EE / CprE / SE 492 – SdDec21-20

IoT Smart Lights

Bi-weekly Report

9/28 – 10/11
Client: Dr. Manimaran Govindarasu
Faculty Advisor: Dr. Gelli Ravikumar

Team Members:

Hamza Mostafa Sayed Mahmoud	habdul@iastate.edu	Hardware Design
William Gavins	wpgavins@iastate.edu	Hardware Design
Xinlei Yu	xinleiyu@iastate.edu	Software Design
Nathan Orts	njorts@iastate.edu	Software Design

Summary:
- GUI now more fleshed out with working CSS, more pages completed.
- Binary Simulation files from PowerCyber Lab simulation can be stored locally with mySQL

Past Week Accomplishments
- GUI software
    - Figured out Django static files.
    - CSS and images are now working, the login page looks nice now.
    - Finished functionality for connection page and image upload page.

- Software Scripts
    - Added Python functions create/add/delete function for mysql database.
    - Modified Shell Main function to detect errors

- Hardware
    - Script better at handling IO, added better integration handling.
    - Switched parts on BOM for available parts.
    - Multiple endpoints are able to interact with the coordinator.

Pending Issues

- Hardware
    - PCB BOM
    - Hardware script persistent storage
    - Find more compact alternatives to parts.
    - Battery protection

- Software
    - GUI
        - User-submitted images are not saving.
        - Light configuration page incomplete.
        - View simulation page incomplete.
    - Software
        - Printout table from database

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
William Gavins	Continued working on Xbee2 scripting software to make interfacing with hardware easier. Fished the hardware schematic design (mostly), got somewhat working layout with a few small parts issues, but it needs to be reworked with smaller parts. Designed charging circuit.	20	35
Hamza Mostafa Sayed Mahmoud	Out due to medical circumstances.	0	10
Xinlei Yu	Python app development - Software/Hardware interfacing.	3	17
Nathan Orts	Python app development - GUI	7	26

Plans for Coming Week

- Nathan - Continue GUI development.
    - Learn more HTML.
    - Complete light configuration page.
- Xinlei
    - Integrate with UI
    - Build functions to decoding the files
- Hamza -
- William- FInish BOM, refactor PCB Layout.