

Software Project

TEAM NAME: Greenly Pebble

PROJECT NAME: Smart Plant

Deo Anthony Madrid (N01361264)

Patrick Gomulka (N01347564)

Erni Banaag (N01221990)

Ricci Gamiao (N01363076)

Table of Contents:

Contents

Team Contract:	2
GitHub Repo Link: https://github.com/riccigamiao3076/SmartPlant	8
Invitation Screenshot:	8
Project Background and Description:	8
1. Project Goals and Vision:	8
2. Software aspect and hardware:	8
3. Screen Flows:	9
4. Feedback Incorporation:	9
5. Plans for Database:	9
Project Scope:	9
Theme and Epics:	10

Team Contract:

Team Contract

CENG-322 TEAM PROJECT

Team Name: GREENLY PEBBLE


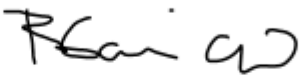
Project Name: SMART PLANT

~~RP~~Please negotiate, sign, scan and include as the first section in your Deliverable 1.

Please note that if cheating is discovered in a group assignment each member will be charged with a cheating offense regardless of their involvement in the offense. Each member will receive the appropriate sanction based on their individual academic honesty history.

Please ensure that you understand the importance of academic honesty. Each member of the group is responsible to ensure the academic integrity of all of the submitted work, not just their own part. Placing your name on a submission indicates that you take responsibility for its content.

Team Member Names (Please Print)	Signatures	Student ID
Project Leader: Deo Anthony Madrid		N01361264
 Patrick Gomulka		N01347564

Erni Goze Banaag		N01221990
Ricci Gamiao		N01363076

For further information read Academic Honesty Policy on <https://humber.ca/legal-and-risk-management/policies/search-by-students.html>.

By signing this contract, we acknowledge having read the Humber Academic Honesty Policy as per the link below.

<https://academic-regulations.humber.ca/2018-2019/17.0-ACADEMIC-MISCONDUCT>

Responsibilities of the Project Leader include:

- Assigning tasks to other team members, including self, in a fair and equitable manner.
- Ensuring work is completed with accuracy, completeness and timeliness.
- Planning for task completion to ensure timelines are met
- Any other duties as deemed necessary for project completion

What we will do if . . .

Scenario	Accepted initials	We agree to do the following
Team member does not deliver component on time due to severe illness or extreme personal problem	E.B D.M P.G R.G	a) Team absorbs workload temporarily __ b) Team seeks advice from professor __ c) Team shifts target date if possible __ d) Other:

Scenario	Accepted initials	We agree to do the following
Team member cannot deliver component on time due to lack of ability	E.B D.M P.G R.G	a) Team reassigns component ____ b) Team helps member ____ c) Team member must ask professor for reference material ____ d) Other:
Team member does not deliver component on time due to lack of effort	E.B D.M P.G R.G	a) Team absorbs workload ____ b) Team "fires" team member by not permitting his/her name on submission ____ c) Other:
Team member does not attend team meeting	E.B D.M P.G R.G	a) Team proceeds without him/her and will assign work to the absent member ____ b) Team doesn't proceed and records team member's absence ____

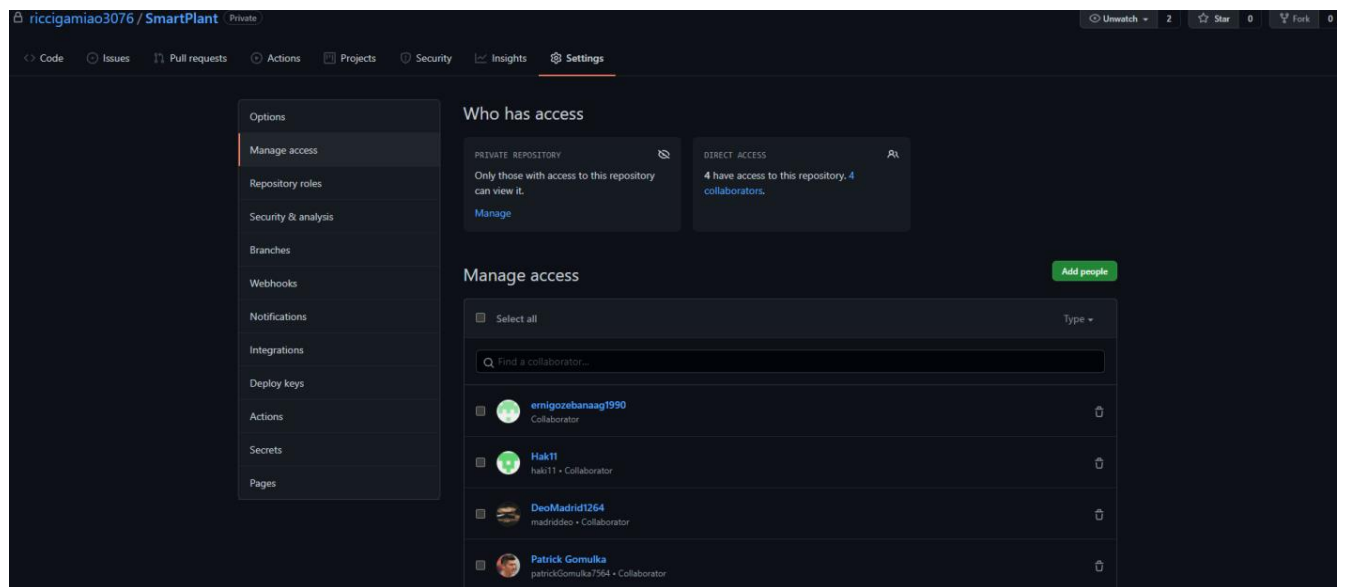
Scenario	Accepted initials	We agree to do the following
		c) Team proceeds for that meeting but "fires" member after __ occurrences __
An unforeseen constraint occurs after the deliverable has been allocated and scheduled (a surprise test or assignment)	E.B D.M P.G R.G	a) Team meets and reschedules deliverable __ b) Team will cope with constraint __ c) Other:
Team cannot achieve consensus leaving one member feeling "railroaded", "ignored", or "frustrated" with a decision which affects all parties	E.B D.M P.G R.G	a) Team agrees to abide by majority vote __ b) Team flips coin __ c) Other:
Team members do not share expectations for grade desired	E.B D.M P.G R.G	a) Team will elect one person as "standards-bearer" who has the right to ask that work be redone __ b) Team votes on each submission's quality __ c) Team will ask for individual marking and will identify sections by author __ d) Other:

