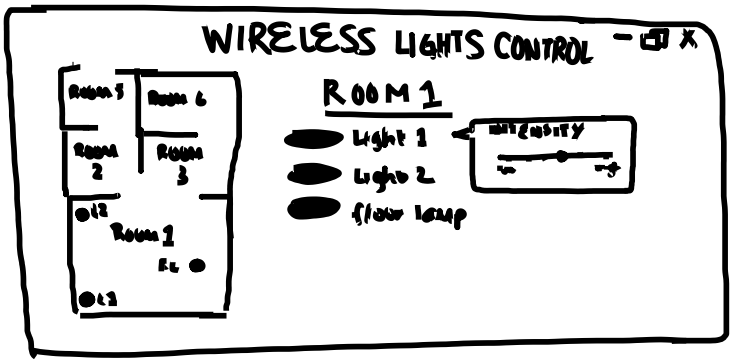
IOT PROJECT IDEAS: 10 plus 10 method

(1) IDENTIFY THE PROBLEM

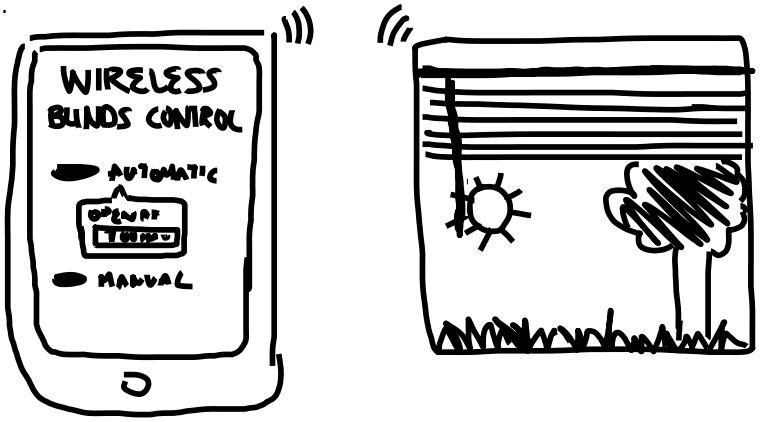
I'm interested in connecting ordinary home controls to the internet and being able to use your phone to control them. Additionally, I am also interested in merging art & creative expression with internet of things, so it can be automatically digitized.

(2) DESIGN CONCEPTS

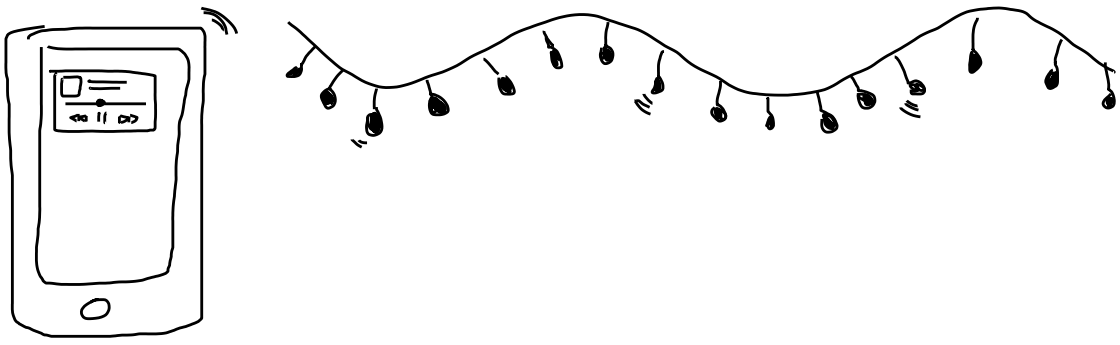
1. Wireless Lights Control: Control your lights in your home through your phone or computer.



