use existing study applications to get on top of work		1. If time-zones are an issue the user can update their profile status on discord to include which country and state they are interested in studying		1. Usually study focused applications such as StudyTogether and Fiveable have all study features to conduct a study session in one application, so users can transition to a more study friendly application		N/A			

Empathy Map

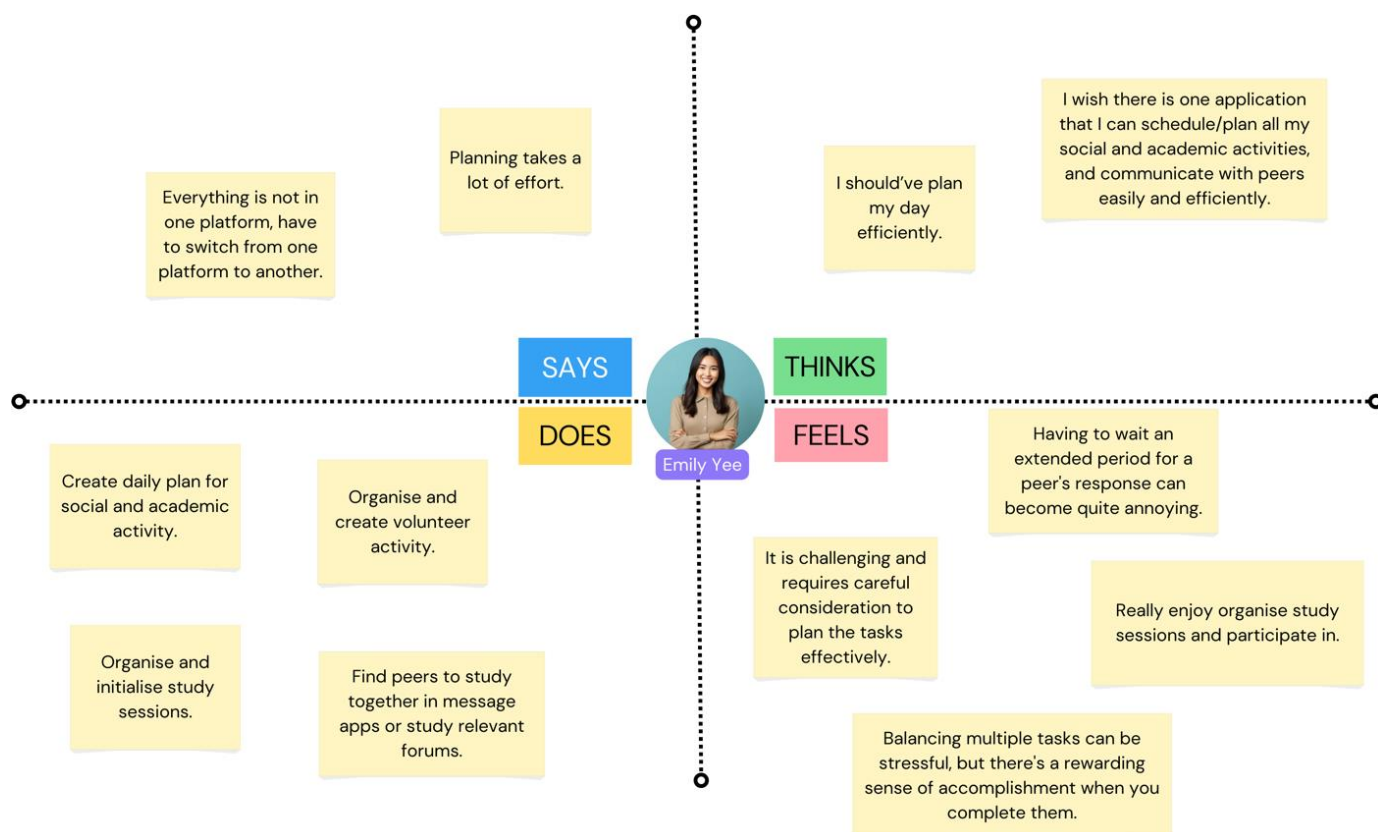
Persona 1: Aditi Das



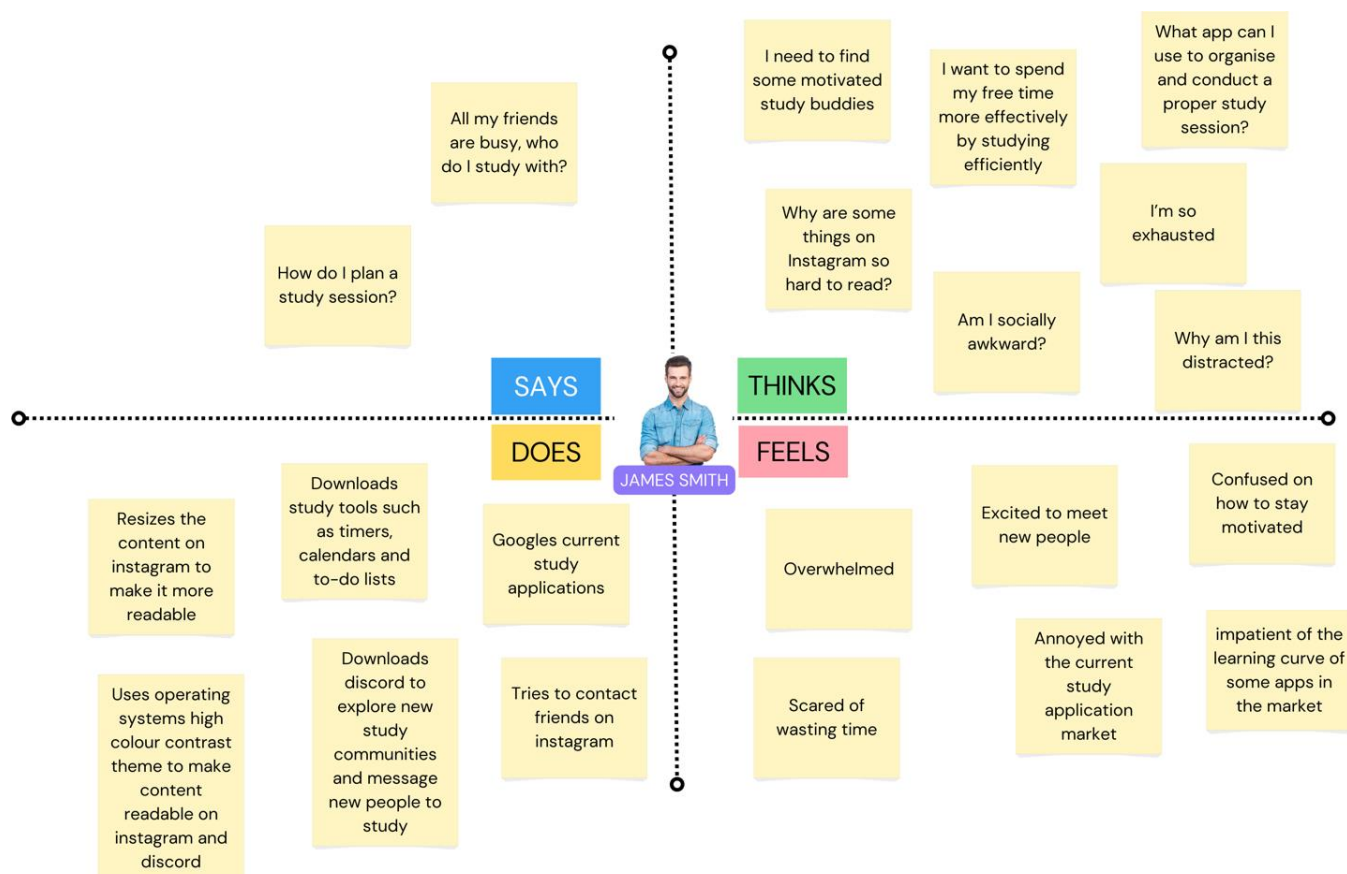
Persona 2: Julia Jones



Persona 3: Emily Yee



Persona 4: James Smith



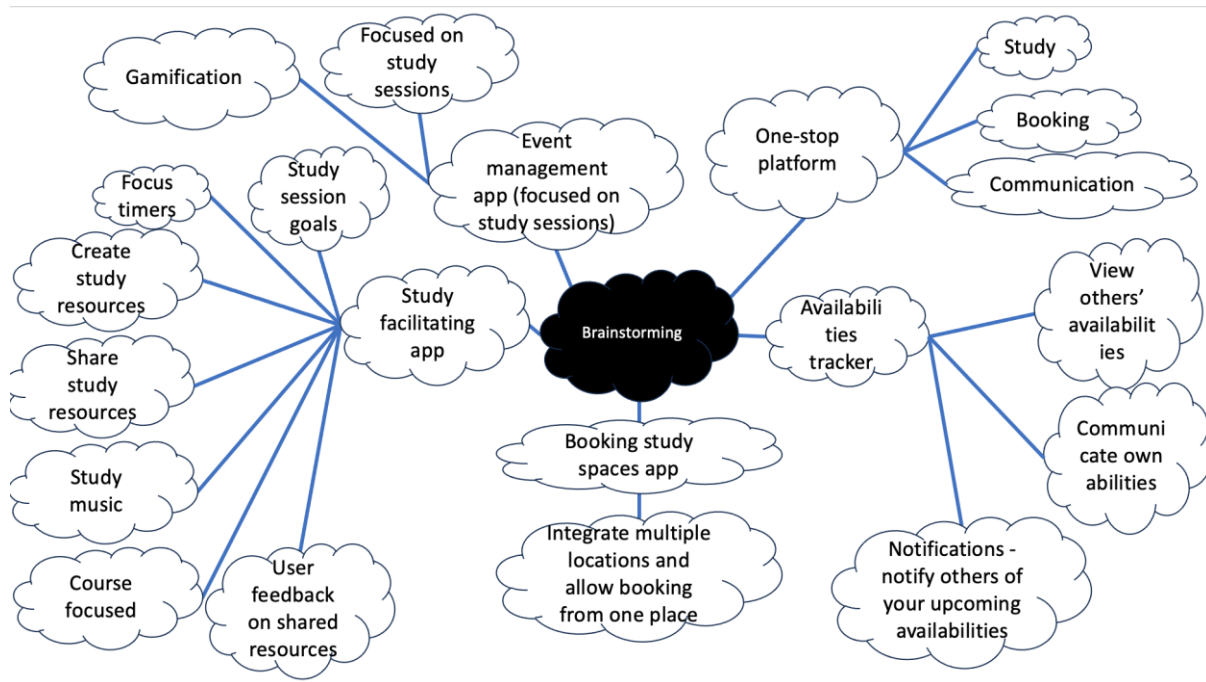
Problem Statement

University students find it difficult to organise and partake in study sessions. The most common issues that they face are finding suitable face-to-face study partners and coordinating study sessions efficiently. The goals of these students are to establish mutual study accountability for motivation, easily find suitable study partners, optimise study resources amongst themselves, and feel that they are part of a learning community.

Brainstorm Ideas

After understanding the user and their needs in stages 1 and 2, here are 5 solutions to the user need/opportunities we saw in the market:

- Event Management mobile app with a focus on study sessions
- Study facilitating mobile app
- Booking study spaces mobile app
- Availabilities tracker app
- One-stop platform for study + booking spaces + communication



Solution Chart

After brainstorming ideas, we have come out the five solutions show in the below chart table.

Solution		Pros	Cons	Votes from teammates
Event Management mobile app with a focus on study sessions		<ul style="list-style-type: none"> Gap in the market 	<ul style="list-style-type: none"> Is only useful if others are on the application too. Focuses only on one of the problems users faces 	Arindam, Meilin
