**Spike Outcomes**

**Name:** On premise

**Goals:**

A server based implementation of the following:

* A node.js based program that reads the data from the Arduino using a motion detector and pushes it to the firebase. The data that the program pushes should be in the json format with 3 attributes:
  + Timestamp
  + Motion start time
  + Motion end time
* A program that does the following:
  + Listens to firebase
  + For every new object:
    - Send email to pre-defined address if motion is long
    - Send email to pre-defined address that shows how many long and short motions have been detected

**Technologies, Tools, and Resources used:**

* Nodemailer, to allow use of an email to send emails from the node app
* Motion sensor, to allow updating of time and to be listened to
* Firebase, to host our data and allow updating of values

**Tasks undertaken**:

The first component would listen to the motion sensor, and update the start, end and timestamp values, as well as determine whether these were long or short, and update them. This would trigger the second component, that was listening after being run locally as a JS file, to the timestamp change as well, to send an email based on which value, or long or short, was updated.

**What we found out:**

Allowing less secure apps should be the first step when implementing node mailer, as it requires our uncertified JS app to access and send emails from an account. The other issue was accessing data at a higher level than what this spike listens to determine an update. For example, it was first listening to the entire server3 of information, so it would send 3 emails every time. By simply listening to one of the 3 updates, this issue was resolved. However, it meant the value, timestamp, being listened to needed to contain the difference in time between the start and end times, rather than just the start time.

**Open issues/risks:**

As this was all done on premise, little to no issues/ risks were found, other than authentication issue with nodemailer.

**Recommendations:**

None.