

ZIB Smart Home



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Problem / Solution

Problem

The system has many important functions.
That makes the device too complicated and difficult
for the user to access and control.

Solution

Simplifying the design will make it easily access to
the function that the user can easier control.

Project Goal

Design luxurious smart home systems
that provide services and contents
according to user needs and experiences.

Research

According to cnbc.com, As of the end of 2016, there were a record 10.8 million millionaires nationwide, and according to a new study from Spectrem Group's Market Insights Report 2017.

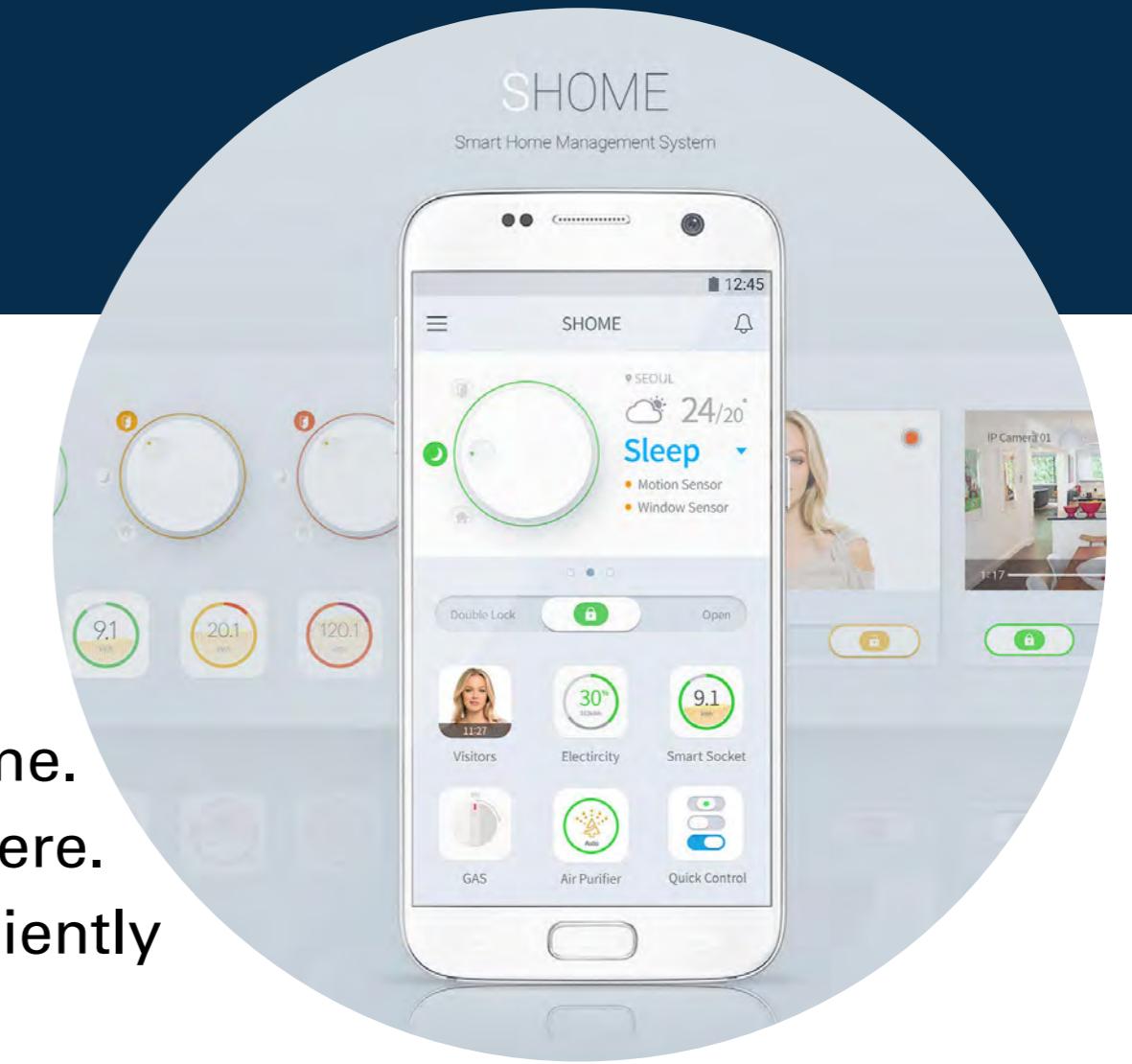
That's more than ever before and marks a 400,000 persons increase from the previous year.

There were 9.4 million individuals with net worth between \$1 million and \$5 million, 1.3 million individuals with net worth between \$5 million and \$25 million, and 156,000 households with more than \$25 million in net worth.

Competitor Analysis

SAMSUNG SMART Home

- Samsung provides many smart home devices such as well pads, door cameras, lobby phones, doorlocks and smart home appliances.
- The devices can be controlled by well unit and mobile app called sHome.
- You will be notified of movement inside your home when you aren't there.
- With the devices and app, users can protect family's safety and conveniently manage their home and visitors from anywhere.



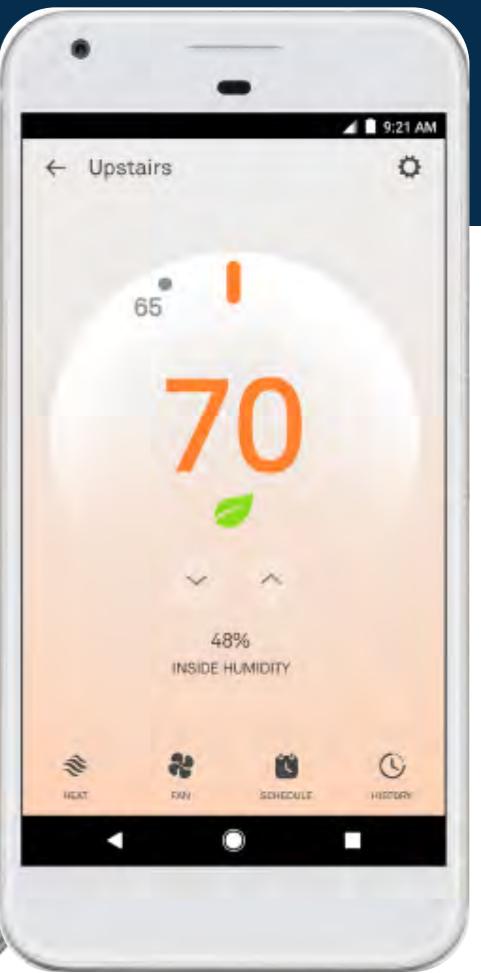
Key features

- Remote Control Smart Devices
- Family Access Care
- Real time monitoring
- Intrusion Detection
- And others.
- Mobile Visitor Call
- Security and emergency alarm
- Door access management
- Energy saving

Competitor Analysis



- Nest provides its home smart devices like thermostats, cameras, doorbell, alarm system, and smoke + CO alarm.
- Nest devices can be controlled by Nest application called Nest.
- Nest provides platform to outside developers for connecting other companies' devices.



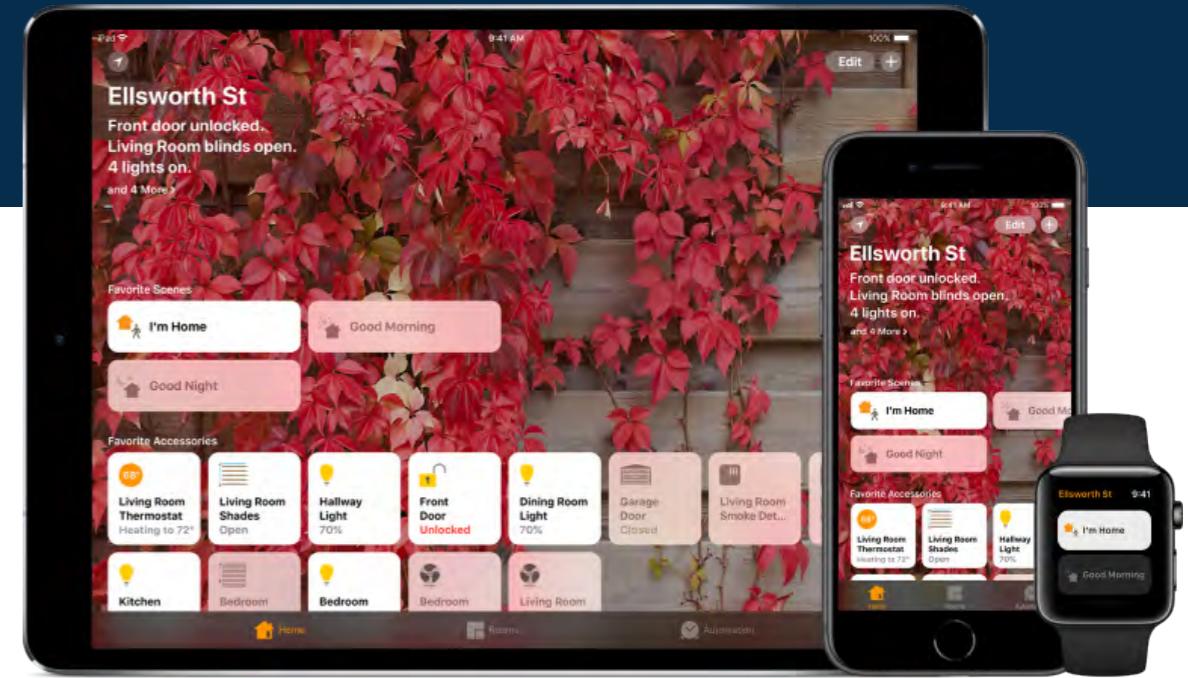
Key features

- Control temperature and energy saving
- Secure alarm system
- The smoke and carbon monoxide alarm for protection
- The security cameras that let you see your home on your phone
- And others.

Competitor Analysis



- Apple's smart home tech for controlling home appliances with iOS device such as iPhone and iPad.
- Apple provides platform, so companies can develop apps for controlling their home products with iOS.
- With the Home app, you can easily and securely control all your HomeKit accessories. (One app for all home accessories.)
- Lights, Switches, Outlets, Thermostats, Windows, Fans, Air Conditioners, Humidifiers, Air Purifier, Speakers, Sensors, Security, Locks, Cameras, Doorbells, Garage Doors, Bridges
- The Home app groups accessories by room.
- Allows users to set scenes, which enable multiple accessories to work in combination.



Target Audience

We were target on the middle to high class of the U.S population.

According to the research.

That's mean 10.8 million is big enough to grow our home security system brand in 2018.

Persona

Mark and Angela Furrows is a new middle-class family in Denver, Colorado. They own multiple hundred units of the rental property in the area. Their revenue was more than 10 million in the past year. They live in five bedrooms, six bathrooms house, located on the top of the hill in a beautiful Breckenridge town, close to ski resort Breck Break.

Mark and Angela have three years old boy named Anthony. He likes to draws, touching, running around, loves music. Yes of cause, making a noise is his favorite.



Mark and Angela

Lifestyle

Mark and Angela leave his kid with nanny sometime when they go out for business. The family activities at home with Anthony, such as cooking, watching the mountain view from the living room and watching movies next to the fireplace is their favorite moment.

Persona

Attou Francis was born and grew up in Africa. He moved to the United States 15 years ago with the green card lottery program.

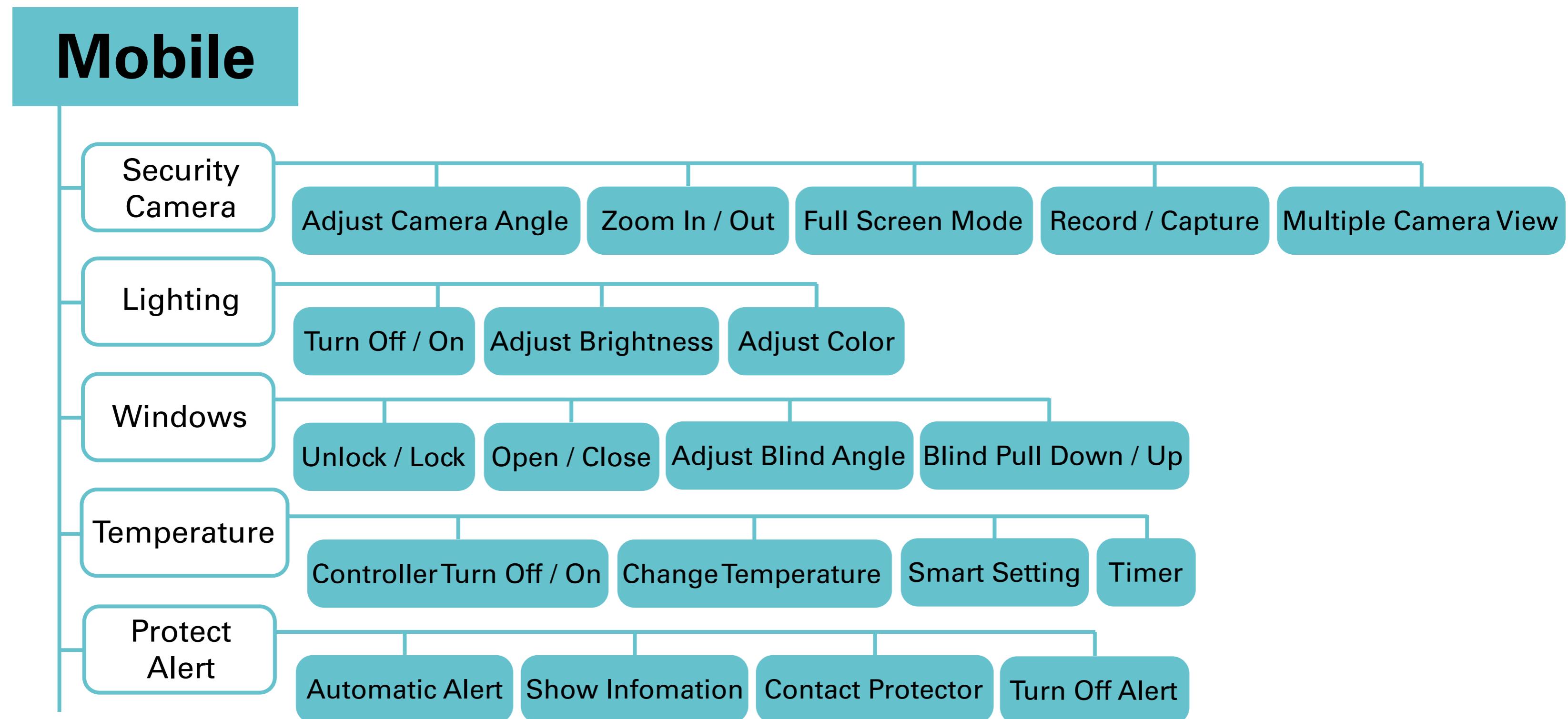
Nowadays, he is the senior electrical engineer at Dell. Dell is an American multinational computer technology company based in Round Rock, Texas, the United States, that develops, sells, repairs, and supports computers and related products. and services.

He is a single man, but his life is so busy with work. He loves to hang out with friends on the weekend. Music and movies are the part of his personal time.



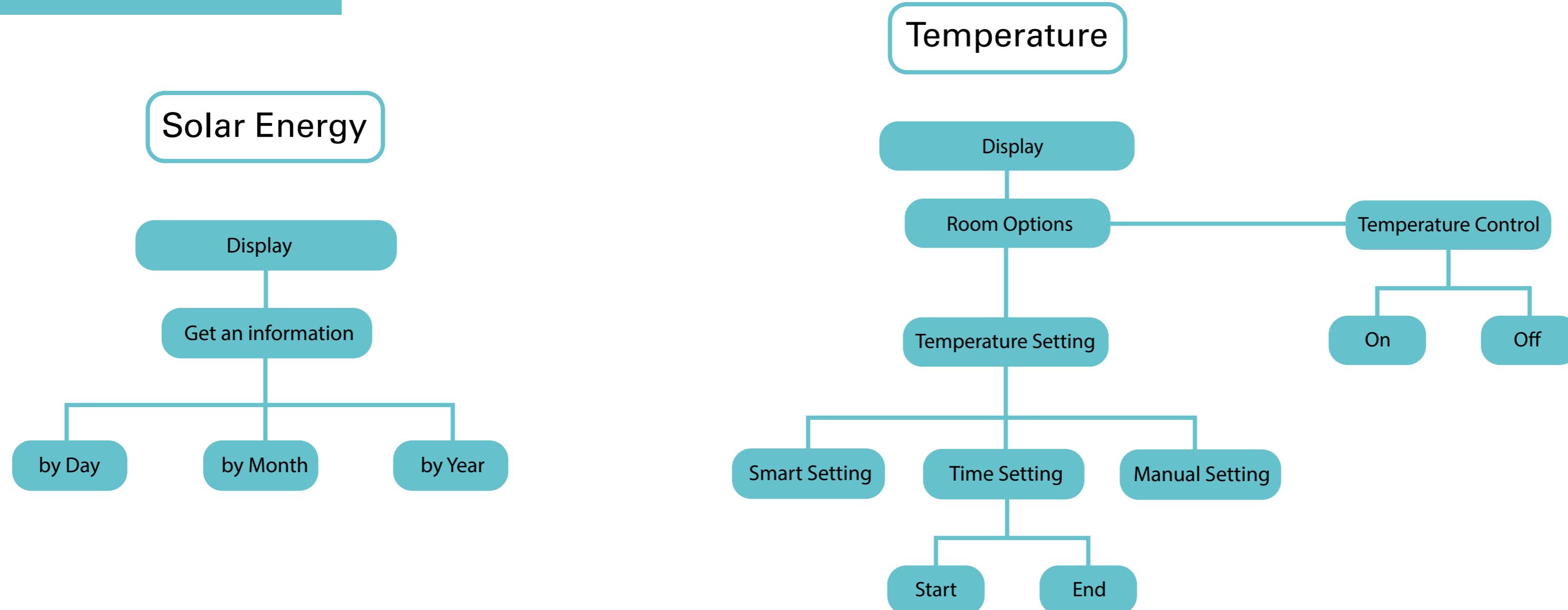
Attou Francis

Information Architecture



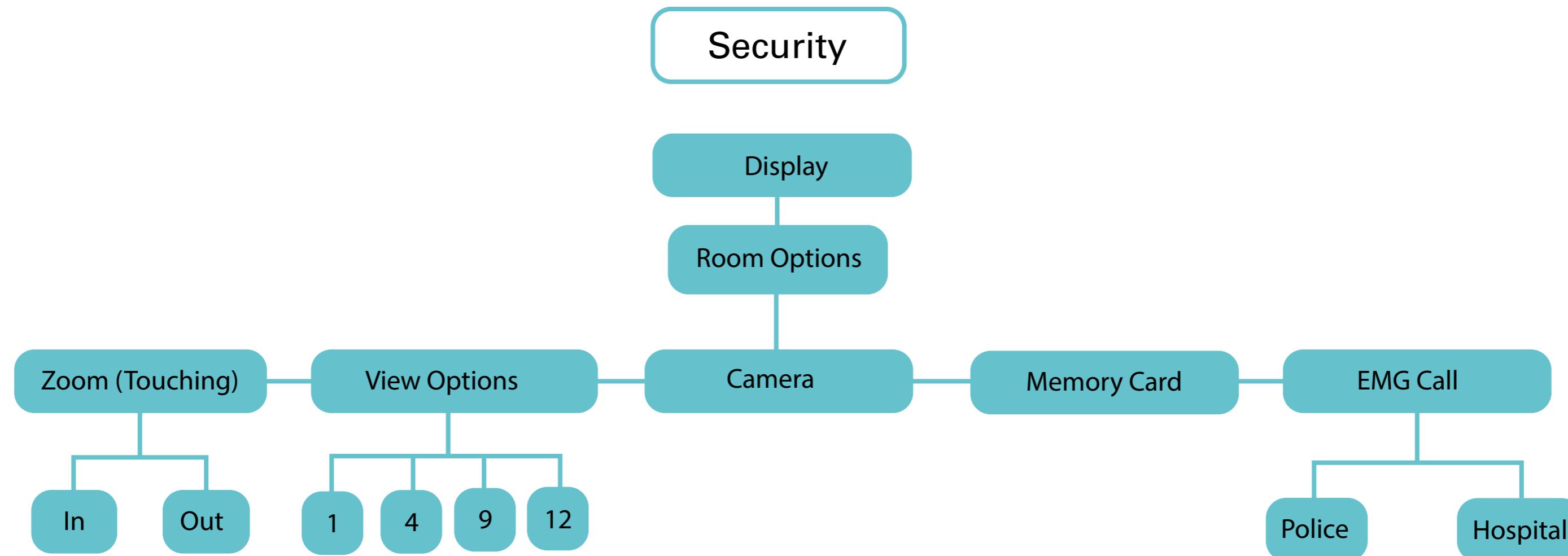
Information Architecture

Main Device



Information Architecture

Main Device



Feature List

Mobile

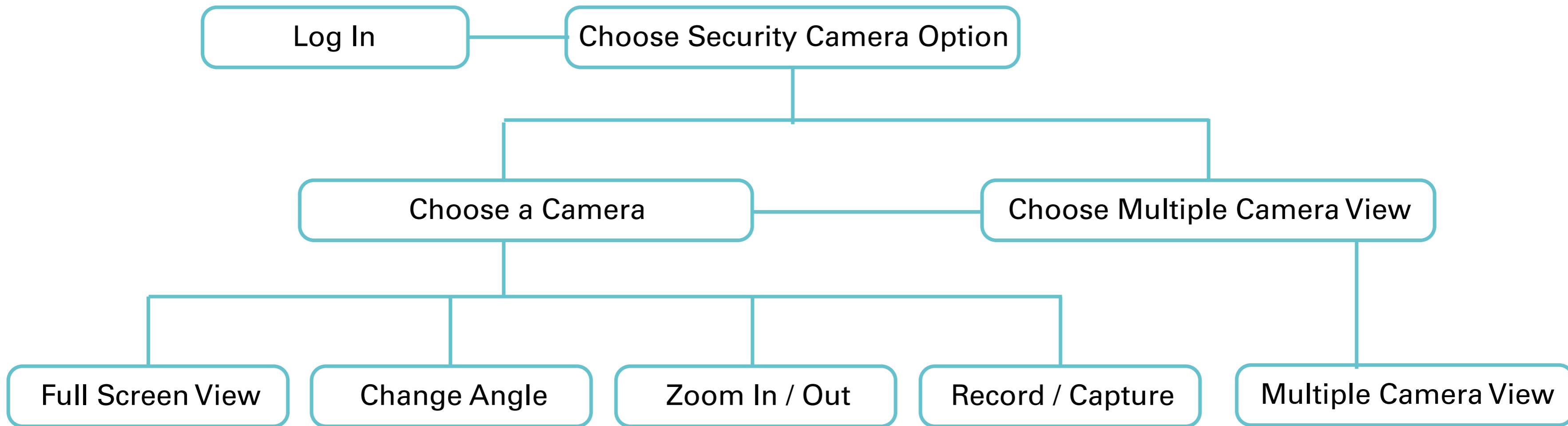
- ◆ Security Camera
- ◆ Lighting
- ◆ Windows
- ◆ Protect System (Alert)
- ◆ Temperature
- ◆ Door Access

