

StuMi - Jeremy Kwok, Michelle Piong, Wonjong Park

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Target Ship Date: TBD

NOTE: ANYTHING MARKED WITH (M) MEANS MAYBE

## Components Map

### Design

#### Frontend

[Design: Figma](#)

Landing Page



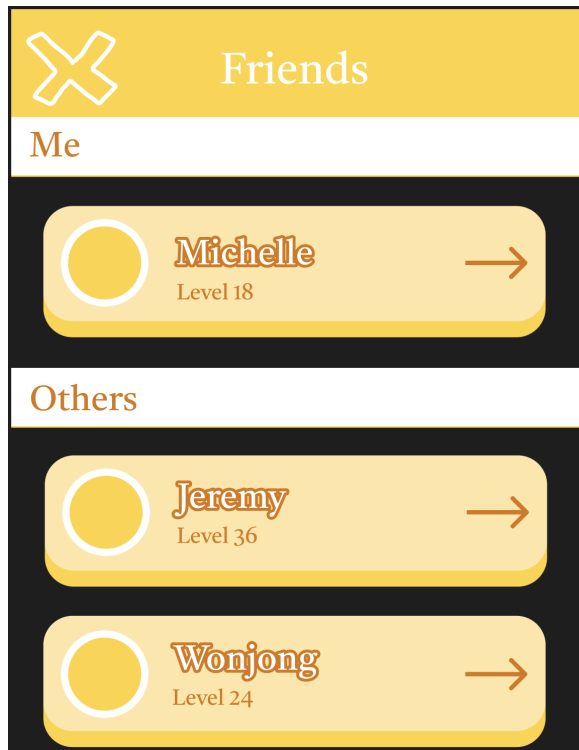
Timer Page



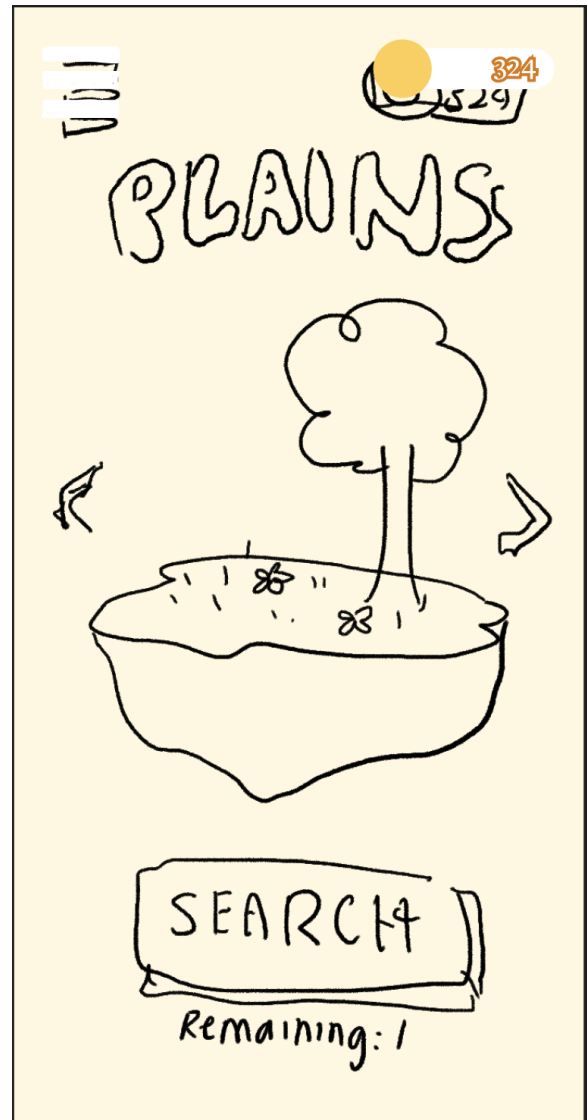
## Achievements Page




## Friends Page




## Search Page




## Settings

 Settings





**Michelle**  
email@gmail.com



Notifications

Sound

Sound effects 


Music 


About Stumi

Help and Support


Privacy Policy

## Profile


 Profile




**Michelle**  
LVL 18


 15 days 1 hours 7 minutes

Recent Acheivements




**New Student**  
Study for 4 hours (4/4)





**Rising Grades**  
Study for 12 hours (12/12)

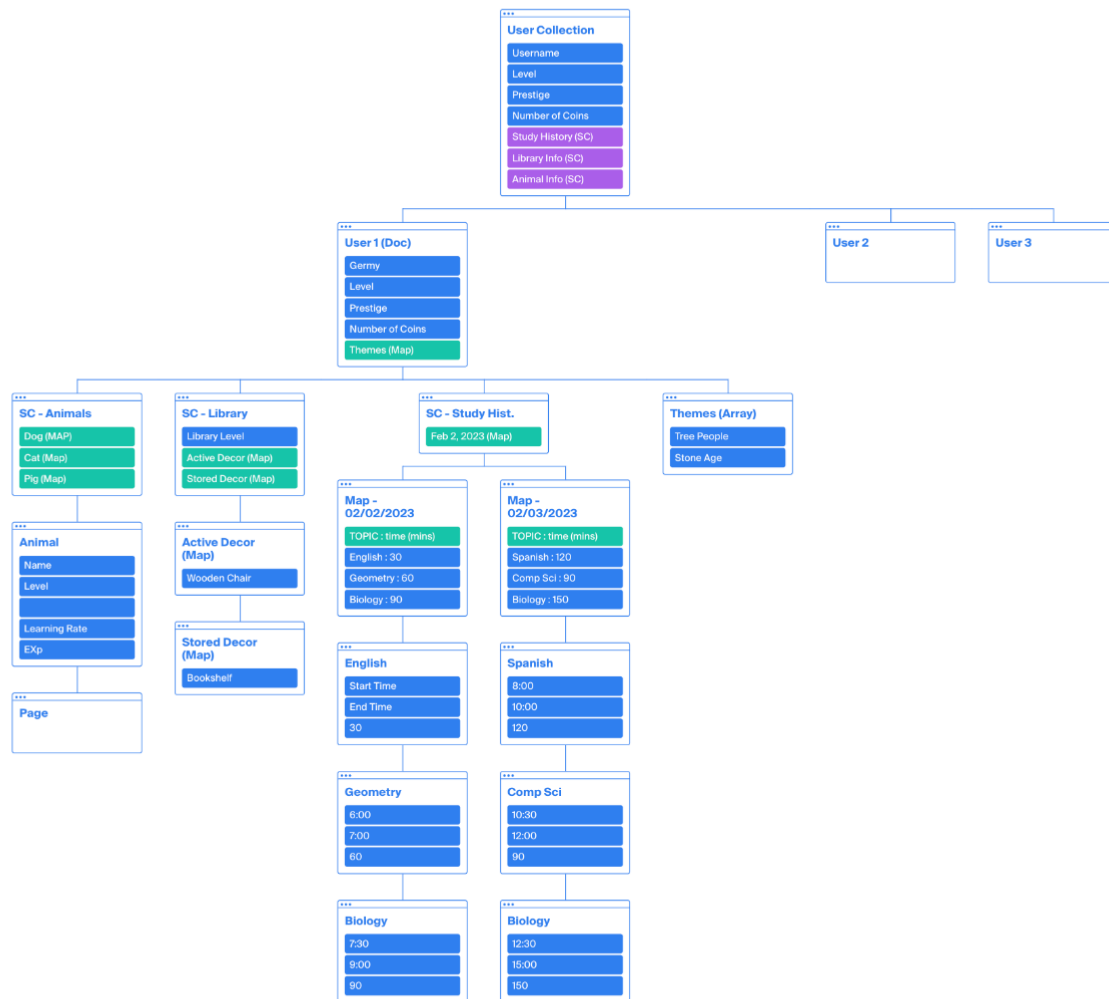


## Backend

Database: Cloud Firestore

[Database Map](#)

<https://octopus.do/kw5indgtm9>



## Database (Cloud Firestore - Subcollection System)

Collection => Documents => Subcollections

<https://firebase.google.com/docs/firestore/data-model>

<https://firebase.google.com/docs/firestore/manage-data/structure-data>

User {Username}:

- Level
  - Amount of prestige needed to advance to next level
- **SC** - Achievements
  - {Achievement 1}

- Obtained?
  - Amount of points needed to advance to next level
  - {Achievement 2}
- **SC - Animals**
  - {Animal 1}
    - Animal Name
    - Animal Species
    - Animal Level
    - (M) Animal Sex
    - Amount of books needed for animal to advance to next level
  - {Animal 2}
- **Library**
  - Library Level - Number of Library Zones Built
  - Decorations and Furniture purchased
  - Decorations in Use
  - Decorations in Storage
- **Store**
  - Items for sale

Users Table

<b>Username</b>	<b>Level</b>	<b>Status/Last Active</b>	<b>Top 3 Achievements</b>			<b>Friends List</b>
Germmy	1	Active	A0	A1	A2	WJ, Michelle

