

SWE Project: Final System

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Project 12 - Your Sweet Spot Life - Hydro Lodge App
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Requirements List

Requirement Key	Met / Not Met?	Description
Account Management - Overall		
FR.AM.1	Met	Account Creation
FR.AM.1.a	Met	Ability to Log in
Account Management - Registration		
FR.AM.1.b	Met	Registration Page
FR.AM.1.b.i	Met	Registration Page Information
FR.AM.1.b.ii	Met	Registration Page Logic
FR.AM.1.b.iii	Met	Registration Page Functionality
FR.AM.1.b.iv	Met	Registration Page Validation
FR.AM.1.b.v	Changed Met	Passwords not being salted
FR.AM.1.b.vi	Not Met	Not implemented due to timeframe
Account Management - Authentication		
FR.AM.2	Met	Ability to Log in
FR.AM.2.a	Met	Ability to Log in
FR.AM.2.a.i	Met	Log in Logic
FR.AM.2.a.ii	Changed	Moved to popup saying will be implemented in future
FR.AM.2.a.iii	Mostly Met	Validates information, does not sanitize
FR.AM.2.a.iv	Not Met	(Nice to have, not implemented)
FR.AM.2.a.v	Added Not Met	(Nice to have) Password hide/view switch
FR.AM.2.b	Met	Ability to stay Logged in
FR.AM.2.c	Met	Ability to Log out

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Requirement Key	Met / Not Met?	Description
FR.AM.2.c.i	Met	Log out Functionality
Account Management - Viewing and Modification		
FR.AM.3	Met	Edit Account
FR.AM.3.a	Met	Edit Account Validation
FR.AM.3.b	Added Met	Account changes Log
Account Management - Account Deletion		
FR.AM.4	Met	Account Deletion
FR.AM.4.a	Met	Account Deletion Functionality
FR.AM.4.b	Met	Popup present with password confirmation
FR.AM.4.c	Met	Account Deletion Functionality
FR.AM.4.d	Met	Account Deletion Functionality
Mock Sensor Data Component		
FR.MSD.1	Partially Met	Generating Mock sensor data. Generation script created. Front-end currently has hard coded data. Need to integrate front-end with back-end
FR.MSD.1.a	Met	Mock Sensor Data Guidelines
FR.MSD.2	Not Met	Refresh of Mock Sensor Data every five minutes not met. Front-end integration with back-end data needs to occur before this can be applied
FR.MSD.3	Not Met	Pull Down to Refreshing Mock Sensor Data not implement due to time constraints
FR.MSD.4	Not Met	Upcoming Features vetoed due to time constraints
Landing Page Component		
FR.LP.1	Met	Landing page functionality
FR.LP.2	Met	Landing page functionality

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Requirement Key	Met / Not Met?	Description
Navigation Menu Component (Persistent Menu Component)		
FR.NM.1	Met	Different order but present
FR.NM.2	Met	Persistent Icon
Plant Monitoring Component		
FR.PM.1	Met	Plant Monitoring Page
FR.PM.2	Met	Plant Slots & Content
FR.PM.2.a	Met	Empty or Plant
FR.PM.2.b	Partially Met	Adding new plant. Front-end functionality is there. Just needs to be connected to the back-end DB.
FR.PM.2.b.i	Met	Selecting plants from hardcoded list in frontend
FR.PM.2.b.ii	Partially Met	Saving Plant to database. Back-end functionality is there. Just needs to be integrated with front-end API call
FR.PM.2.b.iii	Added Partially Met	Searching plant by name Currently works on backend
FR.PM.2.c	Not met	Removing plant -> empty slot in front-end. 'Delete Plant' page has been created, however the plant slot list does not update when a plant is deleted. Backend integration is needed
FR.PM.2.c.i	Changed Met	"Remove" -> "Delete Plant"
FR.PM.2.c.ii	Partially Met	Deleting Plant Data from the database. Query can be performed. Just needs to have the front-end to be integrated with it.
FR.PM.3	Met	Growth Stage
FR.PM.3.a	Changed Met	Logic changed to time planted
FR.PM.4	Met	Plant Information Provided

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Requirement Key	Met / Not Met?	Description
Educational Component		
FR.E.1	Met	Educational area
FR.E.2	Partially Met	Article list to be updated
FR.E.2.a	Partially Met	Title and Preview included; Ellipsis vetoed due to time constraints
FR.E.2.b	Partially Met	Article opens when the corresponding article preview card is tapped was not fully completed. API integration still needed to have this connected with the backend. Article Preview Card title and category do get passed to the article page
FR.E.2.b.i	Changed Met	Youtube short present - Changed to embed, keeps in line with NFR.U.4
FR.E.3	Partially Met	Education Search Bar. Component is present, however it is not functional at the moment
FR.E.4	Met	Local Wordpress website created for API testing
FR.E.5	Not Met	Wordpress API implementation with app not completed due to time limitations. API schema is built for it, it just needs to be connected to the front-end
Upcoming Events Component		
FR.UE.1	Changed	Client Vetoed both calendly and eventbrite, changed scope to include static example
Kid's Corner Component		
FR.KC.1	Met	Kidz Corner Preview
FR.KC.1.a	Met	Kidz Corner Preview
FR.KC.1.b	Met	Contains image
User Tutorial		
FR.UT.2	Not Met	User tutorial vetoed due to being a

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Requirement Key	Met / Not Met?	Description
		nice to have along with time constraints.
FR.UT.2.a	Not Met	User tutorial vetoed due to being a nice to have along with time constraints.
FR.UT.3	Not Met	User tutorial vetoed due to being a nice to have along with time constraints.
Non-Functional - Usability		
NFR.U.1	Changed Met	Moved to back button system
NFR.U.2	Met	See above
NFR.U.3	Met	Scrolling > Switching Views
NFR.U.4	Not Met	Not possible given current scope
NFR.U.5	Met	Readable navigation menus
Non-Functional - Reliability		
NFR.R.1	Met	Currently only running locally, uptime not possible
NFR.R.2	Not Met	Data must be no more than five minutes old. Due to time limitations we were unable to get every page connected to the DB via APIs. Could not be verified without this in place
NFR.R.3	Not Met	Cannot perform database backups automatically
NFR.R.4	Added Met	Logging errors in database
Non-Functional - Performance		
NFR.P.1	Met	Pages load within 1 second
NFR.P.2	Met	Will not make outgoing requests when unfocused
NFR.P.3	Met	Will not request data that is not being

