Mar31/Apr 1 Database connections fully functional and following posted:

your repository/Documentation/GroupNameDatabase.pdf

/1 Participated: Online session

/4 Online demo

Database description (fits into the poster template's results column along with mobile application description):

/1 Addresses connection to enterprise wireless (v.s. home/open Wi-Fi/hotspot)

/1 Database configuration mentioned

/1 Security considered

May replace printing/enclosure block in poster template:

/2 Unit and production testing considerations

Database

The database connection we implemented is Firebase. Firebase offers some powerful tools for a database and that is security, simplicity, and live data being sent to the mobile application with a Wi-Fi connection. All the platform we used requires Wi-Fi connectivity to read and write into the database.

The database login setup is a simple email and password login. Users will have to create an account with their email with a password. All information is protected with the Firebase's own security features as well as hash protection of the user's password.

Authentication

When users register for a new account in the app, the user information will be stored and sync in the database immediately. The user then can use their username and

password to access the app. The users don’t need to provide any additional information. Each user has different data in their database and different types of access.

Users should have an internet connection to enable live data readings and writing into the database. The database should record temperature readings, light sensor readings, images of the house, and as well as perform lighting control. Unfortunately, we haven’t implemented all the sensors/effectors we have to write and read into the database but the light/luminosity sensor.

Unit and Production Testing

For production of the units in our project, we have a little difficulty because we were using multiple platforms to implement our project. The materials, on the other hand, creating this project are very popular so we can easily grab the sensors/effectors online or from a reliable source. Gathering the materials during our previous semester was not that hard, particularly, all the Nucleo components had a one-day delivery because all the parts are readily available in the country. Assembly of the materials was simple as well because they are just stackable components made by a single STMicroelectronics. Other components can also be purchased online or from electronic stores available in the country. Producing the project with materials readily available locally helps the hardware project a lot.