COMP 3980
ASSIGNMENT 3 – GPS

November 9, 2015

TEST DOCUMENT

Summary

Test #	Description	Procedure	Result
1	Connect to GPSD Daemon	Kill daemon, run it and then run the program.	Pass
2	Start stream	Start the stream and run the program. On fail, program exits with error code. On success, UI loads.	Pass
3	Read data	Launch application and see if the data is displayed at the bottom of the UI. If displayed, reading must have been successful.	Pass
4	Wait for data	Run the program in a location where the program will not receive a signal. If the UI displays 'No fix", it successfully is waiting.	Pass
5	Displayed data	Run the program and wait to see if all data is displayed in the appropriate places.	Pass
6	Plotting longitude/latitude	Run the program and obtain a fix. Once a fix has been obtained look at the graphing frame (main view). The O represents us. If it is plotted at the appropriate latitude and longitude, success.	Pass

1. Test 1 – Connect to GPSD Daemon

Check to see if the program is able to connect to the GPS dameon.

Expected Result: Connected

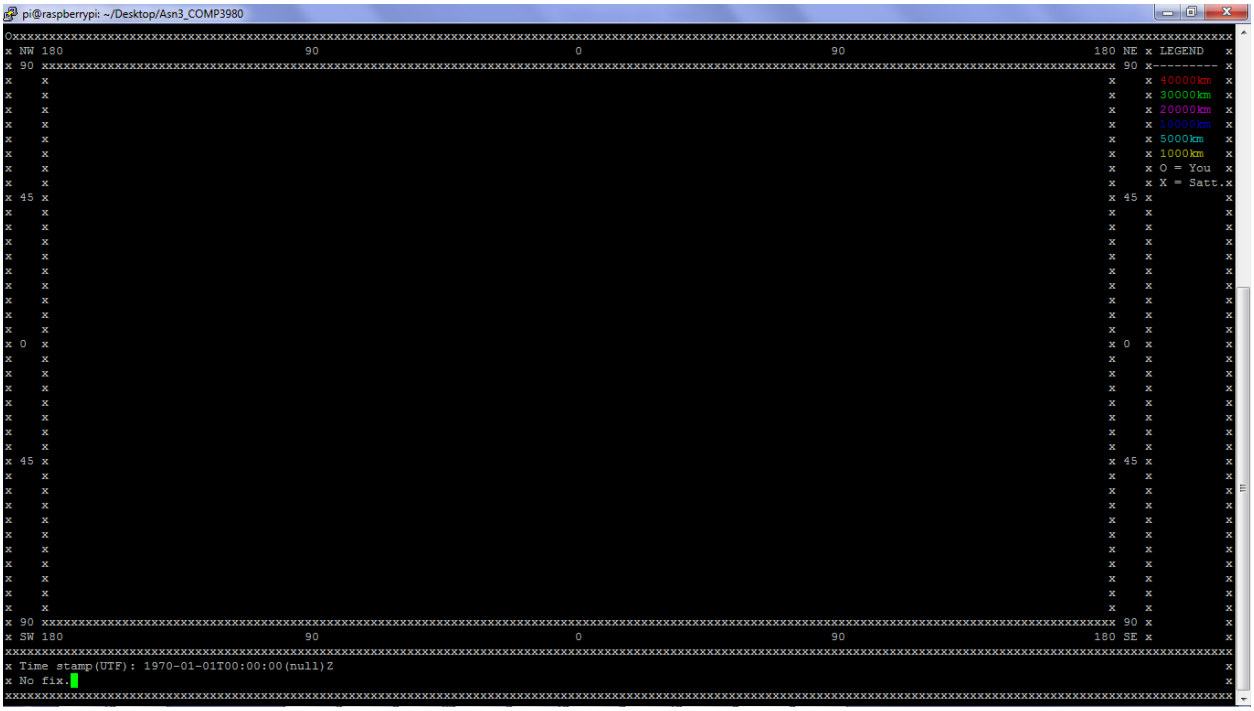
Pass/Fail: Pass

Figure 1 – This figure shows how to kill the daemon and res-start it.

```
pi@raspberrypi ~/Desktop/Asn3_COMP3980 $ sudo killall gpsd
pi@raspberrypi ~/Desktop/Asn3_COMP3980 $ sudo gpsd dev/ttyUSB0 -F /var/run/gpsd.
sock
```

Code to stop gpsd and re-starting it

Figure 1.2 – This figure shows that if you run the program, UI Interface is shown meaning that it did not have any trouble connecting to GPSD.