Main Device

- ◆ Security Camera
- ◆ Lighting
- ◆ Windows
- ◆ Protect System (Setting)
- ◆ Protect System (Alert)
- ◆ Temperature
- ◆ Solar Energy
- ◆ Home Appliances
- ◆ Door Access
- ◆ Family Access Care
- ◆ Garden, Pool & Spa Care
- ◆ Garage Control
- ◆ Pet Control
- ◆ Cleaning Management
- ◆ Emergency Mode

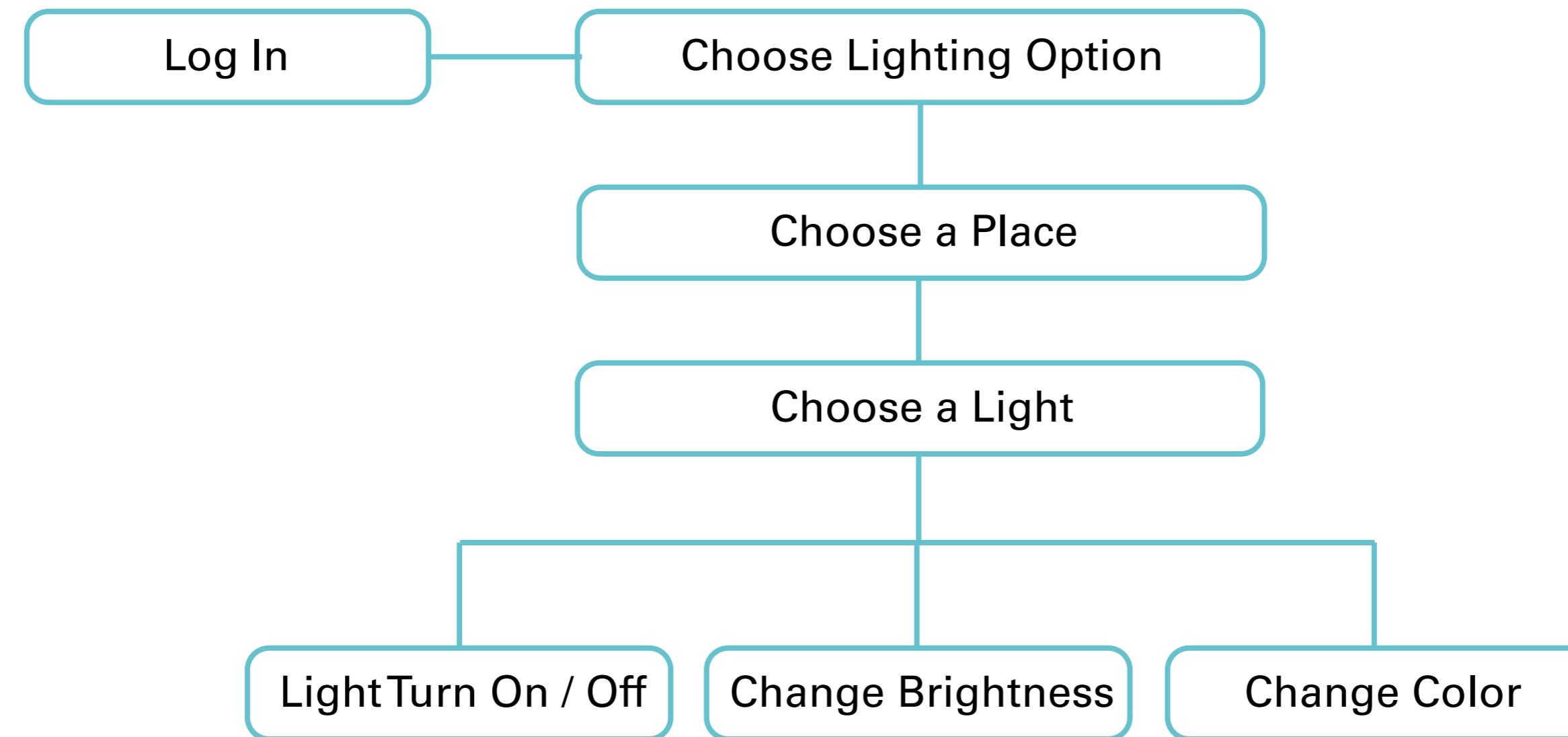
User flows

Mobile (Security Camera)



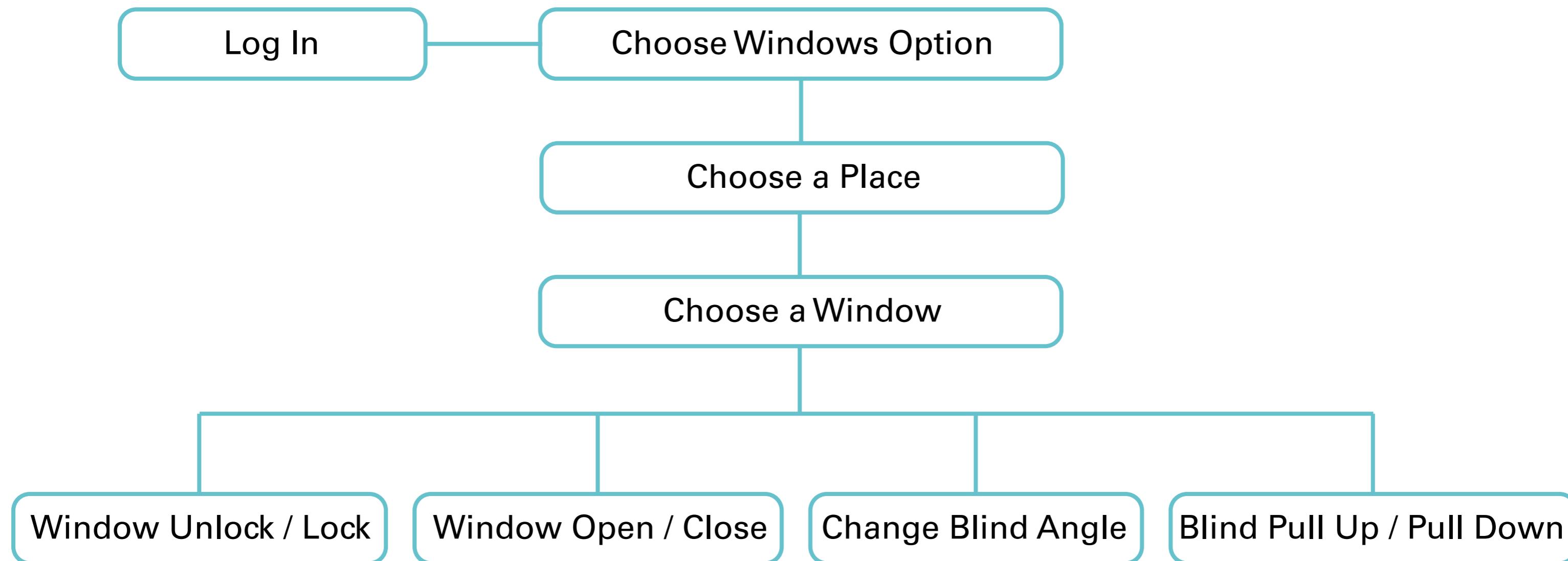
User flows

Mobile (Lighting)



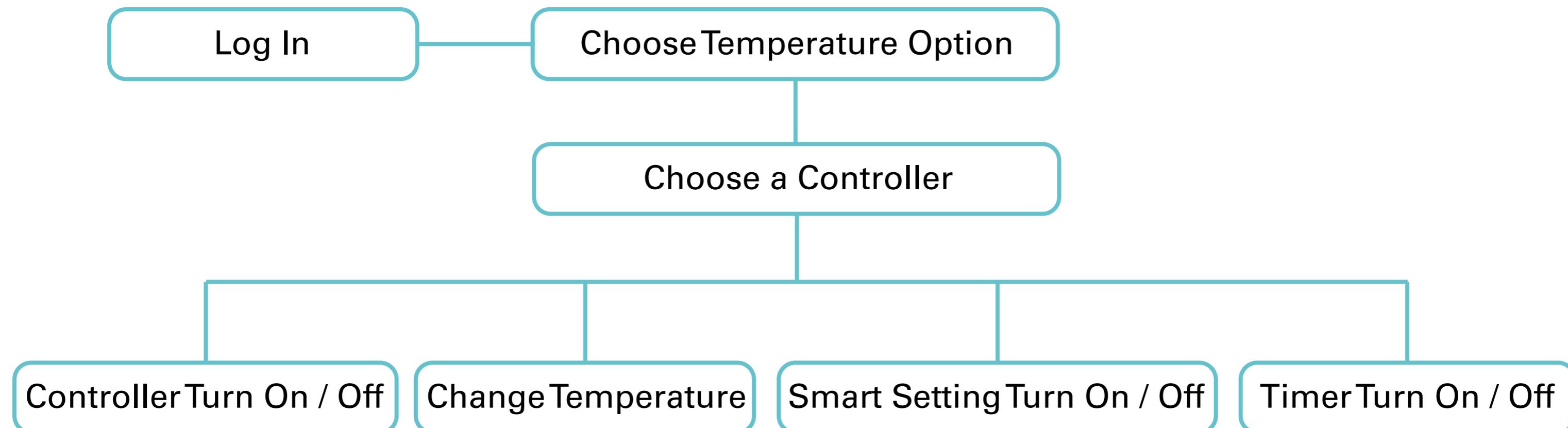
User flows

Mobile (Windows)



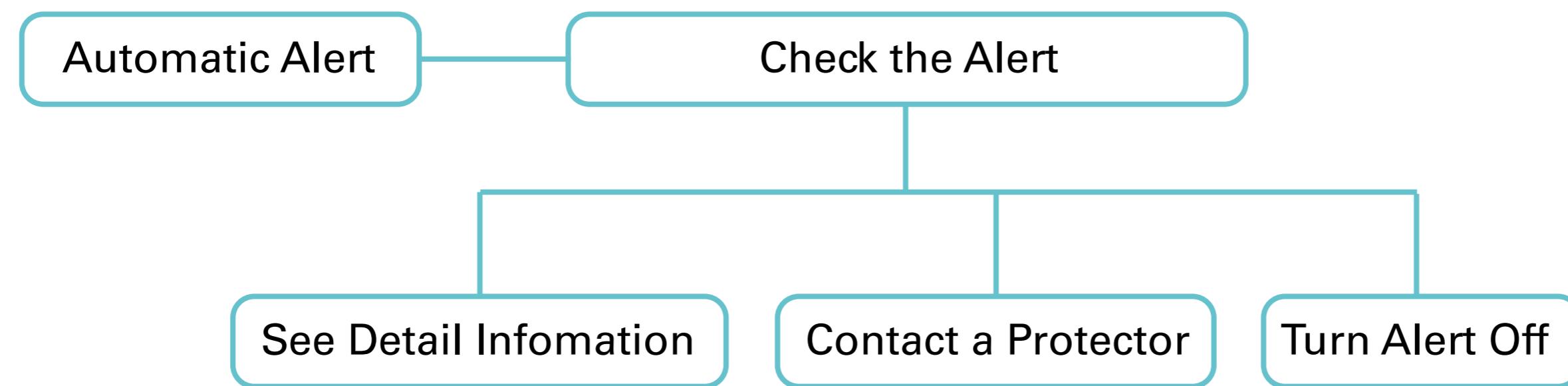
User flows

Mobile (Temperature)



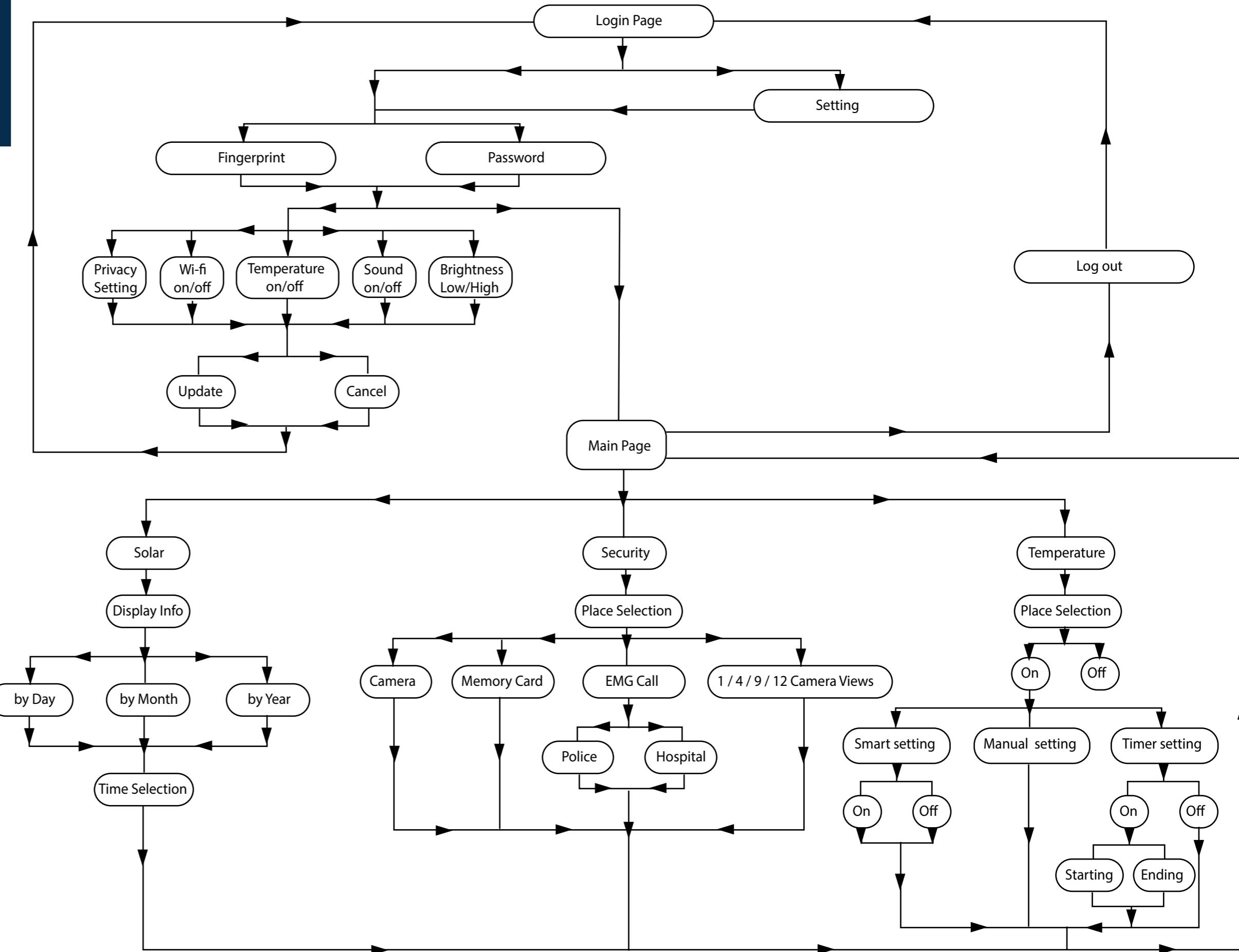
User flows

Mobile (Protect Alert)



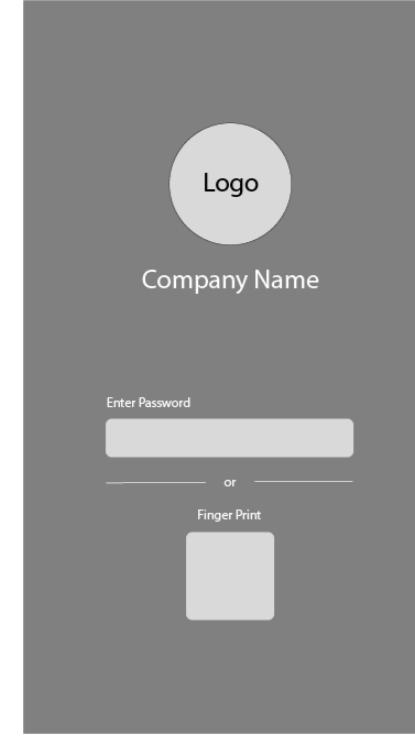
User flows

Main Device



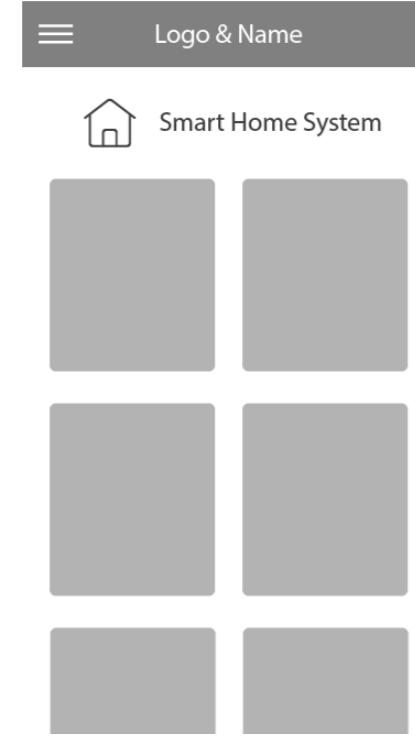
1st Wireframes

login



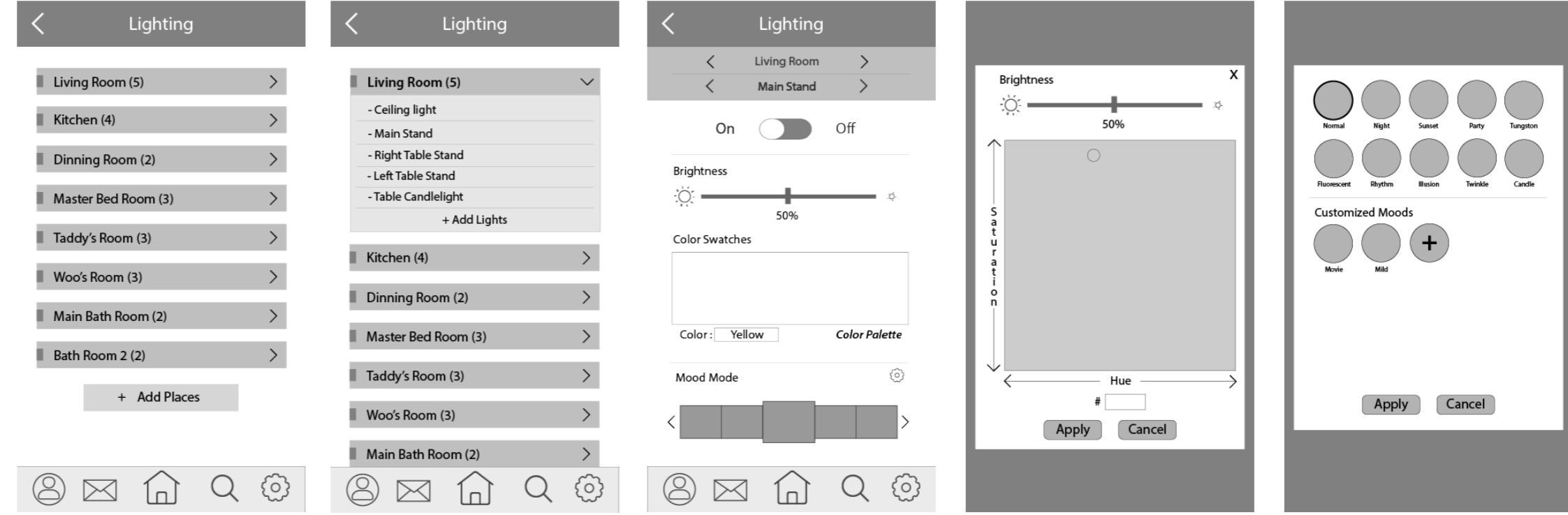
Logo
Company Name
Enter Password
or
Finger Print

Main



Logo & Name
Smart Home System
+ Add Places

Lighting



Lighting
Living Room (5)
Kitchen (4)
Dinning Room (2)
Master Bed Room (3)
Taddy's Room (3)
Woo's Room (3)
Main Bath Room (2)
Bath Room 2 (2)
+ Add Lights

Living Room (5)
- Ceiling light
- Main Stand
- Right Table Stand
- Left Table Stand
- Table Candlelight

Kitchen (4)
Dinning Room (2)
Master Bed Room (3)
Taddy's Room (3)
Woo's Room (3)
Main Bath Room (2)

Living Room
Main Stand

Brightness
50%

Brightness
50%

Color Swatches
Color: Yellow
Color Palette

Mood Mode

Brightness
50%

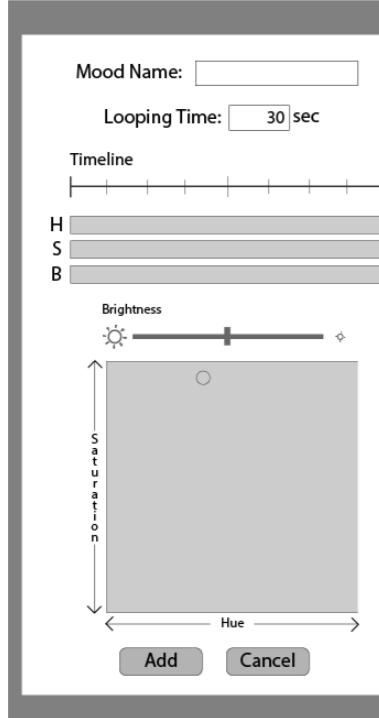
Saturation

Hue

Apply Cancel

Customized Moods
Normal, Night, Sunset, Party, Tungsten
Fluorescent, Rhythm, Illusion, Twinkle, Candle
Movie, Mild

Windows



Mood Name:
Looping Time: 30 sec
Timeline
H
S
B
Brightness
50%

Living Room (3)
Kitchen (2)
Dinning Room (2)
Master Bed Room (2)
Taddy's Room (2)
Woo's Room (2)
Main Bath Room (1)
Bath Room 2 (1)

Living Room (3)
Kitchen (2)
Dinning Room (2)
Master Bed Room (2)
- Veranda Window
- East Well Window
+ Add Windows

Master Bed Room
Veranda Window

Lock
Unlock

Open
0% Open

Blind
180° (Close)
90° (Open)
0° (Close)
5°
Pull Up
0%
Pull Down

Screen Mode Background

None (Off - screen mode)

