

### **1) Unit testing:**

Testing number of button pressed (server.js)

Created a html page where the number of button pressed within 5 seconds is shown. After 5 seconds the number of button pressed is reset back to 0.

Refer to Server.js and Server\_unittest.html in Unit Test Files folder.

### **2) Regression testing:**

For this sprint, the regression testing was performed by re-running the unit tests from the previous sprint. There is in total 2 unit tests from the previous sprint (CommandManager\_unittest.js & Response\_unittest.js). The unit tests were ran after all of the required functionalities for the system was completed. After running the tests, all test cases passed.

### **3) Performance testing:**

The time it takes to send the signal from the web page to the client takes an average time of 0.20240478515625ms with the test case repeated 20 times. The start time is when the button on the web page is clicked, and the end time is when the client receives the signal.

The time it takes to setup the server (server.js) takes an average time of 7975.200450000001ms with the test case repeated 20 times. The start time is when the server starts up, and the end time is when the server is running.

console.time() is the tool that was used to record the time for both tests.

### **4) Usability Testing**

#### **Feedback**

What do you feel for the current UI?

The current user interface has been upgraded from the previous UI where the button is now coloured which makes the UI simple and interesting.

Is it easy and straightforward to be used?

Yes, it is very easy and straightforward to use. The colour also makes sense, green for activation and red for deactivation.

From your point, what can be improved?

The user interface is very good now as the button size has been increased as well as coloured. The font on the page is also large enough.

For user experience, I feel comfortable to operate the web page and obtain information from it. The font is not too big and not too small and the same goes to the button. Everything is simple enough to operate but is a little bit dull. Maybe can add a background to spice things up. Besides that, I feel that the system is fast as the response time is short. I can press the activate alarm duration and straightaway see the led blinking already.