UI interface shows up, which means GPSD has connected.

2. Test 2 – Start stream for the data

Confirm that the stream is able to be successfully open to allow data in.

Expected Result: Opened

Pass/Fail: Pass

Figure 2.1 – This figure is showing that stream is successfully opening as data is flowing through.

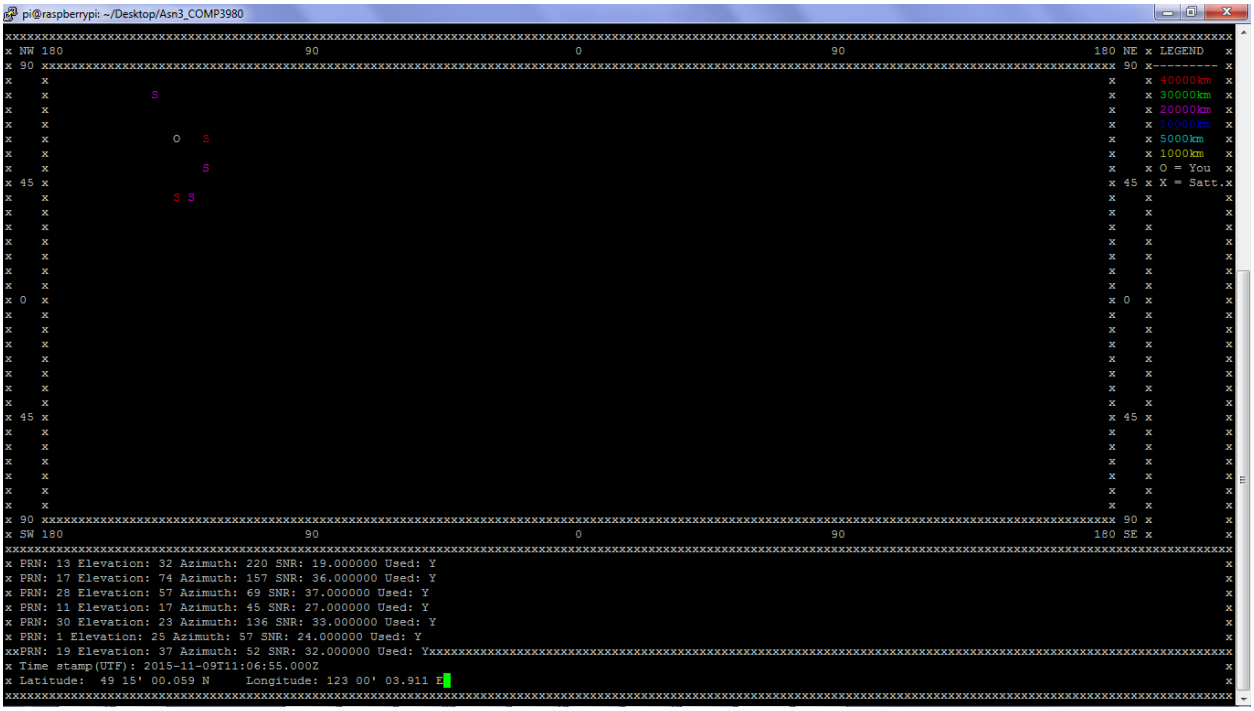


Figure 2.2 – This figure is shows the stream is closed and no data being read.

```
pi@raspberrypi ~/Desktop/Asn3_COMP3980 $ sudo killall gpsd
pi@raspberrypi ~/Desktop/Asn3_COMP3980 $ ./dcgps
Error in reading from socket.
```