Theme
Forest, Ocean, Mountain, Desert, Safari
Beach, Valley, Lake

Cities
Paris, Venice, London, Rome, New York
San Francisco, Seoul, Tokyo

National Parks

Category
Theme
Name:
File Path:
Preview:
*Recommended resolution
- Video: 4K
- Photo: 6000 x 4000 or higher

Apply Cancel

1st Wireframes

Protect(Setting)

< Protect System (Setting)

- Living Room (4) >
- Kitchen (7) >
- Laundry Room (2) >
- Master Bed Room (4) >
- Main Bath Room (2) >

+ Add Places

< Protect System (Setting)

Living Room (4) >

Kitchen (7) >

Laundry Room (2)

- Fire & Smoke (Device A)
- CO (Device A)
- Fine Dust (Device A)
- Water Leak (Device B)
- Moisture & Mold (Device B)
- Gas Leak (Device A)
- Insects & Bugs (Device B)

+ Add Protection Device

Laundry Room (2) >

Master Bed Room (4) >

Main Bath Room (2) >

< Protect System (Setting)

Living Room (4) >

Kitchen (7) >

Moisture & Mold

Warning Option
 Message (Only) Message + Sound

Sound Option
< Voice Explanation >

Volum -  +

Humidity (RH) Sensitivity


0 50 100

- Recommended Setting: 60%
- Current Setting: 60%
(It gives a warning if RH is higher than 60%)

Current RH: 38% (Good)



[View Detailed Report](#)

Protect(Alert)

< Protect System (Setting)

Kitchen >

Moisture & Mold

Alert

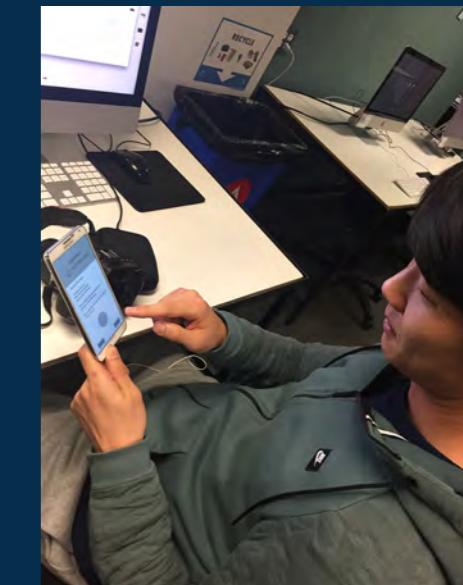
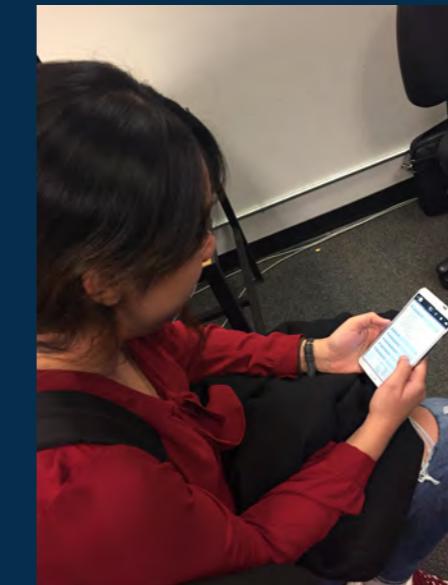
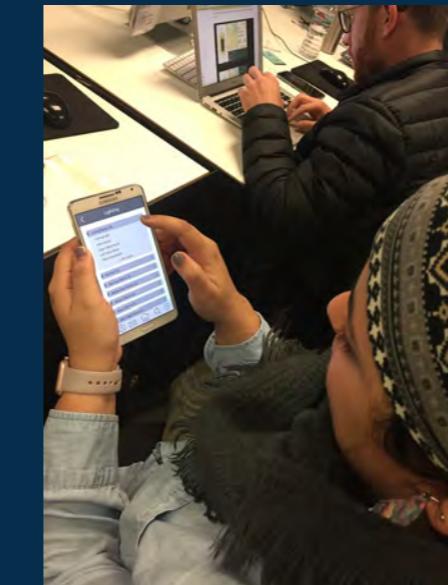
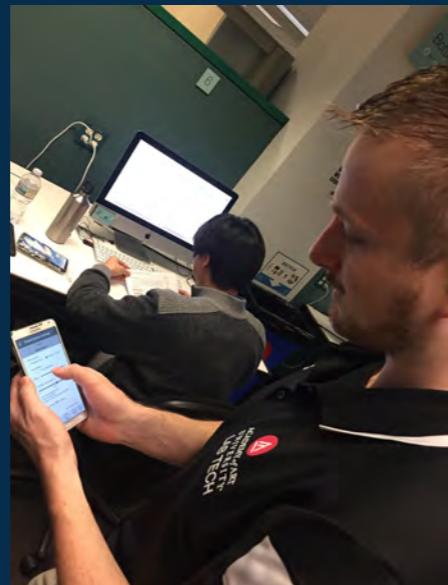
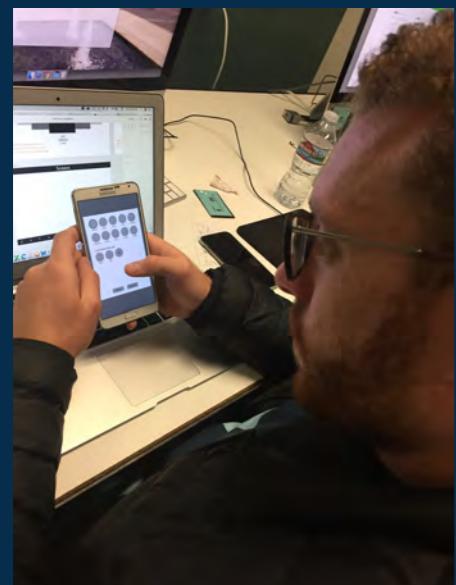
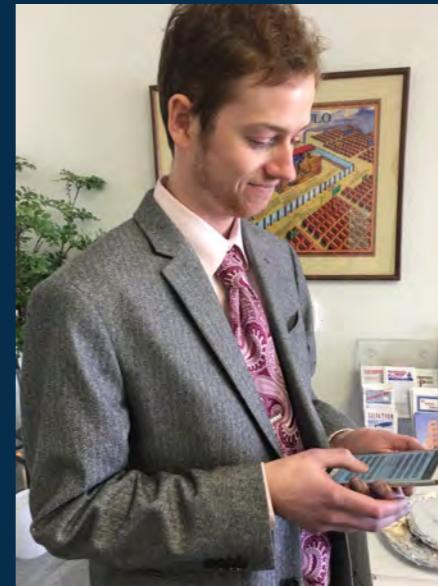
Location: Kitchen

The Humidity (RH) is 62% now

The Humidity (RH)

1st User Testing

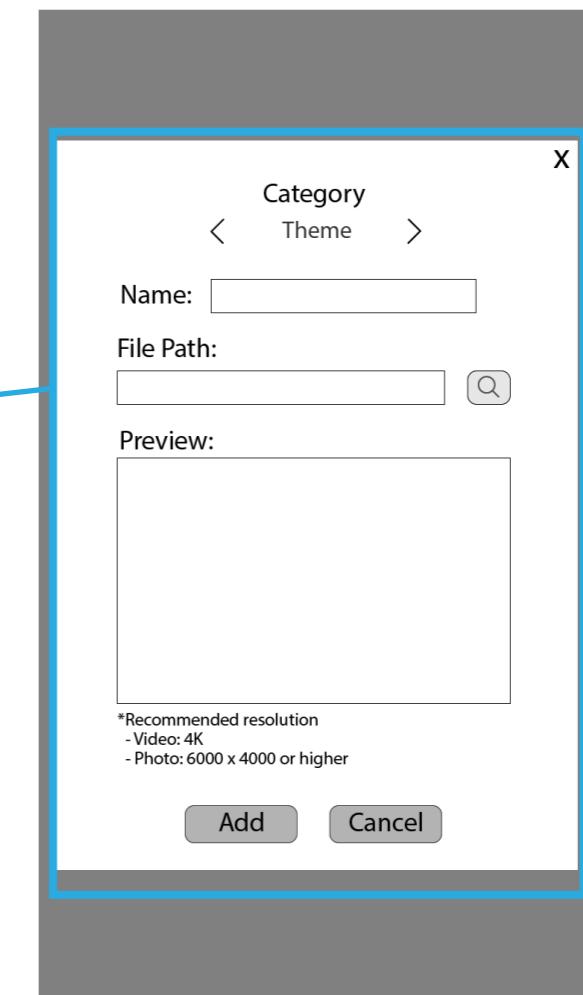
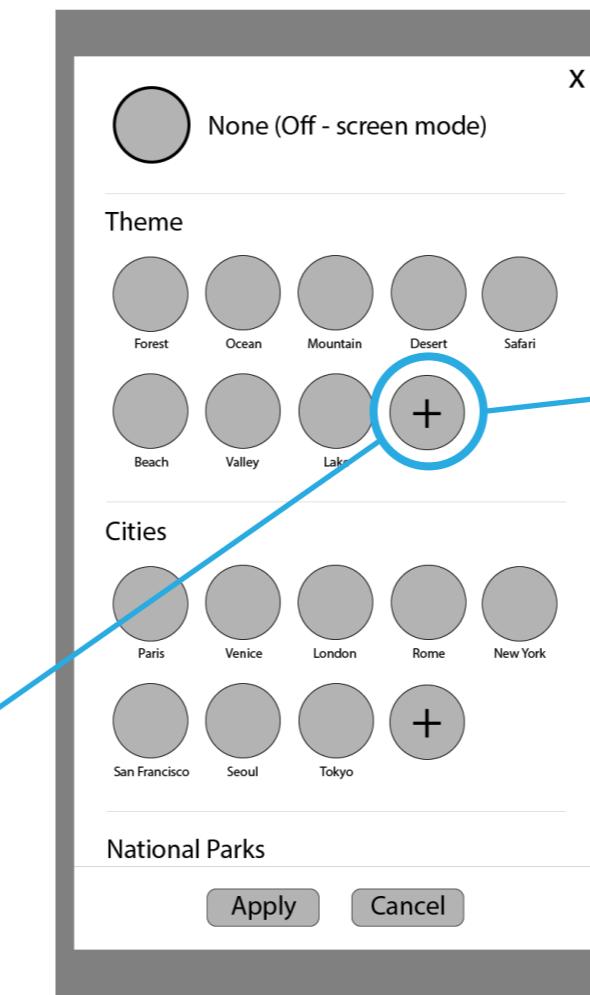
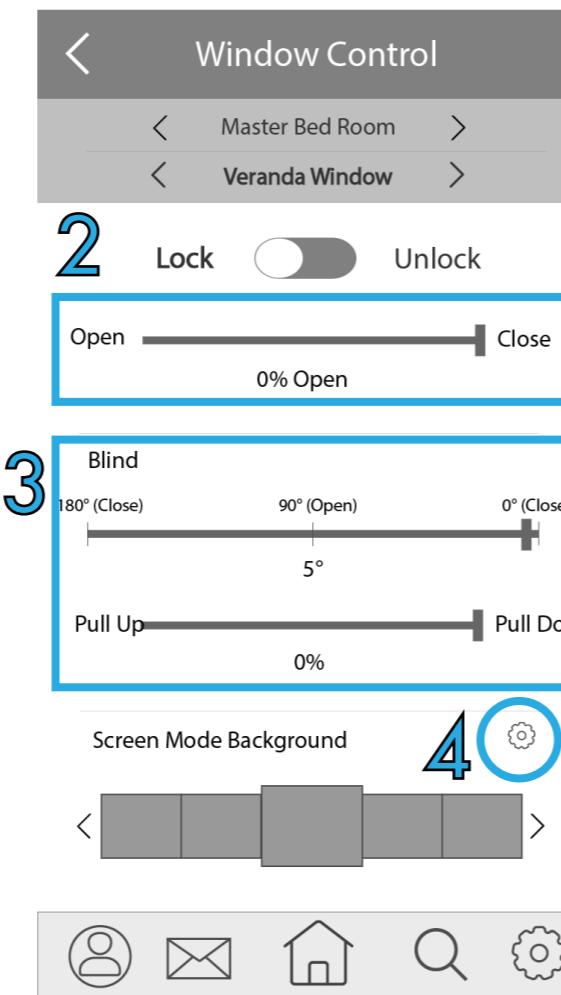
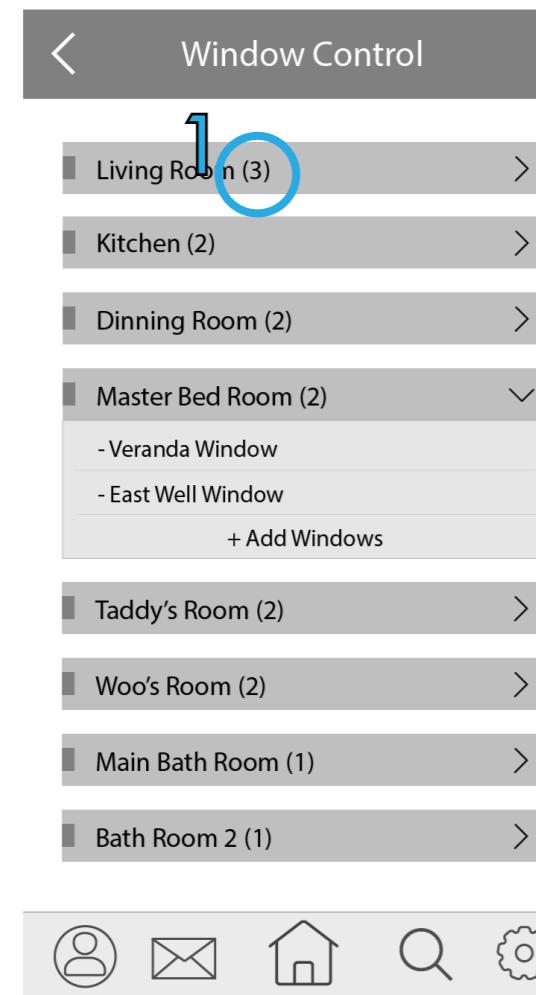
We surveyed 10 people.



User Testing (Windows)

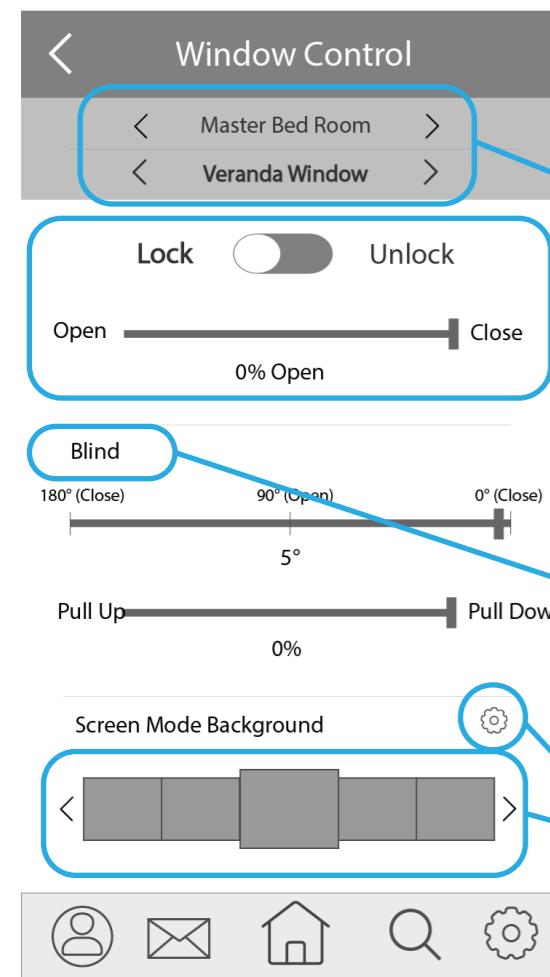
Survey questions

1. How many smart windows in the living room?
2. How can you open and close window of master bed room?
3. Can you explain how the blind function work?
4. How can you add the new window theme?



User Testing (Windows)

Feedback



Need to show the page of register new window

Not only Add function, but also Edit and Remove functions

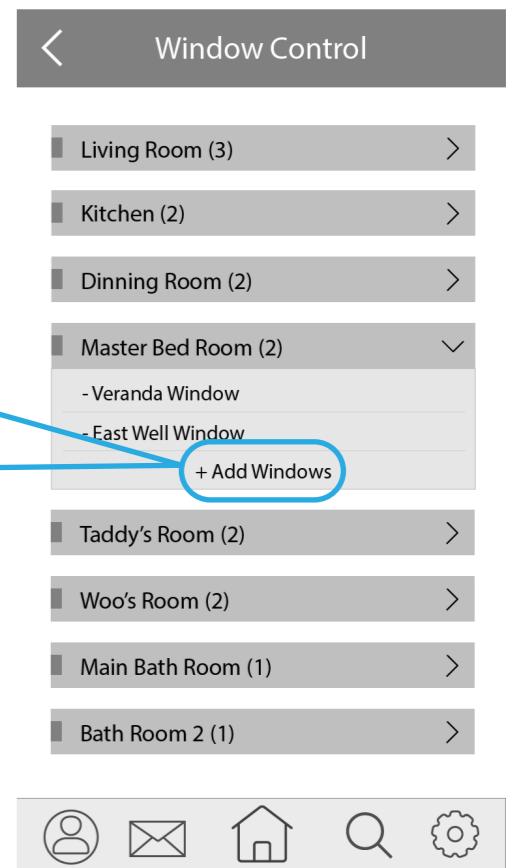
Too many layers of head menu

If the window is lock, open & close function is not activated

Transparency rather than blind (because it is smart window)

The slides in screen mode need to be bigger

Change the setting icon to +



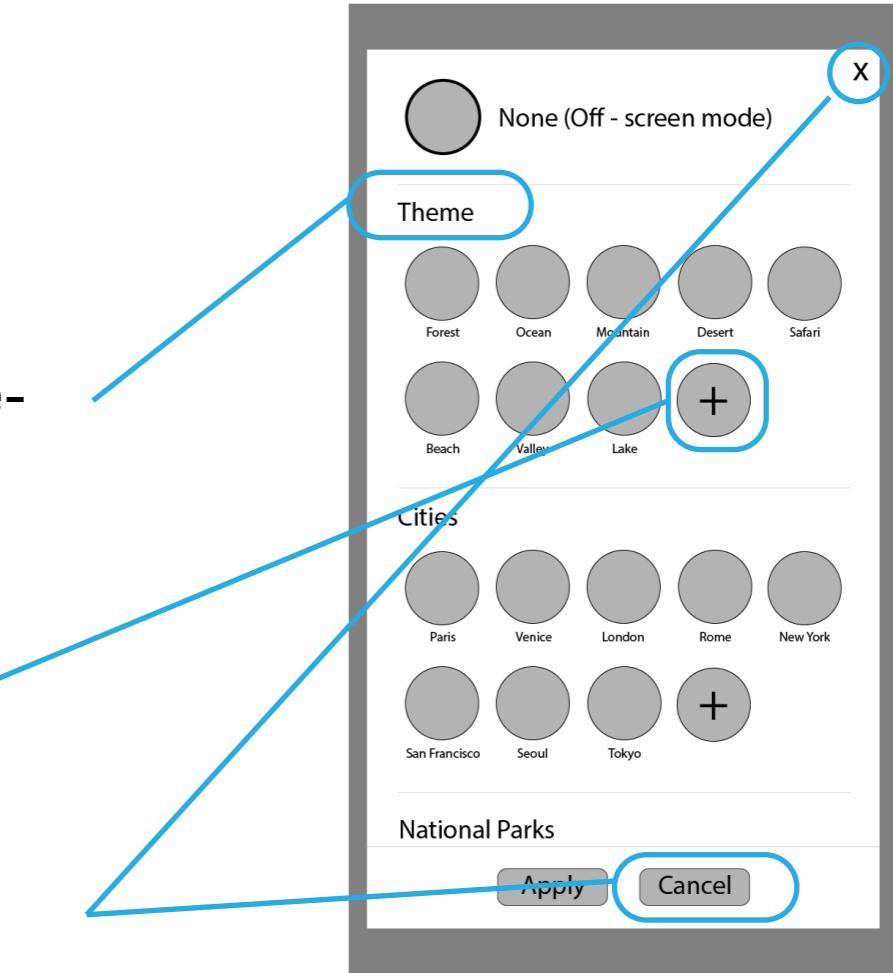
User Testing (Windows)

Feedback

Change theme to nature due to theme is a comprehensive term

Not only Add function, but also Edit and Remove functions

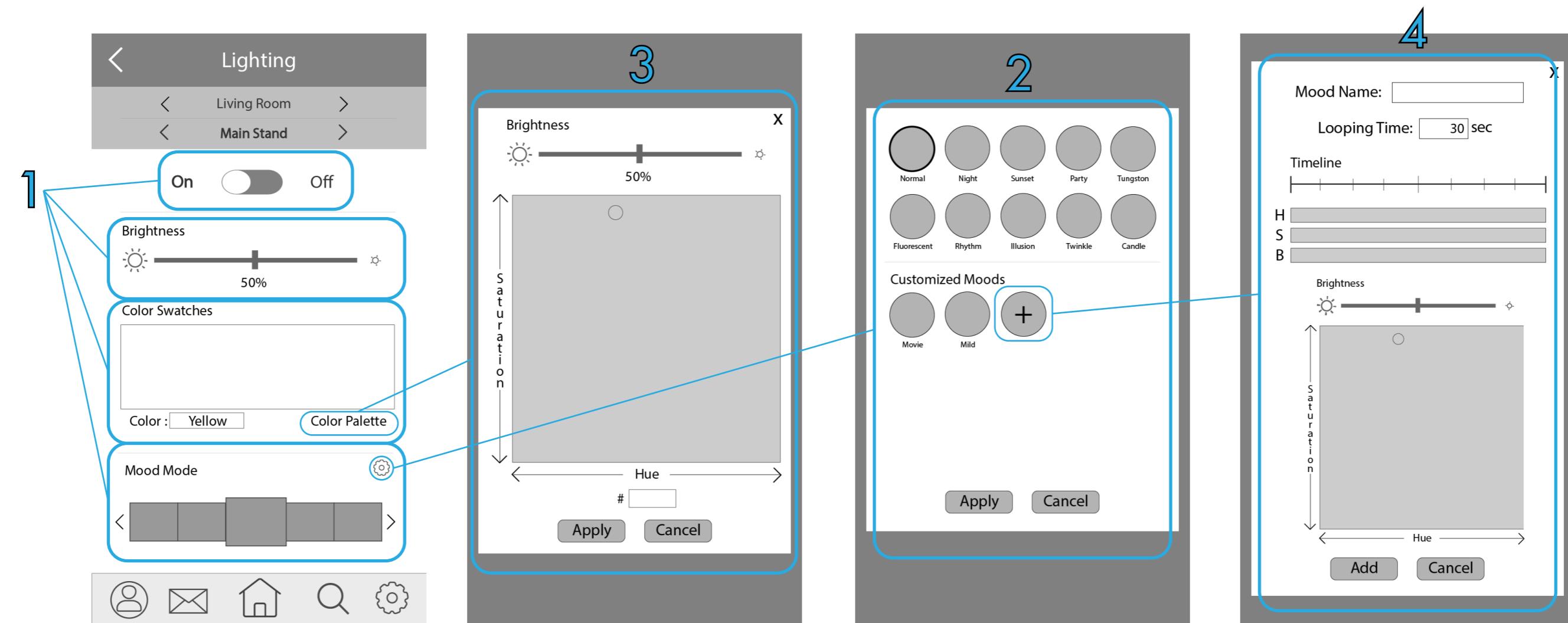
Do not need the (x) because it has cancel button



User Testing (Lighting)

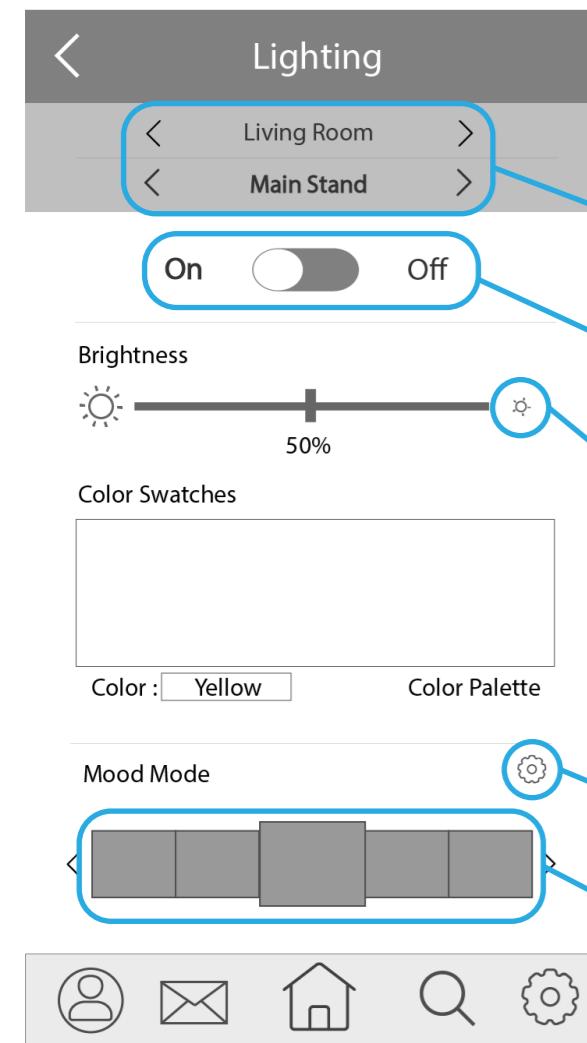
Survey questions

1. How many functions the main stand have?
2. How can you change the mood mode?
3. What is the color palette using for?
4. How can you add the new mood mode?



