



Smart Pill Container

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Project Goal

As we age and acquire more responsibilities, keeping track of which pills to ingest becomes more difficult. Our purpose is to create a Smart Pill Container that would remind people to take their pills at proper time intervals. Since it is an IoT device, the user's data can be stored in a database that family members and friends can access to make sure that their loved one is taking their medications.

Timeline and Progress

Start	End	Task Name	WEEK NUMBER							
			2	3	4	5	6	7	8	9
1/6/20	3/12/20	Research/Redesign and testing	[Task bar]							
1/13/20	1/20/20	Sensor hardware + circuitry setup	CJ/AD							
1/13/20	1/20/20	Add LED Indicators and buzzers for alarm	AN/JO							
1/20/20	1/25/20	3D Print a protective case		CJ/AD						
1/25/20	2/25/20	Wifi module setup + circuitry			AN/JO					
2/18/20	2/25/20	Develop Mobile App					CJ/JO			
2/12/20	2/25/20	Create logging system and transmit data through wifi						AN/AD		
2/25/20	3/1/20	Beta testing/ask users to help us						AN/AD		
3/1/20	3/12/20	Create Documentation							JO/AD	
3/7/20	3/12/20	Final Testing								Everyone

Future Works

- Wifi Module Setup and Circuitry
- Develop mobile software application that fully integrates with the Smart Pill Container
- Set up database to store user data
- User Beta Testing
- Create Documentation for the Users

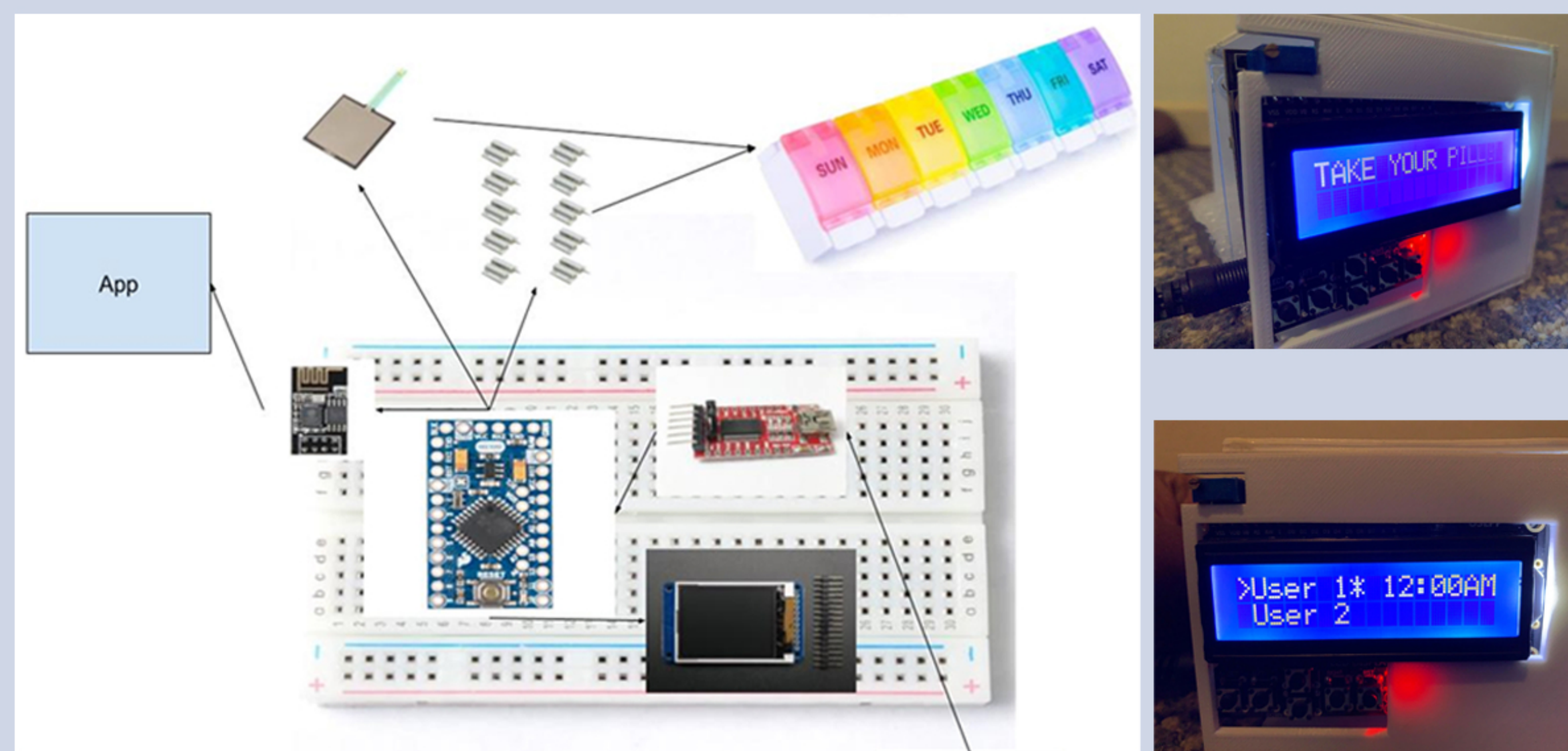
Materials

- Arduino Uno
- Magnetic Reed Switches
- ESP2866 Wifi Shield
- 1.8" Color TFT LCD Display
- 7-Day Pill Container
- 3D Printed Electronic Casing

Contact

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Hardware and Software System Design



Challenges

- Trouble communicating with sensors
- How to cleanly wire the circuit through the pill container
- Finding time to meet outside of class to work on the project

References

Hayes, Tamara L. "An Electronic Pillbox for Continuous Monitoring of Medication Adherence." 2006 International Conference of the IEEE Engineering in Medicine and Biology. John M. Hunt, Andre Adami, Jeffrey A. Kaye. 2006. 6400-6403.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2911441/?fbclid=IwAR02krSQz_19qIOsFkstd3uVzpT-VybimFtGLDZ718CZZi0diYR_lrMQVS4

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