You have been hired as an IoT developer at Strathmore’s data center. There have been issues with the temperature fluctuations which the Data Centre Admin believes is causing hard drives to fail. They want you to build an IoT system that monitors both the temperature and humidity of the data center. The system should:

* Provide real time readings displayed on a graph for both the temperature and humidity
* Dispatch real time alerts to the data center administrators in form of a text message whenever readings go beyond a certain threshold
* Basic analytics on average, maximum, and minimum. Admins should be able to choose the time scale so they may drill down on varying temperatures and humidity with regards to time.
* Your thing should have LEDs to indicate whether the temperature is as the recommended level. It should blink ‘RED’ continuously if the temperature is above the threshold, and blink green continuously if the temperature levels are okay.

Conceptualize how you may design this system.

Break down the solution into 4 parts

* The thing (e.g. what sensors too use, what microcontroller, what language to program in etc.)
* The communication technology you will employ and why
* The backend infrastructure summary (what database, what backend language/framework to use) and why
* Think about the alerting sub system for the text messages, how can you implement this?
* The front-end, how are you going to display this information?