Study facilitating mobile app		<ul style="list-style-type: none"> Users are familiar with such apps thus reducing adoption time. 	<ul style="list-style-type: none"> Similar apps are already in the market - saturated market 	Arindam
Booking study spaces mobile app		<ul style="list-style-type: none"> Current UI is difficult to navigate on mobile. Would allow users to conveniently change bookings without a laptop/ desktop 	<ul style="list-style-type: none"> Small screen size so it may be hard to filter rooms and see all information without navigating to different pages. A market for this already exists. Can get very complicated to do as we may need to contact different study locations and gather timing allocations 	Yulan
Availabilities tracker app		<ul style="list-style-type: none"> Can be integrated with timetables and other APIs to make the process easy and seamless 	<ul style="list-style-type: none"> Too similar to Google Calendar or when2meet - already in the market Can be complex to implement by scratch when accounting for edge cases. Solution only tackles one problem when organising a study session, doesn't account for conducting a study session 	Meilin, Arindam
One-stop platform for study + booking spaces + communication		<ul style="list-style-type: none"> Is more convenient for the end user. Gap in the market Encourages collaboration, communication, and productivity by not needing to learn the UI of more apps 	<ul style="list-style-type: none"> Complex Not as in-depth as focusing on only one item 	Sim, Meilin, Yulan, Arindam

Based on the market research and the votes received, the "One-stop platform for study + booking spaces + communication" solution has garnered the most support from our team. This solution is perceived as highly valuable for streamlining the entire study session process, from scheduling and coordination to accessing suitable study spaces and effective communication among participants.

