Proposal for Orbital 2020

Team Name: DaySpend

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Proposed Level of Achievement:

Apollo 11/Artemis

Motivation

As a student myself, I have never found the planners on the App Store good enough. This is because the apps are either very messy or have too many unnecessary features. **I want a simple-to-use, yet clean-looking planner.**

Also, I easily grow tired of apps that keep track of my spending as I will be too lazy to manually update my spending by unlocking my phone and all that hassle. And again, there are too many unneeded features in current apps. **I want an accessible expense tracker that suits my lazy personality**.

Finally, I need the motivation to keep using these apps. I need a factor/reason to keep me using the app so that I can continue planning my events and/or keep track of my spending, such as a **virtual pet**. I also do not have the discipline to carry out what I planned on doing. **I want an app that keeps me interested and motivated. I want an app that keeps me disciplined.**

If you fall into any of the above, **this app will be just right for you.**

Aim

This is an iOS mobile application with offline usability.

- Planner - You can plan your events weekly. Various pastel color options and color grouping to easily categorize activities top-down. Intuitive drag and drop allows you to transfer/edit events with a single stroke. To access multi-tools (venue/notes/description/alarm), simply touch and hold the event block.
- Expense Tracker - Tracks your daily spending and also weekly/monthly income, which also depicts net spend in graphics of your choice. Widget (accessible when your phone is locked) allows you to easily log your receipts without the hassle of unlocking the phone and entering the app.
- Tamagotchi - Your virtual pet. Completing tasks (keeping to your weekly/daily budget or not being late for your planned events or completing your tasks on time) will reward you with credits that you can use to purchase items and food for your pet. Pet has attributes such as happiness and fullness.
- Ultimately, this serves as a learning experience for us. This will be our first app and we want to learn as much as possible during this process while striving to do our best. **We aim to learn while having fun at the same time.**

User Stories

1. As a person who has issues being punctual, I want to finally start being on time, be it for meetings or for classes.
2. As a person who has issues being organized, I want to have a simple and tidy timetable to tell me exactly what is going on during the day.
3. As a person who has issues with overspending, I want to finally keep track of my spending.
4. As a person who has no time for pets, I want to finally have a virtual pet that also motivates me to meet my goals.

Features and Timeline

By mid-May:
1) Skeleton/User interface of the planner. Finalize the available color templates for each "box" object.
2) User interface of the expense tracker. Finalize the available graphics for the projection of data.
3) Start working on completing the "body" of each feature and also to save data locally (this is an offline app).

By mid-June:
1) Prototype of the planner and expense tracker. Should be able to drag/drop objects. Droplist for extended features (alarm/venue/note/description) is accessible and functional. The drag-to-delete function is working. Should be able to display basic graphs. Data should now be storing locally.
2) Start working on optimizing any feature that is too slow/laggy/buggy.
3) Start on expense tracker widget, "reward function" and the pet feature.

By mid-July:
1) The app should be functioning properly. The Pet skeleton should be usable. Shop for pet accessories and food should be working as an entity itself. Widget is working.
2) Start on feedback function (for users to tell us what can be improved/report bugs) and also push notifications.
3) Integrate pet features into the app.

By mid-August:
1) App should be ready for use.
2) Start using the app and fix any remaining bugs along the way.

If we are feeling adventurous:
1) Modify pet such that users can interact with it (pat/poke). Pet can also respond according to different actions.

Tech Stack

1. SwiftUI (beginner-friendly/interface is what we are looking for, is a good starting point).
2. Xcode (toolkit, has much support and tools that are beginner-friendly)
3. SQLite (for us to store data locally as .db files. Querying is also beginner-friendly)
4. Swift (for the widget)
5. SpriteKit (with Swift, to create the 2D virtual pet)
6. iOS SDK (has the API for us to run our apps)

Qualifications

Jaden - Have some experience in data structures, also Java and Python. Able to analyze data using R.

Daniel - Familiar with Java, Python, and R.