Scenario	Accepted initials	We agree to do the following
Team member behaves in an unprofessional manner by being rude or uncooperative	E.B D.M P.G R.G	a) Team attempts to resolve the issue by airing the problem at team meeting ____ b) Team requests meeting with professor to problem-solve ____ c) Team ignores behaviour ____ d) Team agrees to avoid use of all vocabulary inappropriate to the business setting ____
Team member assumes or requests that his/her name be signed to a submission but has not participated in production of the deliverable	E.B D.M P.G R.G	a) Team agrees that this is cheating and is unethical ____ b) Friends are friends and should help each other ____ c) Team will submit with signature but will advise professor who will take action ____
There is a dominant team member who is content to make all decisions on the team's behalf leaving some team members feeling like subordinates rather than equal members	E.B D.M P.G R.G	a) Team will actively solicit consensus on all decisions which affect project direction by asking for each member's decision and vote ____ b) Team will express subordination feelings and attempt to resolve issue ____

Scenario	Accepted initials	We agree to do the following
		c) Other:
Team has a member who refuses to participate in decision making but complains to others that s/he wasn't consulted	E.B D.M P.G R.G	a) Team forces decision sharing by routinely voting on all issues ____ b) Team routinely checks with each other about perceived roles ____ c) Team discusses the matter at team meeting ____

GitHub Repo Link: <https://github.com/riccigamiao3076/SmartPlant>

Invitation Screenshot:



Project Background and Description:

1. Project Goals and Vision:

This Capstone Project envisions the automation of planting using technology. The Smart Plant helps plant growers track and monitor their plants daily and provides an efficient system for plants to grow and sustain the healthy plant. Using sensors such as Temperature, Humidity, soil moisture, and light, to allow users to maintain the health of the plant through an application, providing notifications for health updates or maintenance requirements.

2. Software aspect and hardware:

The software aspect of the project will use an android based app development, primarily using software tools such as Android Studio, and GitHub. The hardware will implement

multiple sensors such as temperature, humidity, soil moisture, and light. We will also use water pumps, tubing, and a 4-channel relay board, to connect everything together to ensure every component is working in tandem with one another.

3. Screen Flows:

User's will be able to navigate the application with ease, as we will be using a bottom navigation design layout. When opening the application the user will see the temperature, humidity, soil water measurement, and sunlight lumens measurement. In the middle of the screen there will be multiple types of plants to select and configure for maintenance.

4. Feedback Incorporation:

With the feedback requiring options Login and Registration we will incorporate this with our application using Firebase Realtime Database. Including different plant options for different specification maintenance needs.

5. Plans for Database:

We will implement Firebase Realtime Database for User login and Plant data statistics.

Project Scope:

The scope of the project will take around 2-3 months for the estimated completion, however depending on the upcoming demands and evaluations from other classes, we might need extra time depending on how it goes.

We will get all our required materials first, and then start planning the individual tasks to be evenly distributed to our team members in both software and hardware fields, and schedule regular in person meetings to discuss and work on the project.

If any technical challenges arise that jeopardize our projected completion date, we will reduce the length of our development phase by undertaking an improvised redesign of our product and simplifying the user interface if needed.

We will know when our project is complete, when we can verify the functionalities of our product, including both software and hardware requirements are met. The requirements include Sensor's data presented on the main screen, Selection of plants varying different maintenance requirements, Plant logs data used and presented via graph, and Login and Registration database / page.

Theme and Epics:

THEME / BUSINESS GOAL:

- Develop app that intertwines with hardware modules/sensors to collect

- **Epic #1**

- Use a feedback page for new plants discovered.

- **Stories**

- Create a community discussion about plants.
- Add plant photo sharing with friends.
- Automatic email surveys to clients.

- **Epic #2**

- Create incentives to users for finding new plants.

- **Stories**

- Create a badge achievement system.
- Offer premium features to clients.
- Create a contest program.