CSULB – College of Engineering
Computer Engineering
Senior Design Project
CECS-490A

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- Jonathan Cerniaz
- Jehmel Espiritu
- Jeremy Espiritu
- Joseph Guzman
- Afzal Hakim
- Lee Roger Ordinario

Prof:
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Weekly Report 4

Last week's list… ✅🟡❌

Jonathan Cerniaz:

- How to get pills to dispense without cross-contamination. 🟡
- Placement of object recognition.✅
- Dispense history 🟡
- Power supply (options) ✅

Jehmel Espiritu:

- Motor placement in our design 🟡
- Software development for our motors 🟡
- Look into various sizes for stepper motors ✅

Jeremy Espiritu:

- Research object recognition and dispensing for our design 🟡
- Help with motor placement and software development for our motors 🟡

Joseph Guzman:

- Design, building, and placement 🟡
- Raspberry Pi implementation 🟡
- Hardware connections ❌
- Space management 🟡

Afzal Hakim:

- User Interface Development ✅
- Security Device Integration with Automation🟡
    - Building an Application for easy use
- Log Management and Data Tracking❌
    - Research on SQL on how to store and retrieve data

Lee Roger Ordinario:

- Object recognition area design and concept ✅
- The complete layout of compartments and how the pills reach the dispensing area 🟡
- Dimensions of pill compartments and dispense mechanics 🟡

Did you accomplish what you planned?

This week presented some challenges. We made progress by finalizing the selection of devices and determining their intended use. However, we still need to develop the software parts for it, so a significant amount of work remains. We still haven't confirmed if we want to use MySQL or any other software to store the logs. Additionally, we are conducting more research on how to dispense the pills safely and quickly as some pills could break during dispensing. We are deciding whether to use a 3-prong AC Power cord for the power supply to power our device and surge protector power strip.

If not, why?

We encountered several challenges that delayed the progress. With the progress report and presentation happening, we needed to be more focused on finishing and preparing them. However, some challenges are still coming up the closer we get to the final design, including lacking measurements and addressing cross-contamination concerns. These challenges need to be resolved to ensure the success of our project.

Are all team members accounted for?

Yes, we are all accounted for, and we are communicating consistently. We all have our assigned tasks and work together if necessary.

Next week's plan, specific to each individual:

Jonathan Cerniaz:

- Dispense history.
- How to get pills to dispense without cross-contamination.
- Start User Interface code
- Research on touchscreen interface and how we will make it work

Jehmel Espiritu:

- Start coding the motor movements for the pill dispensing
- Focus on how to implement the Launchpad for our motors
- Think about where the motors will be placed on the pill storage

Jeremy Espiritu:

- Continue researching on object recognition and dispensing for our design
- Start coding the object recognition for our design
- Help with motor motor placement and software development for our motors

Joseph Guzman:

- 3D Print of front plate housing

- 3D Print of storage for pills
- Design, building, and placement
- Raspberry pi implementation
- Space management
- Software Development
- GitHub Repo Organizing

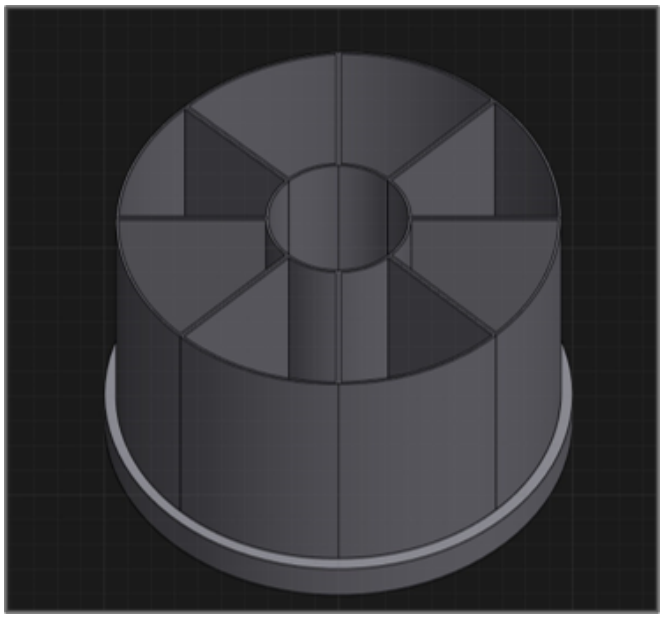
Afzal Hakim:

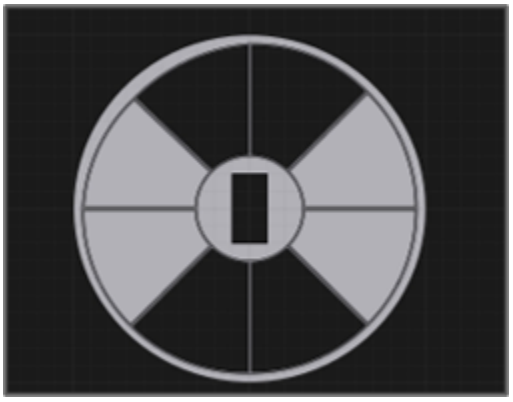
- Log Management and Data Tracking
- Research on SQL on how to store and retrieve data
- More research on how to use Raspberry Pi

Lee Roger Ordinario:

- The complete layout of compartments and how the pills reach the dispensing area
- Dimensions of pill compartments and dispense mechanics.

Pictures/Screenshots:





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3. "How to Control Servo Motors with a Raspberry Pi." Digi-Key Electronics, www.digikey.com/en/maker/tutorials/2021/how-to-control-servo-motors-with-a-raspberry-pi.

4. "Pharmaceutical Packaging Design Tips for Improved Safety." Luminite, blog.luminite.com/blog/pharmaceutical-packaging-design-tips-for-improved-safety.