

Part 2 Report: Stubby (Study Buddy)

1. Project Description

Stubby is a campus-specific study matching app that connects university students based on shared subjects, availability, and study preferences. It supports structured peer collaboration by allowing users to choose between individual partners or study groups. All sessions take place in approved on-campus venues. Stubby ensures safety and quality through verified school login, in-app moderation, and session feedback systems.

2. Requirements Summary

Functional Requirements:

- School-verified profile using school credentials creation with subjects, schedule, and preferences
- Matching algorithm for pairing/grouping students
- On-campus venue selection and session scheduling
- Session review/feedback and reporting features
- Admin/moderator oversight and issue management

Non-Functional Requirements:

- Usability: clean UI, mobile and desktop accessible
- Security: login via school credentials only
- Feedback-driven improvements for session quality
- Privacy: data protected and moderated
- Flexibility for group or solo matching

3. Design Space

Challenging Requirements:

- Developing a robust matching algorithm that accommodates varied class codes and schedules
- Ensuring session safety without invading privacy
- Seamlessly integrating geolocation for venue filtering

Tradeoffs Considered:

- Detailed filtering vs. quick match process
- User freedom vs. platform-moderated structure
- Visual-heavy UI vs. text-heavy for accessibility

Easiest Tasks:

- Creating a profile
- Booking a study session
- Giving session feedback

Hardest Tasks:

- Managing real-time venue availability
- Enabling meaningful feedback systems
- Handling subject equivalency across programs

4. Design Summary (10 pts)

We explored various alternatives:

- **Swipe-Based Matching UI:** too informal for academics, discarded.
- **Chat-First Interface:** cluttered and difficult to moderate.
- **Admin-Curated Bulletin Board:** not scalable or personal.

Selected for Exploration:

1. **Dashboard-Centric Interface:** combines control and clarity.
2. **Venue-First Map UI:** emphasizes campus integration.
3. **Gamified Progress Tracker:** encourages engagement and follow-through.

We prioritized designs that maximize usability, personalization, and safe campus-based collaboration.

5. The Designs

Design 1: Dashboard-Centric Interface

Overview:

Centralized interface showing subject match results, session schedule, and message panel in one view.

Illustrations:

- Profile creation form
- Match list with color-coded availability
- Calendar with booked sessions
- Messaging panel

User Scene:

Shelley logs in, adjusts her IT101-1 preference, sees three compatible matches. She selects Angeline and confirms a study session at Library Discussion Room 1. She receives a reminder notification and a prompt for post-session feedback.

Assessment:

- Pros: Clear organization, quick navigation
- Cons: Initial learning curve
- Feedback: "I liked how everything I needed was visible at once." – 2nd-year Information Systems major

Design 2: Venue-First Interactive Map

Overview:

Users start by choosing a campus venue; the app shows compatible students who also prefer that space/time.

Illustrations:

- Campus map with room availability
- Tooltip showing who's planning to study there
- Join or schedule options

User Scene:

Cedric opens the map and taps the CCIS Lounge. He sees 2 students available at 4PM, views their profiles, and joins one of the sessions with a single tap.

Assessment:

- Pros: Realistic, encourages group formation
- Cons: Less subject-oriented
- Feedback: "I liked seeing who else was going to my favorite spot." – Freshman CS student

Design 3: Gamified Progress Tracker

Overview:

Uses visual rewards like badges, streaks, and progress graphs to encourage participation.

Illustrations:

- User profile with badges
- Match screen with XP points
- Session summary with rewards

User Scene:

Angeline completes her third session this week. She earns a "Consistency Champ" badge and reaches Level 2 on her Study Streak. She shares her badge in-app to encourage her study group.

Assessment:

- Pros: High engagement
- Cons: May not appeal to all users
- Feedback: "This made studying feel like leveling up!" – 3rd-year Civil engineering student

6. Requirements Changes

Modifications Based on Design Feedback:

- **Added:** Badge and streak system to improve engagement
- **Refined:** Match algorithm now highlights “most compatible” users
- **Removed:** Public chat room feature due to moderation concerns

These changes arose from usability feedback collected via campus interviews and informal testing sessions (sample size: 10 students).