User Testing (Lighting)

Feedback



Need to show the page of register a new light

Not only Add function, but also Edit and Remove functions

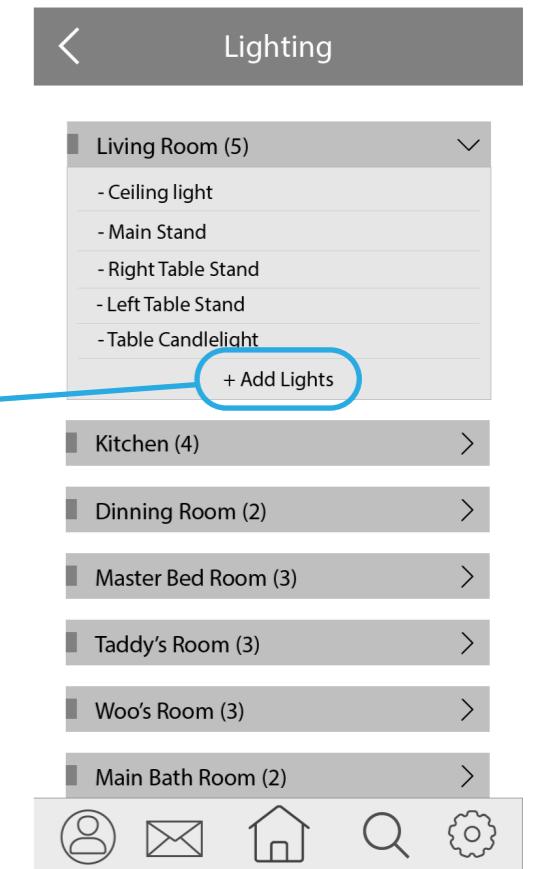
Too many layers of head menu

If the light is turning off, other functions are not activated

Instead of using small sun icon, moon icon use

Change the setting icon to +

The slides in mood mode need to be bigger



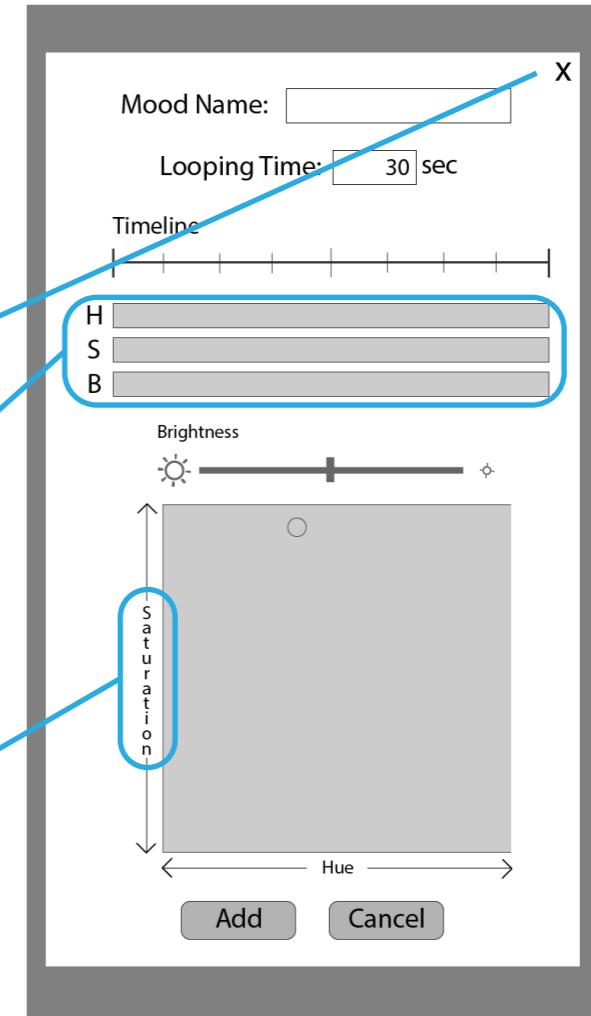
User Testing (Lighting)

Feedback

Do not need the (x) because it has cancel button

Don't H, S, B Setting on timeline (combine them into one)

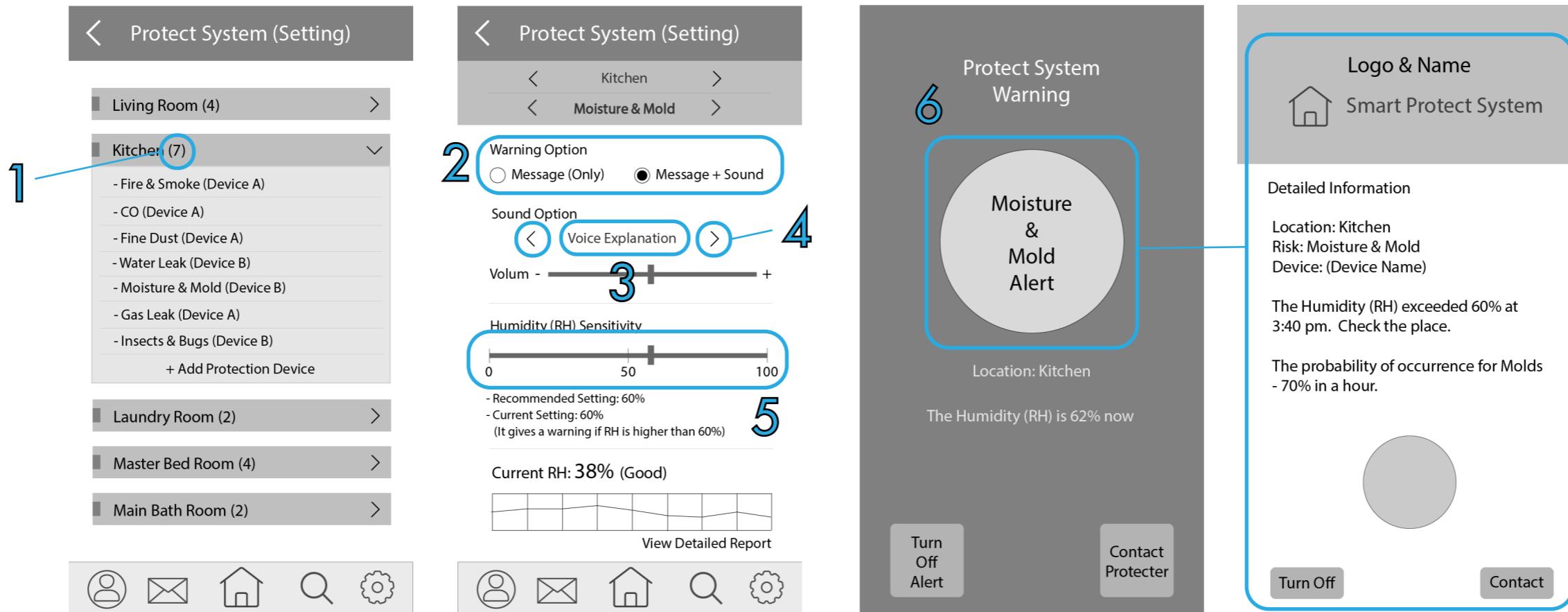
The word 'Saturation' could be horizontal with -90°



User Testing (Protect)

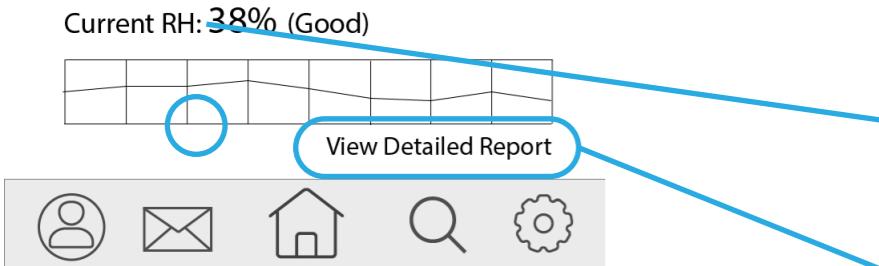
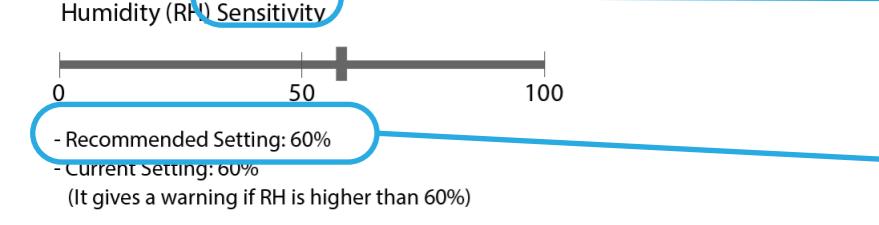
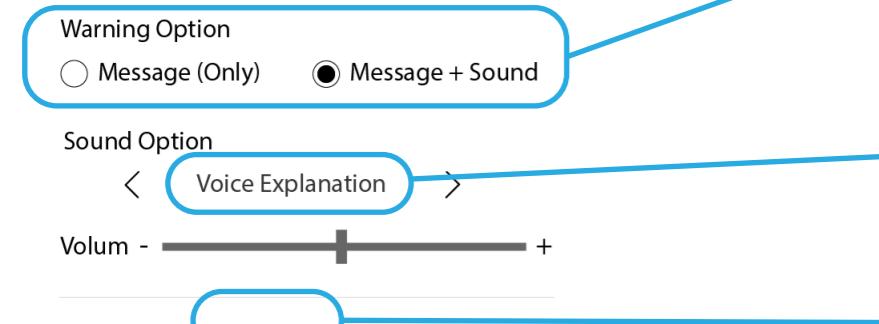
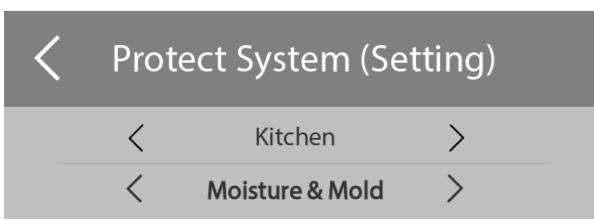
Survey questions

1. What does 'number 7' mean next to the Kitchen mean?
2. Do you know the warning option mean?
3. Do you know voice explanation mean?
4. How to switch from voice to music?
5. If you want to see the warning message when the humidity 70% or higher, how can you change the setting?
6. If you want to see the warning detail info, how can you find out?



User Testing (Protect)

Feedback



Protect system could be confused with security system

Remove 'Insects & bugs' options (may be too complicated)

Need to show how can a user register new device

If the warning option is message only, sound option would not be activated

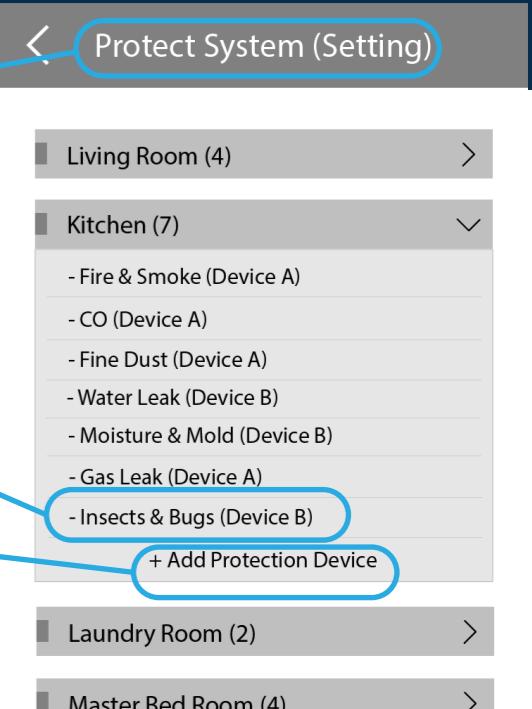
'Voice Sound' is more appropriate word

'Level' is more appropriate word

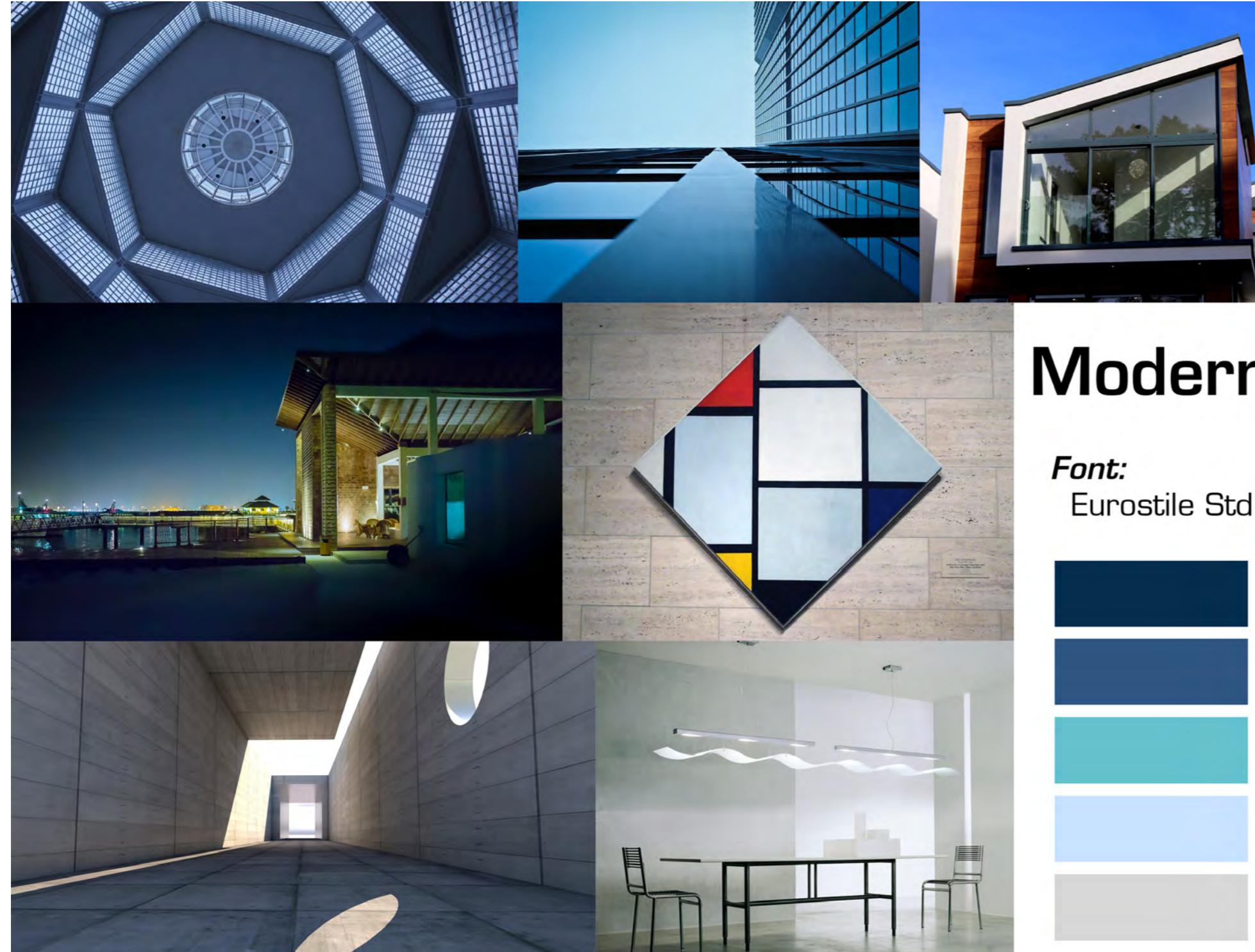
Instead of explanation, use a mark to show recommended setting value.

