**Spike Plan**

**Name: Firebase-JohnnyFive**

**Context:**

**For this spike, Firebase and JohnnyFIve were used. Firebase is a web application platform that acts as a third party platform to store the data from the provided device, Arduino board which consist of LED function and motion function. For this spike, only the motion function was used to test. This spike was separated to a few different files due to the compulsory tools that are needed in order to link Firebase to JohnnyFive. 3 important files are used in this spike which is server.js, Index.html and firebaseWebAPI.js. There are 3 features in this spike which will be tested. One of the features is server will read data from the motion sensor of the board and print the motion data with the timestamp of the server on the console. The server will send the motion data to the client and the client will display the motion data including motions status, the timestamp of the server and time took for data to travel from server to client which labeled as response time.**

**Gap:**

**For this spike, the data can be stored in the third party platform. This helps us to know our history results which provide us information of the difference of the test results after big changes in the code.**

**Goal:**

* **Verify the requirements in order to use firebase platform**
* **Understand firebase library**
* **Check the complexity of maintaining database in the firebase**
* **Check the response time for data sent from server to client**

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

**Deadline: 23/4/2017**

**Planning notes:**

**For firebase, we check the requirements for this spike which help us to understand the requirement of the code and help us to implement the features easily. The design was used from the previous spike. We checked the similarity of the code structure with the other spike. Once done understanding requirement, we study the firebase library to know the syntax and the function can be used to implement the features. We also plan what risk can we reduce in the code structure to make the program run more efficient. We shared the same workspace and the work was done together through Github.**