TEST PLAN

## Introduction:

* This test plan is for the testing of my senior project.
* The goals for this test plan are to pass all of the tests that are listed below and to create more tests to test things with the project that I might have missed or forgot to include.

## References:

* Functional Requirements Document
* Test Cases Document

## Test Items:

* GPS prototype (hardware)
* Webpage app (software)

## Features to be Tested:

1. ID #1: The prototype device’s location shall be displayed in the web app on a map.
2. ID #2: The prototype device, once configured and powered on, should begin transmitting a signal.
3. ID #3: The web app must display the map immediately when opened.
4. ID #4: The web app must display any active device’s location on the map within 10 – 20 seconds after being powered on.
5. ID #5: The web app must enlarge the map when the “Maximize” button is clicked.
6. ID #6: The web app must minimize the map when the “Minimize” button is clicked.
7. ID #7: The prototype device must connect to the web app.
8. ID #8: The web app must open when it is run.
9. ID #9: The web app must prompt the user to enter in an email address for someone they would like to receive a link to the device’s location when the “Share Location” button is clicked.
10. ID #10: The web app must go to the missing item page when the “Lost and Found” button is clicked.
11. ID #11: The web app must return to the map when the “Back to Map” button is clicked.
12. ID #12: The web app must show all active devices in drop-down menu format when the “Devices” button is clicked.
13. ID #13: When the “Devices” button is clicked, the drop-down menu with all currently active devices appears, and a device is clicked, the web app will have a “Change Name” button which allows the user to change the name of the device.
14. ID #14: When the device from the “Devices” drop-down menu is clicked, the web app will only display that device’s location.
15. ID #15: When the “Devices” button is clicked, the drop-down menu with all currently active devices appears, and a device is clicked, the web app will have a “Change Color” button the allows the user to change the color of the device’s locator dot on the map.
16. ID #16: The device’s location on the map in the web app will be accurate to 10-15 feet.
17. ID #17: The map in the web app will zoom in the when the user clicks the “Zoom In” button/icon.
18. ID # 18: The map in the web app will zoom put when the user clicks the “Zoom Out” button/icon.
19. ID #19: The web app will display a map key when the “Key” button is clicked.
20. ID #20: The web app must ask the user for permission to access the user’s device’s location.

## Approach:

* Manual Testing

## Item Pass/Fail Criteria:

1. ID #1:
   1. Pass: Device’s location will be displayed on the map once the device is powered on.
   2. Fail: Device’s location will not be displayed on the map once the device is powered on.
2. ID #2:
   1. Pass: Will pass if the device transmits a signal to the web app when powered on.
   2. Fail: Device does not transmit a signal.
3. ID #3:
   1. Pass: Once the web app is opened, the map will be the first thing to pop up.
   2. Fail: Does not display the map immediately when opened.
4. ID #4:
   1. Pass: After the web app is opened, the locations of any active trackers will appear after 10-20 seconds.
   2. Fail: Does not display active device’s location after being open 10-20 seconds.
5. ID #5:
   1. Pass: The map will become larger when the maximize button is pressed.
   2. Fail: Map will not become larger.
6. ID #6:
   1. Pass: When the “Minimize” button is pressed, the map should return to its original size.
   2. Fail: Map will not minimize to original size.
7. ID #7:
   1. Pass: Prototype GPS tracker will connect to web app.
   2. Fail: Prototype GPS tracker will not connect to web app.
8. ID #8:
   1. Pass: The application will open when it is run.
   2. Fail: Will not open when run.
9. ID #9:
   1. Pass: When the “Share Location” button is clicked, it should prompt the user the enter in an email address.
   2. Fail: Will not prompt user when button is clicked.
10. ID #10:
    1. Pass: When the “Lost and Found” button is clicked, the user should be taken to the correct page.
    2. Fail: Will not go to correct page when button is clicked.
11. ID #11:
    1. Pass: When the “Back to Map” button is clicked, the user should be taken back to the map.
    2. Fail: The user is not taken back to the map.
12. ID #12:
    1. Pass: When the “Devices” button is clicked, A drop-down menu of all the user’s devices should appear.
    2. Fail: No menu will appear when the “Devices” button is clicked.
13. ID #13:
    1. Pass: When the “Devices” button is clicked, there should be a “Change Name” button that appears that allows the user to change the name of the device.
    2. Fail: There will be no “Change Name” button that appears or the user will not be able to change the name of the device.
14. ID #14:
    1. Pass: When a device from the Devices drop-down menu is clicked, all other devices on the map should disappear until the user closes the drop-down menu.
    2. Fail: No dots will disappear from the map when a device is clicked on.
15. ID #15:
    1. Pass: When the “Devices” button is clicked, there should be a “Change Color” button that appears and allows the user to change the color of the locator dot.
    2. Fail: User will not be able to change the color of the locator dot or the “Change Color” button will not appear.
16. ID #16:
    1. Pass: The location of the device will be accurate between 10 to 15 feet to the location of the device on the map.
    2. Fail: Location is not accurate within 10-15 feet.
17. ID #17:
    1. Pass: When the “Zoom In” button/icon is clicked, the map will zoom in closer on the device.
    2. Fail: The map will not zoom in.
18. ID #18:
    1. Pass: When the “Zoom Out” button/icon is clicked, the map will zoom out away from the device.
    2. Fail: The map will not zoom out.
19. ID #19:
    1. Pass: The application should display a map key when the “Key” button is clicked.
    2. Fail: Will not display the map key.
20. ID #20:
    1. Pass: Will be prompted for access to their current location.
    2. Fail: Will not be prompted for access to their current location.

## Test Deliverables:

* Test Plan (this document itself)
* Test Cases Document

## Test Environment:

* Testing Environment includes:
  + GPS prototype device
  + Software application for web-app

## Schedule:

* Provide a summary of the schedule, specifying key test milestones, and/or provide a link to the detailed schedule.

## Project Update:

* The project is missing some of the features in the Functional Requirements but those features are of a low priority. Everything in my requirements document with a high priority is completed and functioning.

## Approvals:

* Dr. Hayes