Do not use technical term like RH

'View History' is appropriate word

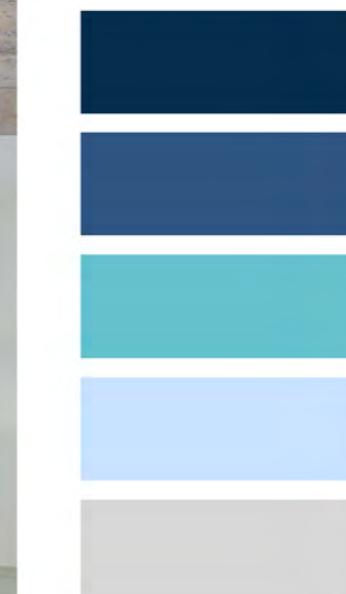


Moodboard & Design 1



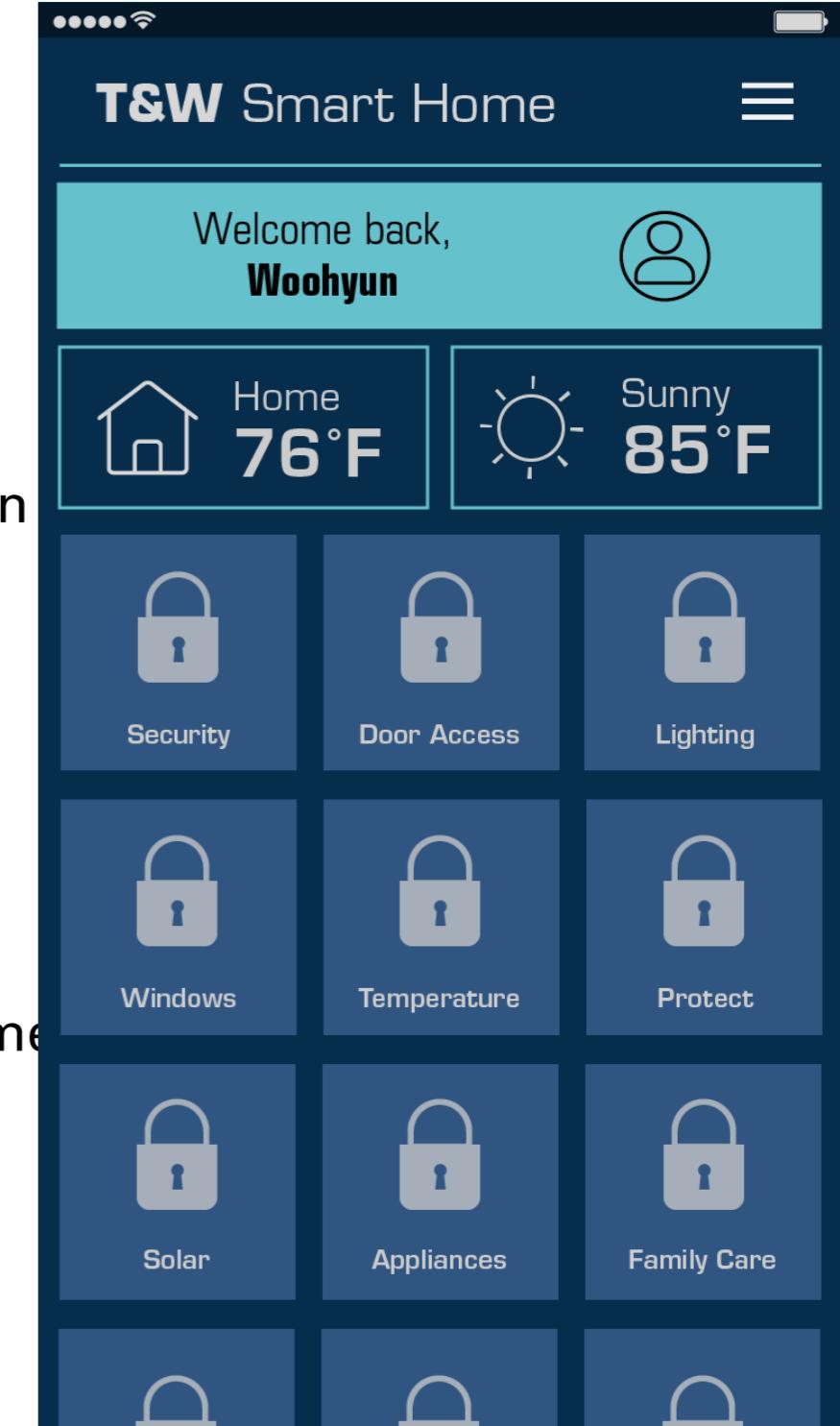
Modern

Font:
Eurostile Std



ound option

ow recommended



Moodboard & Design 2

FUTURE TECHNOLOGY



Share Tech

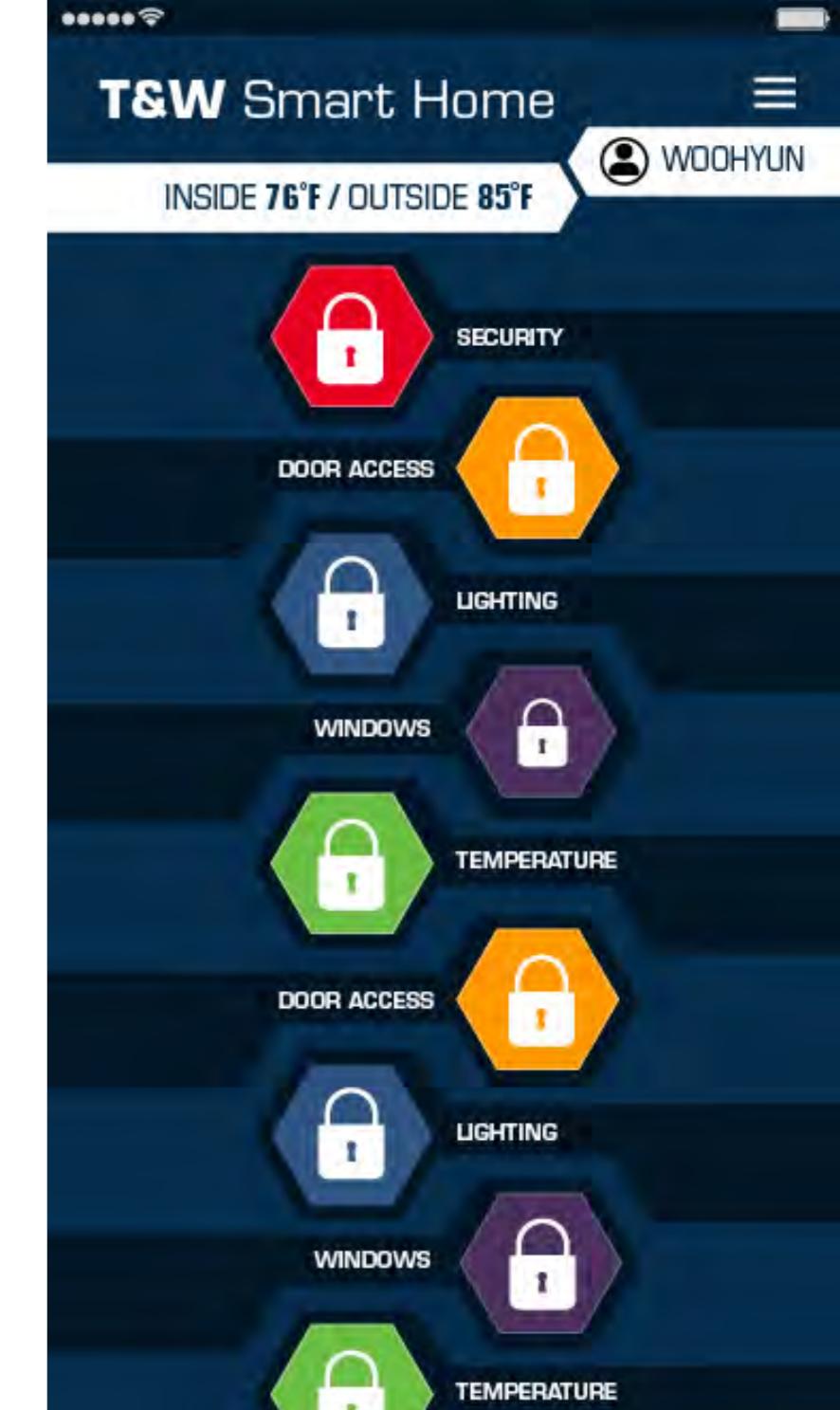
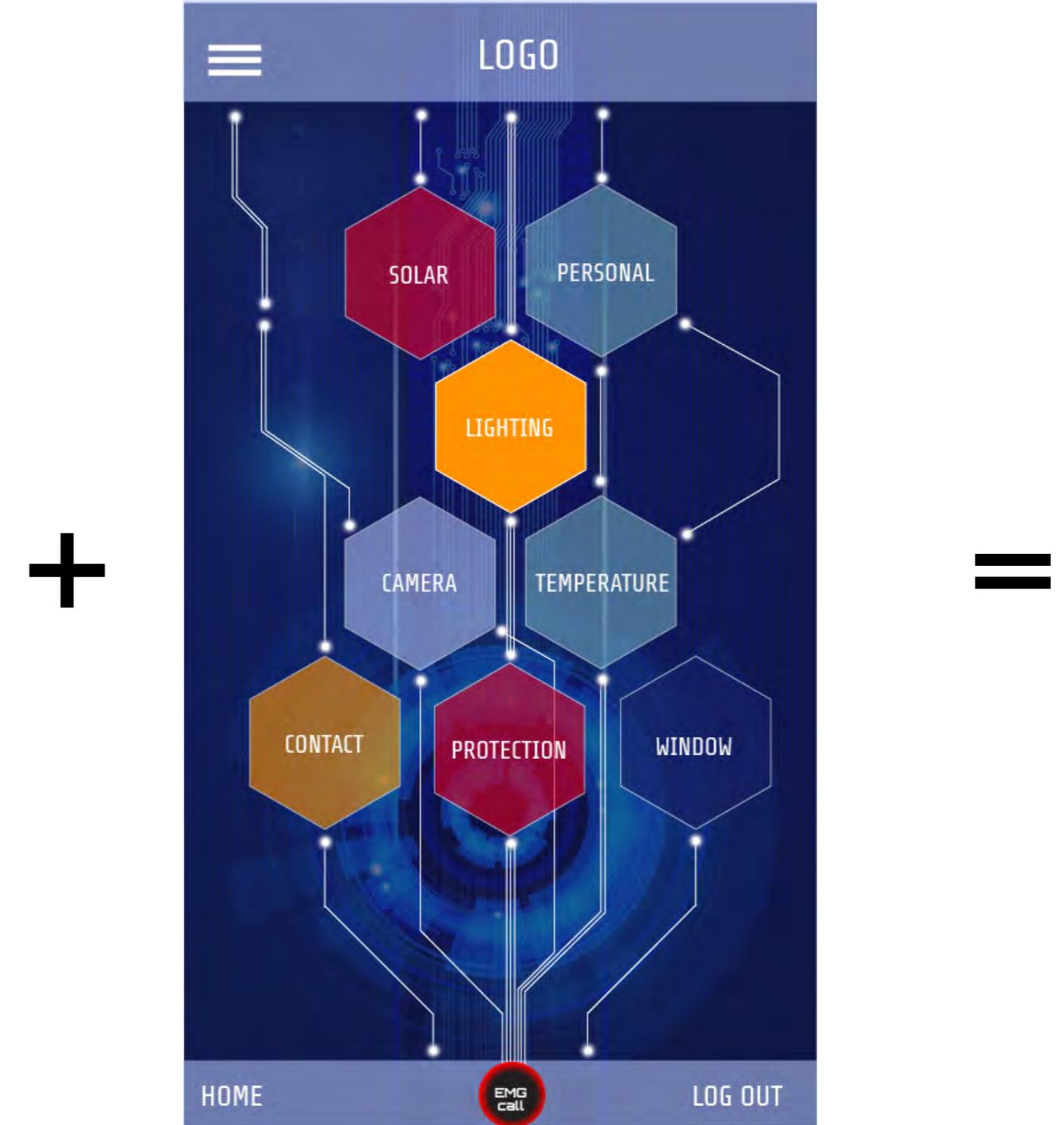
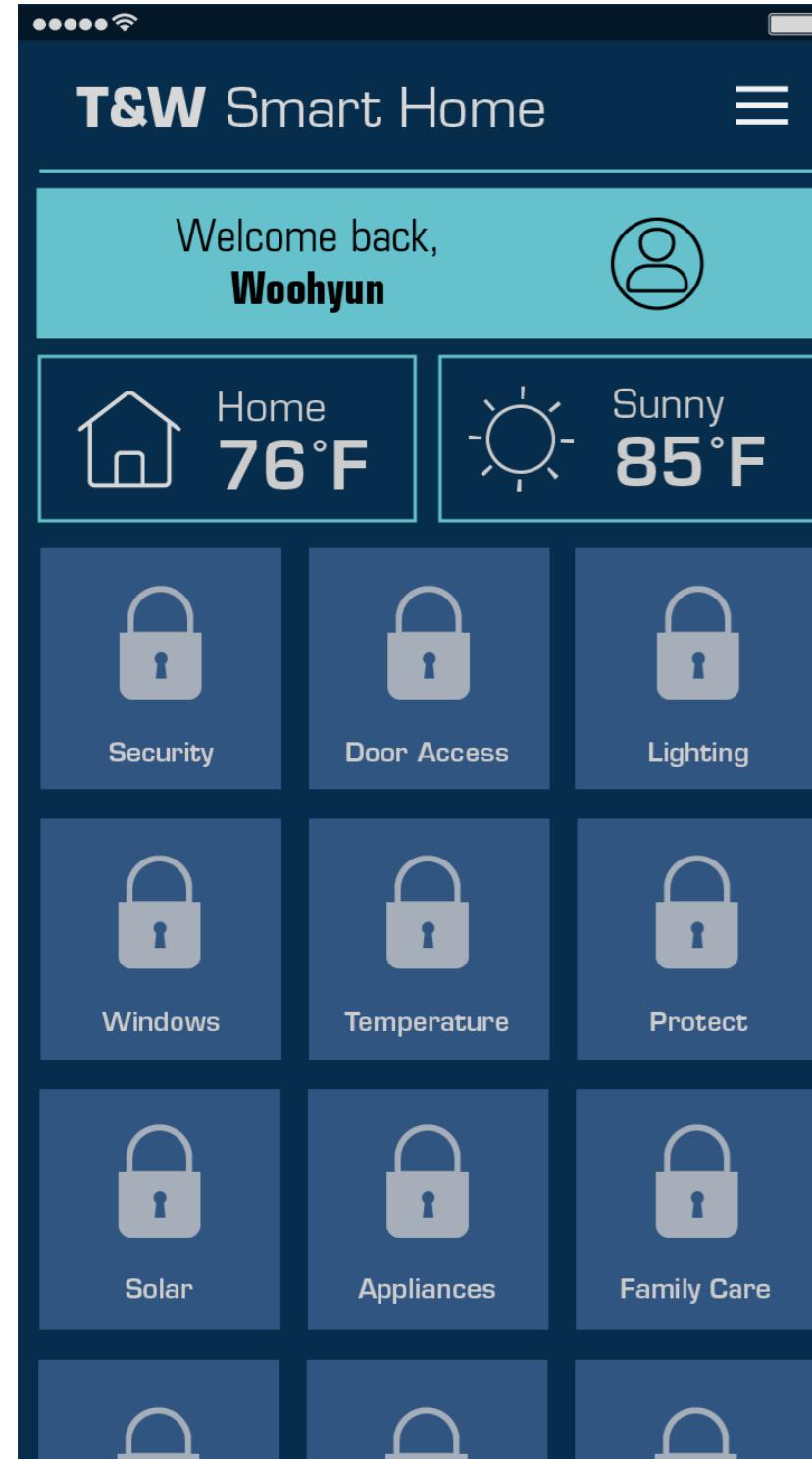
ABCDEFGHIJKLMNPQRSTUVWXYZ

abcdefghijklmnpqrstuvwxyz

1234567890

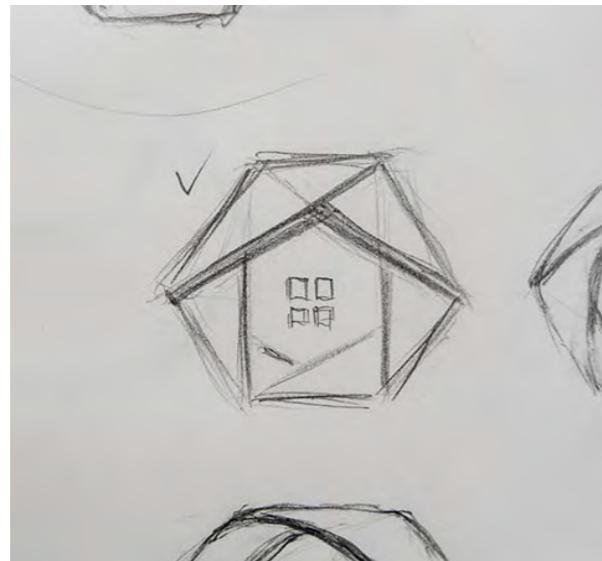


Design Concept



Logo Process (Mobile)

Sketch



1st



Final



Logo Colors



RGB: 6/45/76
CMYK: 100/82/43/41
HAX: 062D4C



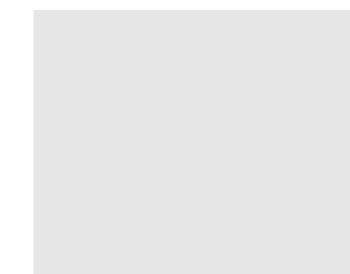
RGB: 48/85/129
CMYK: 89/69/27/9
HAX: 305581



RGB: 101/193/204
CMYK: 57/4/20/0
HAX: 65C1CC

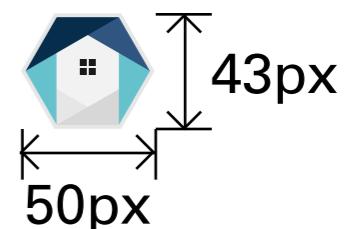


RGB: 215/215/215
CMYK: 15/11/11/0
HAX: D7D7D7



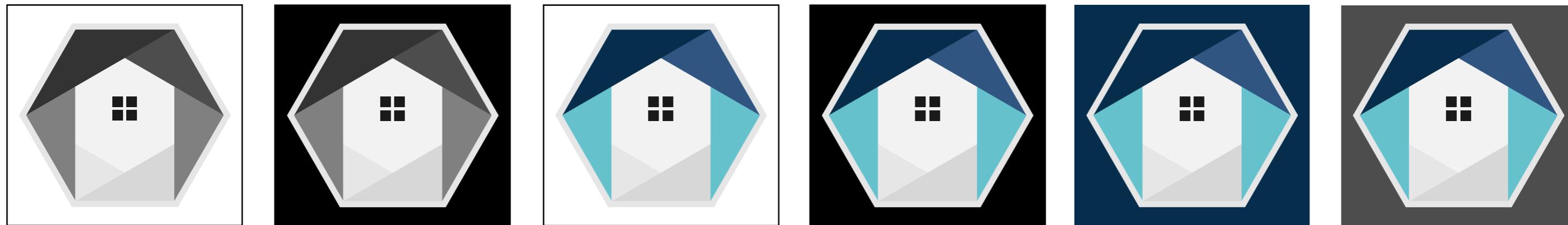
RGB: 230/230/230
CMYK: 8/6/7/0
HAX: E6E6E6

Minimum Size



Logo Style Guide (Mobile)

Usages - Can use only 2 type of logo (Black & White, Color) with any back grounds.



Forbidden usages



Do not
change color



Do not
distort or warp



Do not
rotate



Do not
outline



Do not
apply a gradient

Logo Concept (Main Device)

ZIB is Homophones in Korean language means Home.

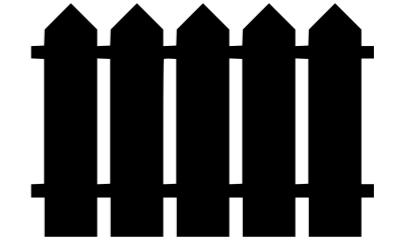


ZIB

Icon. Designed like a top view of umbrella.
Means “Safe” and “Protected”



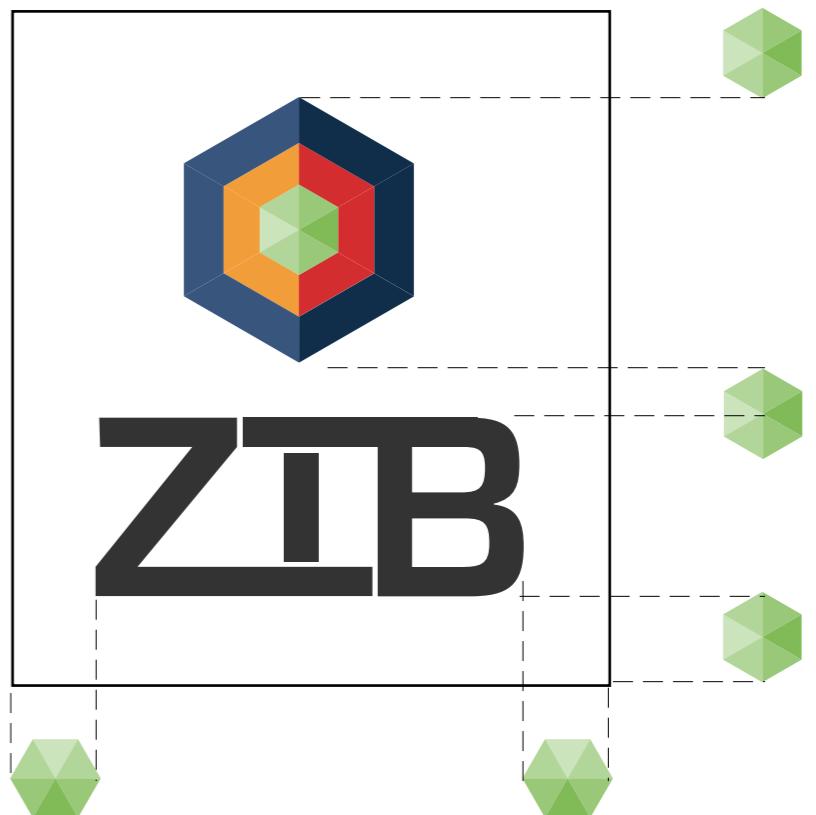
Designed like a house fence.
That is the meaning of anything inside
this area will be “safe” and “comfortable”,
filling like “Home”



Logo Specification (Main Device)

Clear space

- Always maintain clear space around the ZIB signature to protect the logo from distracting graphics or typography.
- For the signature and icon, measure clear space by the half diameter of inside icon.
- For the side, bottom and top of logo, measure clear space by the inside icon's diameter
- Never allow typography or other elements to "invade" the signature of icon.



Logo Specification (Main Device)

Minimum size

- The ZIB signature reproduces well at almost any size. Going too small, however, can damage the logo's integrity and effectiveness. Please never reproduce the signature.



Smaller than 1/2" wide,
measured from the left side edge of "Z"
to the right side edge of "B".



Smaller than 1/8" wide,
measured from the left side edge
of icon to the right side edge of icon..

Logo color



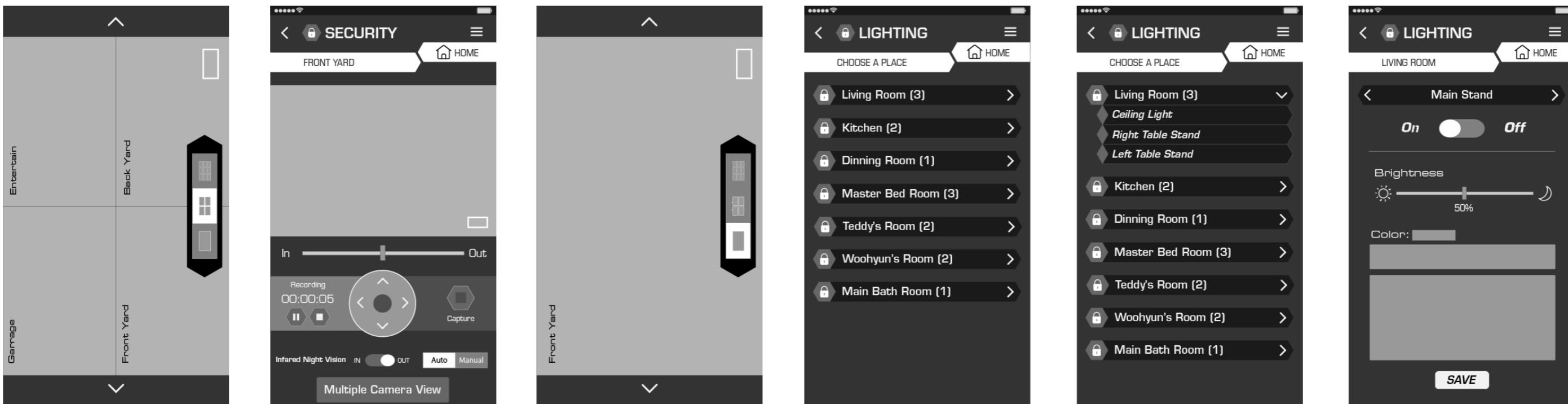
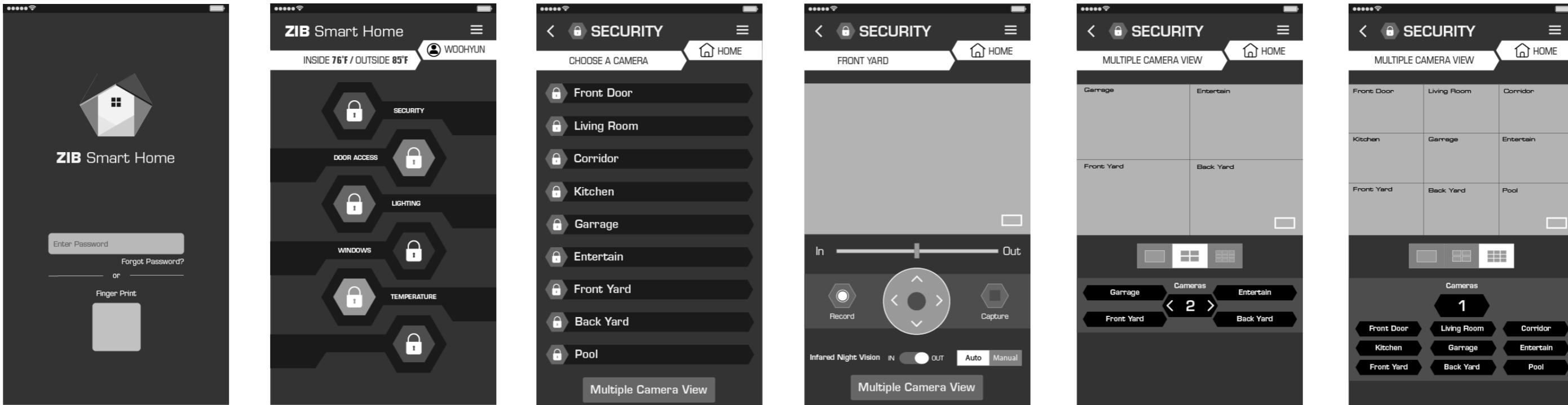
Primary color
Black Onyx
RGB #333333
CMYK 69 63 62 58