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Requirement Key	Met / Not Met?	Description
		shown to user
NFR.P.3.a	Not Met	(Nice to Have) - RecyclerView
NFR.P.4	Met	Lazy loaded using ListViews
NFR.P.5	Not Met	100 requests per minute not possible given current scope
Non-Functional - Supportability		
NFR.S.1	Met	Supports Android 14
NFR.S.2	Met	Supports 9:16 Aspect Ratio
Non-Functional - Extra (Styling)		
NFR.E.1	Met	Sans-Serif
NFR.E.1.a	Not Met	Atkinson Hyperlegible not possible given Current Scope
NFR.E.2	Met	Follows YSSL website as design guideline
NFR.E.2.a	Changed Met	One colour theme changed for better visibility
NFR.E.2.b	Met	Prioritize rounded shapes
NFR.E.2.c	Met	Use of pictograms met within limitations of scope
NFR.E.3	Met	App has responsive design.

Operating Instructions

Log-in Page:



If account present, follow steps 1 through 3 and skip next page:

1. *Enter* email
2. *Enter* password
3. *Tap* **LOG IN**

If account not present, see star icon:

1. *Tap* **REGISTER**

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Registration Page:



A screenshot of a mobile application's account registration page. The page has a light gray background with a white card containing the registration form. At the top left of the card is a back arrow. The title 'ACCOUNT REGISTRATION' is centered at the top. The form consists of five input fields, each with a red number next to it: 1. First Name: 'Jane' 2. Last Name: 'Doe' 3. Email: 'Janedoe@linux.com' 4. Password: '*****' 5. Confirm Password: '*****' Below the confirm password field is a red error message: 'Confirmation Password Does Not Match Password'. Underneath is a red progress bar and the text 'Strength: Weak'. A box titled 'Password Requirements:' lists three rules: 'Minimum of Eight Characters', 'Add at least one number(0-9)', and 'Add a special character (@#\$%*&*)'. At the bottom of the card is a gray 'REGISTER' button with a red number 6 next to it.

ACCOUNT REGISTRATION

First Name: 1
Jane

Last Name: 2
Doe

Email: 3
Janedoe@linux.com

Password: 4

Confirm Password: 5

Confirmation Password Does Not Match Password

Strength: Weak

Password Requirements:

- Minimum of Eight Characters
- Add at least one number(0-9)
- Add a special character (@#\$%*&*)

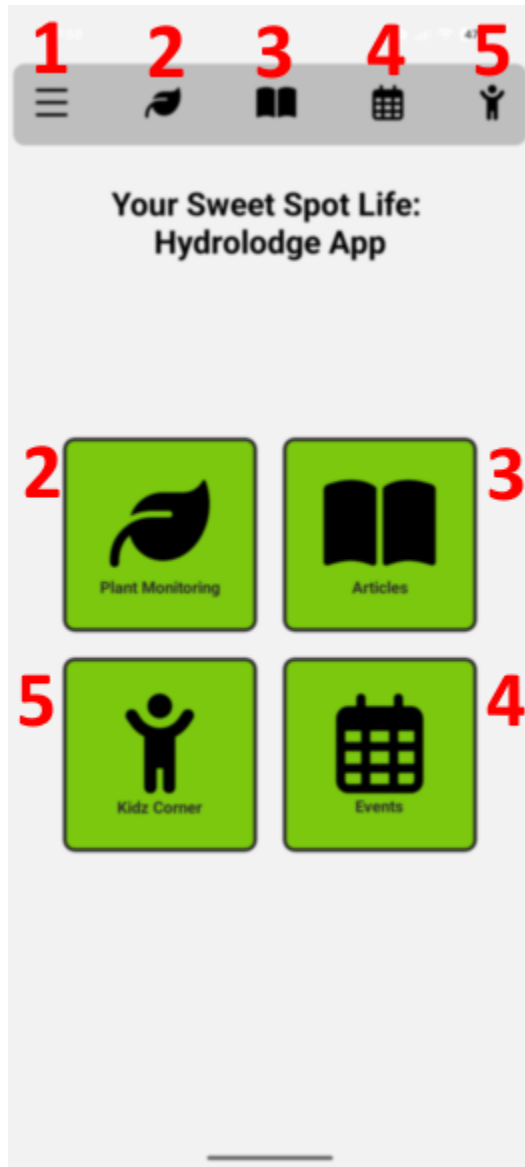
REGISTER 6

To register account:

1. *Enter* First name
2. *Enter* Last name
3. *Enter* Email
4. *Enter* Password (ensure to follow guidelines circled.)
5. *Re-Enter* Password
6. *Tap* **REGISTER**

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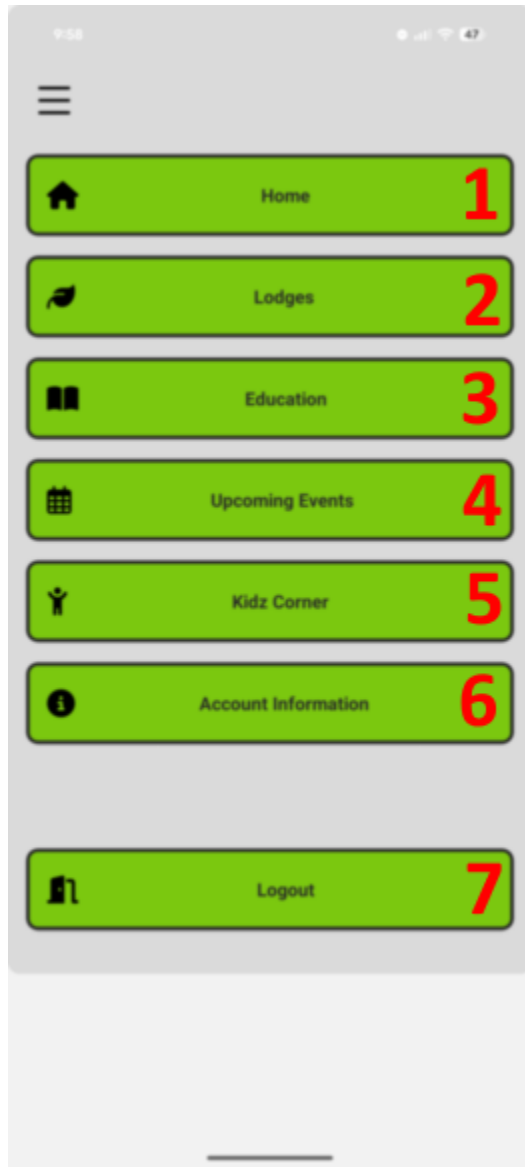
Landing Page:



1. Tap **Hamburger Menu** to access full navigation menu.
2. Tap **Plant Icon** or **Plant Monitoring** to access Plant Monitoring Page.
3. Tap **Book Icon** or **Articles** to access Education Section.
4. Tap **Calendar Icon** or **Events** to access Events Section.
5. Tap **Kid Icon** or **Kidz Corner** to access Kidz Corner.

