**Database Design Documentation**

**Database design before implementation of web2py**

**Table 1**

A database will store the smart devices. A table will include the devices’ names and other attributes such as the time and date the device was first online and the time and date the device was last online. It will state who owns each device. It will also store device specific attributes such as devices current temperature, ambient temperature, internal temperature, lumens, decibels, battery, and/or status.

**Table 2**

A second table will store the devices’ readings at different timestamps. This data can be used for analysis. This table will only include device specific attributes such as devices temperature, ambient temperature, internal temperature, lumens, decibels, battery, and/or status, at different times.

**Attributes**

|  |  |
| --- | --- |
| **Attribute** | **Meaning** |
| device\_name | Name of device added to monitoring system. |
| first\_online | First time device connected to monitoring system. |
| last\_online | Last time the device was connected to monitoring system. |
| owner | Owner of the device |
| device\_temp | The temperature of device is operating at |
| ambient\_temperature | The temperature of the room the device is in/operates in |
| internal\_tempature | Temperature inside the device, for example a fridge or oven |
| lumens | Amount of light the device is giving out |
| decibels | Amount of sound the device is making |
| battery | Battery status of device |
| status | Open/closed – smart doors |

**Tables**

CREATE TABLE tbl\_device(  
device\_name VARCHAR(30),  
first\_online DATETIME,  
last\_online DATETIME,  
owner VARCHAR(30),  
device\_temp VARCHAR(3),  
ambient\_temp VARCHAR(3),  
internal\_temp VARCHAR(3),  
lumens VARCHAR(3),  
decibels VARCHAR(3),  
status VARCHAR(3),  
battery VARCHAR(3)  
);

CREATE TABLE tbl\_readings(  
device\_temp VARCHAR(3),  
ambient\_temp VARCHAR(3),  
internal\_temp VARCHAR(3),  
lumens VARCHAR(3),  
decibels VARCHAR(3),  
status VARCHAR(3),  
battery VARCHAR(3),  
timestamp DATETIME  
);

No foreign keys and primary keys have been added during the initial creation of the tables for the database, as they will be added with web2py.