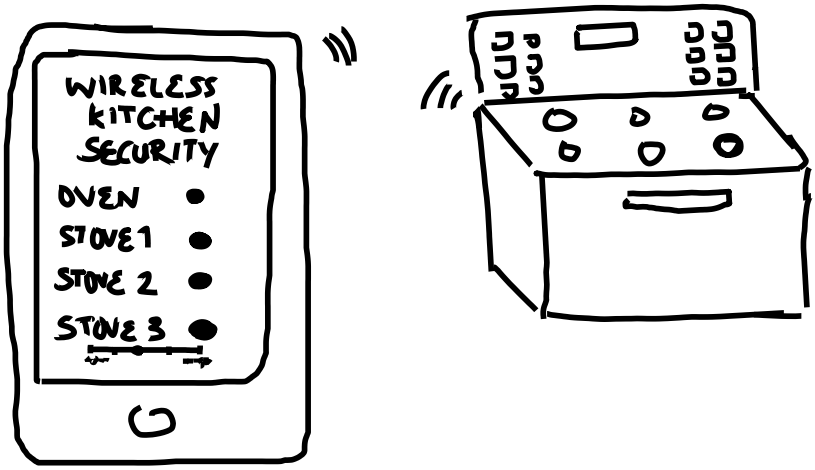
2. Wireless Blinds Control: Automatic blinds that close based on sunlight, time and your own specifications.



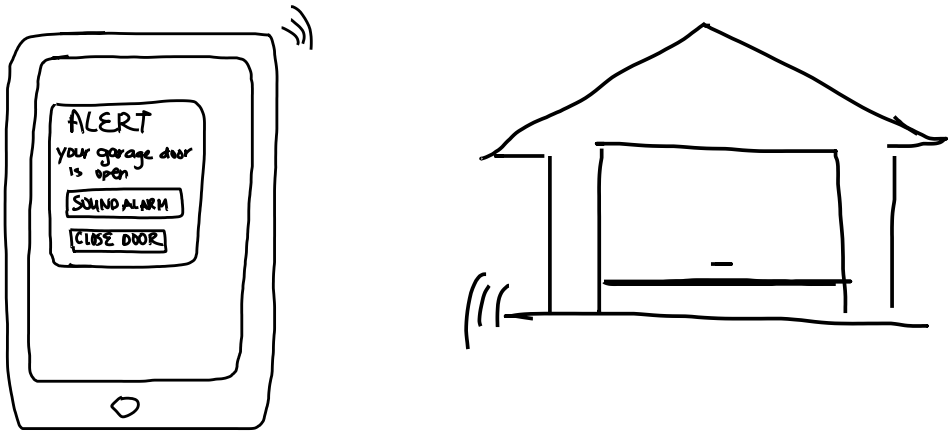
3. Wirelessly control decorative lighting using music and sound. You can control whether they're on or off, control the intensity and the patterns of the light. This can be used for decorations in and outside your house.



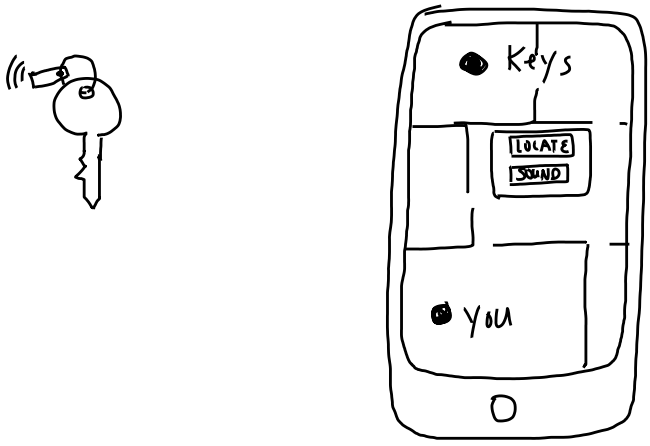
4. Wireless Kitchen Safety: A device that you can put on your oven and stove to control and check whether they are on or off.



