Sensor Cloud

* Collect data from tag sensors
* Call InsertSensorData API when information is received

InsertSensorData API

* Receives raw data with Tag ID, Flowerpot ID = Tag Manager Serial Number, Timestamp, and if Motion was detected.
* Place information in Sensor Data Table.

Sensor Data Table

* Contains Tag ID, FlowerPotID = Tag Manager Serial Number, Timestamp, and if Motion was detected.

Rules Table

* Contains Rule ID, Tag ID, Flowerpot ID, and Rule Number.

Rules Engine

* Creates rules and adds them to Rules Table.
* Uses Rule Table’s Rule Number to determine which rules a given tag sensor needs to be checked against.
* Compares data from Sensor Data against rules to be checked in order to determine if rule was broken.
* If rule was broken, create an alert.

Alerts Table

* Contains AlertID, Flowerpot ID, Received Timestamp, Acknowledged Timestamp, Short Description, Long Description, Alert Level, Image, and Sound

GetAlerts API

* Take Flowerpot ID from URL
* Get all associated alerts from database for the Flowerpot ID given that the alert was not previously acknowledged
* Convert alerts into a JSON object that contains an array of JSON objects
* Echo alerts JSON object to screen

Acknowledge Alerts API

* Take Alert ID from URL
* Change Alert table acknowledge column to current time

GenerateData

* Creates random tag data and inserts it into the Sensor Data table for testing purposes.

GenerateRules

* Creates rule to detect for motion for each of the tag sensors in the Sensor Data table, and inserts it into the Rules table for testing purposes.

GenerateAlerts

* Creates duplicate alert for each of the alerts in the Alerts table for testing purposes.