



Pill Pusher

RObotoMy

Introduction

People need their medication

Traditional pill organizers are time-consuming to set up and easy to misuse

Missed or double doses can lead to serious health complications

Existing automatic dispensers are expensive and not user-friendly

Hardware

Raspberry
Pi Pico

3 push
buttons

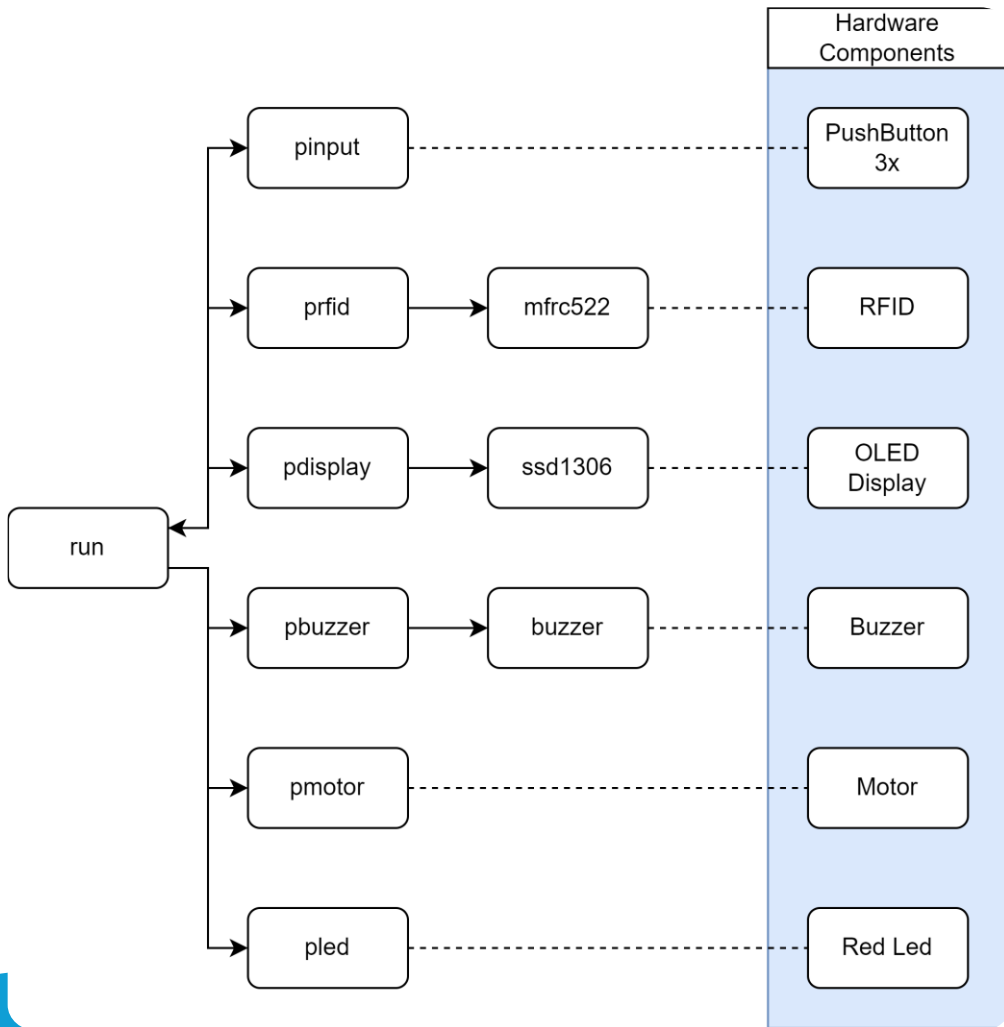
RFID
(RC522)

Servo
(SG90)

OLED
(SSD1306)

LED

Buzzer



Software

Micropython

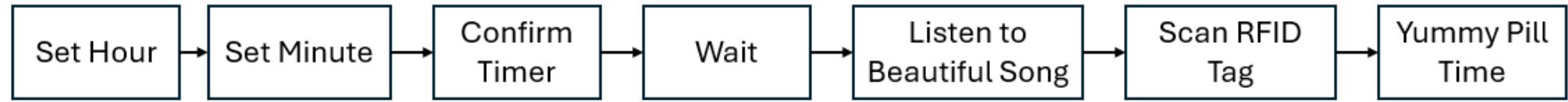
MFRC522 Interface

SSD1306 Interface

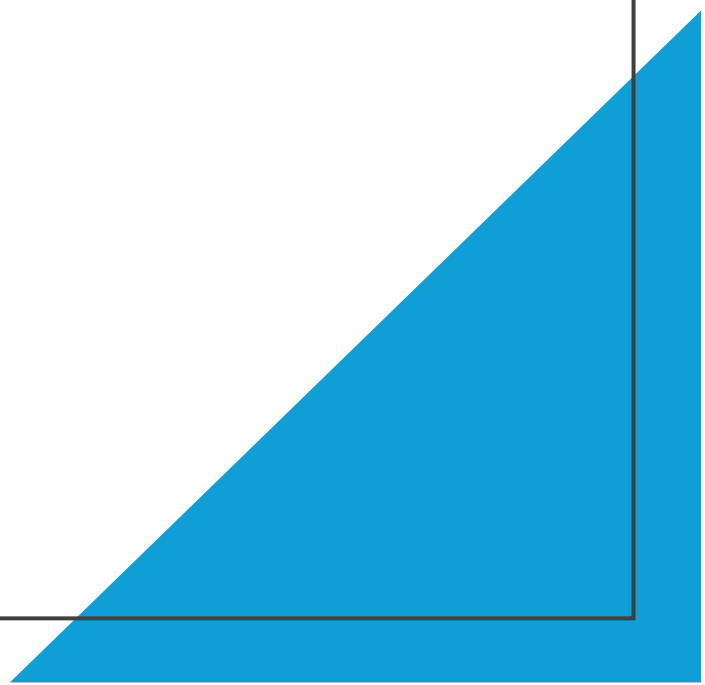


Specifications

Specification	Description
1) User Set Timer	<ul style="list-style-type: none">• Two buttons to set the timer to a specific hour and minute.• A third button to initiate the pill countdown.
2) Organic Light-Emitting Diode (OLED) Display Screen	<ul style="list-style-type: none">• The countdown will be displayed on an OLED screen so the user can clearly keep track of the timer.
3) Buzzer	<ul style="list-style-type: none">• When the timer is finished, a buzzer will sound to audibly alert the user that it is time to take their pill.
4) Radio Frequency Identification (RFID) Security & Timer Lock	<ul style="list-style-type: none">• To dispense their medication, the user must scan the RFID tag.• Timer lock so that while the timer is going, the pill will not dispense.
5) Mechanical Dispensary	<ul style="list-style-type: none">• The system will mechanically output the pill to the user for them to take.



Demo



Key Learnings