Part 2: Design Alternatives (MALEKA)

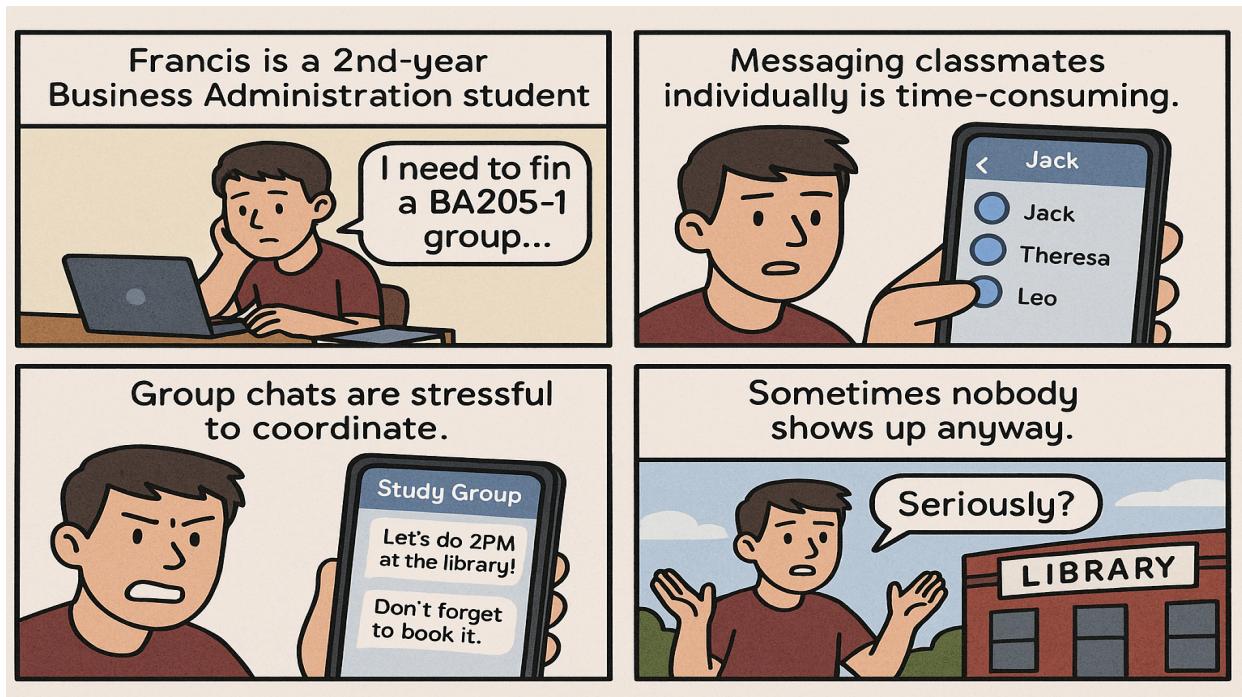
Scenario:

Scenario 1 - Francis, a 2nd-year Business Administration student, prefers group study sessions to learn complex case studies. However, he often finds it hard to form study groups with peers taking the same subjects. Messaging classmates individually is time-consuming, and social media group chats are chaotic. Sometimes, study group members cancel at the last minute or forget to book campus rooms, leaving Francis without a place to study.

