Personal Unit Test Report

Product Name: SlugDex
Team Name: The Slug Surveyors
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Revision Date: 11/28/2022

Files Tested

LocationProvider.dart

- Test Cases:
    - Ensure there is a prompt to ask the user to accept the Location Permissions needed for our app to run.
        - Start Slug dex application.
        - Press Deny at the permissions prompt.
        - Ensures the user is re-prompted for the required permissions until granted.
        - Press Accept to grant location permissions to allow the LocationProvider class to notify all listeners dependent on this thread to access the current location longitude and latitude data that automatically updates listeners on a change of location with high precision.
        - With location permissions accepted, I tested by physically walking around with print statements in the code to ensure that the user's location is constantly updated.

LiveMapScreen.dart

- Test Cases:
    - Ensures that real-time tracking of the user's live location is displayed correctly on the map.
        - LiveMapScreen depends on the LocationProvider thread for the user's live longitude and latitude coordinates. To reach this far into the code execution the location permissions must have already been granted by the user.
        - The live map with custom map style is the first visual screen loaded on our app, camera position centered on the user's current location.
        - Live location class manually tested by physically walking around to confirm that my GPS location is being updated correctly on the map in reference to the physical world and longitude and latitude print statements.

    - Ensure all undiscovered objective entries have populated hint circles on the map that are color coded based on their rarity.
        - Test by manually confirming the count of undiscovered entry circles on the map and cross referencing the EntryList locations to confirm.

- Ensure that tapping on hint circles decision tree performs one of three correct verdict. Note: Debug mode was my method of manually testing most of my code for the live map screen.
    - If debug mode is set to enabled in the settings screen, the user should be able to discover objective locations without being near them to confirm my animation code is displayed for discovery, hint circles are replaced with their associated entry markers, and the entry list in the dex entry view and dex entry page are updated to reflect new discoveries.
    - Else if debug mode is not enabled, and the user is within 25 meters of the target location, tapping on the hint circle should discover location, display discovery animation and hint circles replaced with their associated entry markers and the entry list in the dex entry view and dex entry page are updated to reflect new discoveries.
    - Else debug is not enabled, and the user is not within 25 meters of the target location, then tapping on the hint circle informs the user via sliding snack bar message to get closer and try again.

- Ensure ToggleMapType function correctly toggles between custom maps I created for the app.
    - Tested manually by going into app settings and selecting toggle map, then view the map has changed.

Considering the physical nature of our Geo-Location application the majority of my map testing for my contribution had to be performed manually through print statements, and eyeball verifying to confirm the behavior is as expected. This is most similar to White Box Test methods as the one that looks at the code and structure of the product to be tested and uses that knowledge to perform the tests, this means the testing is performed with knowledge of the internal structure, and code execution decision tree paths of possible verdicts. I created a developer debug mode very early on for testing, to avoid needing to physically walk to objective locations to test all the functionality of our app in its entirety.