COMP3980 Assignment 3 Test Cases

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test # | Description | Test | Expected Result | Pass/Fail |
|  | GPSD is not running. | Run the program after killing the GPSD process. | Program exits and prints the error. | Fig 1. |
|  | GPS dongle is not connected. | Run the program with no dongle plugged in. | Timeout waiting for data from GPS device. | Fig 2. |
|  | GPSD is running and the dongle is plugged in, but there is no satellites visible. | Run the program in an area with no satellite signal. | No satellite information is displayed and n/a is shown for latitude, longitude and time. | Fig 3. |
|  | Waiting for a satellite fix. | Run the program in an area with satellites. | Satellite information is shown, but the ‘used’ field is ‘n’ and no latitude or longitude shown. | Fig 4. |
|  | Satellite is fixed. | Run the program in an area with satellite signals and wait for a fix. | All information is displayed and is comparable to the output from CGPS. | Fig 5.1 and 5.2 |
|  | User wants to exit the program. | Press ‘Q’ while program is running. | Return to terminal | Pass |
|  | GPS dongle is unplugged while program is running. | Unplug the dongle after a satellite fix has been established. | Program exits and displays a timeout error message. | Fig 6. |
|  | GPSD process is killed while program is running. | Kill the process while the program is running. | Program exits and displays an error message. | Fig 7. |

|  |
| --- |
| https://sc-cdn.scaleengine.net/i/6cd9fc6a68d07a9261764b1fba7a4cae.png  Figure 1: GPSD not running |
| https://sc-cdn.scaleengine.net/i/33d41888f68e6e5883c0602aff7992fb.png  Figure 2: Timeout when dongle is not plugged in |
| https://sc-cdn.scaleengine.net/i/e3bddbd6d794cdfa707ed909df879a1f.png  Figure 3: No data being read from satellites |
| https://sc-cdn.scaleengine.net/i/9e510d98e056fe974d9036e21d0a8f47.png  Figure 4: Satellites detected but no fix |
| https://sc-cdn.scaleengine.net/i/58d71d477929b8ac58ea5435860cd4a0.png  Figure 5.1: Data being read from satellites |
| https://sc-cdn.scaleengine.net/i/05d73a15dacc11bd872186541370b90f.png  Figure 5.2: Comparison with CGPS output |
| https://sc-cdn.scaleengine.net/i/33d41888f68e6e5883c0602aff7992fb.png  Figure 6: Dongle removed during operation |
| https://sc-cdn.scaleengine.net/i/c4ecf83424318ec3dc67e32295f435ba.png  Figure 7: GPSD stopped during operation |