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Navigation Menu



1. Tap **Home** to access Landing Page.
2. Tap **Lodges** to access Plant Monitoring Page.
3. Tap **Education** to access Education Section.
4. Tap **Upcoming Events** to access Events Section.
5. Tap **Kidz Corner** to access Kidz Corner.
6. Tap **Account Information** to access Account Information.
7. Tap **Logout** To log out.

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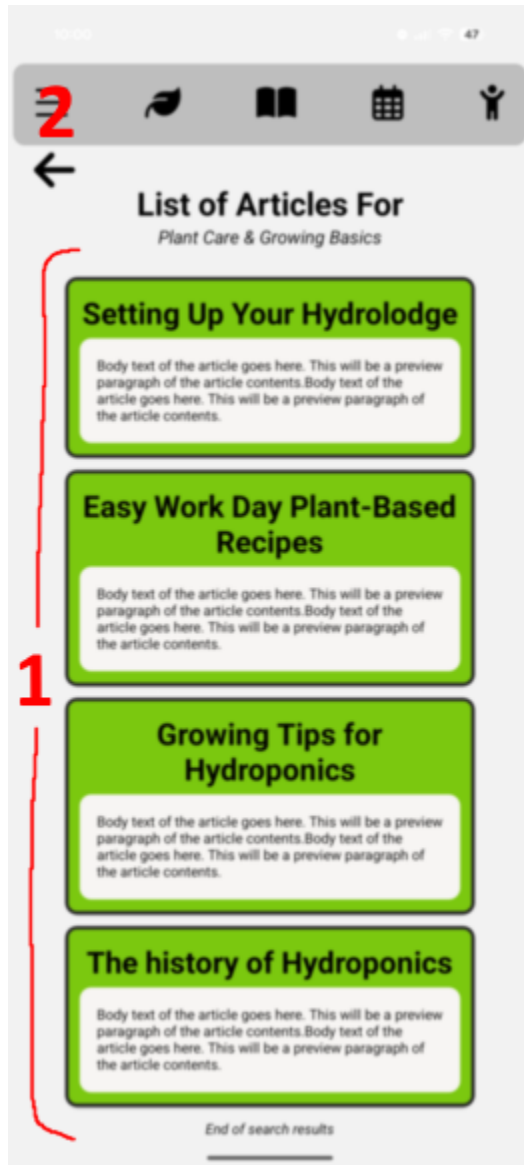
Education Articles:



1. Tap a category to get a list of corresponding articles.
OR
2. Tap on **Search for Article Here** and Type Keyword or Term.
3. Tap on **Search** to get a list of corresponding articles.
OR
4. Tap on **Back Arrow** to return to Landing Page.

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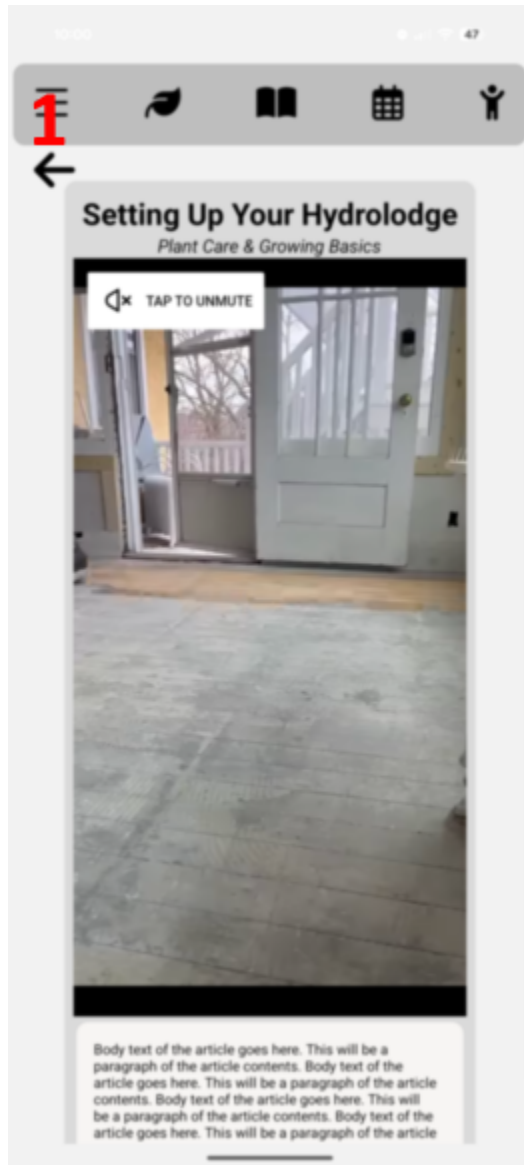
Education Articles List:



1. Tap on an **Article Preview** to access an article.
OR
2. Tap on **Back Arrow** to return to Education Articles.

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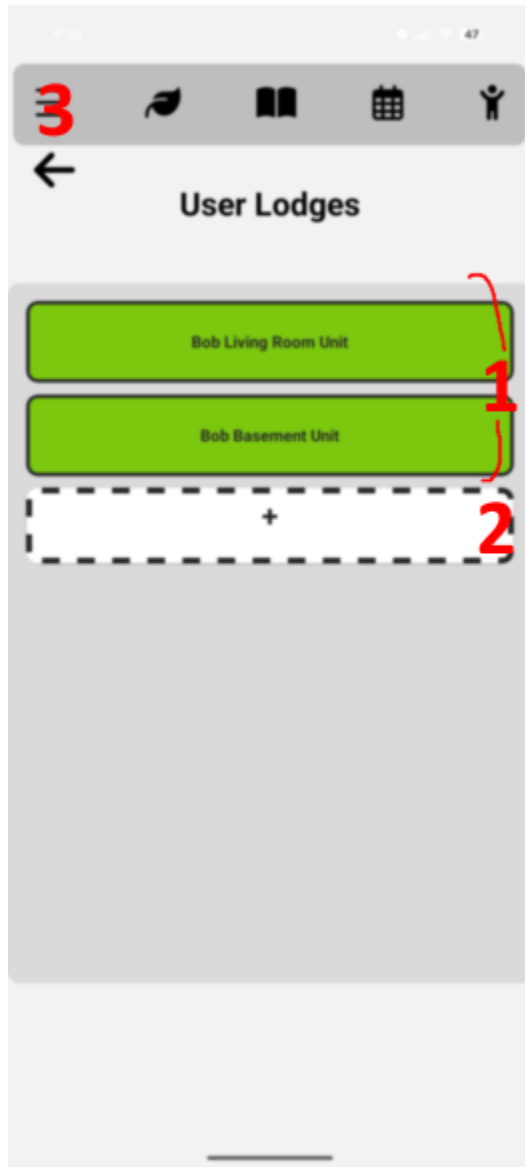
Education Article:



1. Tap on **Back Arrow** to return to Education Articles List.

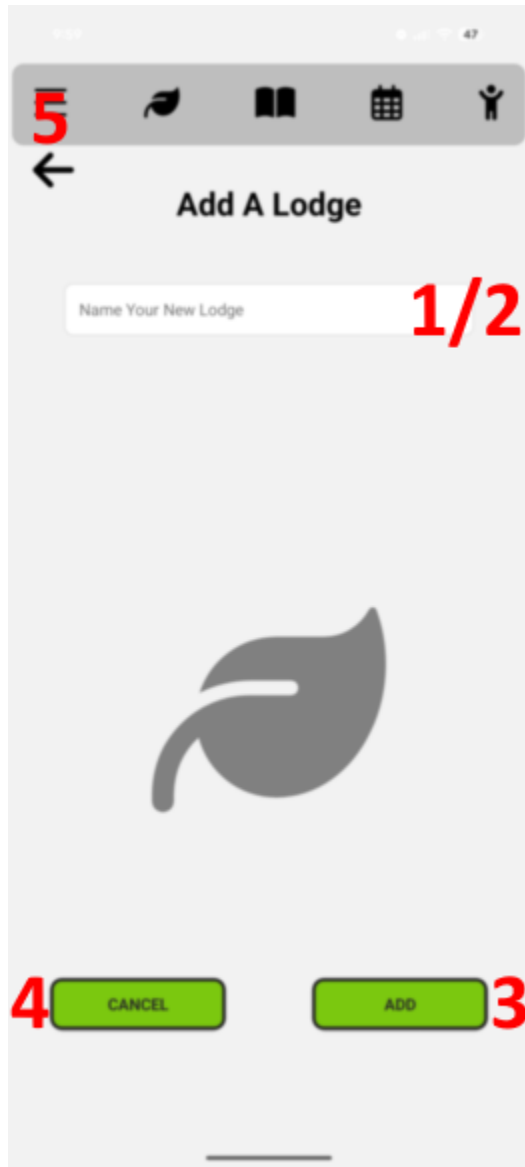
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Plant Monitoring / User Lodges:



1. Tap on a **Lodge** to access a Lodge.
OR
2. Tap on **+** icon to create new Lodge.
OR
3. Tap on **Back Arrow** to return to Landing Page.

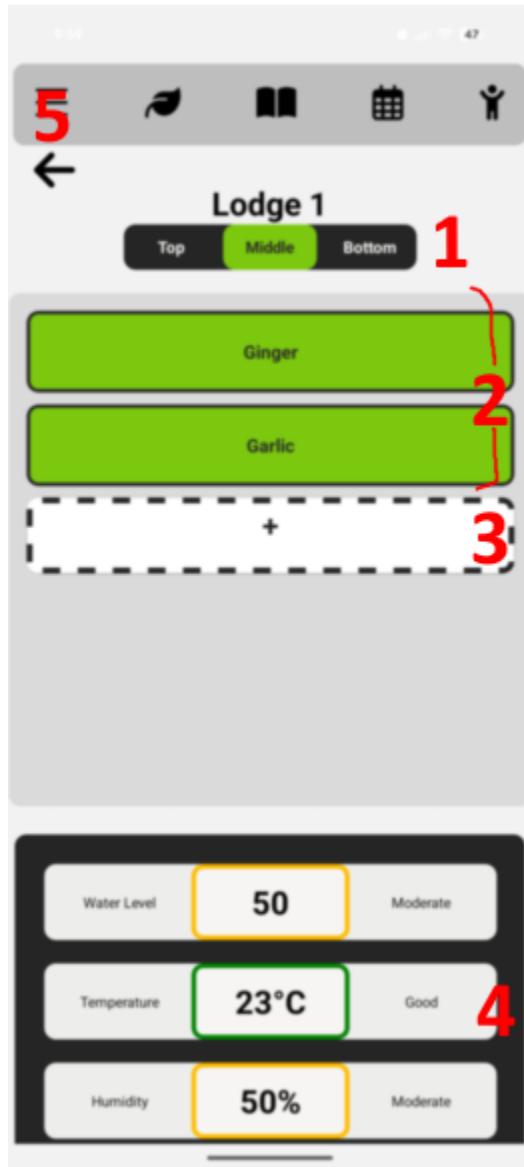
New Lodge:



1. Tap on **Name Your New Lodge**
2. Type Lodge Name
3. Tap on **ADD** to add new Lodge
OR
4. Tap on **Cancel** to Cancel and return to User Lodges Page
OR
5. Tap on **Back Arrow** to return to Landing Page.