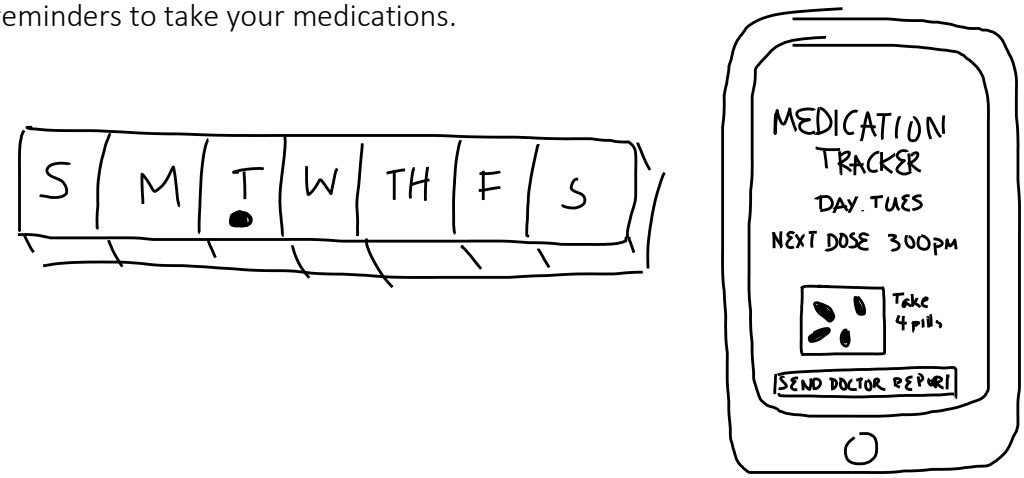
5. Wireless Home Safety: Check through your phone if your garage is closed and all doors/windows are locked. You'll get an alert if you leave the house with any of the above open.



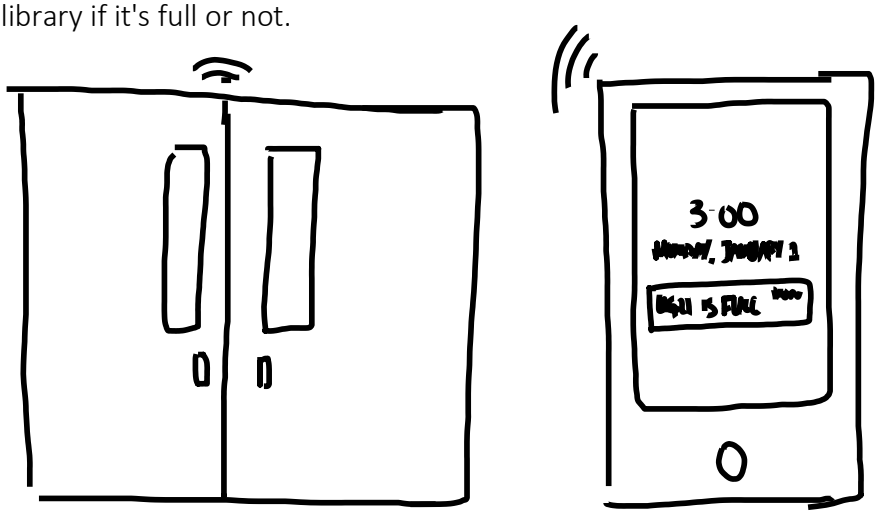
6. Wireless Tracking System: A tracking device that you can put on your keys, wallet, bags, people so you know where you left them



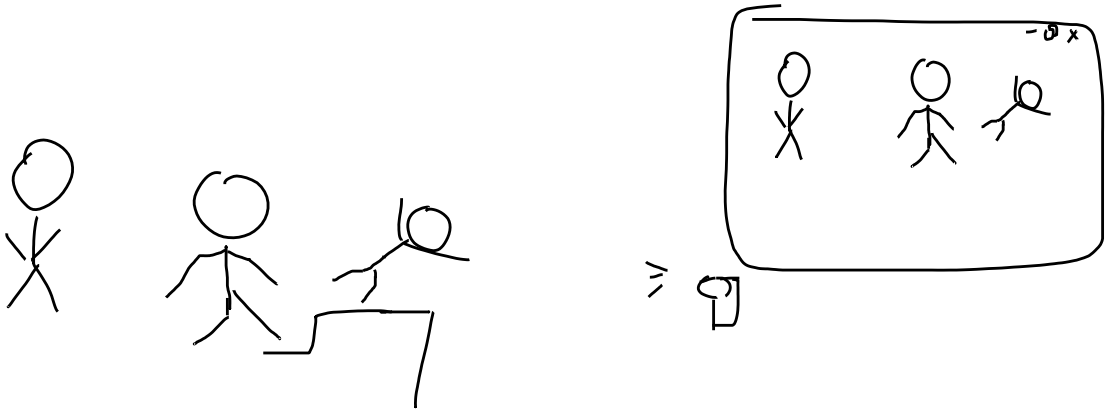
7. A tracker that connects to your phone that tracks your medication intake and sends reminders to take your medications.



