TEST DOCUMENTATION

GPS APPLICATION

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1 Test Cases

Test #	Description	Test Steps	Expected Result	Pass / Fail
1	Program displays correct error message if GPS dongle is not plugged in.	1. Start program with gps dongle **disconnected** 2. Wait for result / error check	A timeout will occur and the program exits. Displays: "`GPS timed out`"	**Pass**
2	Program acquires a fix and detects data. Prints gps data on screen	1. Start program with gps dongle **connected** 2. Wait until program shows a 3D fix	Data is correctly displayed in both windows showing satellites being used and general information regarding the gps.	**Pass**
3	Program can still run properly if gps dongle was unplugged and plugged back in after program executes.	1. Start program with gps dongle **disconnected** 2. Plug in gps dongle 3. Wait until program shows a 3D fix	Program is able to detect the gps data even if gps dongle was not connected in the beginning. Timeout does not occur.	**Pass**
4	Program will display an error and exit if gps dongle is disconnected while program is running.	1. Start program with gps dongle **connected** 2. After program is executed, unplug the gps dongle 3. Wait until timeout occurs	A timeout should occur and proper error message should be displayed "`GPS timed out`"	**Pass**
5	Program can run with gps dongle connected to a **laptop**	1. Connect gps dongle to a **laptop** 2. Wait until program shows a 3D fix	Program is able to detect the gps data and print on it on the screen.	**Pass**

6	Program can run with gps dongle connected to the **raspberry pi**	1. Connect gps dongle to a **raspberry pi** 2. Wait until program shows a 3D fix	Program is able to detect the gps data and print on it on the screen.	**Pass**
7	Program can get gps signal in different weather environments	1. Start program with gps dongle connected 2. Test in **sunny weather** 3. Test at **night** 4. Test in **rain**	Even with different weather conditions the program can still detect the gps data accurately	**Pass**
8	Program can get gps signal in certain environments.	1. Start program with gps dongle connected 2. Test beside a window sill 3. Test 10 meters from the window sill (in a house) 4. Test outside	The program still can get the gps signal even if the raspberry pi is inside the house.	**Pass**
9	When a satellite is lost, it is erased from the screen.	1. Start program with gps dongle connected 2. Wait until program shows a 3D fix 3. Wait until a satellite is lost	Program will delete the lost satellite row from the satellite window. (Before it would not be deleted and have duplicate satellites)	**Pass**
10	Program will exit if any key is pressed while the program is running.	1. Start program with gps dongle connected 2. Press any key	Program will terminate.	**Pass**