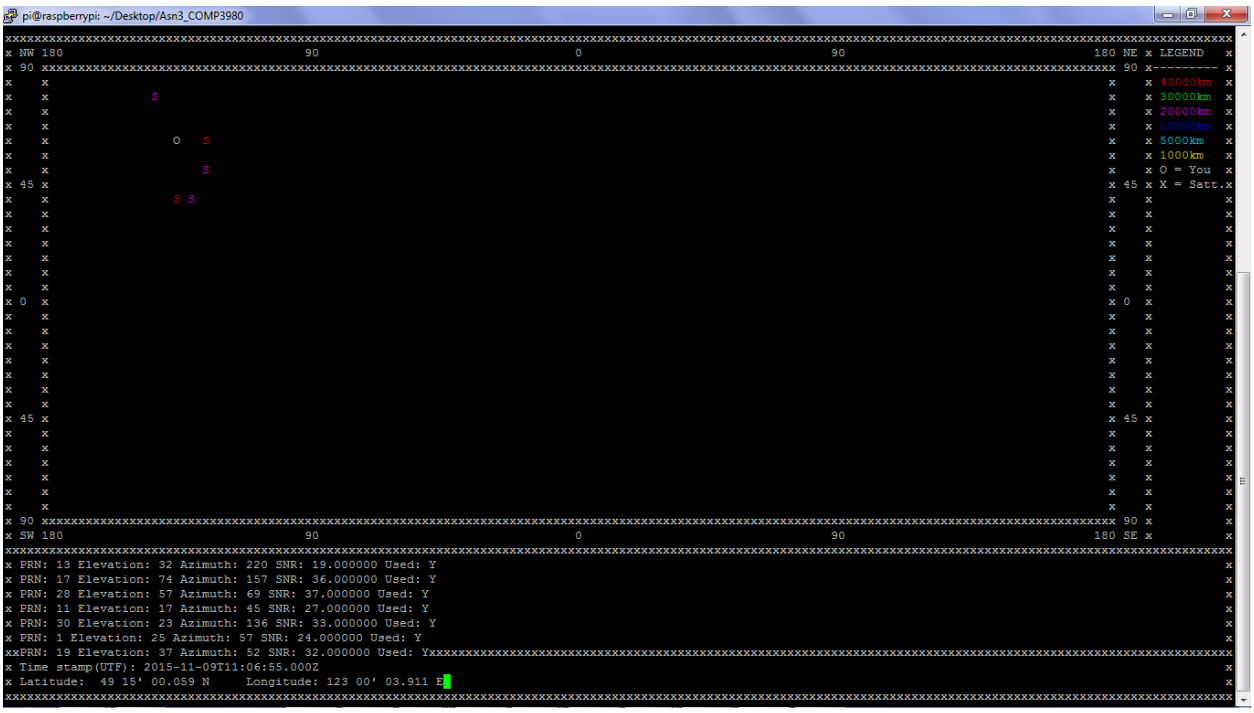
3. Test 3 – Able to read the data

Confirm that the data is being able to be read

Expected Result: Read

Pass/Fail: Pass

Figure 3 – This figure is showing that the data is being able to read and not displaying error to read

