Android Team 21 - Wheelie

Testing Document

**Test Overview**

GPS & Map - We wanted to make sure that our GPS and map was synchronized correctly, especially while moving around. It was important that the map wasn’t static for when the application started and updated and moved when the current GPS coordinates where updated, we also wanted to make sure that our destinations on the map where at the correct location.

Distance- We wanted to make sure that our distance from the current destination was properly updating so that the program would send the user to the next destination once they were within the desired distance from the current destination.

General GUI – Test our GUI and make sure that the splash screen displays correctly, and then sends us to the main screen. From the main screen we want the user to be able to start the tour and then a new screen would display showing their current destination and current location, as well as show when they have reached the last destination and congratulate the user.

Hot/Cold Function – We want to make sure that we properly display weather the user is getting closer or farther away from the target destination, and display the proper picture (blue android logo for getting farther away, orange for getting closer and red for within 15 meters).

**Test Cases**

Test Case 1 –

Purpose: To make sure the application properly realizes the user is at the target location, and switches to the next destination. (Tests the distance function, GUI, and GPS)

Input: Start application while standing at the Chapel, wait for the splash screen to finish. Touch the start tour button (by coordinates), and walk to the Thomas Jefferson statue located behind the Rotunda (Not on the side facing the lawn).

Expected Output: Approximately every 10 feet your current location should update, and when you arrive to the Thomas Jefferson statue (approximately 3-5 feet from the actual statue), the current destination should then change to the coordinates of the Chapel.

Actual Result: Our expected output was achieved, and the destinations correctly updated.

Test Case -2

Purpose: To make sure the map properly updates (Tests Google Maps, GPS, Arrow)

Input: Start at the steps of the Rotunda facing the Homer statue, and start the application, wait for the splash screen, press start tour (By location). Walk toward the Homer statue with the map displayed.

Expected Output: The map should stay centered around your current position, and update as you walk so you can see with respect to your surrounding where you are traveling based off the map, and the arrow should be pointing towards the Thomas Jefferson statue behind the Rotunda.

Actual Result: At first actual map would not display, only the destination dots. This was fixed by registering the API key for Google maps. Then map correctly stays centered around the user, with the arrow pointing at the correct destination.

Test Case 3-

Purpose: Check Hot/Cold icon update (Tests icon updating, distance function)

Input: Start application while standing at the Chapel, wait for the splash screen to finish. Touch the start tour button (by coordinates), and walk to the Thomas Jefferson statue located behind the Rotunda (Not on the side facing the lawn). After walking approximately 20 feet, check the color of the droid icon. Next walk back 20 feet towards the chapel and check the color of the droid icon. Finally walk to within 10 feet of the Thomas Jefferson statue and check the droid icon again.

Expected Output: When moving towards the statue the android icon should be orange, when moving back to the chapel the icon should be blue, and when in close proximity of the statue (approximately 15 meters) the icon should be red.

Actual Output: On our first attempt, the icon did not update properly, but rather stayed cold the entire time, we fixed part of this problem by erasing the current icon and redrawing a new one every time the location was updated.

Test Case 4-

Purpose: to make sure the changing coordinates functionality works for testing.

Input: Start the application and start a tour(by coordinates) and then type in the coordinates of the first Thomas Jefferson statue, and check to see if the destination coordinates update, and the text comes up telling the user they have reached a destination, and repeat for all destinations.

Expected Output: The application should update to the next destination when the coordinates of the target destination are entered, and complete once all 10 destinations have been entered.

Actual Output: On our first attempt the coordinates could be entered but the application would fail when the final coordinates where entered. We fixed this by re-working how we did the intents, and tested again and it worked fine.