

To Online Shop, Or to Not Online Shop

By: Amiah Gooding, Matthew Martin, Max Minard, Smruthi Sandhanam,
Travis Stanger, and Yana Aleksandrova

Sdmay20-19



Overall Scope

- **Purpose:** Utilize online shopping and at-home experiences to enhance the shopping capabilities of customers.
- **What is it?:** An IOT based solution that combines mobile app development, communication with hardware sensors, and data management.
- **Expected Outcome:** A proof of concept for a single location (ex: cabinet or cupboard) with hopes of expanding to other places in the home.



Technical Goals

Home IoT Goals

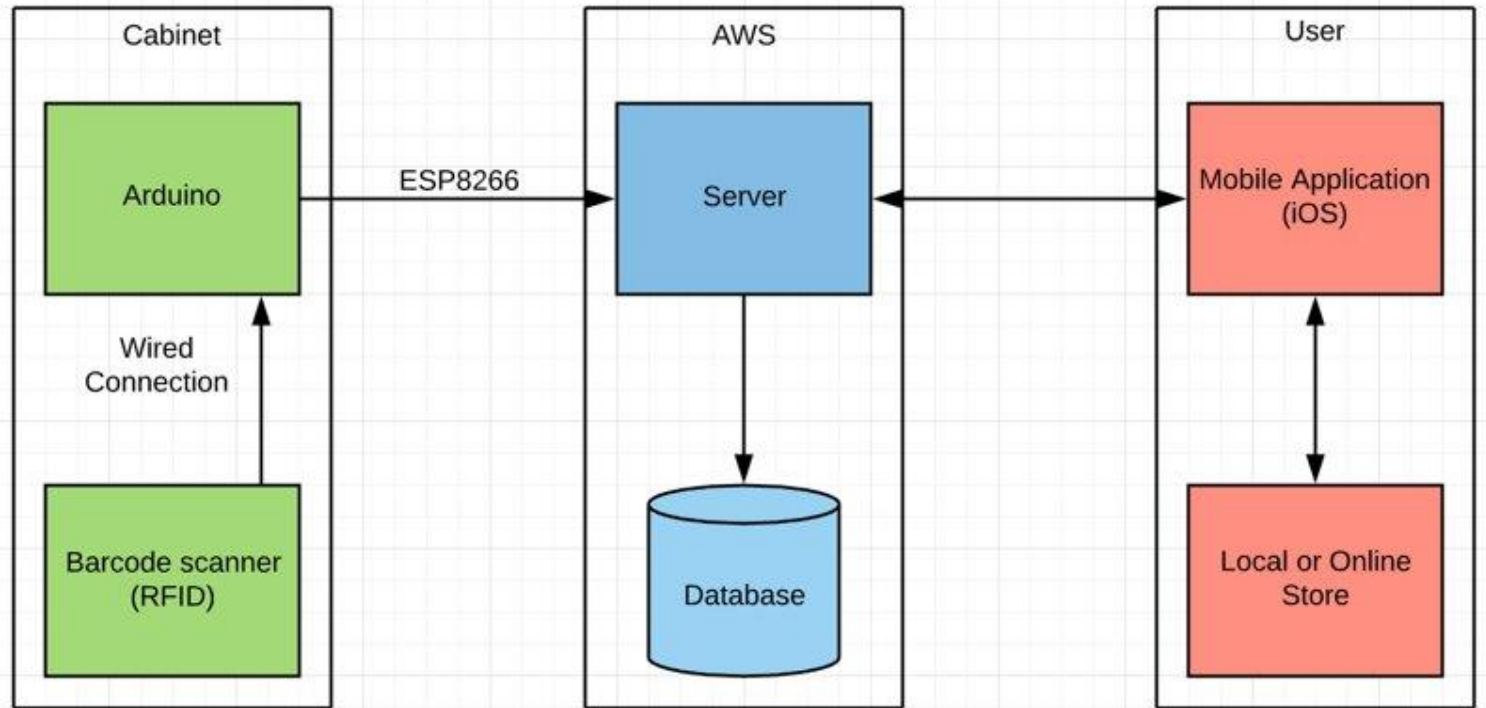
- Sensor based data collection
- Populating application database with the itemized pantry contents
- Sensor data to be transmitted on Wi-Fi to Arduino

Application Goals

- Mobile application that gathers data from hardware components via an itemized database
- Application retrieves the list items need to be bought from the database
- Algorithms to determine if it's cheaper to buy items online or in-store
- Uses geolocation to figure out the best deal for buying a product



System Block Diagram



Timeline

Position	Milestone/Activity	Start Date	End Date
1	Formalize Scope/Identify main components	9/6/19	9/20/19
2	Research	10/1/19	10/10/19
3	Use-case scenarios and main approaches	10/7/19	11/1/19
4	Converge on design/Basic functionality	11/1/19	11/30/19
5	Revisit design decisions	1/13/20	1/30/20
6	Begin Component Testing	1/30/20	2/28/20
7	Complete initial integration w/ testing	2/28/20	3/30/20
8	Complete "dry-runs" of demo	3/30/20	4/30/20

Task #	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20
1	X							
2		X						
3		X						
4			X					
5					X			
6						X		
7							X	
8								X