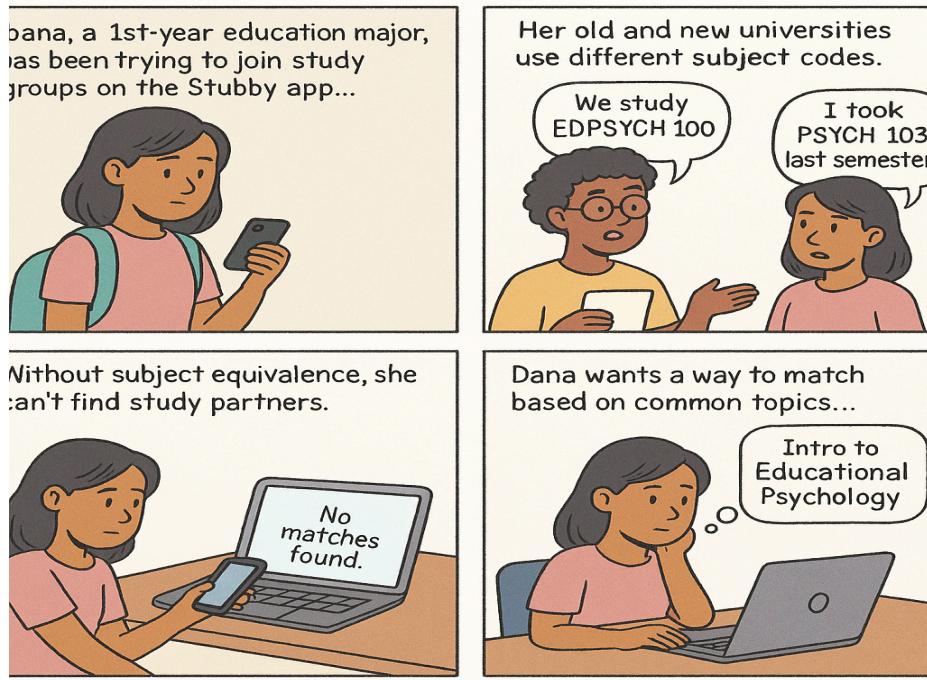
Scenario 2 - Dana, a 1st-year Education major, recently transferred from another university. While trying to join study groups on the Stubby app, she realizes the subject codes from her old school don't match the ones used at her new university. Despite studying the same content, she's left out of matches because the system doesn't recognize the equivalency between course titles. She ends up studying alone or guessing which sessions might align with her needs.

Scenario 3 - Ethan, a 4th-year Engineering student, likes reviewing at quiet on-campus venues like the Innovation Hub or Library Room 2. But recently, every time he tries to schedule a session through Stubby, the rooms are already fully booked. Sometimes, rooms appear available on the app but are occupied in real life. This discourages him from even using the booking feature and forces him to study in noisy, less productive environments.

Storyboard (Based on Scenarios):



Storyboard 1 - Francis and the Group Study Struggles



Storyboard 2 - Dana and the Confusing Course Codes



Storyboard 3 - Ethan and the Overbooked Study Rooms

Application Icon Size Comparison



The icons above showcase the application icon in various sizes. This is essential to identify how it would look in many different screen ratios.

Design

Stubby adopts a sleek, minimalist design philosophy that emphasizes clarity and simplicity. By minimizing unnecessary visual clutter and focusing only on essential elements, Stubby reduces cognitive overload, allowing students to navigate the app with ease and concentrate better on their academic tasks. This intentional design approach helps create a calm and focused learning environment that supports productivity and reduces distractions.



Color Palettes

The different color palettes shown above will be used in the application.

The chosen palette is still not finalized; however, it will be ready by the time the pair approaches the prototyping stage.

Font Style

ABCDEFGHIJKLMNP
 QRSTUVWXYZÀÅÉÍÖ
 abcdefghijklmnopqrst
 uvwxyzàå&123456789
 01234567890(\$£€.,!?)

The pair has opted to use Proxima nova as the font for the application due to its simplicity and non-reliance to fancy design. Similar applications such as Netflix and Spotify have also used this font and the pair has found it to be simple yet fitting for a modern-minimalistic design.