User Stories and Requirements

User Stories

Account Management:

- ***As a user wanting a secure mobile application, I want to be able to register an account on the application so that I can access the application unrestricted.***
 - Acceptance Criteria:
 - If the user enters a valid username, email, password, the user will be allowed to create an account
 - If the user registers with a username that is already taken, the user will be prompted to enter a new username.
 - If the users enter an invalid email, the user will be prompted to enter a correct email
 - The password field must match the confirm password field exactly
 - The password must be between 6 and 40 characters
 - None of these fields may be empty, and the user cannot register with any of the fields that are incorrect or missing.
- ***As a user wanting a secure mobile application, I want to be able to sign into my account on the application so that I can save my details and progress.***
 - Acceptance Criteria:
 - If the user enters the valid username and password, they can log into the account.
 - If the user enters the incorrect username or password, they are alerted that their credentials are incorrectly entered, and they are not logged in.
- ***As a user wanting a secure mobile application, I want to be able to securely change my password to the application so that if I forget my password, I can still access my account.***
 - Acceptance Criteria:
 - If the user clicks on the 'forgot password' button, they are prompted to change their passcode via a link in their email.
 - The email links directs the user to a form with 'new password' and 'confirm new password' fields.
 - Both fields must be valid and the same for the new password to be applied.

Join Study channels:

- ***As a user who wants to easily find courses, I want to be able to view a list of all courses by name so that I can browse through them.***
 - Acceptance Criteria:
 - If a user views a list of courses, the courses will be automatically organized in an alphabetical manner.
 - If a user filters a list of courses by school, the courses will be filtered by school.
- ***As a user who wants to easily find courses, I want to be able to search for courses by name so that I can conveniently find them.***
 - Acceptance Criteria:
 - If a user searches a course by name, it will automatically appear.
 - If a user types part of a course name into the search bar, suggestions will pop up.
- ***As a user who wants to study with other people from my course, I want to be able to join course groups so that I can know where to find other individuals interested in study sessions for my course.***
 - Acceptance Criteria:
 - If a user views a course and is a member of that course, they will be given the option to join a course group chat.
 - If a user is not a member of that course, they will not be able to join.
- ***As a user who wants to study with other people from my class, I want to be able to view a list of class groups so that I can know where to find other individuals interested in study sessions from my classes.***
 - Acceptance Criteria:

- If a user clicks on a course, they can view a list of classes in that course.
- If a user clicks on a class, they can join the corresponding class group chat.
- ***As a user who wants to study with other people from my class, I want to be able to join class groups so that I can know where to find other individuals interested in study sessions from my classes.***
 - Acceptance Criteria:
 - If a user wants to make a smaller group chat, they can add and remove various people and see whether other users are in the same courses or classes.

Communicate with others:

- ***As a user who is time poor, I want to be able to communicate my availability so I can coordinate a time to meet up easily.***
 - Acceptance Criteria:
 - Users can put their availability in the group calendar, and everyone else can see who is available on when.
 - If the users want to link the personal calendar to group calendar, the user will be allowed to make it public.
 - Users can select to show availability on specific date and time.
 - Users can annotate their availability in terms of percentage.
- ***As a user whose availability is updating and changing, I want to be able to edit my availability so I can keep the availabilities up to date.***
 - Acceptance Criteria:
 - If a user wants to modify their availability, they can select specific days and time slots and show that they are available.
 - If a user wants to show that they are available at certain times, the system should allow users to set recurring availability patterns (e.g., every Monday and Wednesday from 2:00 PM to 4:00 PM).
 - Once the availability is updated, if the personal calendar and group calendar is linked together, it will automatically update both. If not linked together, it will ask if the users want to update the other one.
- ***As a user who wants to communicate with other users coming to the study session, I want to be part of a study group chat so I can communicate with other users coming to a particular study session.***
 - Acceptance Criteria:
 - If the user views study sessions, they will be able to join.
 - If a user clicks on the "Join Group Chat", they will be able to immediately join the group
- As a user who wants to get to know others in my course, I want to be able to message people in my courses so that I can feel like I am part of a learning community.
 - Acceptance Criteria:
 - If a user clicks on someone's profile, they will be able to see the message button
 - If a user clicks on the message button, they will be able to send the messages to the specify person
 - If another user sends a message to a user, they are able to receive the message back from the contacted user

Find study sessions:

- ***As a user who wants to study with other people from my courses, I want to see the upcoming study sessions planned for my courses so that I can consider whether they are a good fit for me to join.***
 - Acceptance Criteria:
 - If a user clicks on the course calendar, they should be able to view a list of upcoming study sessions in the dashboard or navigation menu for the specify course.
 - The study sessions are sorted by date and time, with the earliest sessions appearing at the top of the list.

- Users should be able to view the location, date and time of each study session near the study session name in a clear and easily accessible format, so users can compare each of them and decide which study session to join without the need to click for more details.
- Users should be able to click the study session name to see more details, such as attendees, descriptions etc.
- ***As a user who is time poor, I want to filter upcoming study sessions planned for my courses so that I can narrow down the ones that work for me.***
 - Acceptance Criteria:
 - Study sessions should be filtered by time, course, and class.
- ***As a user who wants to study together with others from my course, I want to be able to show interest in joining a study session so that others can know who is coming to the session.***
 - Acceptance Criteria:
 - If a user wants to confirm the study session, they should be able to give like/thumb to the study session
 - Once users can also give like/thumb to a study session.
- ***As a user who wants to study together with others from my course, I want to be able to view a list of users interested in joining a study session so that I can know who is coming to the session.***
 - Acceptance Criteria:
 - If a user opens open the course section, they can find a list of all users who are interested in the study session.
 - Users should be able to toggle/hide the list whenever they want
 - Each user on the list should be clickable to reveal more information about them (status, what subjects they study, etc.)

Create study sessions:

- ***As a user who is time poor, I want to be able to create a study sessions event given a particular time in an easy and seamless manner so I can spend more time on other tasks.***
 - Acceptance Criteria:
 - Users should be able to navigate to a very visible "create study session" section where they can create a study session as soon as possible
 - Users should be able to organise a study session either private, invite-only or public
 - Users should provide a study session title, date, time, location, course/subject tags, max number of people and brief information about the study session
 - Users should be given effective feedback through a confirmation screen before users finalise their creation
- ***As a user whose schedule frequently changes, I want to be able to edit my study sessions event for a different location in an easy and seamless manner, so I am not stuck with the location I have booked in case I make a mistake/change my mind.***
 - Acceptance Criteria:
 - Users should be able to be give an option whether they joined a study session or created one to edit all the details there including the location
 - After making edits they must have an option to confirm the changes and update it accordingly
 - After doing that it should send all the joined users a notification that the location has been changed
- ***As a user who is time poor, I want to be able to book a location for my study session in an easy and seamless manner so I can spend more time on other tasks.***
 - Acceptance Criteria:
 - Users who want to create a study session should be able to navigate to a very visible "create study session" section. In the location input, they can select a location and results are filtered based on availability
 - Users affiliated with the study session should be notified in case any change has been made

- ***As a user whose schedule frequently changes, I want to be able to delete my study sessions event if it is no longer going ahead so I can inform the other users that are going.***
 - Acceptance Criteria:
 - Users should be able to navigate to the existing study sessions section and be able to delete it
 - After deleting, the user should get an alert saying that all users who joined this session will be informed that it has been deleted
- ***As a user who is time poor, I want to be able to easily check the availability of others in my class or course while I am creating a session so that I know who when is the best times for a study session.***
 - Acceptance Criteria:
 - By joining a course group, it will ask for the user's permission to share their availability calendar
 - Using the shared availability calendars, users can create study sessions for the one who want to join
 - Use the shared availability calendars, give how many hours to study (0.5 hr, 2hrs), then automatically suggest the best time slot for creating the study sessions.
- ***As a user who is time poor, I want to be able to create a recurring study sessions event given a particular time and frequency in an easy and seamless manner so I can spend more time on other tasks.***
 - Acceptance Criteria:
 - Users can tick the recurring box to create duplicate study sessions.
 - By default, frequency will be set to every week. By entering a number for the frequency, it will generate the corresponding recurring event.
 - Users will be able to update and change future recurring events without affecting previous events.