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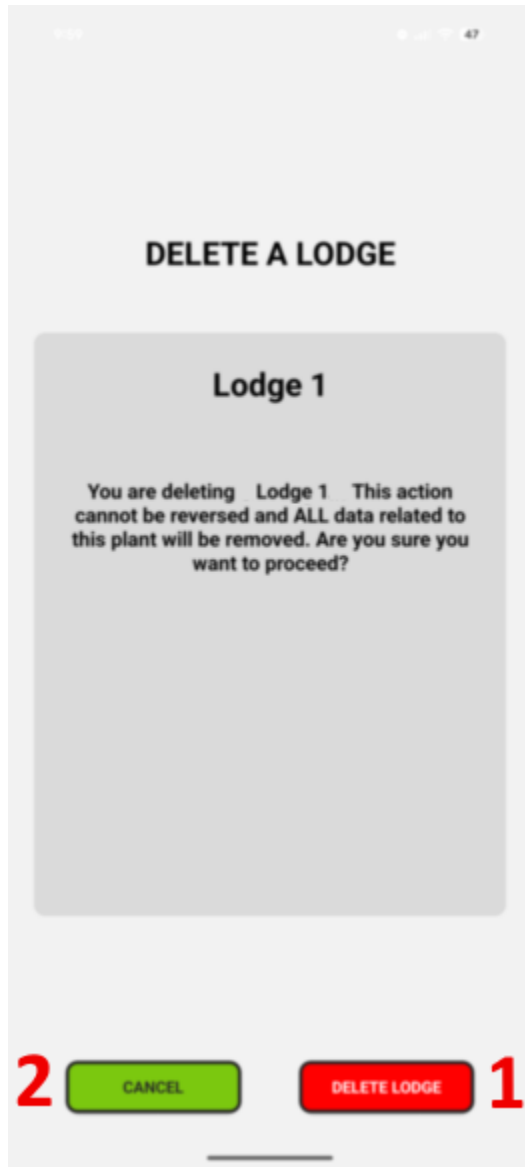
Lodge:



1. Tap on **Layer (TOP/MIDDLE/BOTTOM)** to select Lodge layer.
2. Tap on **Plant** to view plant.
OR
3. Tap on **+** icon to create new Plant.
OR
4. Scroll Down to view Sensor Data.
OR
5. Tap on **Back Arrow** to return to User Lodges.
OR
6. Tap on **DELETE LODGE** (Not shown, under sensor data) to delete Lodge.

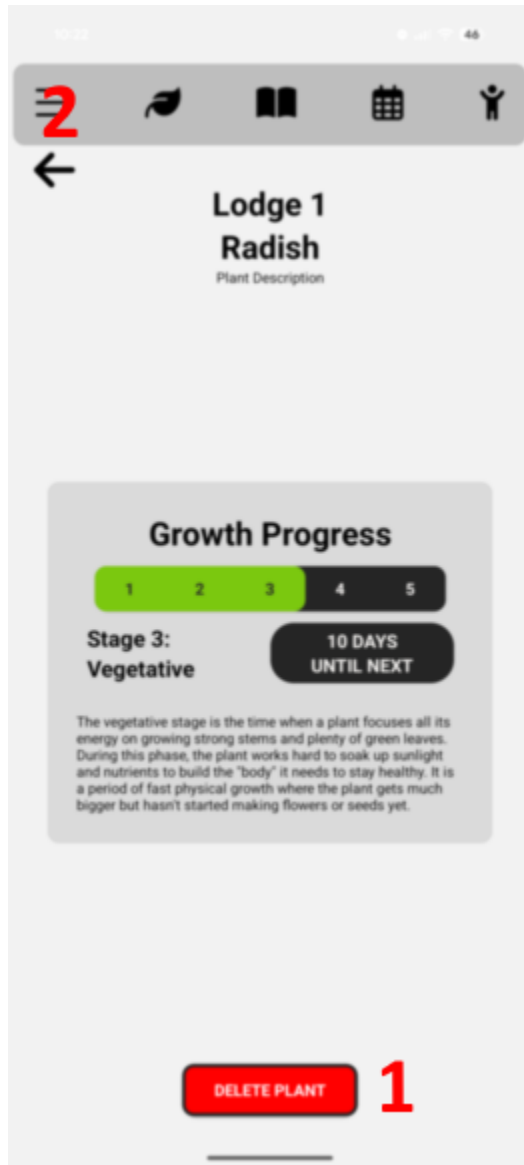
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Delete Lodge:



1. Tap on **DELETE LODGE** to Delete Lodge
OR
2. Tap on **CANCEL** to return to Lodge.

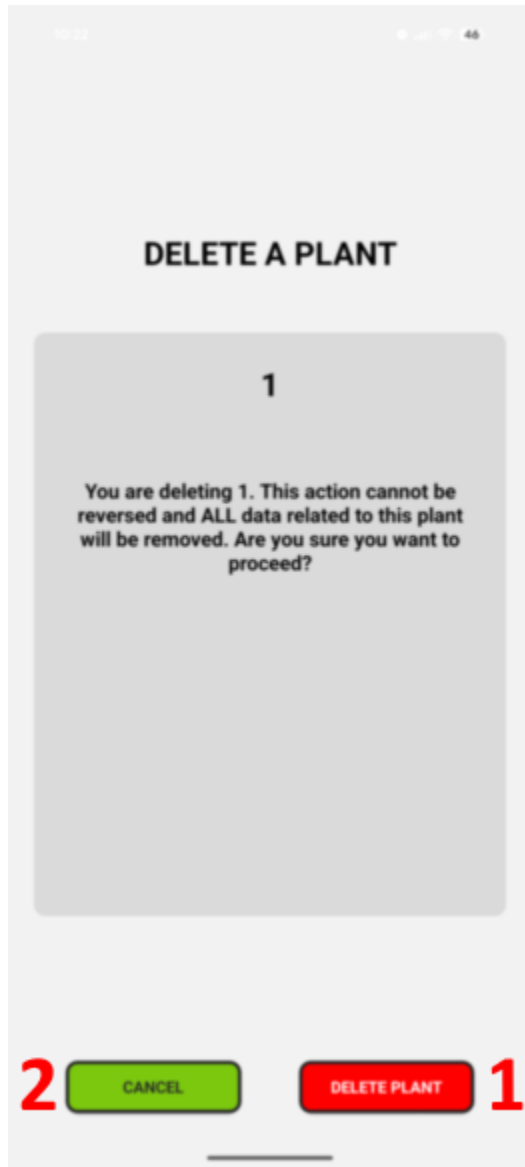
Plant Info:



3. Tap on **DELETE PLANT** to Delete Plant.
OR
4. Tap on **Back Arrow** to return to Lodge.

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Delete A Plant:



1. Tap on **DELETE PLANT** to Delete Plant.
OR
2. Tap on **CANCEL** to return to Plant Info.

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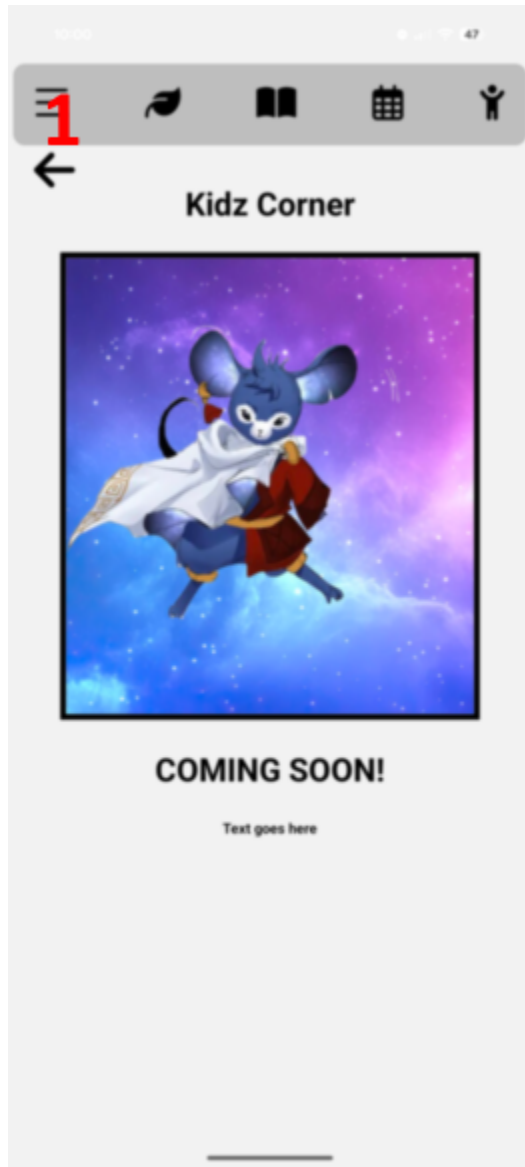
Add A Plant:



1. Tap on **Search for Plant Here**.
2. Type in Plant Name.
3. Tap on **Search**
OR
4. Tap on **Plant** to pick plant from list.
OR
5. Tap on **Back Arrow** to return to Lodge.

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Kidz Corner:



1. Tap on **Back Arrow** to return to Landing Page.

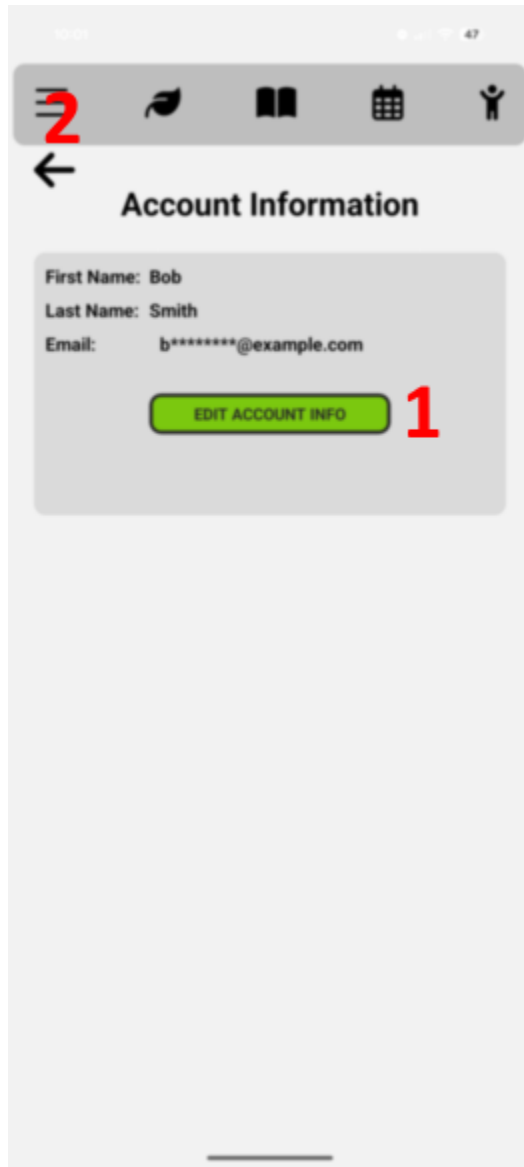
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Events:



1. Tap on **Back Arrow** to return to Landing Page.

Account Information:



1. Tap on **EDIT ACCOUNT INFO** to edit account information.
OR
2. Tap on **Back Arrow** to return to Landing Page.

Edit Account:

The screenshot shows a mobile application interface for 'ACCOUNT REGISTRATION'. At the top left, there is a back arrow icon labeled with a red '7'. Below this, the title 'ACCOUNT REGISTRATION' is centered. The form contains three input fields: 'First Name' (labeled with a red '1'), 'Last Name' (labeled with a red '2'), and 'Email' (labeled with a red '3'). Below the input fields are three buttons: a grey 'SAVE' button (labeled with a red '4'), a green 'CHANGE PASSWORD' button (labeled with a red '5'), and a red 'DELETE ACCOUNT' button (labeled with a red '6'). The status bar at the top right shows the time as 4:47.

1. *Enter* First Name (if applicable)
2. *Enter* Last Name (if applicable)
3. *Enter* Email (if applicable)
4. *Tap* on **Save** to update account information.
OR
5. *Tap* on **CHANGE PASSWORD** to change password.
OR
6. *Tap* on **DELETE ACCOUNT** to delete account.
OR
7. *Tap* on **Back Arrow** to return to Lodge.