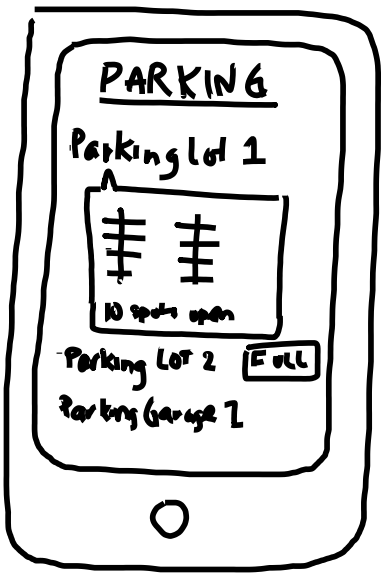
8. A sensor that tells you how many people are in a library at a given time. It checks when someone walks in and unchecks when someone leaves. That way you can know before you go to the library if it's full or not.



9. A tracker that translates movement into drawings and animations with a pressure sensitive screen that can be used to track a finger to draw and to play games.



10. A tracker that tells you if there is space to park in a parking lot.



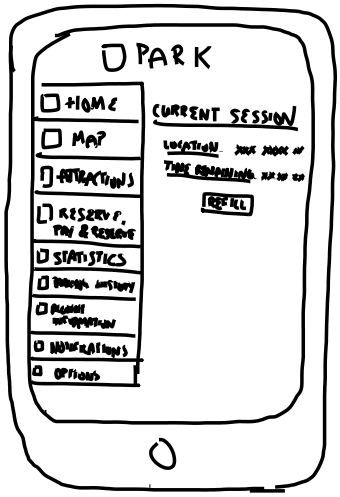
(3) REVIEW DESIGN CONCEPTS

The recurring themes in my designs are trackers that link to an application to find or take care of something automatically (instead of physically having to do it).

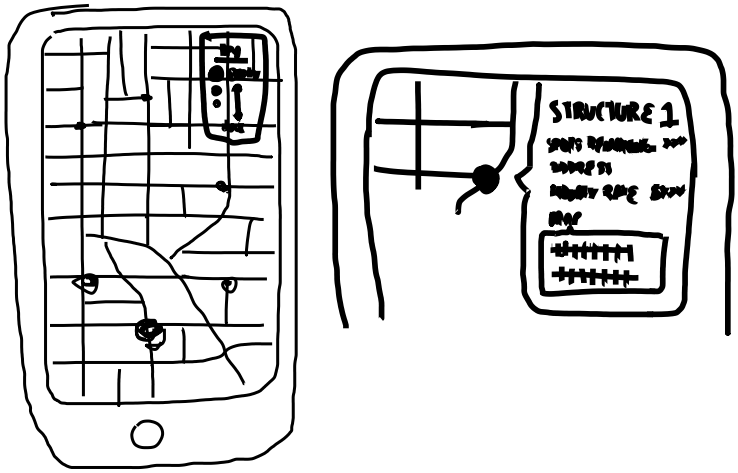
(4) STARTING CONCEPT/PITCH

Finding parking in Ann Arbor is a pain. Although there are many parking structures, open lots and street parking, many times they are all full or reserved and you end up wasting a lot of time looking for a parking spot. If trackers could be implemented to keep track of which spots are empty and that data could connect to an application, then it would save drivers a lot of time. This app will not only make parking easier for people, but also easier for the police department to regulate parking.

