**Spike Plan 01:**

**Name:** Testing different toolchains and observing for the best combinations

**Context:**

Through various tests we can check whether the combinations of toolchains are optimal for utilization. Tests consist of checking the time taken to send information from the server to the client. The shortest time taken throughout the combinations will be the determining factor in choosing the necessary toolchains that will be used for the project. Moreover, the usability, accessibility and stability of the tools also effects the outcome of the choice. The easier it is for us to use, the easier the preference becomes.

**Gap:**

Risk of this project might be if the developer chose a harder toolchain, which is compatible but not optimal for the project, then the likelihood of this project becoming tedious increases. It will also effect the work conduct throughout the project.

**Goals/Deliverables:**

The motive of this plan to get the correct and optimal toolchain for the project. The spike source code will serve as the deliverable for this project, as it will be used to prove whether the toolchain is optimal or not.

**Planned Date:** 12/4/017

**Deadline:** 14/4/017

**Planned Notes:**

1. We took our time checking every toolchain, noting any discrepancies, taking on average of at least 10 counts and then coming up with optimal choice for our preference.
2. We divided our work by one coming up with the source code and the other writing the documentary and report of the tests conducted.
3. We tackled the primary risk first, that is testing the optimal combination and then checking its usability, durability, and accessibility.

**Spike Plan 02:**

**Name:** Checking for imprecision in the data recorded.

**Context:**

This plan was undertaken to check for any errors in the data recorded from both of our chosen combinations. We check for any anomalies in the data recorded, and whether the server-client-server connection was facing any issues. Whenever we faced any irregularity in the data recorded, we check with our source code, as it serves as the key to fix the problem. Moreover, the toolchain that we preferred for this project has enough resources on the internet to give us a directive to whether we were making any errors while designing the project.

**Gap:**

The risk of this plan might occur if the internet connection is fluctuating (spike 02 – firebase with beaglebone.io), which was easily mitigated by taking the device to a better internet connection spot.

**Goals/Deliverables:**

The goal of this plan was to finish the project with the least number of errors as possible. The deliverable was the source code, which was the core member in mitigating any anomaly or irregularity that we found while doing the project.

**Planned Date:** 13/4/017

**Deadline:** 20/4/017

**Planned notes:**

1. We divided our work through one of us coming up with the source code and the other writing the documentary and report of the tests conducted.
2. We tackled the primary risk first, that is testing the optimal combination and using the preferred tools to finish the project.
3. Any anomalies were noted down, and were tackled immediately.