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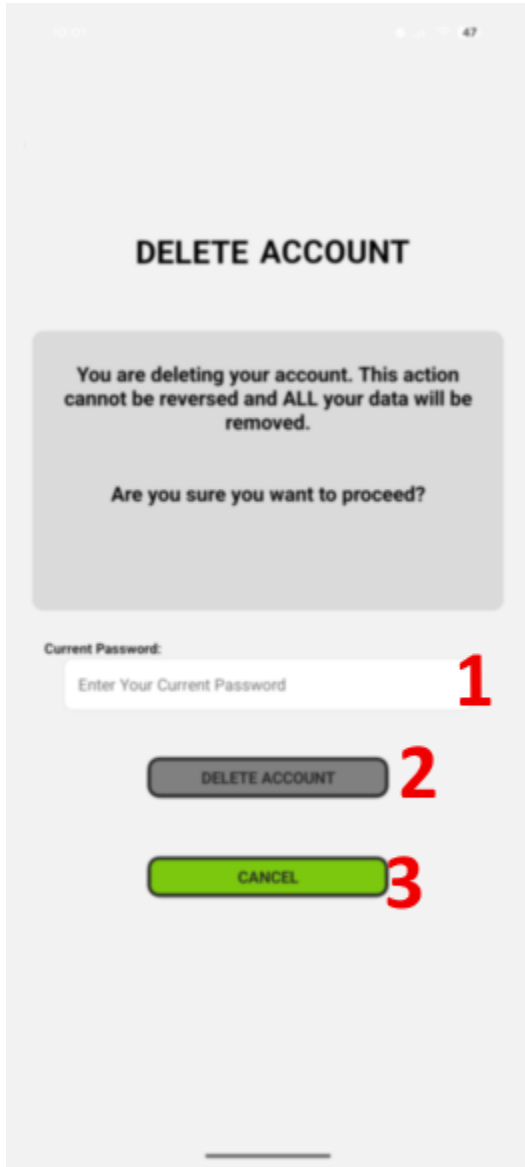
Change Password:

The screenshot shows a mobile app interface for changing a password. At the top left, there is a back arrow icon with a large red number '5' next to it. Below this is the title 'CHANGE PASSWORD'. There are three input fields: 'Current Password:' with a placeholder 'Enter Your Current Password' and a red number '1' to its right; 'New Password:' with a placeholder 'Enter Your New Password' and a red number '2' to its right; and 'Confirm New Password:' with a placeholder 'Confirm New Password' and a red number '3' to its right. At the bottom, there is a grey 'SAVE' button with a red number '4' to its right. The status bar at the top shows the time '10:01' and battery level '47'.

1. *Enter* current password.
2. *Enter* new password.
3. *Enter* new password again.
4. *Tap* on **SAVE** to update account information.
OR
5. *Tap* on **Back Arrow** to return to Edit Account.

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Delete Account:



DELETE ACCOUNT

You are deleting your account. This action cannot be reversed and ALL your data will be removed.

Are you sure you want to proceed?

Current Password:

Enter Your Current Password **1**

DELETE ACCOUNT **2**

CANCEL **3**

1. *Enter* Password.
2. *Tap* on **DELETE ACCOUNT** to delete account.
OR
3. *Tap* on **CANCEL** to return to Edit Account.

Build Instructions

Introduction:

Hello Marguerite. I have put together a little document for you here just to give you the details about how to set up, run and use the app. If you have any questions or if there is something you need in the future, please contact me at mason.tehrani83@gmail.com.

- Mason

General Information:

The HydroLodge App Folder you have received here should have three folders, two shortcuts and two .bat files

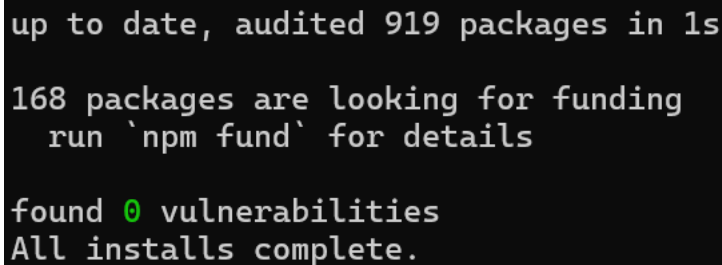
- The HydroLodge-Compainion-App folder contains all the files for the react native applications. This is the actual app made from the mock-up you were shown by Nicholas.
- The NodeJs_Server folder contains all the Backend files and the database. This contains all the Api controllers, the server.js file, Logic files, the database (HydroLodge.db) and typescript classes that were not used, but left in as I imagine they could be a useful reference to have in the future.
- The Documents folder contains all the deployment and documentation, including this document.
- The Shortcuts [HydroLodge App] and [HydroLodge App Setup] can be moved and placed wherever you want. The other folders and files cannot be moved without causing things to break

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Setup Instructions

The current folders you have do not have their respective node_module folders. These contain reusable components that are commonly used by many applications. They were removed generally to reduce the size of the code when exporting/compressing it due to the folder's large size. To install all the required node packages follow the following steps

- 1) Click the HydroLodge App Setup shortcut or the Install.bat file in the HydroLodge App folder. This will Open a Command prompt
- 2) Once you see something that looks like the picture below, press enter. This should close the command prompt



```
up to date, audited 919 packages in 1s  
  
168 packages are looking for funding  
  run `npm fund` for details  
  
found 0 vulnerabilities  
All installs complete.
```

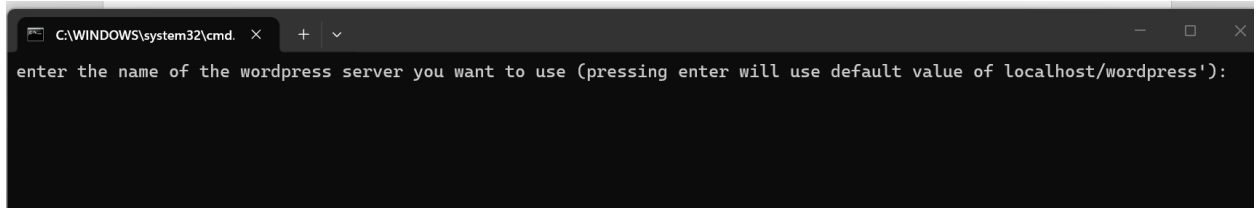
To double check , go into the NodeJs_Server and the HydroLodge-Companion-App\HydroLodgeCompanionApp respectively and look for a folder called “node modules” or something similar

Should the above instructions not work, you can go into the NodeJs_Server and the HydroLodge-Companion-App\HydroLodgeCompanionApp respectively and click the Install.bat file in each one.

