

EE/CprE/SE 492 GROUP PROGRESS REPORT

Group number: Group 25

Project title: SMART Garden System

Client:

Advisor: Diane Rover

Team Members: Sarah Schoenke, Jake Thoma, Bryanna Adamson, Julia Condon, Nick Vaughan, Jasen Hesel, Devon Sindt

- **Project Summary:** *(Short summary about the project. What are the design goals? Have the direction or scope of the project changed? This should be about a paragraph in length.)*

Our Goal is to build a Smart Garden System. In this system we will have the ability to monitor and adjust the heat levels, water system, and growth. There will be a camera stationed at each plant which will display on a website. The website itself is where the consumer will be able to monitor and adjust everything. There will also be a grade for the growth and levels you set for that plant vs what is actually occurring in the system itself. This allows the consumer to see if the grade is worse, that means they know to be able to look at the system and see what might need to be adjusted.

- **Accomplishments:** *(Please describe/summarize as to what was done, by whom, when and, collectively as a group since the last report. This should be about a paragraph or two in length. Bulleted points are acceptable as well. Please keep only your technical details related to your project. Figures, schematics, flow diagrams, pseudocode, and project related results are acceptable, but please ensure that they are legible (clear enough to read) and to provide an explanation. If researching a topic, please add a few details about what was learned and how it is relevant to the project. If two or more people worked on a single task, be sure to distinguish how each member contributed to the task. Specific details relating to the assistance provided to other members may be included here.)*
 - The connection/link between the camera page on our website and the physical camera is almost complete (Sarah and Jake)
 - Started a control scripts folder for issuing commands to the lights and water pump, depending on the commands from the website. (Jake)
 - There is now a controls page on the website for the link to control the lights, water, temperature, fans, moisture levels. (Sarah)
 - There are now graphics pages for all four types of plants with tables and graphs that will eventually be filled with real values (Bryanna)
 - The home page was updated to utilize the group decided color scheme. (Julia)
 - The home page was edited to adjust depending on screen size and a few other usability issues were fixed. (Julia)
 - The boards have been replaced and the seeds have been purchased (Devon)
 - Our main page has been connected to backend and updated heavily (Nick)
 - Our frontend now has access to all backend endpoints available (Nick)
 - A navigation bar has been added to move between screens (Nick)

- Boyd lab training has been finished and we have started to build the greenhouse. We expect to have it finished by next week. (Devon and Jasen)
 - Designed and printed some essential parts that we need for the greenhouse including water tube mounting brackets and a door latch. (Jasen)
- **Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*
- Problems with light wave lengths: We had a slight issue with our high pressure sodium bulbs, they emit a high concentration of red and yellow light, but is lacking in the blue light wavelength. To counteract this, we are including a blue light bulb into our design. Without it, our plants would grow too quickly for the foundation to keep up and the plants would become weak, stickley and crumble under their own weight.

Attendance: Attendance was a little bit better this past couple of weeks. We had to reschedule a meeting due to spring break and some not really explaining why they couldn't show up however, it was better because we had communication and where able to reschedule to meet with everyone. We had an issue with one person not attending our group meeting. However, other then that attendance is better then at the time of the last report.

Cutting the wood: There was as girl in the lab when Jake and Devon went to go spilt the boards and she was concerned about them performing this. This means we now have to get this approved again by somebody. There was a guy who said if campu will not let us he will offer to help us split it after Monday.

○ **Advisor Input/Signature:**

Please select one of the options below and sign.

- _____ I am pleased with the progress the team is making.
- _____ The teams progress could use some minor improvements which I will discuss with them.
- _____ The team's progress has some major concerns that I will discuss directly with Dr. Bigelow bigelow@iastate.edu , 515-294-4177

Signature: _____



Diane Rover 4:47 PM

Terrific, thanks!

Team, I'm satisfied with the progress on your project. Thanks, Dr. Rover

NEW



Diane Rover 4:48 PM

You can use the message above like an email.



Sarah Schoenke 4:49 PM

Thank you!