

SlugDex

Team name: The Slug Surveyors

Team Members:

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Have you ever wondered if you've seen all that campus has to offer?...

Have you ever played Pokemon GO?..

Discover and learn about iconic locations around campus with SlugDex!





SlugDex



Who Is This Application For?

- Prospective UCSC Students
- New UCSC Students
- Or anyone that is interested in exploring and learning more about the beautiful UCSC campus!

SlugDex



Why?

- Gaining familiarity with the layout of the campus
- Discovering new locations around the campus that you may have not known about
- Learning more about the history of UCSC

Project Scope



Goals:

- Guide users to discover locations around campus
- Allow users to view information about locations, based on if found
- Show user progress and leaderboards to incentivize exploration
- Update and add new locations
- Store user profile and statistics



Story 1: Show the user on a map

- As a player, I want to see my live location on a map so that I can see how close I am to a target location.

Story 2: Create entry data

- As a player, I want to have entries that contain information about a location so that I can learn and discover facts about campus.

Story 3: Display entry data

- As a player, I want to see entries in a thoughtful way so that I can discover information about it.

Story 4: Hint about finding entry

- As a player, I want a picture or map-related hint so that I can more easily discover this entry.

Story 5: Discover target locations

- As a player, I want to mark locations as found so that I can view the entry corresponding to it and collect it.



Spikes:

- Learning Dart
- Learning the Flutter framework
- Creating a reliable development environment
- Finding the best way to perform real-world testing for our application



Infrastructure Tasks:

- Downloading Flutter framework and it's dependencies
- Setting up a development environment in VSCode
- Setting up IOS and Android Emulators



Story 1: Record & Track Player Statistics

- As a player, I want to have my statistics tracked so that my progress can be measured and compared.

Story 2: Create Database to store Entry Data

- As a developer, I would like a database that holds all locations with necessary attributes so that I can easily add/update locations.

Story 3: Store Progress with User Info

- As a player, I want others to see my progress and information so that I can be proud of my continued usage.

Story 4: Update map with new entries

- As a developer, I want all locations to be refreshed upon opening the app so that any new ones added or updated are shown to the apps users.

Story 5: Add User Authentication

- As a user, I want my information to be stored online so that I can save and share my progress.



Spikes:

- Learning Firebase
- User authentication process
- Deciding on measurement of progress

Infrastructure Tasks:

- Set up a database using Firebase



Story 1: Create a User Profile in App

- As a player, I want to create a profile so that I can associate my progress and statistics with it.

Story 2: Simplify and refine user interface

- As a player, I want a fluid user interface that is refined and intuitive.

Story 3: Create Unique Entry Art

- As a player, I want to see a simplified representation of an Entry so that I can differentiate it and recognize it from others

Story 4: Create Stylized Map Art

- As a player, I want to reference a simplified and themed map so that I can better understand where to find Entries

Architecture



Check if new locations are added. If so, update location list

Interface showing user settings

Will hold all locations and location attributes in a table. All user progress will be stored to show progression along with progression in relation to other users.

Data gets loaded

<<Container: Firebase>>
Database

Will hold all locations and location attributes in a table.
All user progress will be stored to show progression along with progression in relation to other users.

<<Container: JSON File>>
Input file

Initial file to load all achievable locations and their attributes (e.g. location name, latitude, longitude, description)

First app run

Load User Location

data

Google Maps API used to display map of campus and update user's current location

Successful Login

User checks their

User authentication

Log with Google login API. User login will be remembered after app is closed

User is already authenticated

User opens app «Person»



Technologies



- Dart and JSON files to store data
- Firebase Database to store locations and user progress
- Flutter app framework for cross platform development
- Android Studio and VS Code environment



Challenges/Risks



- Learning new technologies: Dart, Flutter, Firebase
- Large scale code collaboration and version control
- User adoption /advertisement
- IOS development and Store restrictions

Minimum Viable Product (MVP)



Allow players to discover locations on campus:

- Location on map
- Process to mark locations as found

Show players information about those locations:

- Name, Description and Map Data
- UI to navigate different locations