Recitation Number	**: 3038-101**	**Team Name**	**: Team Bonsai**
Team Number	**: 1**	**Application Name**	**: Bonsai Buddy**

Members:

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Revised Project Feature List:

- Example Home Page
    - Before a user decides to login or register they will be directed to an example home page. This page will serve as a demonstration of the features of the app, without actually using a secure database connection.

- User Login Modal
    - The user login modal will allow returning users to monitor and control the health of their specific bonsai / houseplant. This feature pops down on the home page

- User Registration Modal
    - The user registration page will allow a first-time user to create an account, allowing them to use the login page when they return to the website.

- Water Pump Control
    - The water pump will allow users to select either automatic or manual water scheduling. The auto watering will be schedule based, while also using sensor readings. The manual watering will be a button which sends a command to the hardware.

- Table History Display
    - The user will also be able to view recent sensor history data in a table on their home page

- Photo-resistivity Sensor Readings
    - The hardware will have a photo-resistor sensor equipped. This will provide live feed data to the database to monitor the health and environment of the bonsai / houseplant.

- Soil Moisture Capacitor Readings
    - The hardware will have a soil moisture capacitor sensor equipped. This will provide live feed data to the database to monitor the health and environment of the bonsai / houseplant.

- Temperature and Humidity Sensor Readings
    - The hardware will have both a temperature and a humidity sensor equipped. This will provide live feed data to the database to monitor the health and environment of the bonsai / houseplant.

- Graph History Display
    - The website will allow the user to select which sensor data to display in a vs time graph on their home page.

- Camera
    - Time Lapse
        - The camera will take photos once every 10 minutes and send them to the database. These photos will then be fed into website and displayed as a time lapse
    - Live Feed
        - The most recent picture taken will be displayed as a live feed from the bonsai / houseplant

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Web Service Design:

NodeJS API

Login Service – connected to userDB
(Username, PasswordHash) => valid or invalid token

Information Service – connected to infoDB with valid token
Request recent information => return * by date
Request Date information => return * with date = date
Request (temp, hum, soil, …) => return (temp, hum, soil, …) by date

Back End Design:

PostgreSQL – hosted on Heroku

userDB:

(PK) username	passwordHash	userId
varchar	varchar	int
Luke Bakken	$2a$10$HjtzzASvdla5eRuPcKHU3e1qtTmJSfsuTzty77OKecNA7oM4qj/Ti	18725
John Doe	$2a$10$PMi3lRkdhnFJILDqTz.lYurs0gQp2zMm/zt7y4UVisoWjX9t8B5K.	83952

InfoDB

(PK) userId	date	lastWaterDate	soilMoisture	photoresistivity	temperature	humidity	photo
int	date	date	int	int	float	float	image
18725	X	X	X	X	X	X	X
18725	X	X	X	X	X	X	X
83952	X	X	X	X	X	X	X