**Spike Plan**

**Name: JohnnyFive-Socket**

**Context:**

**For this spike, it was separated to 3 pairs of file such as spike1.html, spike1.js and spike2.html, spike2.js and spike3.html, spike3.js. Each of the files was labeled with unique numbers so features can be differentiated in the type of files easily. The features that are tested by using with an Arduino board which consist of LED function and motion function but for this spike, only motion function was tested. For spike1.html and spike1.js, the server which is spike1.js only able to read data from the motion sensor of the board and print the motion data with the timestamp of the server on the console. For spike2.html and spike2.js, the server collects motion data and send the motion data to the client for display purposes. Lastly, spike3.html and spike3.js handles receiving motion data at the client from the server and displays the motion data, the timestamp of the server and the time taken for the server to send data to the client which labeled as response time.**

**Gap:**

**For this spike, program bug risk can be avoided and handled easily when code structures are handled with consistency and systematically. Features are separated to reduce the complexity of the code and keep track of the progress. It also contributes to the compilation of code to be easier.**

**Goals:**

* **Understand the Socket library**
* **Check whether the device was connected to the server.**
* **Check if data was sent correctly.**
* **Check the time taken for the data sent from server to client.**

**Planned start date: 18/4/2017**

**Deadline: 23/4/2017**

**Planning notes:**

**Firstly, we have a small discussion regarding the requirements for this spike. Understanding the requirements gave us the insight to know the code and implement the features easily. Once the requirements are known, we planned of a design to display our results. We used google search as part of helping our understanding towards the library code, code structures, and syntax. Whenever there is a problem with the coding, the problem will be solved together. We also plan to reduce the bug risk and have cleaner code structures by separating the features. We share the same workspace and the code was implemented together through GitHub so the responsibility and work coordination can be handled easily.**