Houndchaser Demo

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Home

Welcome to Hound Chaser: Simplifying Pet Care

- High-level overview of Hound Chaser
- Designed for easy pet and dog walk management
- Track pet information: name, weight, breed, and more
- Main functionality: Schedule and track walks effortlessly
- Receive timely notifications for scheduled walks with specific pets
- Enjoy hassle-free pet care management

Dependencies and System Requirements

Requires an Android Device to run

System Requirements: Google Pixel 3a (Android API level 24) or higher

Dependencies:

cupertino_icons: ^1.0.2: For Cupertino-style icons.

flutter_polyline_points: ^1.0.0: Plotting polyline points on maps.

google_maps_flutter: ^2.1.7: For integrating Google Maps. Previously used geolocation but switched to this.

location: any: location services.

flutter_svg: ^1.1.0: Creates SVG images in Flutter.

dio: any: makes HTTP requests.

firebase_core: ^2.27.0: Functionality for Firebase core.

firebase_database: ^10.4.9: Allows utilization of Firebase Database.

equatable: ^2.0.3: For creating value-based equality for objects.

flutter_bloc: ^7.0.0: Utilization of bloc and bloc-builders in Flutter.

firebase_auth: 4.17.8: For Firebase Authentication.

intl: 0.19.0: internalization support.

mocktail: 1.0.3: mocking in flutter.

flutter_local_notifications: 17.0.0: For sending notifications to the user

timezone: 0.9.2: For fetching current time to schedule notifications

Design and Implementation Choices

- Icons & Pictures – Providing ease of access and visual delights
- User-guide & Notifications – Explains what to do
- Database - Storage and Security.
  - Utilization of firebase_core to safely and securely store data on pets.
- Implementation of flutter_local_notifications to notify user
- Implementation of movement and location tracking through google_maps_flutter
- Cupertino widgets – gives our android app a unique look

Testing

Navigation Tests

1.Navigating to Schedule Walk from homepage.

Checks to see if tapping the "Schedule Walk" link takes you to the Schedule Walk page.

2.Navigating to Pet List Page from homepage.

Checks to see if tapping the "Manage Pets" link takes you to the Schedule Walk page.

Known Bugs & Implementation Issues

Geolocation Issue:

Issue with implementing a walk and distance tracker using Geolocator. Further issues came with joining points together.

Solution: *google_maps_flutter*.

Scaffolding Issue:

Error created with our AppBar. Potentially due to the multiple material widgets, used, causing a material error.

Solution: Using Cupertino.

Database Field Issue:

Connecting our Database to Houndchaser, and getting it to add and delete pets correctly.

Solution: Using precise targeting on the key for the pet itself to be deleted and added.

Notification Issue:

Trying to add scheduled notifications involved the need of time zone libraries and notification libraries that interact with the android OS system. Ran into multiple dependency issues.

Solution: Compromising functionality for less dependencies

Future Work

- Pet tips and fun facts as pop ups/notifications
- Be able to schedule several days in advance
- Global leaderboards comparing multiple pets against one another.
- More testing for all navigations and adding pets to the database and more.
- Add image functionality to allow users to upload images of their pets
- Add sign in functionality

Leaderboard

Thank You

Summary of **Evan's** Contributions

- Front-End Tasks
  - Created the homepage
  - Created the schedule walk page (including the time select widget)
  - Created the select pet page
  - Created pet view page
  - Assisted in creation of pet list/manage page

- Back-End Tasks
  - Created the notification scheduler that notifies the user of a walk at the selected time
  - Created unit tests for homepage navigation
  - Functionality of adding selected pets to the database
  - Various minor bug fixes
  - Added appropriate update for pets' distance and walks state
  - Updates for selected pets state appropriately

Thank You

Summary of Hashem's Contributions

- Front-End Tasks
    - Created the deletion of pets from the pet list (and Icon)
    - Assistance in creation of pet states
    - Assistance in the adding of pets, and updating

- Back-End Tasks
    - Implementation of Cupertino Scaffolds to the code.
    - Assisting in implementation of the pet list
    - Various bug fixes
    - Code Readability, comments, and cleanup

Thank You

Summary of Tristan's Contributions

- Front-End Tasks
  - Created Pet List and Pet Detail pages

- Back-End Tasks
  - Created and implemented Firebase database
  - Created and implemented Cubit/State functionality for app functions involving displaying/editing pets
  - Set up initial version of route-based navigation (expanded on by other members)

Thank You

Summary of Luis' Contributions

- Front-End Tasks
  - Created the current walk page and walk summary dialog pop-up
- Back-End Tasks
  - Implemented the google maps flutter package
  - Tracks duration, distance, and precise location for walks

Images Cited

- *Google Pixel 3a Review*. (2019). Google Pixel 3A XL review: Google raises the bar for mid-tier phones. Retrieved April 3, 2024, from https://www.zdnet.com/product/google-pixel-3a-xl/.

- Leaderboard. (n.d.). Make My Pet a Yellow Dog Brewing Star. Retrieved April 3, 2024, from https://www.gogophotocontest.com/bcspcapetstar-2022.

Video Example – Walking with Pets

https://youtu.be/rZOgocCt1jA