Design Review

Questions and Comments

Group 2 reviewing Group 4

Questions:

1. How are you going to be able to prototype such a large system design with so many moving parts and controls such as with the temperature regulation, moisture, and time dependent systems you have outlined, that will accurately depict the conditions and changing environment of a greenhouse?

2. Is it necessary to have multiple forms of temperature regulation for only specific areas with a heating mat and incandescent lamp opposed to something like a central heating system that can cut down on cost, complexity, and energy consumption, keeping the entire greenhouse at a constant temperature? As well is it necessary to having both active and passive ventilation for the system if they will be completing the same task and can take away from the complexity of design to remove an unneeded active component?

3. If connectivity to the greenhouse or submodules fails, either loss of the wireless connection, a faulty or shorted connection to the sensors or submodules what back-ups do you have in place to keep the plants and system safe to ensure bad data, or loss of connection doesn't result in overwatering, overheating, over cooling etc? If one of the components of the system does fail, will it stop the system from working as a whole or will the other subsystems still be able to operate until it can be fixed?

4. You brought up IOT systems being used in your project, will this be implemented with the different submodules of your system being wireless, or will there be a wired connection to the Raspberry Pi for all submodules.
   - **If it is wireless submodules**, how do you plan on creating the communication network and what protocol do you plan on using? If connectivity fails to one of the submodules, how do you plan on indicating to the user that it has happened and reconnecting to the device? Is
   - **If it is wired submodules**, how do you plan on making the system easy to set-up and use minimizing the complexity to the user and being able to

troubleshoot easily if wires and/or connections fail? As well how will you protect your electrical connections from a humid and wet environment to ensure no shorts or damage to the system over years of use?