**WEEKLY REPORT and MEETING AGENDA**

Report #: 4 Project Name: SPICE

Date: 3/29/2023 Prepared by: Carlos Zapata III

**Agenda for the meeting**

1. Print shop update, 3D models
2. Discuss local SQL database for recipes
3. Progress with motors and Arduino

**Overall accomplishments since last meeting**

1. Completed 99% of 3D modeling
2. Confirmed access to FEDC
3. Finalized front-end, decided on what database to use for the recipes
4. Controlled motors

**Tasks completed by each team member since last meeting**

| Task description | Assigned to | Completed? |
| --- | --- | --- |
| Redesign Connection to housings | Caleb/Carlos | No |
| Fabricate Rotating Base | Caleb/Carlos | No |
| Control motors via PWM | Kile/Caleb | Yes |
| Obtained individual FEDC memberships and applied for team membership | All | Yes |
| Finished remaining 3D models | Caleb/Carlos | Yes |
| Converted 3D models into .stl format for 3D printing | Caleb | Yes |
| Sent models to FEDC to print | Carlos | No |
| Finished front-end for UI | JP/Carlos | Yes |
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**Plans for next period**

1. Redesign connection system for housings
2. Wait for/receive printed parts from FEDC, then begin assembling individual spice housings
3. Develop a communication system between the Raspberry Pi and Arduino
4. Design/implement recipe database

**Task assignment per team member (to be completed before the next meeting)**

| Task description | Assigned to |
| --- | --- |
| Fabricate Rotating Base | Caleb/Carlos |
| Redesign Connection to Housing | Caleb/Carlos |
| Continue Working on UI | JP/Carlos |
| Assemble spice housings | Caleb/Carlos |
| Develop communications between Raspberry Pi and Arduino | Kile/Caleb |
| Design/Implement recipe database | JP/Carlos/Caleb |
| Develop/test controls for arduino motor speed | Kile/Caleb |

**Project management status**

1. Now have access to the FEDC, can put in 3D print requests

**Minutes from previous meeting**

Meeting Minutes (March 8th):

* Dr.M: Updated Functionality?
* Carlos: Scrapped mechanical coupling system
  + Switched to electrical system
* Dr.M: Describe electrical socket
* Caleb: The socket will have a pin for power and motor control
  + Pins that give information on what container connected to
* Dr.M: if by mistake ground goes to power, causes a short
  + Could be a serious danger
  + Still need to make sure in the right position
  + Chance of error because of mechanical movement
* Carlos: Pin system reduces number of mechanical components
* Dr.M: Software can double check that connection is made
  + Explain data pins, how much voltage needed
* Caleb: Would have some pins not connected
* Dr.M: Likely better to have them attached to ground
  + Expecting
* Caleb: Showing 3D components
  + Rotating Base and Stepper motor to gear
* Dr.M: Want functional parts before CDR
* JP: Demonstration of front end, grabbing laptop
* Kile: Pi & Arduino power motor, but its very slow
  + Want to add extra functionality for controlling motors
* JP: Looking at UI, run through functionality
* Dr.M: What can we expect for CDR
  + Don’t need everything to be put together
  + Good to have anything, just want a system to show