Secondary color
Dark Blue
RGB #102D4A
CMYK 91 81 44 43

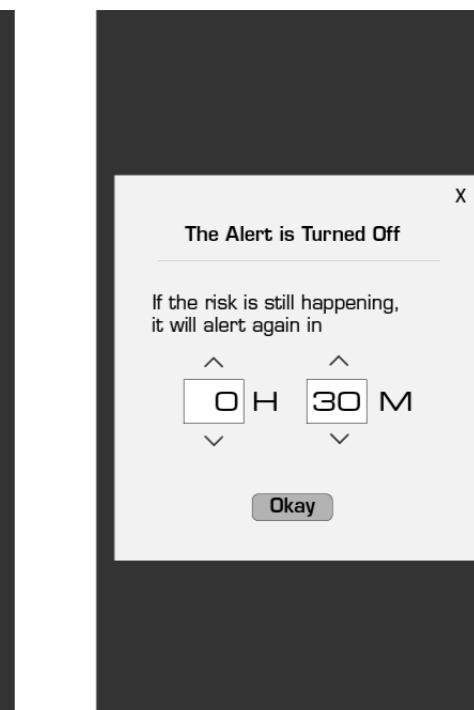
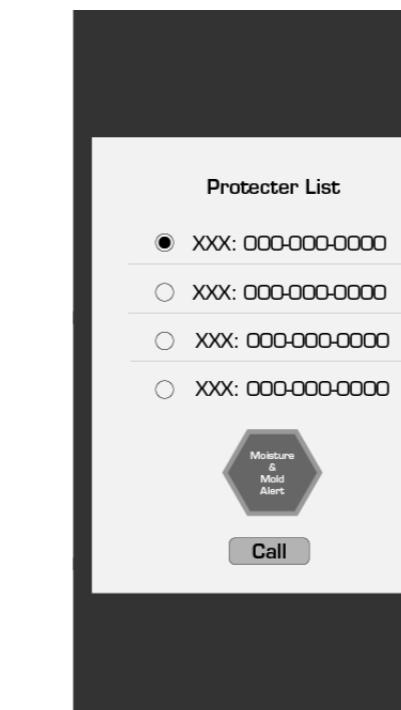
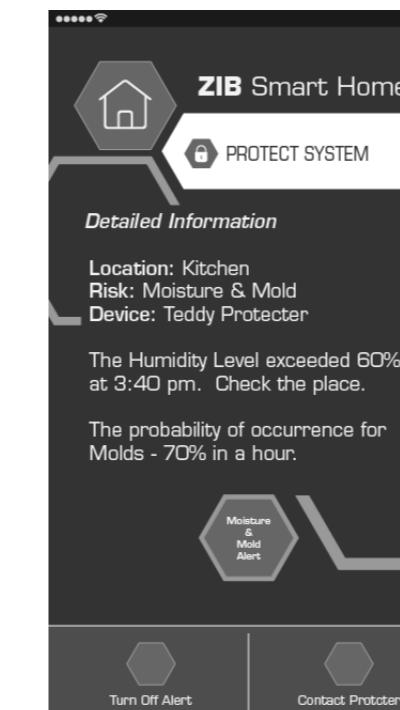
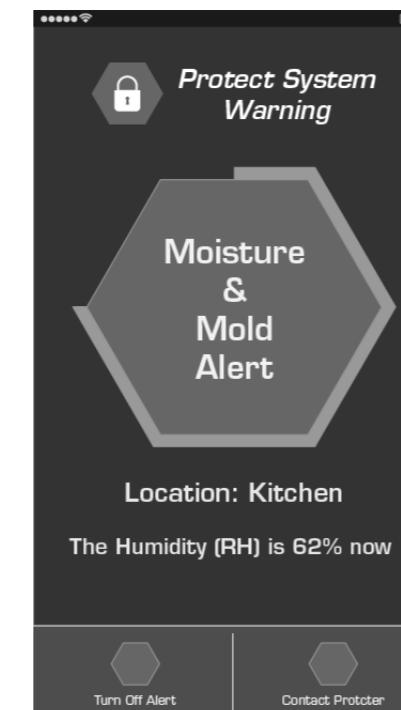
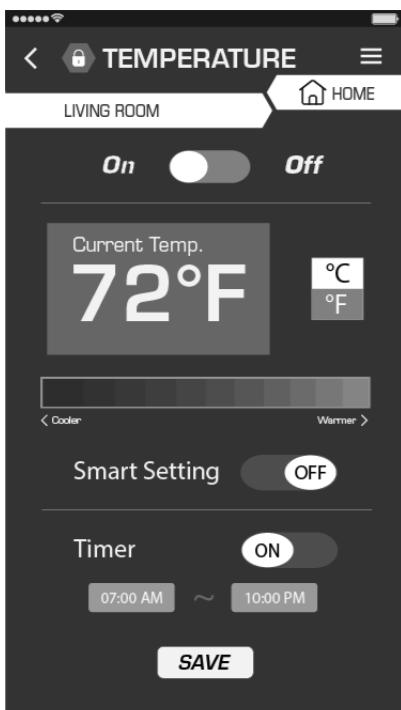
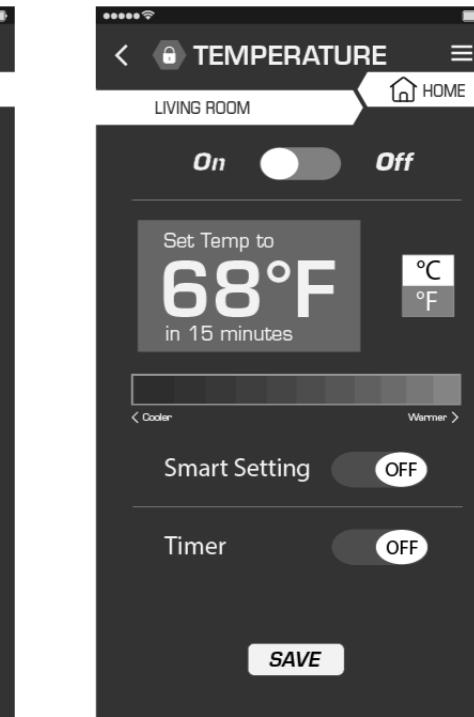
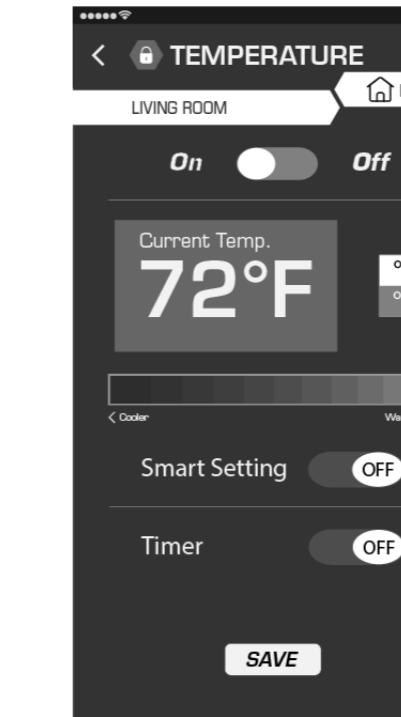
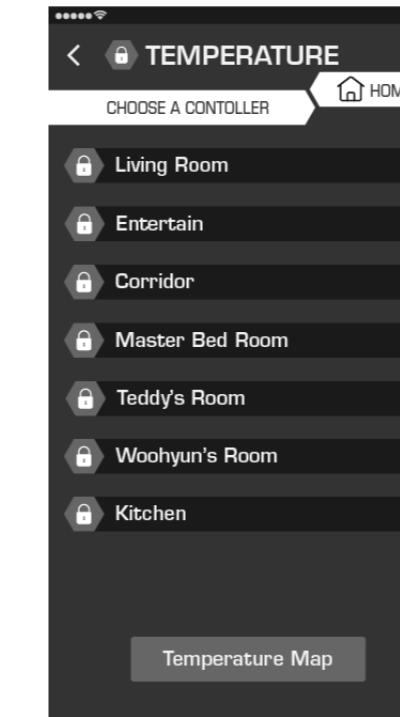
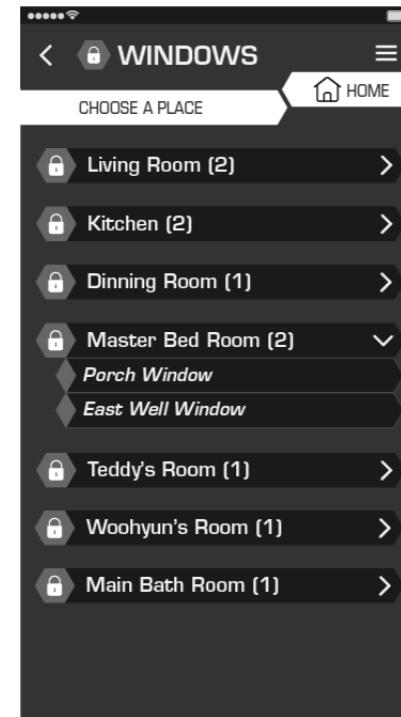
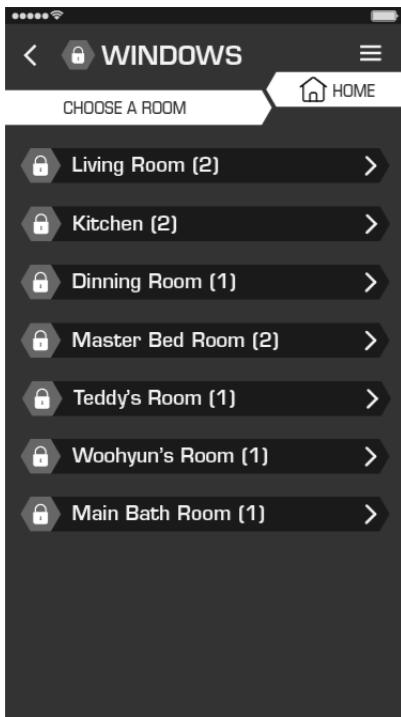
Secondary color
Warm Red
RGB #D42D30
CMYK 11 97 91 02

Secondary color
Fresh Green
RGB #80BB57
CMYK 55 05 87 00

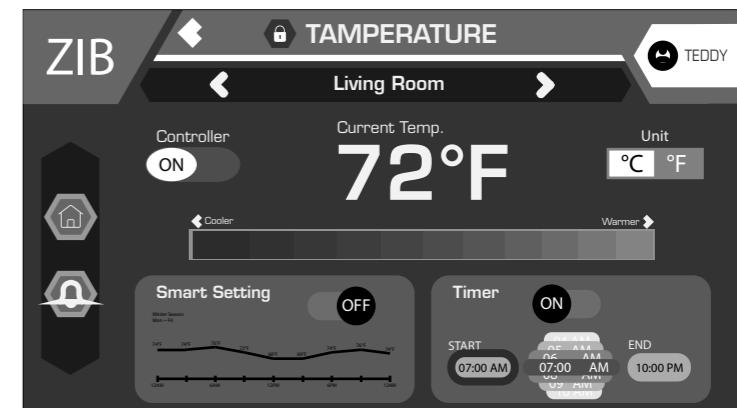
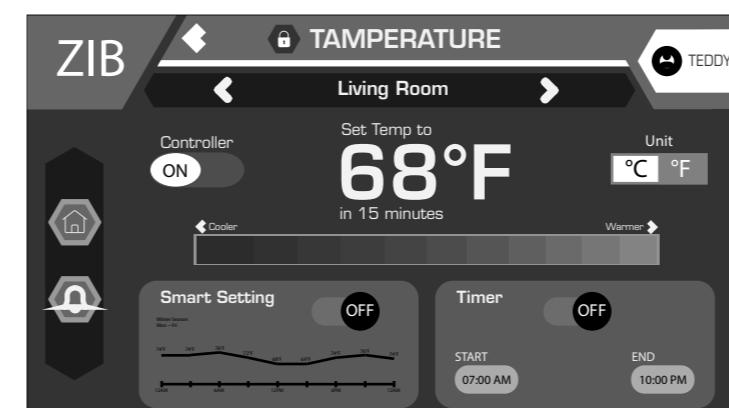
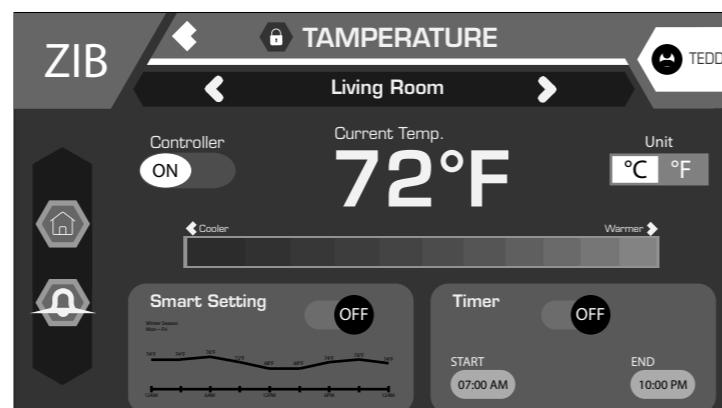
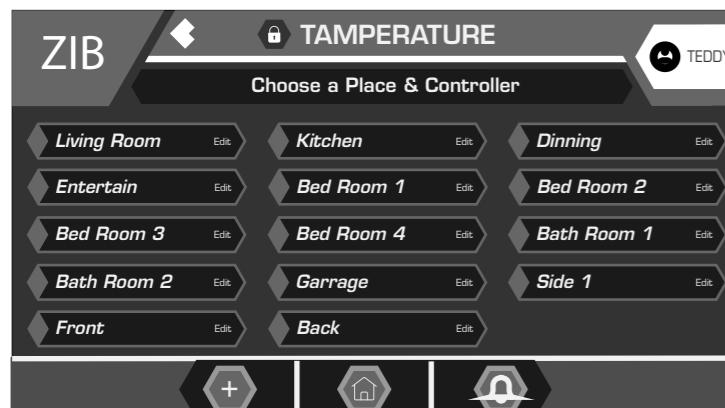
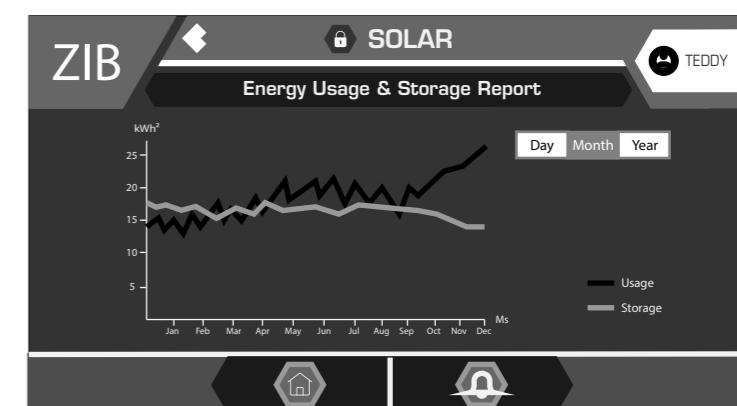
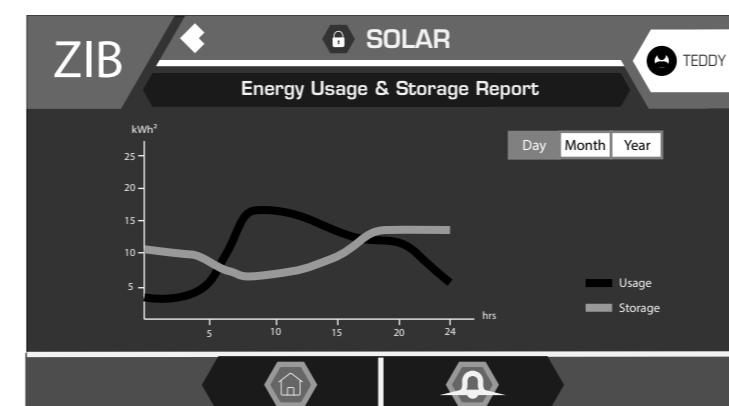
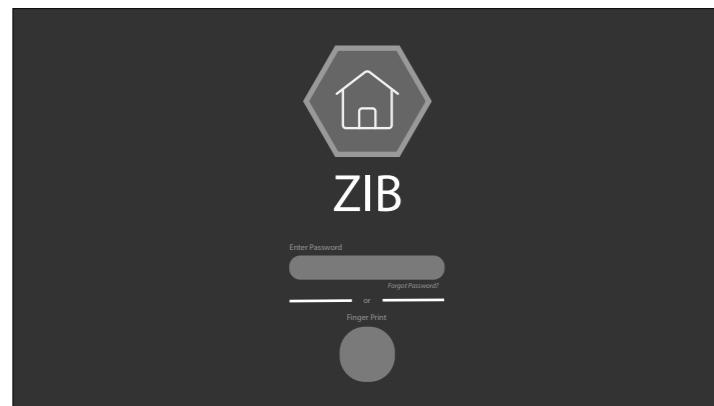
2nd Wireframes (Mobile)



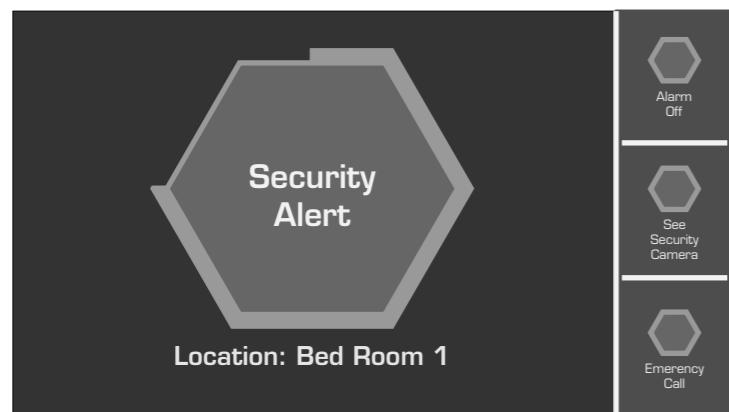
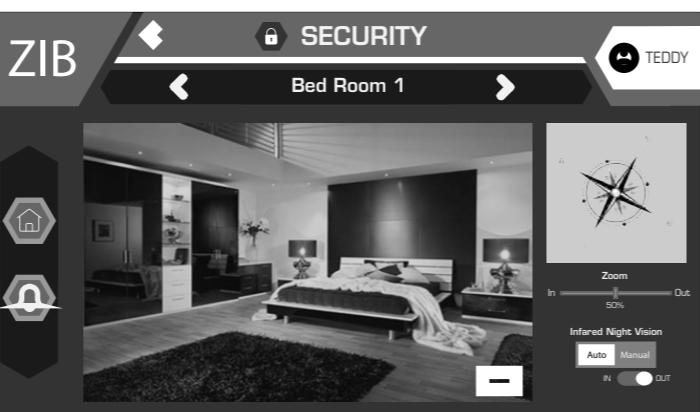
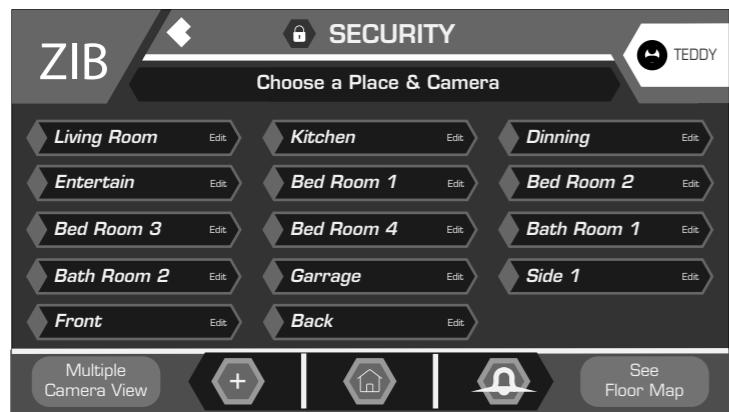
2nd Wireframes (Mobile)



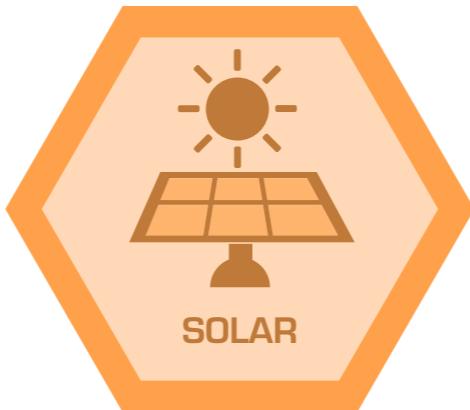
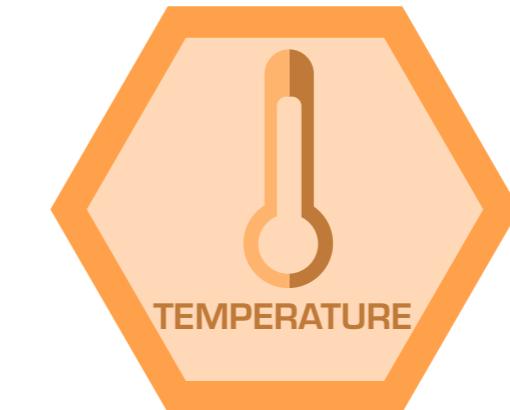
2nd Wireframes (Main Device)