Find available study rooms:

- ***As a user looking for a space to study, I want to be able to view a list of potential rooms and see their information so that I can find the rooms that best fit me.***
 - Acceptance Criteria:
 - Users will be able to view each room location
 - Users will be able to view the available times of each room.
- ***As a user looking for a space to study, I want to be able to easily filter through potential rooms so that I can find the rooms that best fit me.***
 - Acceptance Criteria:
 - Users will be able to filter each study location by availability
 - Users will be able to filter each study location by geographical location.
- ***As a user looking for a space to study, I want to be able to see a map view for the list of potential rooms so that I can find/visualise the rooms that best fit me.***
 - Acceptance Criteria:
 - The map should be clear and resizable so that the user can see all the study locations clearly
 - Locations that are booked out and available should be clearly colour coded and a legend should be provided so that the user isn't confused
 - The map should have a "back to current location" feature so that users could navigate back if they drifted away too far and are lost

Study tools:

- ***As a user who gets distracted easily, I want to be able to have study tools that help me so that I can study as effectively and efficiently as possible.***
 - Acceptance Criteria:
 - Pomodoro timer
 - Todo-list
 - Study music
 - Ability to create flashcards

Accessibility settings:

- ***As a user who is visually impaired, I want to be able to study without facing any accessibility issues such as poor colour contrast or not having resizable text so that I can study with others without feeling left out.***
- Acceptance Criteria:
 - Semantic HTML and alt text used to ensure screen reader friendly
 - Text font adjustable from the app
 - Custom modes: light mode, dark mode and high contrast mode

Requirements

Functional:

- Account Management
 - Create an account.
 - Log in with correct credentials.
 - Ability to change password.
- Join study channels.
 - View list of courses
 - Join Course
 - View list of classes in the course
 - Join a class.
 - Search by course
- Communicate with others.
 - Communicate with others in the course about your availability.
 - Edit your availability and make your availability public.
 - Create a study session group chat.
 - Send messages.
- Find study sessions.
 - View list of all upcoming study sessions
 - Show interest in joining an upcoming study session.
 - View list of others attending the study session
 - Filter study sessions by time, course and class
- Create study session.
 - View others' availabilities
 - Create study session at a particular time.
 - Delete a study session.
 - Book location for study session.
 - Edit time and location.
 - Add a recurring study session.
- Find available study rooms.
 - View a list of rooms and their information.
 - Filter by availabilities and locations
 - Map view of study locations
- Study tools
 - Pomodoro timer on app
 - To-do list
 - Study music
 - Create Flashcards from summary.
- Accessibility

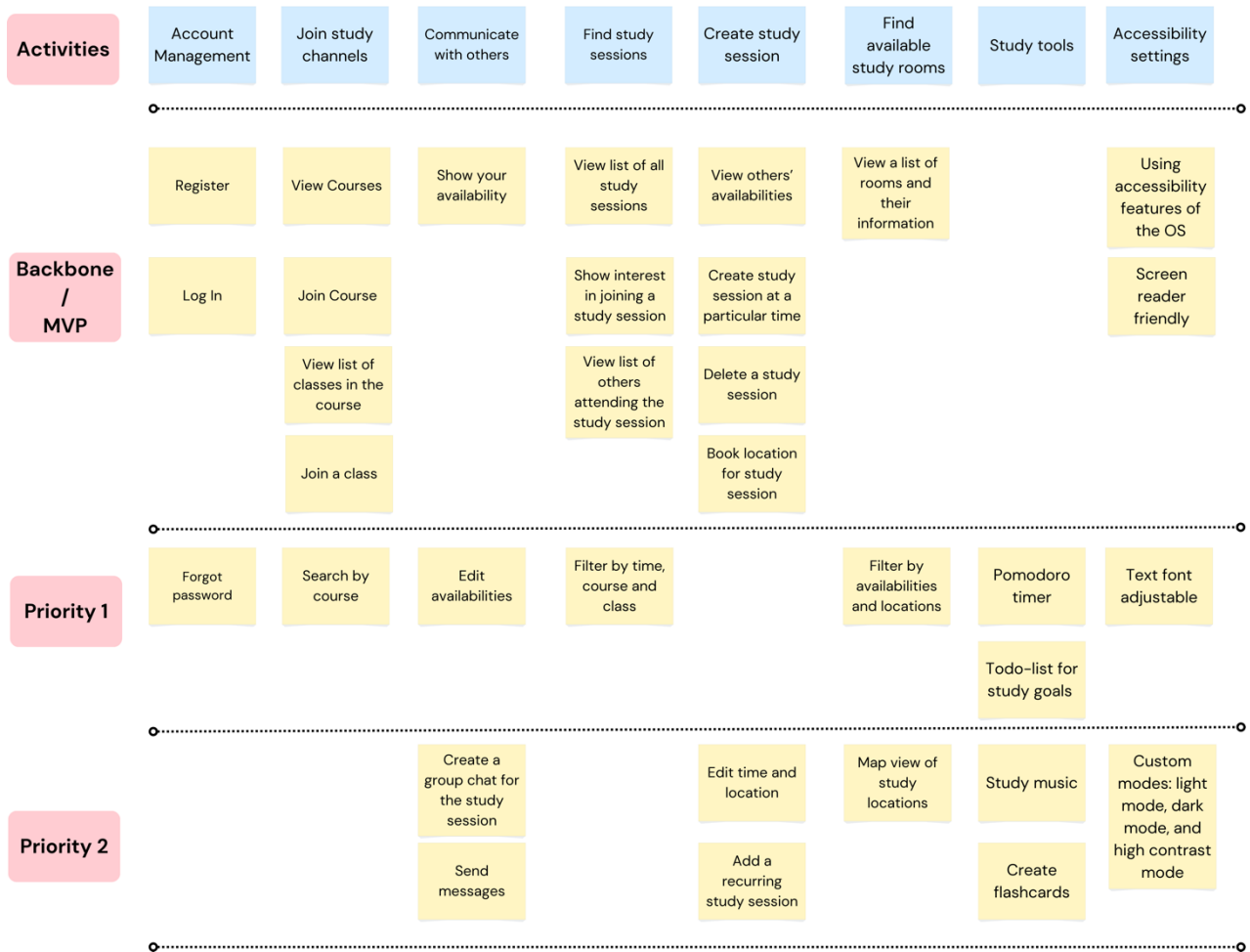
- Screen reader friendly
- Text font adjustable
- Custom modes: light mode, dark mode, and high contrast mode

Non-Functional:

- Easy to navigate and utilise for both novice and expert users (Minimalist UI)
- Secure authentication system
- Basic help and documentation for users who may still be confused on the UI
- Must pass the WCAG AA Accessibility requirements
- Easy booking process that does not take a lot of effort to navigate
- User friendly UI that works on both mobile and desktop

User Story Mapping

To provide a priority to how the user stories will be executed, they are broken down, with decreasing level of priority, into 'Backbone/MVP', 'Priority 1', and 'Priority 2'.