Running Instructions

To Run the app, follow the following steps

- 1) Click the HydroLodge App ShortCut, which should open Two Command Prompts
- 2) Go to the Command prompt that looks like the picture below and follow the prompts

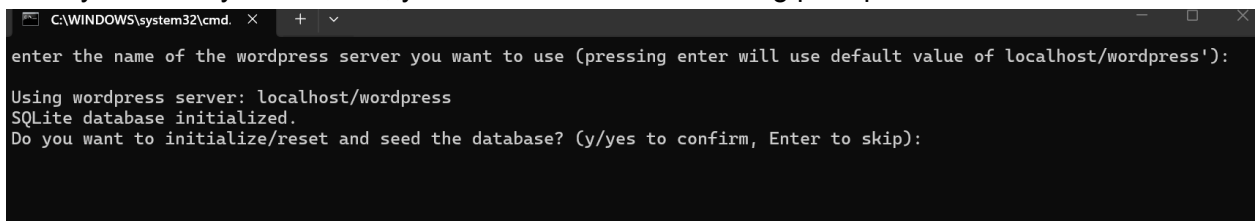


```
C:\WINDOWS\system32\cmd. x + v
enter the name of the wordpress server you want to use (pressing enter will use default value of localhost/wordpress):
```

- 3) The first prompt will ask for the wordpress website you want to use for the articles section of the app, you can use [yoursweetspot.life], but that does not have any articles or categories as of me writing this. You can use any website here. You do not need to include https// in front.

In order to use locally hosted wordpress sites, use localhost/<Insert-folder-name-here>. This will only work if apache and MySql are running.

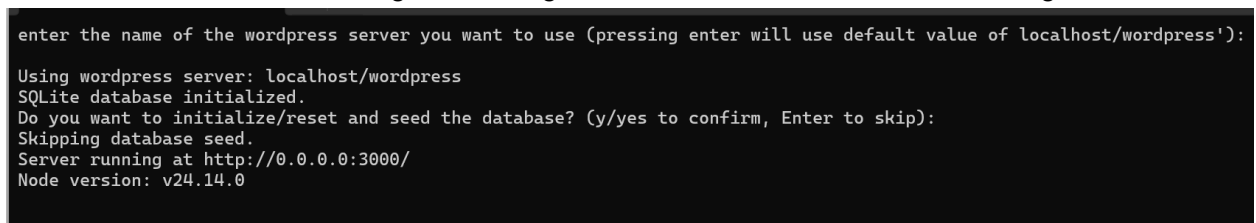
- 4) Once you select your website, you will then see the following prompt



```
C:\WINDOWS\system32\cmd. x + v
enter the name of the wordpress server you want to use (pressing enter will use default value of localhost/wordpress):
Using wordpress server: localhost/wordpress
SQLite database initialized.
Do you want to initialize/reset and seed the database? (y/yes to confirm, Enter to skip):
```

press y or type yes, then hit enter if this is the first time you are running the app or if you want to reset the database to the default setting. Please enter to skip this step should you so choose

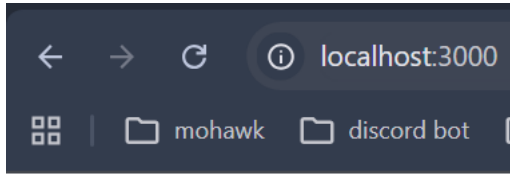
- 5) You should now see something resembling this. That means the server is running.



```
enter the name of the wordpress server you want to use (pressing enter will use default value of localhost/wordpress):
Using wordpress server: localhost/wordpress
SQLite database initialized.
Do you want to initialize/reset and seed the database? (y/yes to confirm, Enter to skip):
Skipping database seed.
Server running at http://0.0.0.0:3000/
Node version: v24.14.0
```

- 6) To double check this, type localhost:3000 in a web browser, and you should see this in the top left corner of the screen

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HydroLodge server is running

- 7) Once the backend is running, you can go to the other command prompt, you should see a QR code



- 8) You can scan the QR code on your phone to access the app via your phone or use one of the option provided here (a for a local android emulator and w for a browser based on) to run the app

Enjoy and once again, if there are any questions, Feel free to reach out via the email provided on the first page.

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Outstanding Issues & Future Plans

Outstanding Issues:

Our application is currently a demonstrational product for shareholders. Implementations such as setting up connections to sensors, figuring out what sensors are needed, IOT implementation for remote access, along with better security and accessibility practices will be needed to begin on the final product.

A recommendation to our client would be to create a working prototype of a lodge, gather information about plants (and their growth cycles), figure out how data from sensors could affect plant growth, and a server or provider to host databases before continuing development on the application. A large amount of functionality comes from external sources, which could always change, having these external systems set in stone will allow for a much more streamlined development in the future.

We would also recommend hiring a System Architect to fully design the system and provide documentation allowing for a more professionally designed system, allowing students to work more efficiently and on a more guided route.

Future Plans:

Jacob is not planning to continue working with the client. However they are open to providing support to team members who do plan to continue working with her, should they have any technical questions.

Cynthia is considering continuing working with our client as building more applications or continuing to develop and maintain the Hydrolodge App would be valuable experience. However Cynthia's time will be limited over the summer, so she is planning on discussing opportunities with the client and will evaluate how the client could fit into her plans.

Nicholas is not planning on continuing to work for our client as after further research on Your Sweet Spot Life, discovered they would be incompatible with the company based on some investors' values, a bias against the use of generative AI as YSSL uses a large amount of it in other projects, and has doubts that the current phased strategy is entirely plausible.

Mason is happy to continue working on this project as he has already started communicating with the client about continuing, and has already started to take a look at other projects such as StartBox. He also has plans to update the backend to include a console to allow users to view the logs and update static data in the database (growthstages)

GitHub Repo handover

<https://github.com/HydroLodgeApp>

Four Repositories:

- 1) HydroLodge-Companion-App
 - Front-end app repo
- 2) HydroLodge_Server
 - Back-end server and user database repo
- 3) HydroLodge-General-Repo
 - Contains the API Schema
- 4) HydroLodge_WordPress_Database
 - Temporary WordPress setup used when developing Education section

For Marguerite: We will give you admin access so you can view and manage the GitHub organization. The GitHub organization contains all four of the repositories listed above. If you have any questions regarding this, please let us know.

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