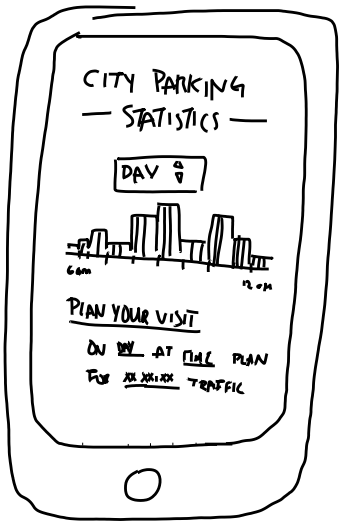
(5) VARIATIONS OF STARTING CONCEPT



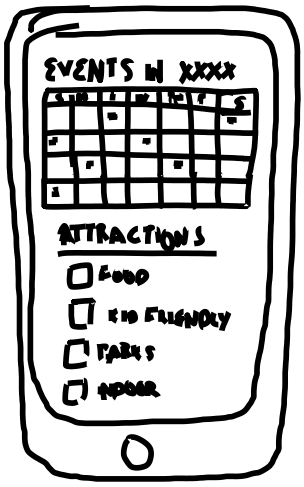
1. Since there are already meters that check if someone has paid for a spot, you can use that data to see if someone has parked.
    - Drawback: someone could've payed for more or less time they parked for, so it won't accurately tell you if the spot is full or empty
2. Use a presence or proximity detection sensor to track each parking spot
3. A map showing all of the possible parking in the city. User can click on the lot/structure to see detailed information about it (and also see a map of how the spots are laid out & see which ones are taken)



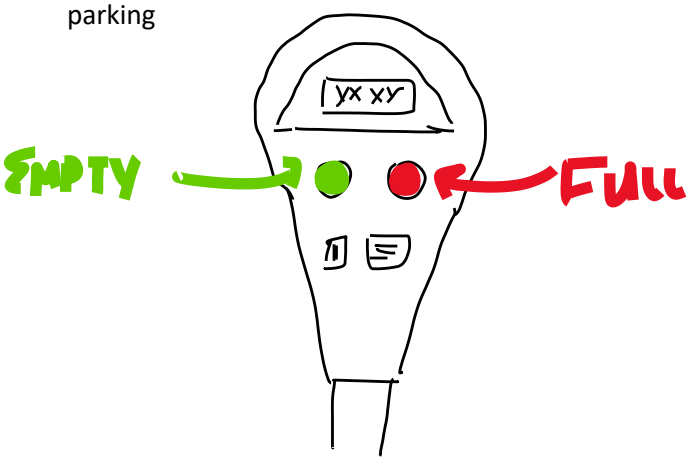
4. Have a report about how busy parking lots/structures are depending on the time, day and time of year.



5. Have an Attractions & Events tab to see what's going on in the city, and tells user if there will be more traffic in the area than normal.



6. Short term reservations: Reserve a spot a few hours prior to parking in the area
   Drawbacks:
   - Someone else can park in your spot, making you lose money
   - Meters have to clearly show that spot has been reserved
     - To get around these issues, there can be a section of the lot for reserved parking



7. Long term rentals: Rent a spot for a month or longer

8. Pay for parking through the app or at the meter & also have an option to refill
9. App sends a reminder before meter time is almost done. User can customize how long before the app will send reminder. Another option can be to use GPS to track how far you are from your car, and app will send you a reminder according to that time.

10. Users can create an account and access their parking history throughout the city

11. Creating a rewards system for users who use the app to reserve & pay for parking consistently
    - For example, for every 15 hours of parking reserved through app, user can park anywhere in the city for an hour for free

12. Instead of having timed meters, can park just park and your card will be charged after you move your car

13. Have an option to report to the police department if someone took your reserved spot
    - This can be eliminated if there is a designated area for parking in each lot/structure
    - If not designated area, meters need to have some sort of digital marker that shows if the spot has been reserved (Green & Red lights)