

Proposal for Orbital 2022

Team Name:

Focat

Proposed Level of Achievement:

Artemis

Motivation

It is hard to stay focused with the abundance of applications on our mobile devices demanding our attention and, as students, it can be hard to visualise progress in your studies which is demotivating when you have spent hours studying yet nothing to show for it. By using Focat, a gamified timer mobile application, you can be rewarded for putting down your phone and staying focused.

Whenever you need to sit down and focus on your studies, you can start a focus session on Focat and put down your phone to focus on getting things done until the session timer runs out. Your progress will be shown on the dashboard giving you a sense of achievement after successfully completing a focus session which will also motivate you to stop procrastinating and to build upon time management habits.

Peer pressure is a powerful influence and by using Focat, users create positive feedback loops within their circle of friends by encouraging one another to sit down and focus together. With features like focus time hiscores and push notifications whenever a friend starts a focus session, users will be positively peer pressured into starting a focus session themselves or joining their friends to do so.

Aim

We hope to replicate most of the basic features of a similar app called Forest and further improve upon it by adding features that we wanted to have when we were using the Forest app ourselves.

Instead of planting trees like in Forest, Focat will have users each raise a cat of their choice, which they can choose when they first register on the application. Racking up their time spent focusing will reward users with in-game currency which users can use to spend on their pets.

As students ourselves, we would like to target fellow students for our application.

User Stories

1. As a student who uses Forest, I wish it has many more features that caters to my needs and streamlines my study process.
2. As a student who gets distracted by the social media platforms and games on my phone, I want to be able to restrict myself from using applications that I am addicted to and be rewarded for being productive.
3. As a student who does not have anyone to study with at home, I want to be able to study with my friends and have a character that is virtually there to study with me.
4. As a student who gets too engrossed when studying, I want to be able to set a stopwatch to remind myself to take a break after every study session and not overwork myself.

5. As a student who wishes to know how much time I spend on each module, I want to be able to time myself and give this duration a tag to indicate the module I was studying. This can help me to keep track of which are the modules I should focus more on.
6. As a student who enjoys using software to keep track of my study progress, I want to be able to keep track of all my study progress on one single application.
7. As a user of Forest but not a huge fan of trees, I would like a similar app with a different theme and more functionality.

Features and Timeline

All the features:

1. Default Page

- a. Users will be able to login
- b. Users will be able to register for an account
- c. Users will be able to reset their password

2. Home Page

- a. There is a timer and stopwatch for users to set the duration of their next focus session
- b. Before a session begins, it can be tagged with a label for dashboard statistics
- c. Before a session begins, it can be configured to lockdown the phone with application whitelisting during the session.
- d. Users can see the list of people in the room waiting for the session to start.
- e. Users can communicate with users within the same room but only before the session begins. There is no communication feature during the session.
- f. There is a start button for the host to start the session.
- g. Any user with the session's code can join the session room anytime throughout the session.
- h. The host of the focus session can send invite code/links for anyone to join the session.
- i. If the host leaves the room, the host will be automatically transferred to someone else in the room.
- j. Each session can be set to play simple background music/sounds during the session.
- k. Friends of the user will be notified through push notifications when a friend begins/is about to begin a session.
- l. Friends of the user can join the session without the session code. There will be a button for them to join the friend's session if there is an active session.
- m. During a solo session, users must flip their phone face down for the timer to tick down.

3. Goals

- a. There is a to-do list for users to keep track of the tasks to be completed.
- b. The to-dos listed here can be selected to be tracked for completion in the home page before a session starts.
- c. Users can write down their goals, specifically their goals for the modules that they are taking.
- d. Goals can be privately or publicly displayed on their profile.
- e. Users can set focus time goals for each tag(module) they have and enable reminders for the user if they have not reached their goals for the day/week/month/year.

4. Dashboard

- a. Users will see their cats here and be able to customise their own cats.
- b. Users can see their dashboard on daily, weekly, monthly, or yearly focus time statistics.
- c. They can see their focus time distribution based on the tags they chose before the start of each session.

5. Timeline

- a. Users can see their own progress and achievements.

- b. Users can see their friend's progress and achievements.

6. Friends

- a. Users can see their lists of friends.
- b. Users can add/remove friends in their friends list.
- c. Users can see basic statistics of their friends such as total hours focused.
- d. Users can click on their friends to see their cats and more detailed statistics.
- e. Users will be able to see which of their friends are currently in a session and will be able to join their friend's session directly from this page.

7. Achievements

- a. Users can see a list of achievements that they can complete to get rewards.
- b. Examples of achievements include:
 - i. Time spent focusing
 - ii. Number of days they checked in on their cats
 - iii. Number of friends they have
 - iv. Number of sessions completed as a group

8. Store

- a. Users can purchase items from the store.
- b. Examples of items include:
 - i. Clothes for the pets
 - ii. Furniture for the pets
 - iii. Gifts for their friends
 - iv. Background of the pet's room

9. Settings

- a. Users will be able to configure their account settings such as e-mail and password.
- b. Users will be able to configure their application notification settings.
- c. Users will be able to generate a referral code to invite their friends and get rewards.

Timeline:

Features by Milestone 1 (30 May):

1. Do up the skeleton of the application
 - 1.1 Login (Home Page for non-logged in users)
 - 1.2 Registration
 - 1.3 Settings, including Logout
2. Timer and stopwatch for one user

Features by Milestone 2 (27 Jun):

3. Friend system including friends list
4. Joining others sessions via unique code or unique URL
 - 4.1. Join a friend's session halfway
 - 4.2. Join a friend's room instead of waiting for invite code/link
 - 4.3. Transfer host of the room when host leaves the room
 - 4.4. Better push notifications (Notify the user when a friend has started a session)
 - 4.5. Chat room within the application itself (Before the session starts)
5. Dashboard
6. Timeline
7. Goals
 - 7.1. Goal setting
 - 7.2. To-do list
 - 7.3. Session tags

Features by Milestone 3 (25 Jul):

8. Achievements
9. Store
10. Push notification reminders to clock in focus sessions

Tech Stack

1. React Native
2. Firebase
3. Github
4. Github Actions
5. Docker

Qualifications

Chia Yun Rong:

Technical skills

- Python
- Flutter
- Dart
- Elixir
- Java
- Git
- Linux

Project experience

1. Integrated and digitalised various administrative processes into a mobile application using Flutter, Dart on the Frontend and using Python and Appwrite as the Backend.
 - Users can update their current and future status such as whether they are on leave, on MC, in office, out on course, etc.
 - Provided a dashboard for administrators to see the overview of their office's status.
 - The dashboard shown will be different for different users with different access permissions.
 - Able to export information into .xls format and automatically send it to a specified e-mail.
2. Created a Telegram Bot using Python for users to check on information about bus services such as the ETA of the next bus.
 - Queries LTAs API and formats it for the user through the Telegram Bot interface.

Lim Jia Yi Venus:

Technical skills

- Java
- Python
- Basic ReactJS
- Basic software testing
- Git
- Linux

Project experience

1. Worked on existing web scraping Python programs and containerised them into Docker containers. The scraped data were visualised on Tableau.
2. Worked with a tech team that built a web application using ReactJS for their frontend and conducted these testings on their web application:
 - Jest unit testing
 - Performance testing using Artillery
 - UI testing using Playwright
 - Static security testing
3. Created a to-do-list Google extension.
 - Uses Chrome Storage to store the tasks.