

SENG440 – Assignment 2

Drunken Auto Pilot
by Andy Holden

Project Overview

No doubt many of us have experienced being blackout drunk and wandering off where we shouldn't have. Only to end up falling asleep in the wrong house or some unsuspecting persons front garden. The aim of this application is to try to prevent this from happening too often. The idea is that the user will program in their home location when sober and will have an easily activated get me home option. This will find a route home, track the users progress and provide encouragement until the user makes it home. The user can then look at their statistics the next day to try to figure out what happened to them. When activated the app will track the user through GPS, telling them when they go off course, also, it will count the amount of steps the user does so that they can tell why their legs are sore from so much walking. It will have an option for recording a video diary as well to record the users drunken ramblings for decoding the next day.

User Stories

Story 1: As a user, I should be able to launch the application for the first time and be prompted for my details.

- AC1: Use a multi-resolution launcher icon.
- AC2: Display an initial preferences screen to the user to enter their details including name and home location.
- AC3: Allow the user to select their home location using their address. (Use the HOME Geocoder API)
- AC4: Use a toast to display success/failure to save and provide errors for fields that are missing or incorrect.

Story 2: As a user, I should be displayed with an easy to use home screen containing an easy way to start the auto pilot.

- AC1: Have an action bar displayed to the user at all times so they can activate and deactivate an auto pilot, add a short 30 second video or audio diary, or change the users preferences.
- AC2: Have a large button that reads "Get Me Home!" to activate the auto pilot.

Story 3: As a user, I would like to be able to change my name and home address in case I move house.

- AC1: The user data should be able to be saved with ease.
- AC2: The user data should be able to be edited with ease.
- AC3: Use the AndroidX Preference Library to change these settings.

Story 4: As a user, I would like to be able to see my auto-pilot statistics the next day to figure out what happened.

- AC1: Use the Room API to store all data in a database for retrieval the next day.
- AC2: Have all data saved in real time to prevent loss of data should the phone run out of battery etc.
- AC3: Have all data saved outside of the UI Thread to prevent performance issues.

Story 5: As a user, I would like to be able to see my progress on my journey home.

- AC1: Have an easy to read screen displaying the statistics from a previous drunken episode, including average speed, a map of the route taken, number of steps, and links to view any recorded medias.
- AC2: Episodes should be able to be named for recollection of the user at a later date – default name should be the date it occurred on.
- AC3: Have an easy to use way to select an episode. This could be in the form of a recycler view with the date and the name of the episode.

Story 6: As a user, I would like to be encouraged throughout my journey, lest I lose the will to get home.

- AC1: Audio messages should be conveyed to the user to keep them motivated on their journey.
- AC2: Audio messages should stop upon reaching the destination.
- AC3: Audio messages should stop after a set period of inactivity to prevent battery depletion.

Story 7: As a Spanish speaking user, I would like to be able to understand and use the application.

- AC1: All audio messages must be in english and spanish depending on the users settings.
- AC2: All static text must be declared in the strings resources in both english and spanish.

Story 8: As a user, I would like to be able to use my app in both portrait and landscape orientations.

- AC1: Every screen must have the ability to be used in both orientations.

Story 9: As a user, I would like to be able to back-up my data to be used by another device.

- AC1: The app should be able to export some or all episodes as well as the users preferences to a file.
- AC2: The app should be able to import episodes from a file.
- AC3: The app should be able to import settings from a file.

Story 10: As a user, I would like the app to tell me when I have reached my destination.

- AC1: Display an animation to the user to let them know they have made it home.
- AC2: Send a notification to the user to let them know they are home.
- AC3: Display a toast to the user to let them know they are home.
- AC4: Convey an audio message to the user to let them know they are home.

Story 11: As a user, I would like to be shown a splash screen while my settings are being loaded.

- AC1: Settings should be loaded on a different thread to the UI.
- AC2: The splash screen should contain the app icon and a loading message to the user.
- AC3 (optional): Some animation here could be cool.