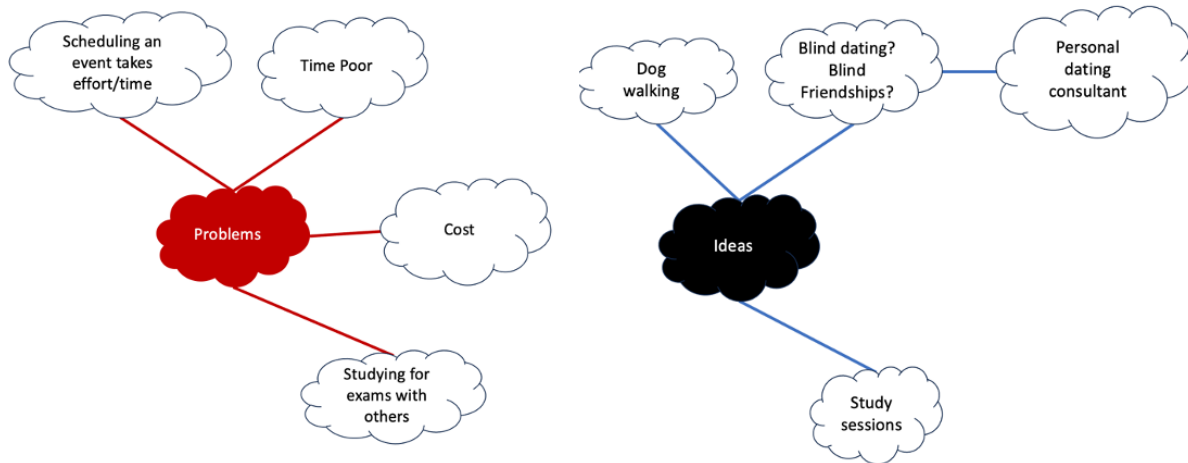


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Appendix

A. Initial brainstorming:



B. Responses to questionnaire:

Respondent 1:

Demographic Questions:

1. **What is your age?**
20 years old.
2. **What is your current academic status and level of education?**
Bachelor of Computer Science at UNSW, 2nd Year.

Study preferences:

1. **Do you prefer to study alone or with friends? Why?**
Prefer studying with friends. Helps with motivation and is more fun/less isolating. We can also discuss things that don't make sense and get another opinion. Provides different perspectives.
2. **How do you generally go about planning a study session?**
Plan what topics I want to revise, co-ordinate times and location with friends. Assigning clear goals of what I want from the study session is helpful as otherwise I can get carried away chatting with friends.
3. **Do you have preferred locations for studying with others?**
Normally on the University, either the library or other study rooms.
4. **Is it difficult for you to find a place to study together with others?**
Can be difficult, especially during peak times like exams.

Study sessions:

5. **Have you attended face-to-face study sessions before? What was that experience like?**
Yes, many. Very beneficial for more complex subjects/topics. Good to get real time feedback from peers. Also builds camaraderie among students.
6. **Have you attempted to organise a study session before? What was that experience like?**
Yes, it can be challenging to figure out what times work for everyone's schedule. But can be really productive and fun when everyone is together. Sharing resources and helping each other with difficult concepts is one of the most rewarding aspects.
7. **If you have attended face-to-face study sessions before, what were you looking to get out of them?**
Clear doubts, understand more complex topics, solve problems collaboratively, and prepare for exams.

Apps:

8. **Have you used apps to coordinate study sessions? If so:**

- a. **Which ones?**
WhatsApp for communication and google calendar to schedule times.
 - b. **What were the best features of these apps?**
Many of my friends use WhatsApp so creating group chats for study groups is very easy and intuitive. Google Calendar is used to scheduling, seeing interest, and reminding participants.
 - c. **What could be improved or added on these apps?**
Google Calendar could have more advanced features for tracking study session progress.
9. **Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?**
Learning curve of using new apps might deter some students from adopting them.
10. **Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?**
No, but I do like customisation options such as dark mode.

Respondent 2:

Demographic Questions:

11. **What is your age?**
24 years old.
12. **What is your current academic status and level of education?**
Masters of Environmental Science at UNSW.

Study preferences:

13. **Do you prefer to study alone or with friends? Why?**
Alone. Solitude helps me focus, but I do like having group discussions with peers for more complex topics and if it's a group project.
14. **How do you generally go about planning a study session?**
Re-reading my notes and creating resources such as flash cards. Writing down the information or reading it back to myself is helpful.
15. **Do you have preferred locations for studying with others?**
Generally, the rooms at the library or other quiet places are where I study with others.
16. **Is it difficult for you to find a place to study together with others?**
Yes, especially around exams.

Study sessions:

17. **Have you attended face-to-face study sessions before? What was that experience like?**
Yes, as both an undergrad and now as a post-grad. Peer-to-peer teaching and collaboration is great for understanding complex topics.
18. **Have you attempted to organise a study session before? What was that experience like?**
No.
19. **If you have attended face-to-face study sessions before, what were you looking to get out of them?**
Gain a deeper understanding of complex topics, especially those related to my research. Receive feedback, make friends that I can study with again and ask questions of.

Apps:

20. **Have you used apps to coordinate study sessions? If so:**
- a. **Which ones?**
Discord.
 - b. **What were the best features of these apps?**
You can make different groups and sub-groups on the app and share resources easily.

c. What could be improved or added on these apps?

Some way to schedule times more easily.

21. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?

No.

22. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

No.

Respondent 3:

Demographic Questions:

23. What is your age?

23 years old.

24. What is your current academic status and level of education?

3rd year into Bachelor's degree in Economics at UNSW.

Study preferences:

25. Do you prefer to study alone or with friends? Why?

Love to study with friends, live on campus so can often find students for studying together.

Bounce ideas off each other, clarify doubts, and even turn study sessions into fun brainstorming sessions.