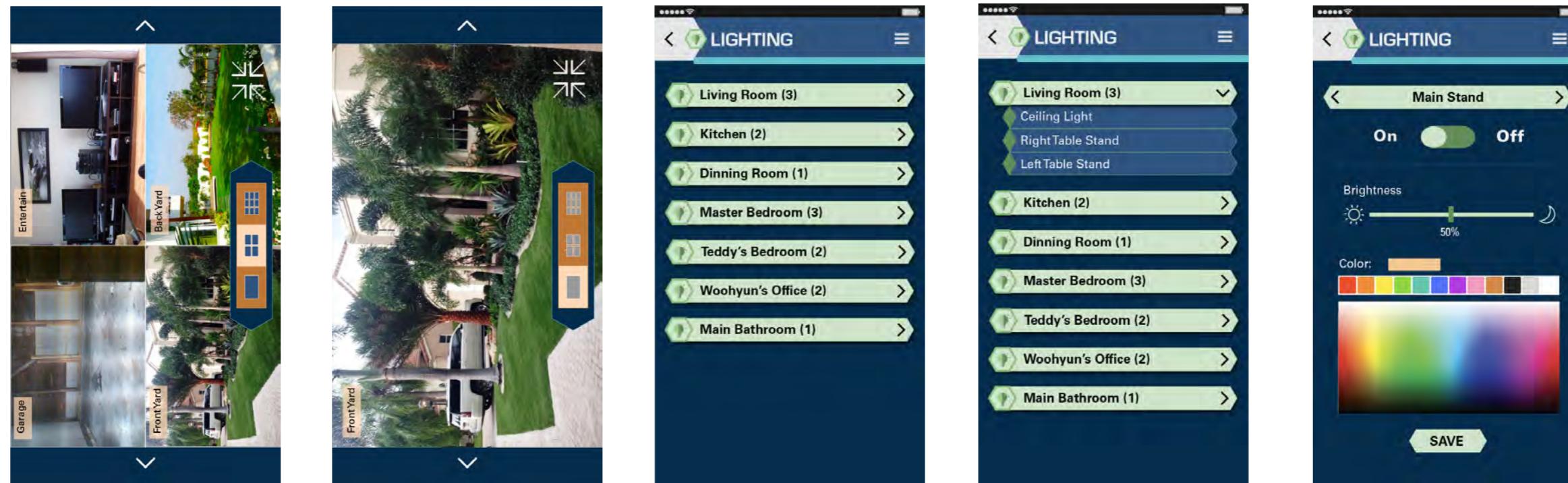
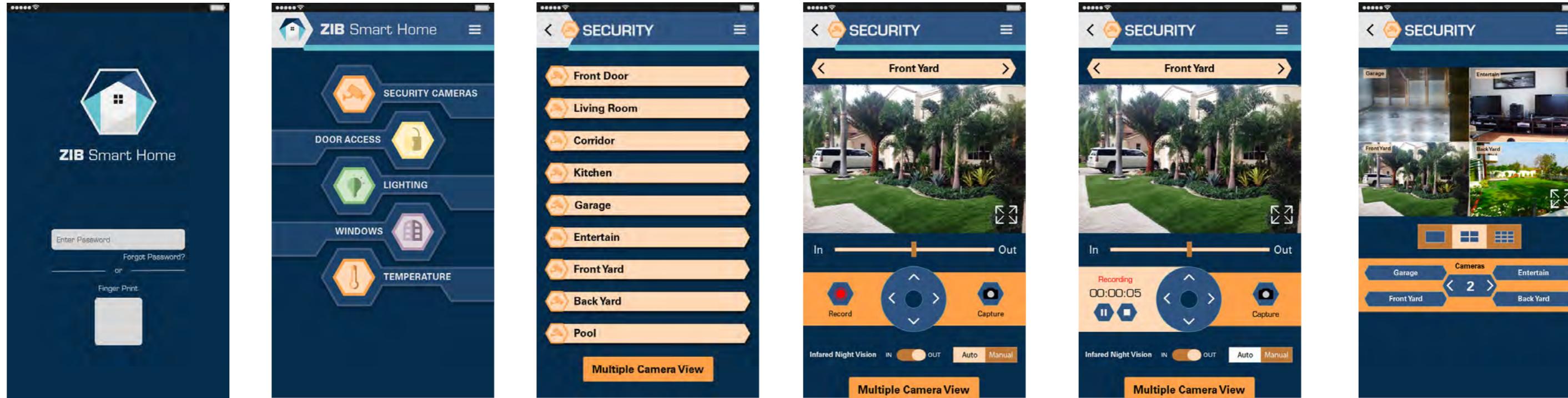
2nd Wireframes (Main Device)



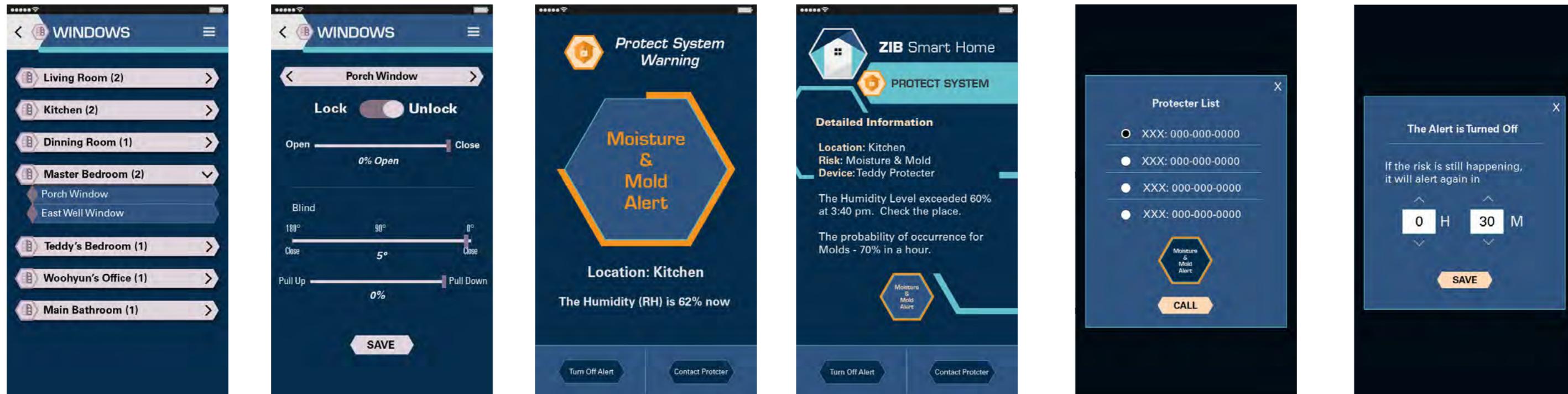
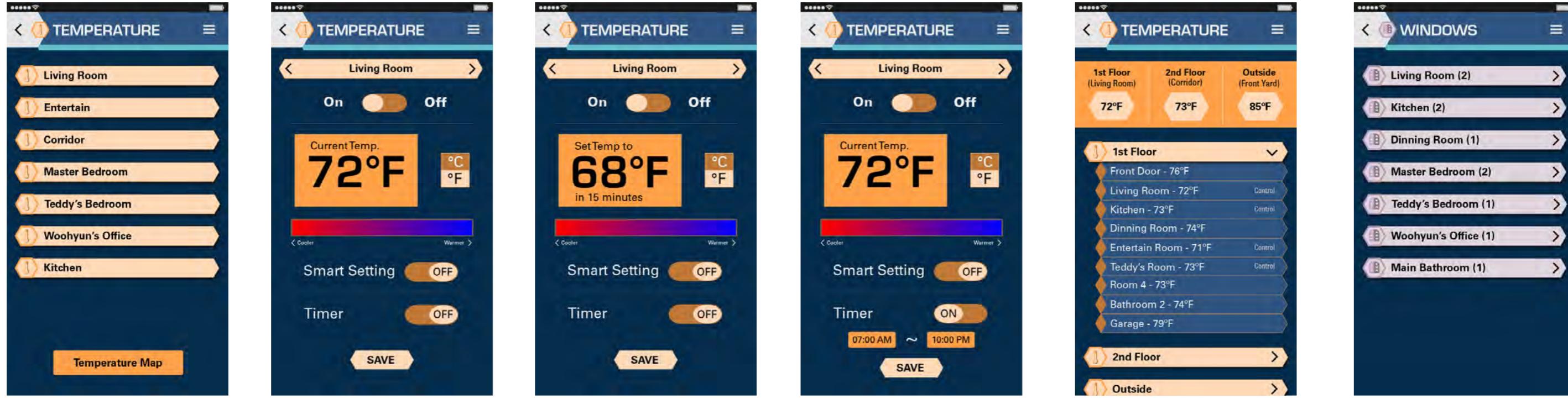
Icons Design



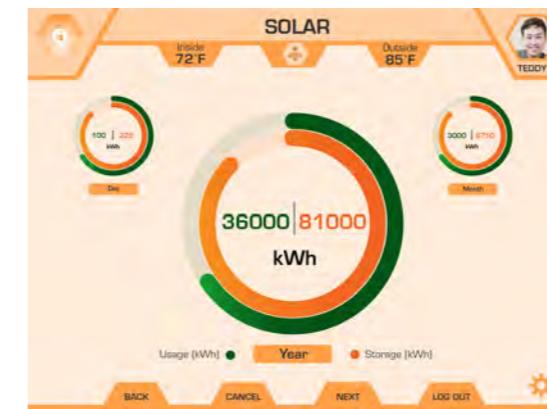
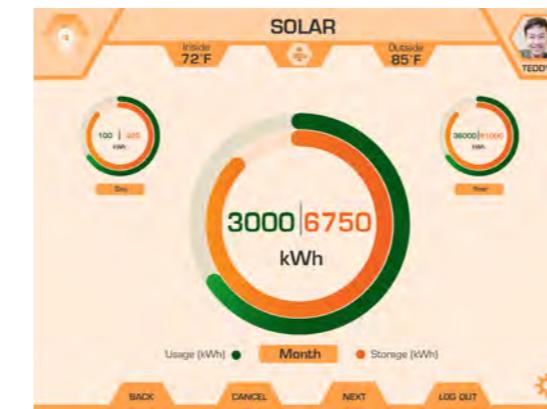
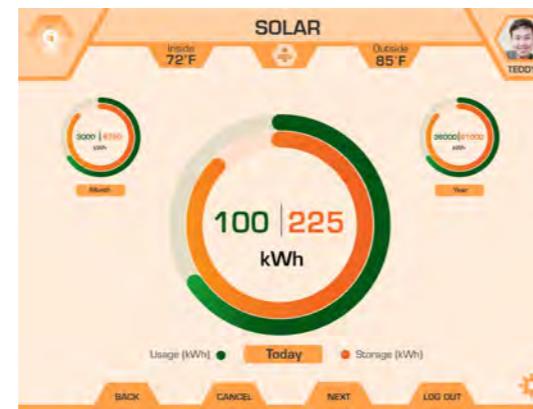
1st Design Version (Mobile)



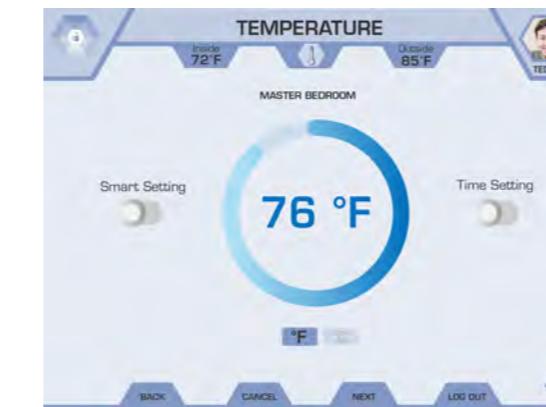
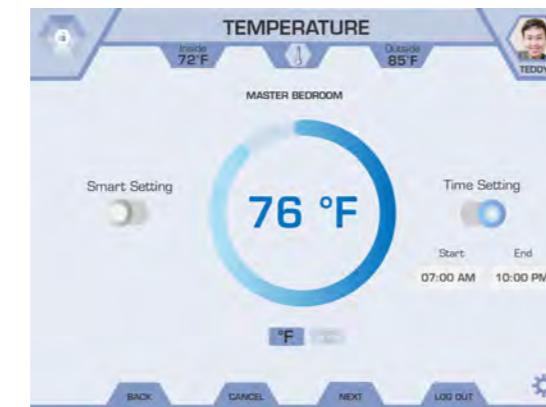
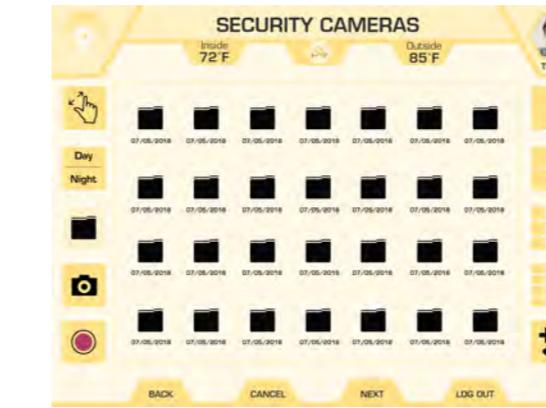
1st Design Version (Mobile)



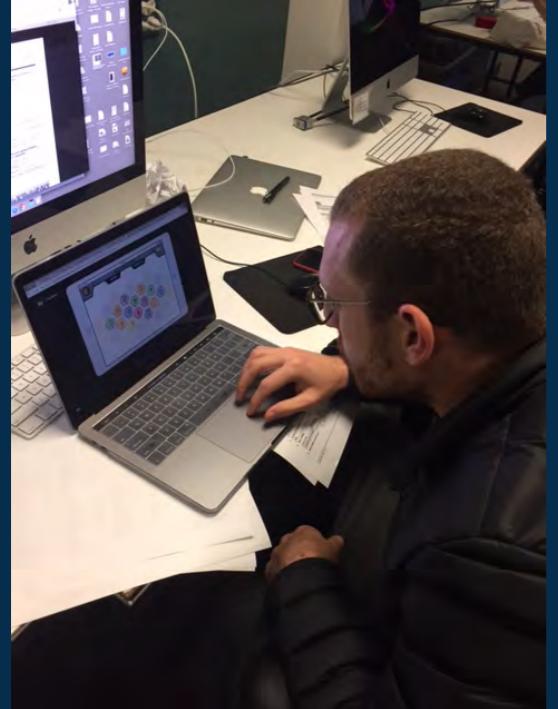
1st Design Version (Main Device)



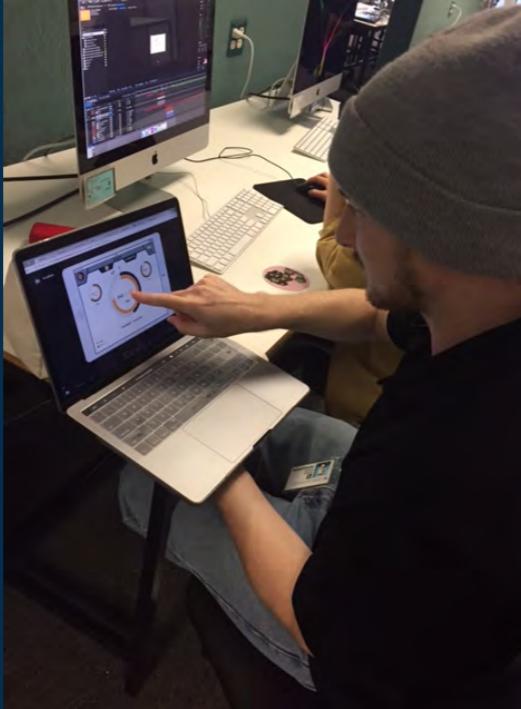
1st Design Version (Main Device)



2nd User Testing



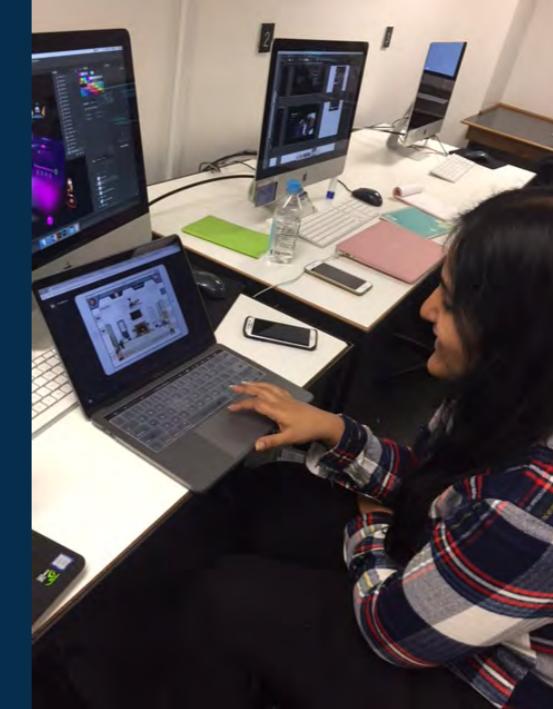
Mustafa



Andrew



Kyn



Sandra



Yuan



Yuqi



Val
(Mobile)



Cindy
(Mobile)



Grace
(Mobile)



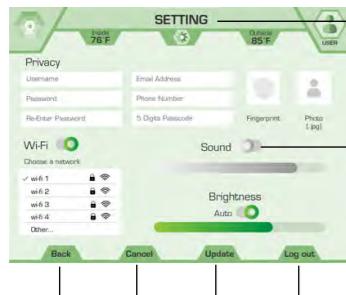
Mustafa
(Mobile)

2nd User Testing

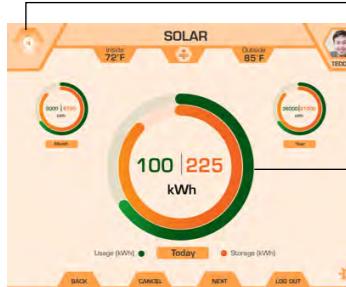
Feedback



- The logo does not look like a logo, the color not outstanding.
- The fingerpring icon should not inside.



- The heading is too big, and too tight.
- The color of the switch icon should not be in gradient, because does not consistence.
- Useless of the bottom menu bar.



- Does not look like logo.
- Very confusing information displayed.
- Setting function should be just on main page.



- Which part of the house that the inside temperature displayed.
- No consistancy design. Should look like main menu
- Log out function should be on just on main menu.



- Main menu.

2nd User Testing

Feedback



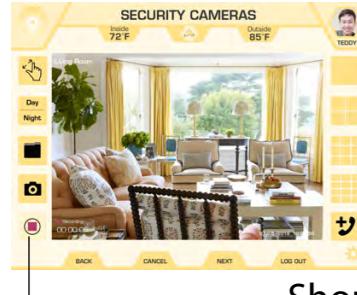
Not necessary function for touchscreen..
Should switch to day and night time automatically.

EMG call should direct to police and hospital.

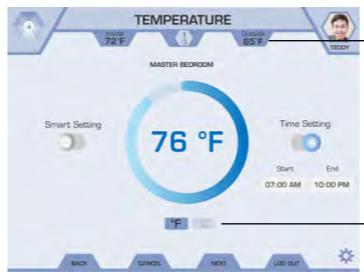


No consistency design. Should look like main menu.

The background for all pages should be white.



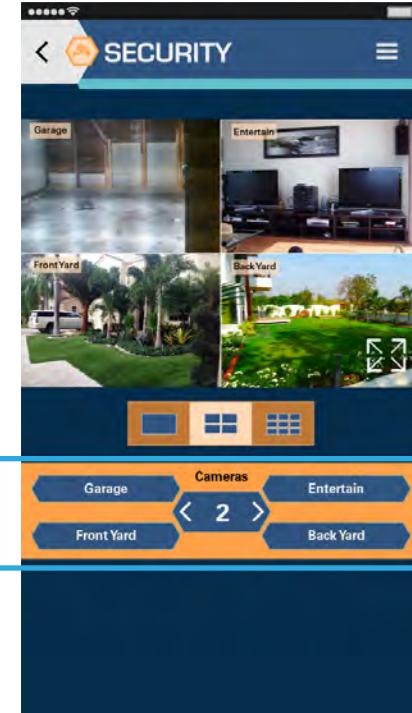
Should be automatically recording.



Need more space.

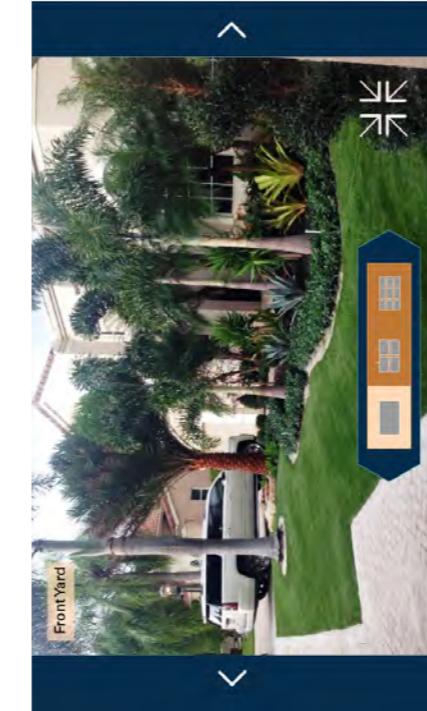
Should be in setting page.

2nd User Testing

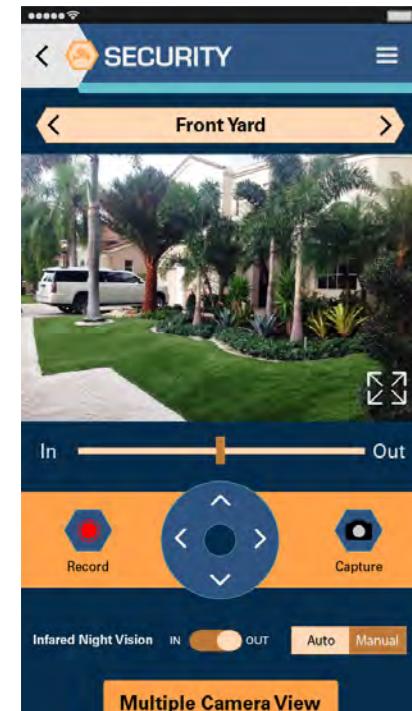


Cannot understand the number 2 mean.

Better to show all camera, and go to single camera view with clicking the screen.



Remove the option, and make the full screen. (fill the arrow area with screen)



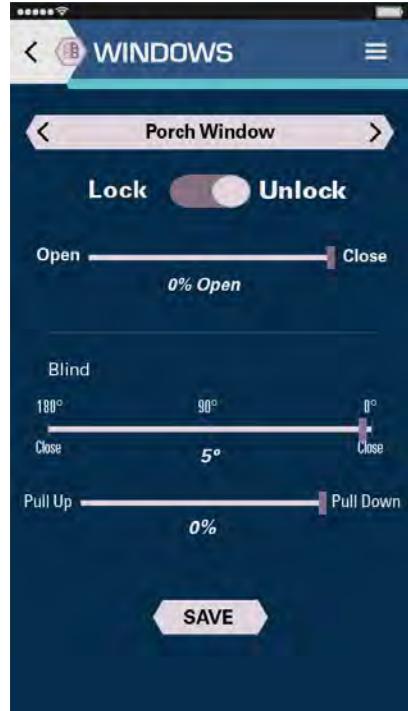
Using icons instead of using In /Out for zooming. Infrared Night Vision is not necessary.



Switch the position of On and Off.

Always the brighter is going from left to right, so switch the moon and sun icon.

2nd User Testing



Switch the position of Lock and Unlock, Open and Close, and Pull Up and Pull Down.

Blind part could be confusing.



Temperature map is complicated.

It is not necessary.



Make the switches and buttons are consistent.

