Rough Functional Requirements for [Smart Home Inspector]

[Smart Home Inspector] (SHI) is intended to be a utility to aid in discovering, tracking, and interpreting events in an IOT network. More specifically, it will be capable of fetching logged events from hub devices in smart home device networks and displaying them in a more human-readable format. The following are functional and non-functional requirements for the [Smart Home Inspector]:

Questions:

- Should the app stay connected to the hub and display new events in real time? No
- What specific types of data displays should the app use? N/A
- Is there more analysis than just events to be presented (statistical? Workload? Network traffic?) N/A
- Should the app pay attention to incoming/out-going traffic to/from the network? No
- Should the JSON files only document syntax, or should they also profile different devices with log file locations

Functional Reqs.

- Must be able to fetch log files and other common forms of records in smart hub devices
- Must be able to recognize/determine the type of events recorded in the log files
- Must recognize/determine the smart devices used in the network according to the log files
- Must recognize/determine the various events associated with each smart device on the network using the log files
- Must display the logged events
- Must save the displayed events and current log files for later use
- Must load saved displays and log files
- Must update log files with new versions from the source hub
- Must not update log files with new versions from a different source hub
- Must display changes and add new occurrences in the events displayed
- should use a log file syntax table to parse log files
- log file syntax tables should be stored in JSON format

Non-Functional Reqs.

- Must be able to fetch log files in a reasonable and short amount of time
- Must be able to abort fetching log files if the process becomes longer than reasonable.
- Must be able to display logged events grouped by various factors such as chronology, type of device, or type of event.
- Must display changes and new occurrences of events in real time or at faster and slower speeds

JSON Log File Syntax Table:
The syntax table will store various keywords for SHI to search the log file for.

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There are three main classes that the JSON files document: Devices, Sensor Events, and general state changes. It's possible that the JSON files will also record the locations of important log files inside the smart hub filesystem.

Syntax information will be recorded by associating an array of syntax keywords with an identifier corresponding to the type of information the keywords represent. For example the identifier "Device" would be associated with an array of keywords/statements used to preface a device name being declared. Another example would be an identifier "Event Class" with an array of boundaries such as "{...}" and "[...]" where a description of the event would be in between.