meeting #21 (virtual) 3/24/23

meeting time: 1:30 PM - 2:00 PM

Raspberry Pi connection

using a struct to communicate with the Arduino

- possibly contain spices and quantities

For software

- stick to local database (SQL), can query easily
- Also look into Microsoft SQL server and other backend databases

3D models

- Mount bearing table
- start by printing one housing to ensure measurements

3/27/23

Meeting #22 (virtual)

meeting time: 9:30 AM - 11:00 AM

Getting access to 3D printing shop

Models ready for 3D printing (housing, spiral, base, gear)

Looked into Microsoft SQL server, may end up using that for local database for recipes

Setting up local environment for the database development (Microsoft SQL server)

meeting #23 (In-Person) 3/29/23

meeting time: 8:00AM - 9:00AM

meeting Notes

- SQL database
  1) Start simple
  2) Basic structure: Recipes with spices (multiple) and their quantities
- Motors
  1) Working motors; can be turned on and off w/ Pi

-3D printing
  1) Focus on 1 or 2 housings for demo if the rest of the modules aren't done in time
  2) Possibly look outside of A&M for 3D printing shops

(28)

Meeting #24 (In-person)

4/3/23

Meeting time: 10:00 Am - 11:10 Am

met in person on mondays for Pair Programming with Arduino, database design

meeting #25 (In-person) 4/5/23

Meeting time: 8:00 AM - 8:40 AM

Meeting Notes:

Database:

Look into whether Microsoft SQL server is compatible on Pi / Linux

Go simple; possibly a column for each separate slice since we'd only be working with 8 slices

Printing:

Faster than expected, soon to send 2nd round of prints in

Library for communication between Rasp. Pi and Arduino

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meeting #26 (In-Person)

meeting time: 10:00AM - 12:00PM

4/10/19

Plans for today:

Test communication between Pi and UI; be able to run UI on Pi

Fix with issues with Raspberry Pi

Interacted with database to display database table column for recipes on UI

Installing packages for Java onto the Pi

Meeting #23 (In-person) 4/12/23?

Meeting time: 8:00 AM - 8:50 AM

Meeting Notes:

3D printing:

main gear finished; lids for housings, soon to be finished

UI/API:

1 main error that still needs to be resolved (API application)

General design w/ housing:

Utilize springs

Ensure springs are electrically insulated to prevent them from heating up too much

Handling max tolerance may be difficult

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meeting #28 (In-Person)

meeting time: 8:00 AM - 9:30 AM

9/13/2

physical design:

base finished, need to figure out where to fit stepper motor

Need to implement serial communication between UI and motors

Finishing touches for UI

Meeting #29 (In-Person)

Meeting time: 8:00 AM - 9:30 AM

Design:

Base parts glued together

Planning to dispense spices off to the side (opposite side from where stepper motor gear is)

Zipties to hold down stepper motor?

Also some guards to hold motor in place, or a brace block

Take motor voltages into account with the entire system

(34)

Meeting #30 (In-Person)

Meeting time: 8:00 AM - 11:20 AM

4/24

Final testing for system

- may need more voltage for stepper motor
- Need to connect serial comms with button press for UI
  1) possibly use a sorted array to store the mapping values of the selected spices, send data structure to Arduino

-Too much friction between gears and stepper motor

Demo:

- might demonstrate a single spice being dispensed
- Rotation not working for the entire system
- Show UI on Raspberry Pi

Meeting #31 (In-person) 4/26/23

meeting time: 8:00 AM - 11:10 AM

Demo:

Got individual slices to dispense based on user input

Display GUI on Pi

Run application from Laptop