26. How do you generally go about planning a study session?

Message in group chats and see who is interested. Find times and locations that work for those people and meet up. Bring our study materials and snacks.

27. Do you have preferred locations for studying with others?

Coffee shops, university library or in our rooms.

28. Is it difficult for you to find a place to study together with others?

Sometimes, mostly we can find a space and if not, we can use our room on campus.

Study sessions:

29. Have you attended face-to-face study sessions before? What was that experience like?

Yes, the energy is super contagious and people ask questions that I would never have thought about. Everyone is working to one goal and that's really motivating.

30. Have you attempted to organise a study session before? What was that experience like?

Yes, scheduling is the biggest issue but once that is set, it is a really fun time.

31. If you have attended face-to-face study sessions before, what were you looking to get out of them?

Deepen my understanding of the material, prepare for exams, and share study strategies with my peers. It's all about mutual support and learning from each other.

Apps:

32. Have you used apps to coordinate study sessions? If so:

a. Which ones?

Facebook Messenger.

b. What were the best features of these apps?

Communicating and creating group chats were really simple.

c. What could be improved or added on these apps?

Hard to co-ordinate times and get interest.

33. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?

No, ease of use is probably the biggest aspect of any app. Nothing specific to study apps.

- 34. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?**

No.

Respondent 4:

Demographic Questions:

- 1. What is your age?**

21.

- 2. What is your current academic status and level of education?**

Honours student.

Study preferences:

- 3. Do you prefer to study alone or with friends? Why?**

I enjoy studying with friends especially on a discord server if online or a library. In public. I find it nice as my friends keep me accountable of how I use my time and I procrastinate less with them.

- 4. How do you generally go about planning a study session?**

I usually use Todo lists of the tasks I need to complete and tick off the ones completed or just move them to the next day if not finished.

- 5. Do you have preferred locations for studying with others?**

I prefer studying at the library or a café.

- 6. Is it difficult for you to find a place to study together with others?**

No.

Study sessions:

- 7. Have you attended face-to-face study sessions before? What was that experience like?**

Yes. It was good but a lot of the times we would move into irrelevant conversations.

- 8. Have you attempted to organise a study session before? What was that experience like?**

No.

- 9. If you have attended face-to-face study sessions before, what were you looking to get out of them?**

To study as effectively as possible with little distractions.

Apps:

- 10. Have you used apps to coordinate study sessions? If so:**

- a. Which ones?**

Discord.

- b. What were the best features of these apps?**

You can search for any study discord server and join.

- c. What could be improved or added on these apps?**

Maybe adding a pinned channel as you need to scroll down a lot to find the group.

- 11. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?**

Privacy might be an issue, like what if my mic was not on mute when I thought it was on mute.

- 12. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?**

No.

Respondent 5:

Demographic Questions:

- 13. What is your age?**

22.

14. What is your current academic status and level of education?

Medsci at UoA.

Study preferences:

15. Do you prefer to study alone or with friends? Why?

I prefer studying with a group of people. This allows me to keep track of my work and take breaks when needed so that I don't burn out.

16. How do you generally go about planning a study session?

I study with a group, so we have a group chat where we write down everything, we want to have completed by the end of the study session.

17. Do you have preferred locations for studying with others?

I prefer either online on discord, or at the uni library.

18. Is it difficult for you to find a place to study together with others?

No.

Study sessions:

19. Have you attended face-to-face study sessions before? What was that experience like?

Yes. Although good, sometimes our group got distracted which made it hard to always stay on track.

20. Have you attempted to organise a study session before? What was that experience like?

No.

21. If you have attended face-to-face study sessions before, what were you looking to get out of them?

I was looking to get a lot of unfinished work done such as catching up on lectures or working on my thesis without being distracted much.

Apps:

22. Have you used apps to coordinate study sessions? If so:

a. Which ones?

Discord and Fiveable.

b. What were the best features of these apps?

Easy to use and we could add multiple people to collaborate with.

c. What could be improved or added on these apps?

Maybe have a built-in app/website blocker to prevent you from using a distract app/website while you work.

23. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?

Not really no.

24. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

Not a disability but, I usually wear glasses and have weak eyesight so usually I prefer resizable content in case the content on the screen is too small.

Respondent 6:

Demographic Questions:

25. What is your age?

19.

26. What is your current academic status and level of education?

Civil engineer at WSU.

Study preferences:

27. Do you prefer to study alone or with friends? Why?

I usually prefer studying alone. If I'm with my friends, I can never get work done because it's too distracting.

28. How do you generally go about planning a study session?

I don't really plan it out, I just look at upcoming assessment tasks or lectures I have missed and get them done ASAP.

29. Do you have preferred locations for studying with others?

If I do study with others, it would be in the library as it's more motivating there.

30. Is it difficult for you to find a place to study together with others?

No.

Study sessions:

31. Have you attended face-to-face study sessions before? What was that experience like?

Although not bad but they always turn out to be socialising meets.

32. Have you attempted to organise a study session before? What was that experience like?

No, I haven't organised one.

33. If you have attended face-to-face study sessions before, what were you looking to get out of them?

I wanted to have a conversation with my friends during break time but when working I wanted a less distracting workplace that keeps me motivated enough to get through any pending tasks.

Apps:

34. Have you used apps to coordinate study sessions? If so:

a. Which ones?

WhatsApp, Instagram dm's and sometimes MS teams.

b. What were the best features of these apps?

Quick and easy way to ask my mates if they want to study.

c. What could be improved or added on these apps?

Nothing they do everything I need it to do.

35. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?

Some study session applications are paid. Whenever I go on a website's home page and it has a pricing section, I never use that application, so if it isn't free that could be a concern.

36. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

No, but I do like dark mode as it feels easier on the eyes, especially at night.

Respondent 7:

Demographic Questions:

1. What is your age?

23 years old.

2. What is your current academic status and level of education?

Master of Computing at ANU.

Study preferences:

3. Do you prefer to study alone or with friends? Why?

My study approach varies depending on the situation. If I'm unable to maintain focus while studying alone, I'll seek out a friend to study with. Conversely, if I can concentrate effectively, I'll choose to study by myself.

4. How do you generally go about planning a study session?

I usually plan ahead for what I'm going to do next or start planning the day at the beginning of the day. If I want to study with a friend, I'll ask her if she's available the day before or in the morning.

5. Do you have preferred locations for studying with others?

When I'm motivated to study, I usually do so at home. However, when I lack motivation, I intentionally go to the library to create a more structured environment that helps me stay focused. Generally, I prefer studying indoors, as outdoor locations are not conducive to my comfort and concentration.

6. Is it difficult for you to find a place to study together with others?

Sometimes it can indeed be challenging to find a suitable place to study. Resources may be available at times, but at other times, they may be insufficient. Additionally, there are instances where people inside it don't leave on time, even after reserving a classroom, leading to a waste of time. Generally, if I go early enough, I can usually find a suitable place to study during regular times, as long as it's not right before exams. Furthermore, I prefer to study in environments with good ambience, although there are typically many people in such places.