Study Records Table

<b>Username</b>	<b>Study Date</b>	<b>Study Start Time (24H)</b>	<b>Study Duration</b>
Germmy	01/13/2023	8:00 AM	3:00
Germmy	02/14/2023	20:00	0:30

### Using Collection - Document Method:

- **Have Users Collection, GameItem Collection**
  - **Inside User Collection have one document for each user**
    - **Inside each document will have the user's information**
  - **Inside GameItem Collection we have a document for:**
    - **Animals**
    - **Regions**

- **Library Expansions**
- **Store Items**

## **Pages:**

### **Title Page**

- Toggle Music
- Toggle Sound Effects
- (M) Login/Logout (Unless we use AppleID authentication)

### **Timer Page**

- Have a working timer
- Keep track of how long user studies
- Allow user to choose their study subject and how long they study for
- Detect if the user leaves the app (when they do stop timer and record time after truncating to minutes)
  - Alternative: Toggle Autodim
    - Autodim turns the screen dark but keeps the first party app running (that way we know users are still on our app and not on another app)
- Record the date and start/end times of study sessions (truncate up to minutes)
- After timer stops, a page displaying how many books earned by each animal should pop up, and if any animals “grew/leveled up”

### **Achievements Page**

- Show users current achievements (and how many points it took them to get there)
- Show users how many points needed to advance to next tier of achievement
- Split Achievements into different categories?
- Achievement ideas:
  - Veterancy - Total study time
  - Inclusive collaboration - How many study groups the user has made
  - Diversity - How many different species of animals are/have been in library
  - Explorer - Embark on X expeditions

### **Friends Page**

- Display friends list (Username, Level, Buddy Note, Status?)
- Online? Studying? At their library?
- (M) Allow user to place them into folders
- (M) View friends Library

## Library Page

- View Library (and all study animals)
- Bookstore section (if you click then it brings you to the Store Page)
- Tap on an animal to see current level/Animal profile
- Do we want to allow users to buy a “theme?”
  - Do we do themes by zone (like Gardenscapes), or one theme fits all?
    - Do themes scale with library size?
  - How do we determine the price of each theme?

## Search Page

- User selects region (unavailable regions are silhouetted)
- Display searches remaining in
- User gets X searches every day OR every \_\_\_\_ they spend study
- (Q): Do we need to take into account sex?

## Store Page

- Display current number of coins at top
- Library Expansion
- Decorations/furniture
- Rename tag (for username)
- (M) Animal outfits

## Profile Page

- Display user’s current level
- Top three achievements (or whichever three they want to display to the world)
- Total Study time (and a link for study history)

<https://firebase.google.com/docs/firestore/query-data/queries>

## Settings Page

- Turn Music On/Off
- Turn Sound Effects On/Off
- About Stumi
- Help/Support
- Notifications
- Account Information (should display username, email, Time Zone, etc.)



# Entities

## Animals

- Name: Randomly assigned? User-named? Species Name?
- Level: Every four levels should be a level-up in grade
- Species: What type of animal is it
- Animals will share ONE themed clothing
- Sex?
- Book rate: Animal EXP/How many books each animal earns per min of studying
  - Each user's animals should have different book rates (i.e. two users with the same level cat should have different book rates)

## Furniture

- 

# Currency Exchange Rates

Level	Coins (per min)	Books (per min)	
1	X	Elementary:	A
		Middle:	B
		High:	C
		College:	D

Should we change how many coins a user earns per minute?

Products to boost coin production? (could be unlocked at set levels)

## Priority List:

1. Timer
2. Settings
  - a. User-created subjects through @AppStorage
3. Achievements
4. Library
5. Friends
  - a. Do we want to give the option to view the library of the user's friends?
6. Search
7. Store

Remaining Questions:

1. How do we want to store data? Locally or Online?

Locally		Online Database	
Pros	Cons	Pros	Cons
- Easier to access	- Unbacked up data		

- a. Majority locally will be easier to access

## Future Goals:

1. Implement a break system
  - a. When a user sets a timer to study, they can insert break periods (where they don't get coins or books but can leave their app)
  - b. If a user doesn't return to the app within X minutes of break time ending, the timer ends
2. Have multiple outfit themes
  - a. Once a user purchases a second theme, they can change their animals' outfits (i.e. half the library wears one theme, and the other half wears another theme)
3. Unlock "special library zones" once libraries reach a certain level
  - a. At library level 5, libraries unlock a study room where they can place four animals to boost the animals' learning rates