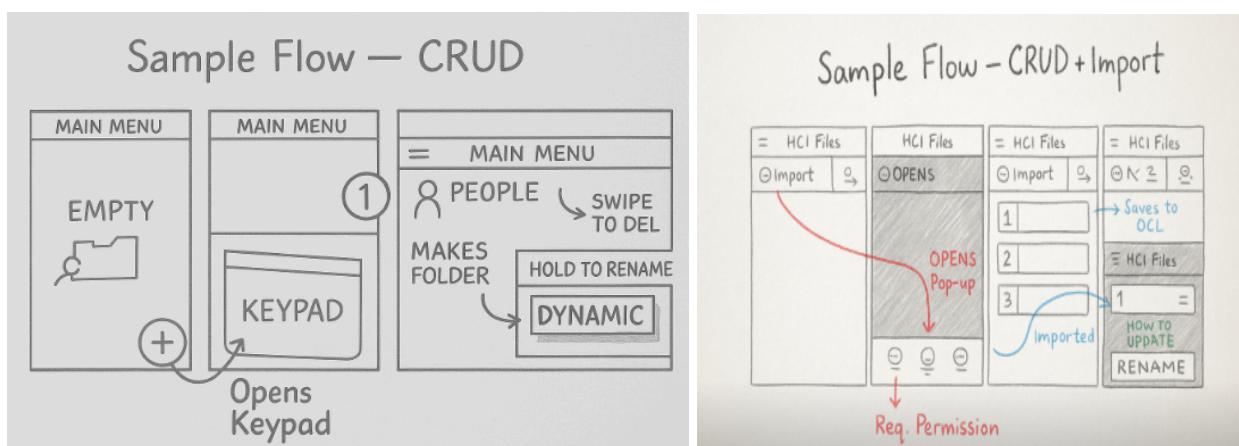
Proxima Nova Font

GUI

The team will only be using the Android GUI for the application so to not complicate matters by adopting 2 separate GUI designs for different models. The pair will be adopting the Android GUI from Figma for this application.

Sample Feature Flows

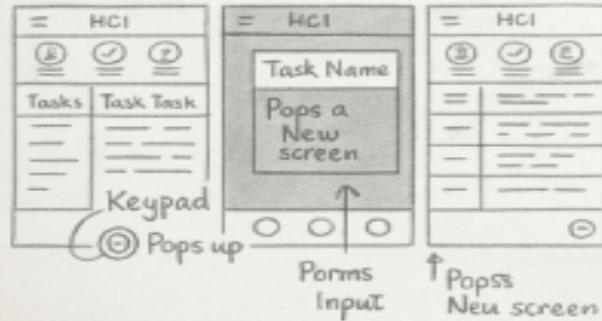
The Team would like to showcase a sample flow of different features that can be seen throughout the app. These features are subject to change depending on the results of the survey.



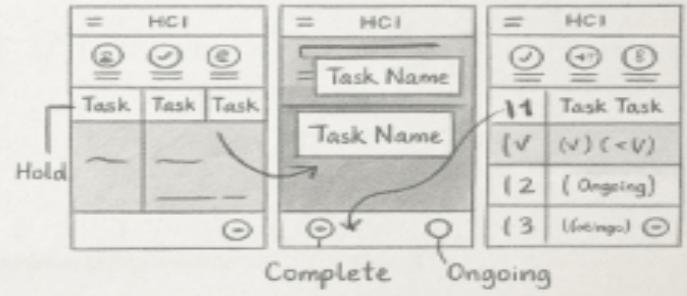
Sample Flow-CRUD: This flow showcases a CRUD (Create, Read, Update, Delete) system integrated into the app. It will be used for 3 screens, Main Menu Folders, Course Folder, Quizzes

Sample Flow-CRUD+ Import: This flow also showcases a CRUD (Create, Read, Update, Delete) system integrated into the app. The import is a specific flow where the user can import files from the phone into the app and is also available in the Course Folder.

Sample Flow – Task Adding



Sample Slow – Task MARKING



Sample Flow-Task Adding: The flow showcases how the application will go about adding tasks and mark them Urgent, Not Urgent or Due. Special icons will be used in the 3 marks.

Sample Flow -Task Marking: The flow showcases how the user can mark a task as completed or ongoing.