Study sessions:

7. Have you attended face-to-face study sessions before? What was that experience like?

Yes, I have attended face-to-face study sessions before. In tutorial sessions, the experience often depended on the environment. If it was noisy or not very engaging, I found it hard to focus, but if the tutor was highly engaged and responsive, it made the session more productive. I sometimes felt a bit shy during these sessions. When studying with friends, everything was generally fine, but it was easy to get sidetracked by casual conversations. As for project group sessions, they could be a bit awkward, especially if I wasn't very familiar with the group members.

8. Have you attempted to organise a study session before? What was that experience like?

Yes, I have tried to organize study sessions before, and the experience has been a mix of positive and negative aspects. When arranging to study with a friend, it's great if they have the time and can commit. However, there can be challenges when waiting for their response, as it can lead to time wasted, or if they suddenly become unavailable on the scheduled day, it can be disappointing. Regarding online study sessions, it can sometimes be frustrating when you don't know where someone has gone, which can affect your motivation to study. Similarly, if a friend is late or unable to join, it can feel like a waste of time and can also be demotivating.

9. If you have attended face-to-face study sessions before, what were you looking to get out of them?

When attending face-to-face study sessions, my primary goals were to immerse myself in a conducive learning environment. This atmosphere helped me stay more engaged in my studies and be more productive in completing my work. The aim was to efficiently finish my tasks so that I could have more free time and reduce any internal stress or anxiety related to unfinished work. Additionally, these sessions provided an opportunity for mutual assistance and problem-solving with fellow participants. However, it's worth noting that sometimes this could lead to casual conversations, which could be both helpful and distracting.

Apps:

10. Have you used apps to coordinate study sessions? If so:

a. Which ones?

- i. Trello in MS Teams
- ii. Discord
- iii. Zoom
- iv. Forest
- v. Finding a Common Meeting Time Web App

- vi. Voting Function in MS Teams/Other App
- b. **What were the best features of these apps?**
- c. **What could be improved or added on these apps?**

Both b and c:

Trello inside Ms Teams: This allows each person to have their own to-do list and monitor each other's progress. It facilitates mutual supervision and coordination, making it convenient for collaborative work, especially when integrated with Microsoft Teams.

Discord: It is useful for keeping track of what others are doing, and it can have multiple screens sharing at the same time which is particularly valuable for collaborative work.

Zoom: Zoom has some limitations, such as the need to use a school account to host meetings since it has time restrictions on personal accounts. It also seems too formal to use it, it feels like attending a tutorial or lecture.

Forest: The Forest app is effective for promoting coordination as it allows users to build virtual forests together. If someone touches their phone during a session, the forest is destroyed. It has a simple interface but you cannot tell if your friends are using other devices simultaneously.

Finding a Common Meeting Time Web App: These apps are convenient for finding common meeting times without the need for back-and-forth messages to determine availability. However, they often only provide available datetimes and don't indicate the likelihood of participants being 100% available or only partially available.

Voting Function in MS Teams/Other App: Using a voting format for scheduling can be useful, but can lead to scheduling conflicts when the most popular time slots are not feasible for some participants. Communicating the reason for unavailability without sending additional messages can be challenging. For instance, consider a scenario with 5 people and 8 time slots to vote on. In this case, 4 people may agree on the first time slot, while the second time slot receives only 3 votes, with all other slots having just 2 votes each. However, in reality, the second time slot might be suitable for the remaining 2 people who didn't vote for it, and the first time slot may not work for those who didn't vote for it. In this situation, they may choose the most popular one, but this would cause conflict.

11. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions? There are several concerns and barriers that might deter me from using applications designed to organize study sessions:

- a. Lack of Data Transparency: It's concerning when applications don't provide clear information about how they handle user data, including video and other information, which can impact privacy and security.
- b. Discord's Audio Settings: Discord's default audio settings can be a barrier, as it doesn't always remember user preferences for muting or unmuting. This can lead to disruptions in study sessions.
- c. Microsoft Teams' Message Digest: Message digests in Microsoft Teams can be seen as annoying, I have read the message without opening the app, but it always sends an email to me after one hour.
- d. Zoom's Screen Sharing UX: Zoom's user experience can be frustrating when someone shares their screen, and the interface automatically zooms in and out. This can disrupt the flow of a study session and make it difficult to find necessary controls.
- e. Impact on Music Quality: When using Discord or Zoom while simultaneously listening to music, it can lead to a drop in the quality of the music. Users may need to adjust their audio settings to maintain audio quality, which can be cumbersome.

12. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

Some apps do not support font enlargement.

Respondent 8:

Demographic Questions:

13. What is your age?

23 years old.

14. What is your current academic status and level of education?

Bachelor of Data Science and Decisions (Graduated).

Study preferences:

15. Do you prefer to study alone or with friends? Why?

I prefer to study alone because it allows me to concentrate better. Additionally, the subjects I study with friends are often different from mine, and there is nothing in common, and cannot have a discussion about the material.

16. How do you generally go about planning a study session?

When planning a study session, I typically start by setting clear and achievable goals for the session. However, one common issue I face is that I sometimes set overly ambitious goals, leading to a situation where I give myself too much to accomplish within the allotted time, and as a result, I may not be able to finish everything I initially planned. This is a recurring challenge for me in my study planning process.

17. Do you have preferred locations for studying with others?

Yes, I do have a preferred location for studying with others, and that would definitely be the library. Libraries offer a public space with numerous available study areas, and the overall atmosphere is conducive to focused study, making it an ideal place for collaborative learning with others.

18. Is it difficult for you to find a place to study together with others?

It depends whether you go to library at the peak hours or off-peak hours.

Study sessions:

19. Have you attended face-to-face study sessions before? What was that experience like?

The preparation time and the waiting time for your friends to arrive can consume a significant portion of your study session. Even if you arrive early, the gap between your arrival and your friend's arrival can be punctuated with interruptions. However, once everyone settles down, this period of studying with friends can be highly productive and conducive to concentration. In contrast, studying alone at home may lead to a decrease in concentration, as various distractions, such as noises from outside, can disrupt your focus. When studying with friends, even if you are momentarily interrupted by something else, the sight of your friends diligently studying can quickly get you back on track, enhancing your overall productivity.

20. Have you attempted to organise a study session before? What was that experience like?

Rarely, not very often. I can remember only once or twice. I feel like it is pretty much the same as the one organised by others. It doesn't have any difference. But if you do organise by yourself, you will become more motivated, because you know the reason why you organise this, what is your goal, and what to do. Overall, if it is organised by others, the feeling might be a little bit different, maybe less motivated.

21. If you have attended face-to-face study sessions before, what were you looking to get out of them?

Longer study time. I can get my project and study tasks done.

Apps:

22. Have you used apps to coordinate study sessions? If so:

a. Which ones?