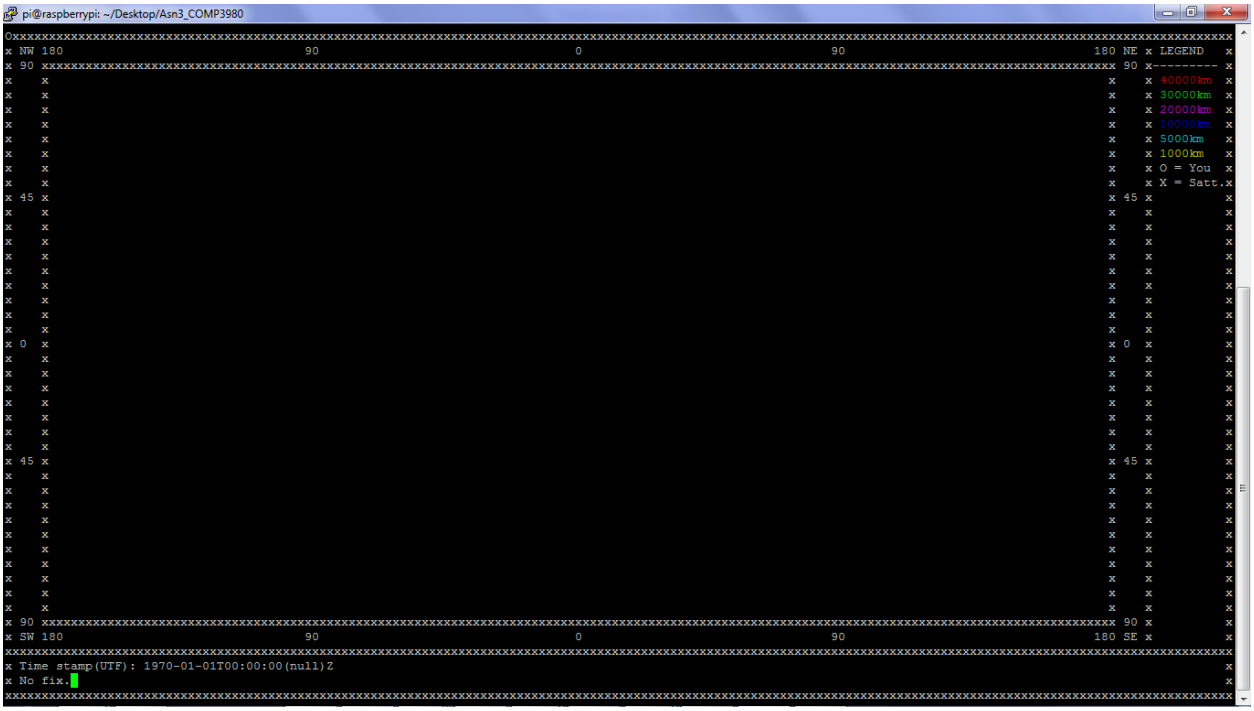


4. Test 4 – Waiting for data

Expected Result: Waits a little bit before displaying “No fix.” if not enough data is found.

Pass/Fail: Pass

Figure 4 – This figure shows program waiting for data to come in and in the meantime displays No Fix as not enough information is coming in.



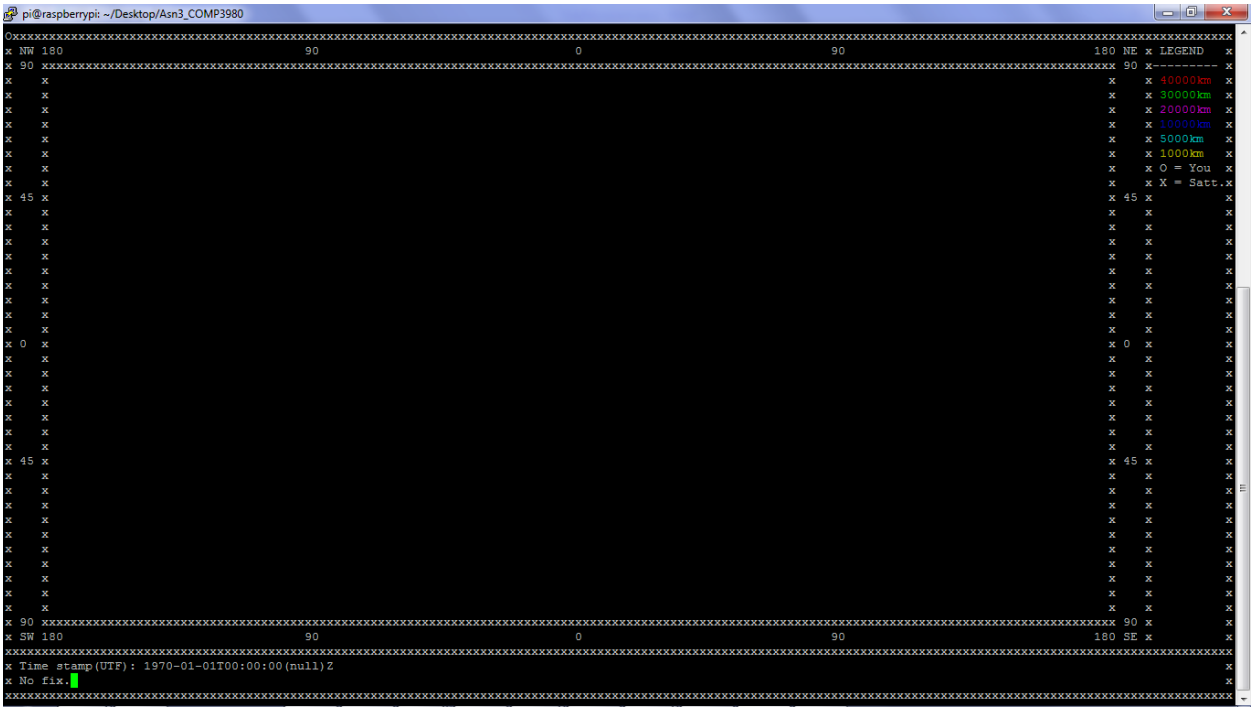
5. Test 5 – Displays scanned data to screen

Check if scanned data is being properly scanned to screen

Expected Result: Scanned

Pass/Fail: Pass

Figure 5 – This figure shows scanned data successfully displayed on GUI screen.



6. Test 6 – Longitude and Latitude have plotted accurately

Check to see if the longitude and latitude have plotted accurately on our graph of the map.

Expected Result: To plot where we think Vancouver data we get

Pass/Fail: Pass

Figure 6 – This figure shows where the observer is being drawn on the graphed map