Project Name: Pill Dispenser
Sponsor: Quality of Life Plus (QL+)
Created by: Team Pharmhouse

Project Overview
Team Pharmhouse designed and manufactured a pill dispenser that is able to distribute a desired amount of medication pills to their respective days in both weekly and monthly pill organizers, including am and pm weekly containers. The dispenser also is able to be compatible with pills of a variety of shapes and sizes, as it is common for users to take multiple unique pills per day. The design will accommodate users with impairments such as arthritis, color-blindness, and various upper extremity issues. Simple, intuitive operations in conjunction with durability make this device the perfect solution. Lighter and smaller than similar products make transportation even easier.

Team Members
Chandler Meziere
Team Leader
Jeff Smith
Systems Engineer
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Manufacturing Engineer
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Software Engineer
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Design Engineer
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Procurement Engineer
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Systems Engineer
Micah Spence
Quality Engineer
Jennifer Thai
Software Engineer

Manufactured Product

CAD Design
Counter Subsystem - Exploded View
Separator Subsystem - Exploded View
Complete System - Collapsed View

Specifications
Size Envelope: 11.9" x 9.8" x 8.9"
Power Required: 12V 60Hz AC
Weight: 12.8 lbs.
Transport Method: (2) 2" Nylon Straps

Main Components:
- FDA Approved Food-Safe Materials
- Arduino MEGA
- Raspberry Pi 3B+
- IR Break Beam Sensors

- Micro Precision Servo Actuator
- Nema 17 Stepper Motor
- SD10 Servo Motors
- 7" LCD Screen
- 12V Power Supply

System Level Diagram

Electronic Connections Diagram

Project Budget: $5000
Costs Spent: $1214
Excess Budget: $3786

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