- i. WeChat
- ii. MS Teams, but no longer use after graduated, have switched to use Zoom, Discord and VooV meeting instead
- iii. Forest
- iv. Pomodoro Timer
- v. iPhone clock

b. What were the best features of these apps?

c. What could be improved or added on these apps?

Both b and c:

WeChat: Create a study group, and every time when someone want to have a study session, send message to the group to see if anyone want to join.

Forest vs Pomodoro Timer: use this during pandemic time, it is one of my favourite apps, but then I switched to Pomodoro Timer, because it is better than the Forest. As it can create many different times ranges beforehand, but Forest just like the iPhone clock, with addition of some features, like restriction usage to some apps. Pomodoro Timer have the features that Forest have, but also have features that Forest does not have.

iPhone clock: I use the default countdown function on my iPhone for managing my study sessions. The simplicity of its interface is what appeals to me, as I prefer a straightforward way to start my learning sessions. I don't want to go through the process of creating study sessions and deciding how many minutes each session should be, as sometimes it's challenging to predict how long a task will take. My usual approach is to set a one-hour countdown timer. When the timer goes off, and if I haven't completed my task, I'll start a new timer for the next session. I don't record how long I've been studying or how long I'll need for a task because I find that I cannot follow my initial plans, and flexibility is important when it comes to studying effectively.

23. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?

If my needs have changed, then I'll change the application.

24. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

N/A.

Respondent 9:

Demographic Questions:

25. What is your age?

23 years old.

26. What is your current academic status and level of education?

Undergraduate bachelors student (highest completed level of education is high school).

Study preferences:

27. Do you prefer to study alone or with friends? Why?

I usually prefer alone, but it depends on the subject and who I'm studying with. I usually find working with other people too distracting.

28. How do you generally go about planning a study session?

Usually someone will message a group chat for friends studying the same subject and then those that want to go will work out a time/place.

29. Do you have preferred locations for studying with others?

Somewhere quiet but where we won't disturb other people by talking. Booked rooms in a library are good.

30. Is it difficult for you to find a place to study together with others?

Not usually, since they're usually planned in advance, and someone will book a room in a library.

Study sessions:

31. Have you attended face-to-face study sessions before? What was that experience like?

Yes, that's the only way I've done them. It's good to see what other people are working on, and you can easily ask questions if you're stuck on something. Although it can be hard to tune out other people's conversations when you're trying to focus.

32. Have you attempted to organise a study session before? What was that experience like?

No, usually someone else will suggest the idea, but if I'm interested, I'll help suggest locations.

33. If you have attended face-to-face study sessions before, what were you looking to get out of them?

Help from other people if I'm stuck on something (I can show them what I'm doing more easily), a sense of everyone else's understanding, discussion of ideas for more subjective topics, working with other people on hard problems to try and attack it from different angles.

Apps:

34. Have you used apps to coordinate study sessions? If so:

a. Which ones?

Not ones that are specifically for that. I've just used Facebook messenger.

b. What were the best features of these apps?

N/A.

c. What could be improved or added on these apps?

N/A.

35. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?

Maybe just getting everyone to download and use it? Unless there are any very useful features that would make everyone want to use it.

36. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

N/A.

Respondent 10:

Demographic Questions:

1. What is your age?

20.

2. What is your current academic status and level of education?

Undergraduate student at UNSW.

Study preferences:

3. Do you prefer to study alone or with friends? Why?

Alone.

4. How do you generally go about planning a study session?

Will study when she has downtime between classes.

5. Do you have preferred locations for studying with others?

Law library.

6. Is it difficult for you to find a place to study together with others?

No.

Study sessions:

7. Have you attended face-to-face study sessions before? What was that experience like?

Yes. She studies with friends when they are on campus at the same time or will meet people to study between finals.

8. Have you attempted to organise a study session before? What was that experience like?

She texted her friends.

9. If you have attended face-to-face study sessions before, what were you looking to get out of them?

It is nice to have company and be able to easily ask people questions.

Apps:

10. Have you used apps to coordinate study sessions? If so:

a. Which ones?

Messenger.

b. What were the best features of these apps?

c. What could be improved or added on these apps?

11. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?

No.

12. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

No.

Other thoughts

- She says some people at UNSW may be a bit elitist and sometimes law students are intense, so it is frustrating to be around them sometimes.
- It is difficult to make friends in certain classes due to the demographics of UNSW.

Respondent 11:

Demographic Questions:

13. What is your age?

21.

14. What is your current academic status and level of education?

Undergraduate student Computer Science

Study preferences:

15. Do you prefer to study alone or with friends? Why?

With friends.

16. How do you generally go about planning a study session?

Texts class group chats. Usually takes classes with friends.

17. Do you have preferred locations for studying with others?

Library.

18. Is it difficult for you to find a place to study together with others?

No. Finds it easy to reserve a room.

Study sessions:

19. Have you attended face-to-face study sessions before? What was that experience like?

Yes. Pretty helpful.

20. Have you attempted to organise a study session before? What was that experience like?

Hard because people have different schedules, but it is possible.

21. If you have attended face-to-face study sessions before, what were you looking to get out of them?

Easier to get stuff done in group. Can check problem set and get help with debugging.

Apps:

22. Have you used apps to coordinate study sessions? If so:

a. Which ones?

No.

b. What were the best features of these apps?

No.

c. What could be improved or added on these apps?

No.

23. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions?

No.

24. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications?

No.

Other stuff:

- Hard to meet people in classes sometimes and some classes can feel quite cliquey.
- She feels lucky she has a lot of CS friends, but she met them outside of class.
- Thinks it would be helpful to have an app that makes meeting people easier.

Respondent 12:

Demographic Questions:

1. What is your age?

21.

2. What is your current academic status and level of education?

Undergraduate student in film.

Study preferences:

3. Do you prefer to study alone or with friends? Why?

Alone.

4. How do you generally go about planning a study session?

Studies whenever he has downtime as she works a lot.

5. Do you have preferred locations for studying with others?

Multicultural students centre.

6. Is it difficult for you to find a place to study together with others?

No.

Study sessions:

7. Have you attended face-to-face study sessions before? What was that experience like?

He says a lot of people study in that building so it is easy to go there and see a familiar face.

8. Have you attempted to organise a study session before? What was that experience like?

Yes. It can be difficult since people have different work schedules.

9. If you have attended face-to-face study sessions before, what were you looking to get out of them?

It is fun to study with friends and he feels more motivated.

Apps:

10. Have you used apps to coordinate study sessions? If so:

a. Which ones?

Messenger.

b. What were the best features of these apps?

No.

c. What could be improved or added on these apps?

No.

11. Are there any concerns or barriers that you think may stop you from using applications that organise study sessions? No.

12. Do you have any disabilities relevant to study session apps and if so do you have any additional needs from such applications? No.

Notes: could be interesting to have an app with status updates about when people are studying. User only studies with people when he runs into people and is hesitant to reach out.