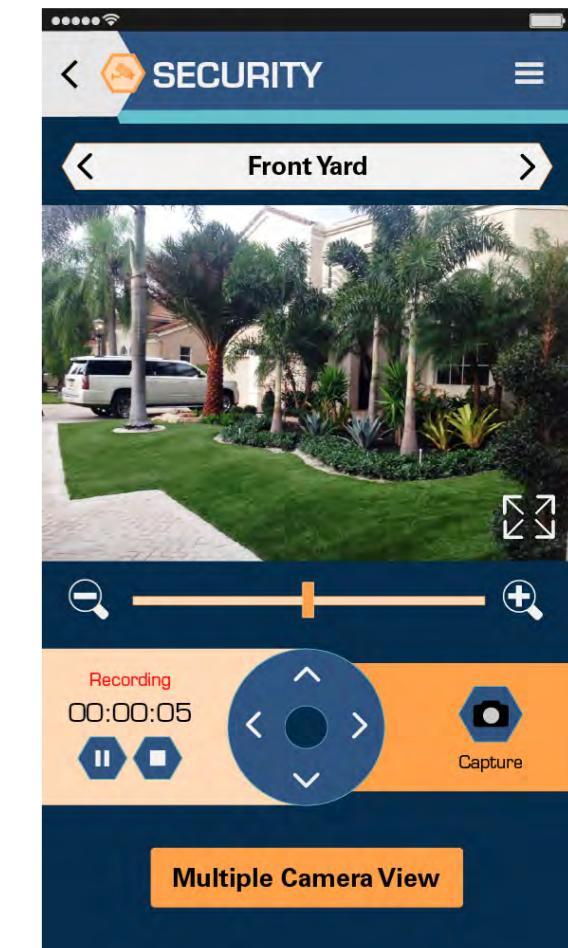
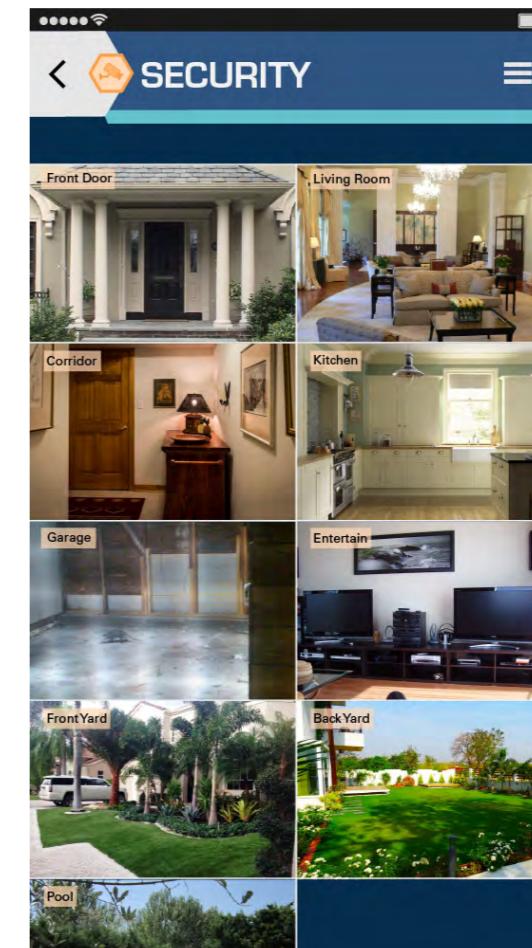
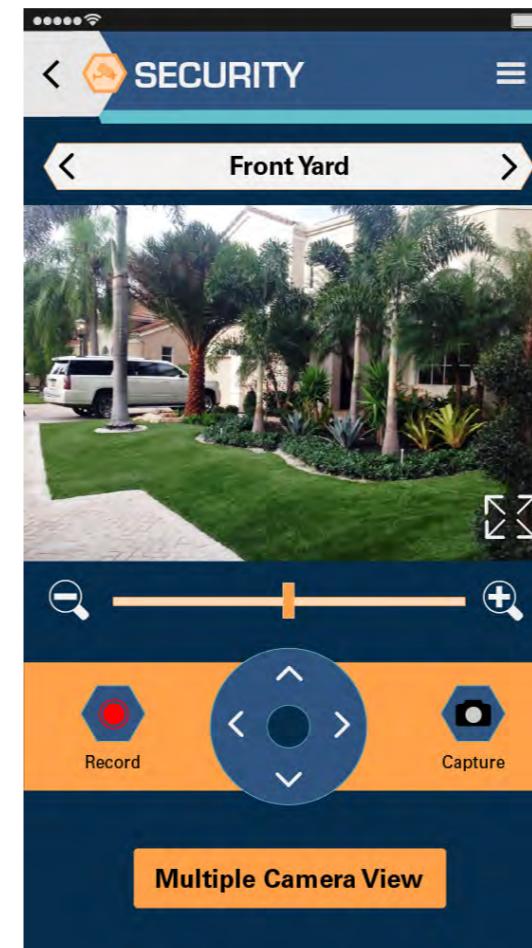
Color is so showy.

Need to have indicator on the cooler and warmer bar, and the temperature screen shows the same color as the bar.

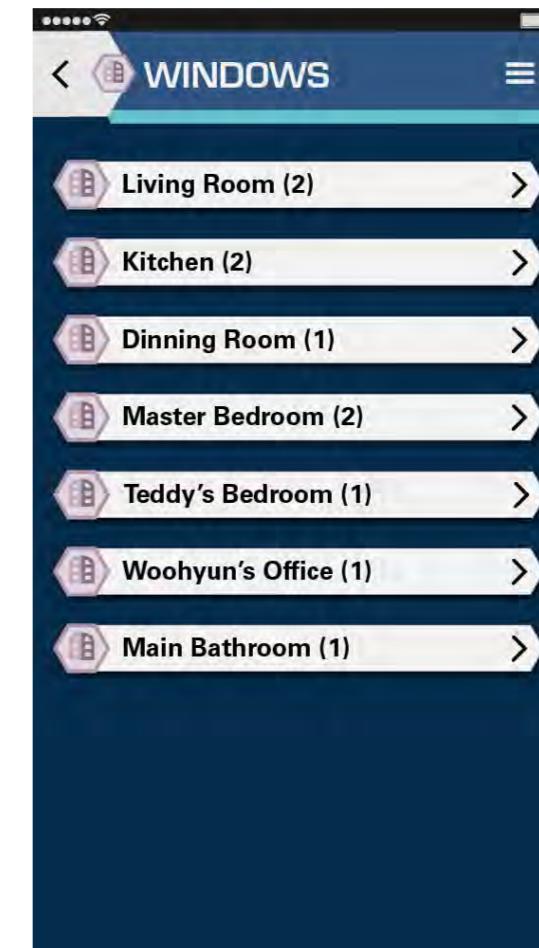
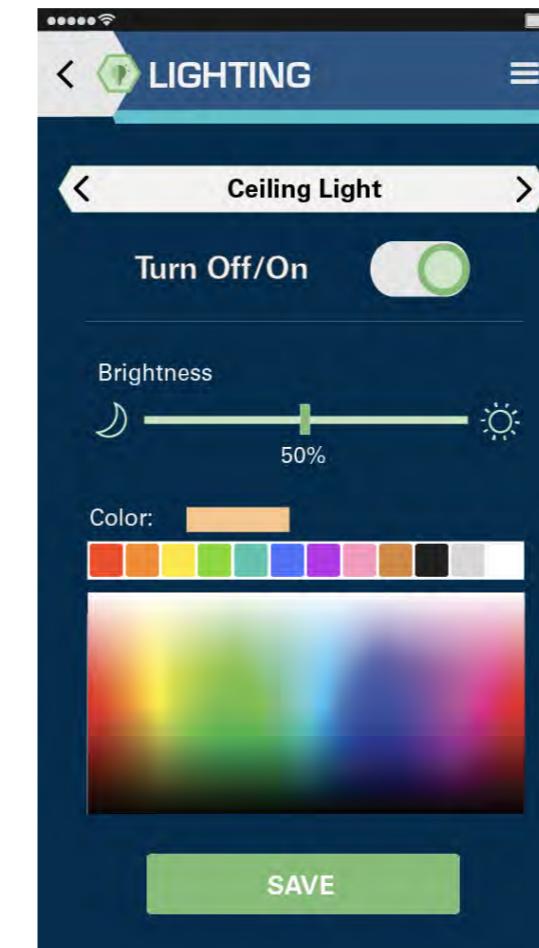


Using Red tone color.

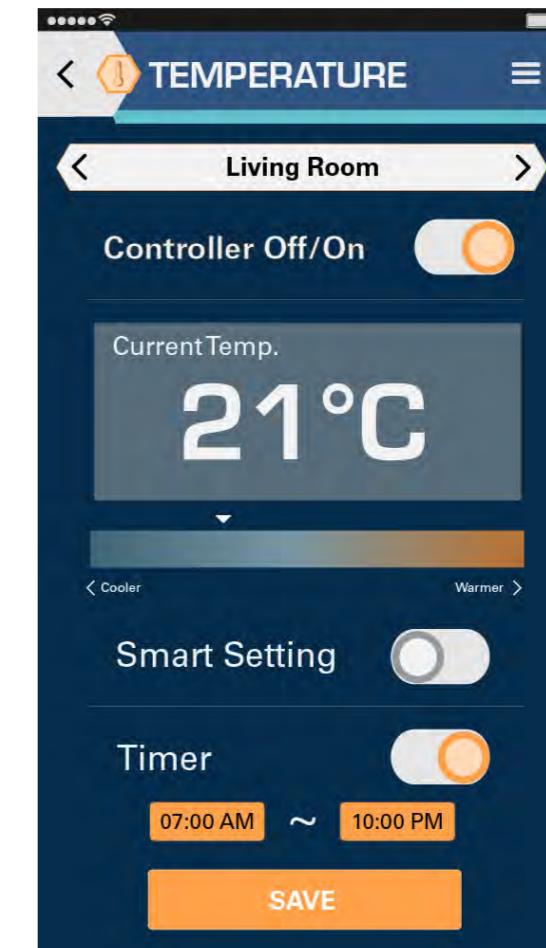
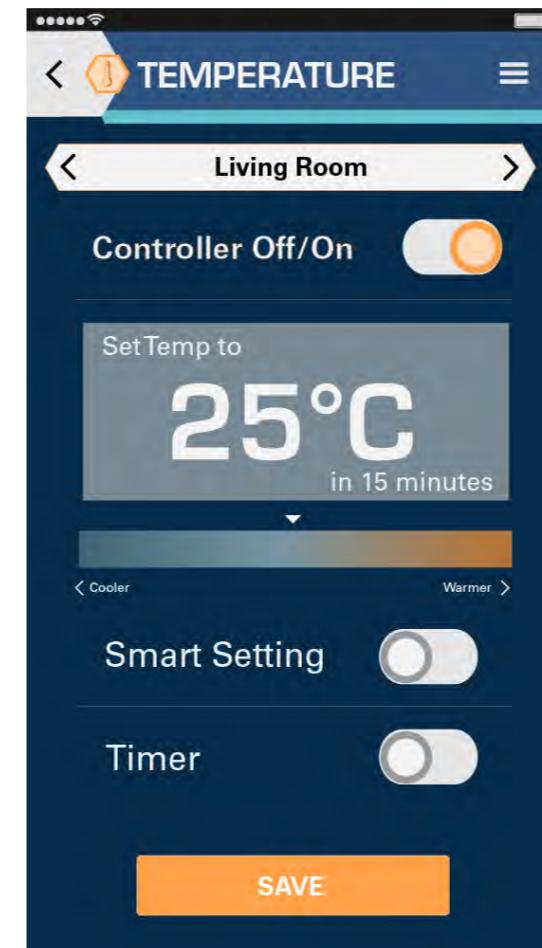
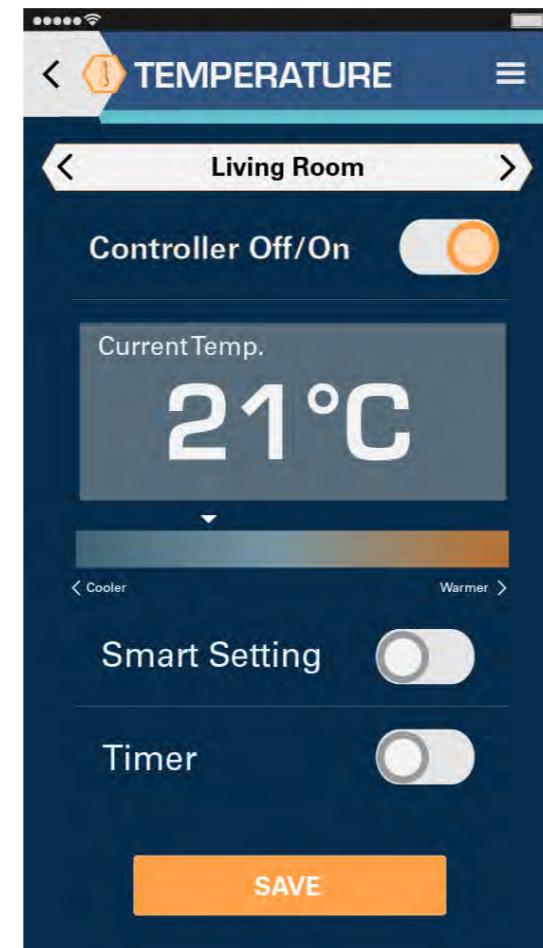
Final Design



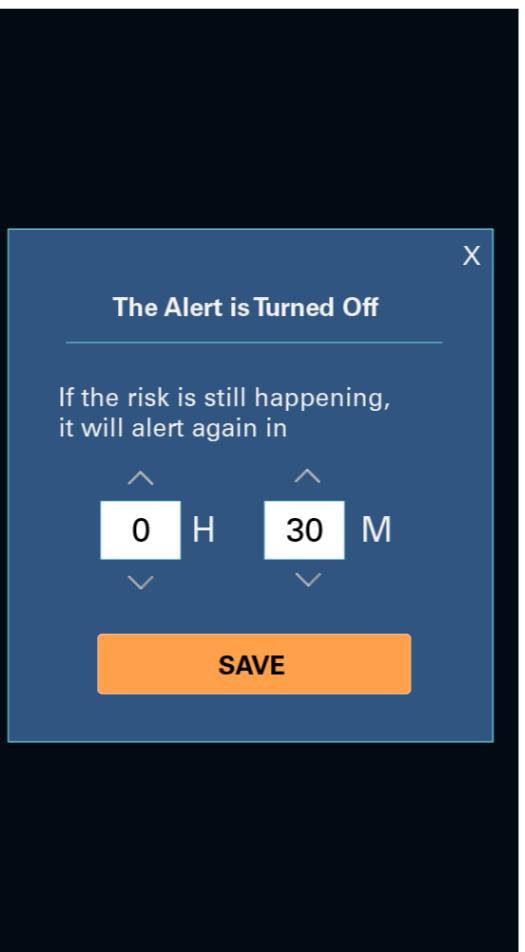
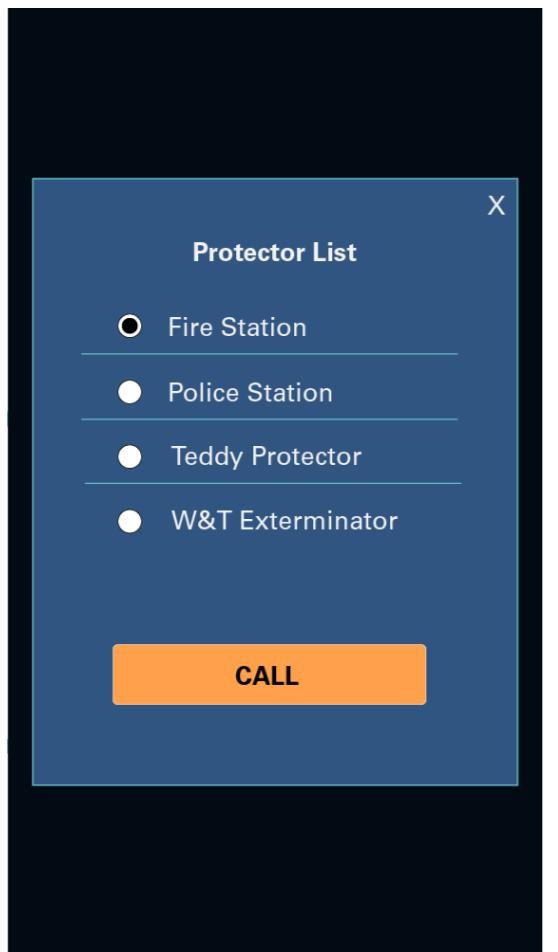
Final Design



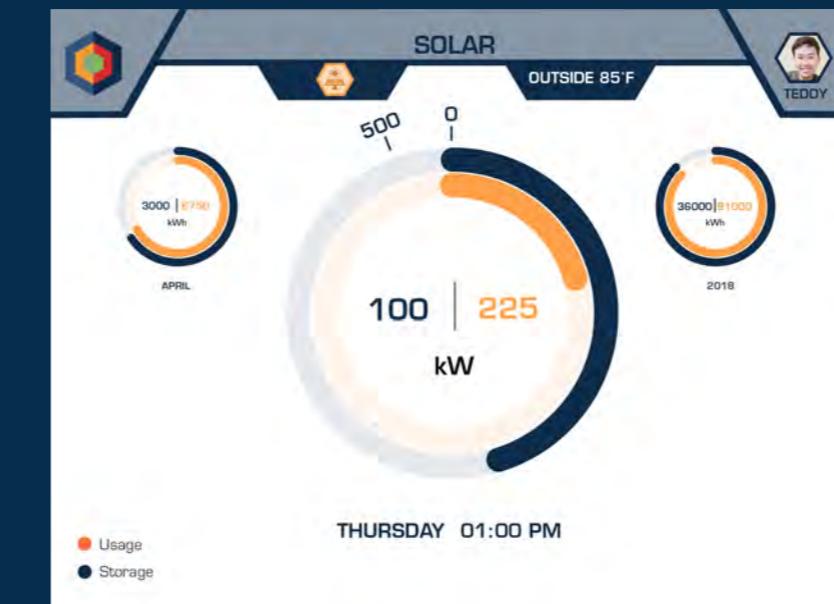
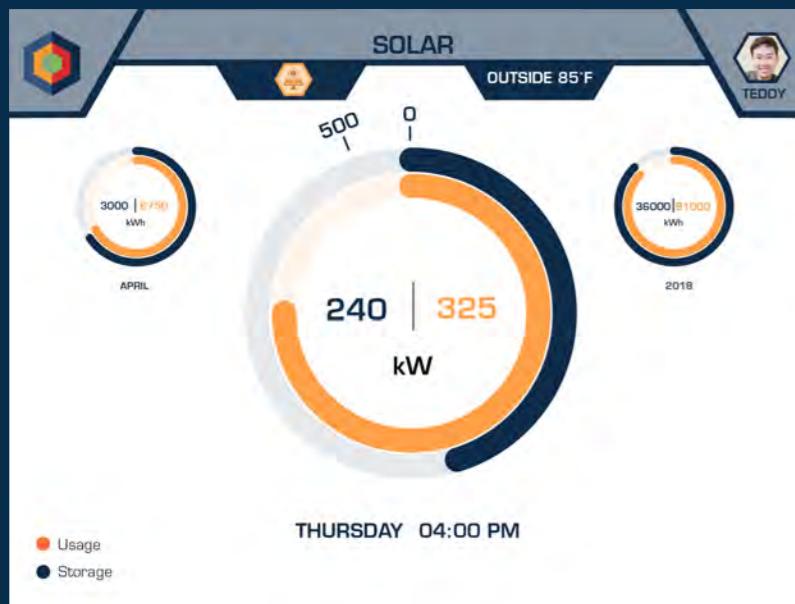
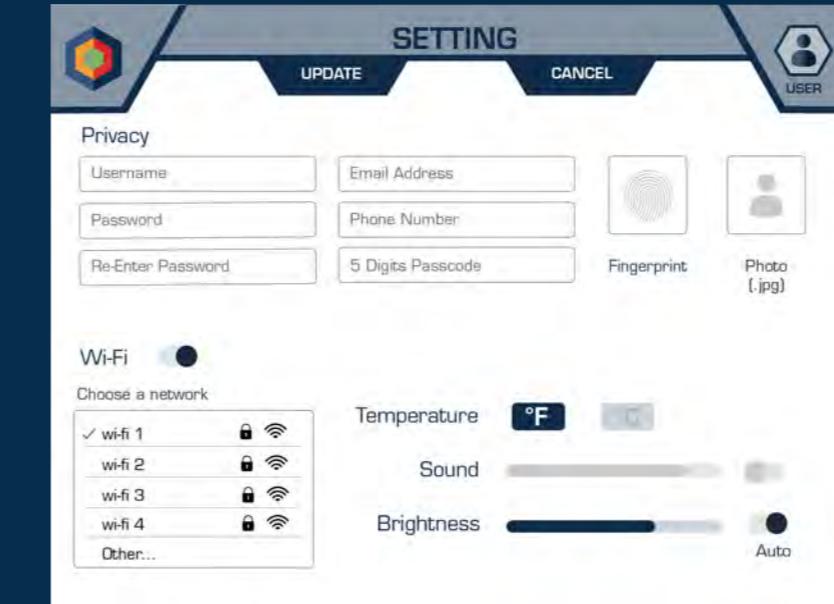
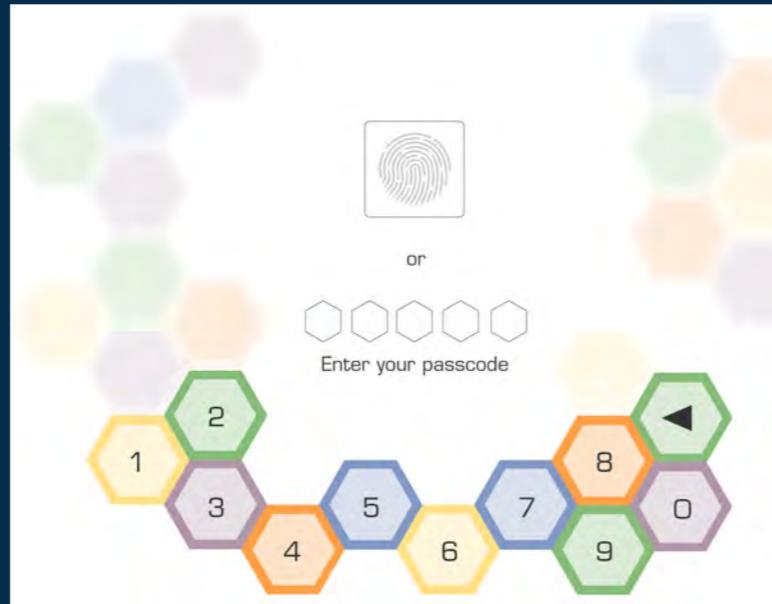
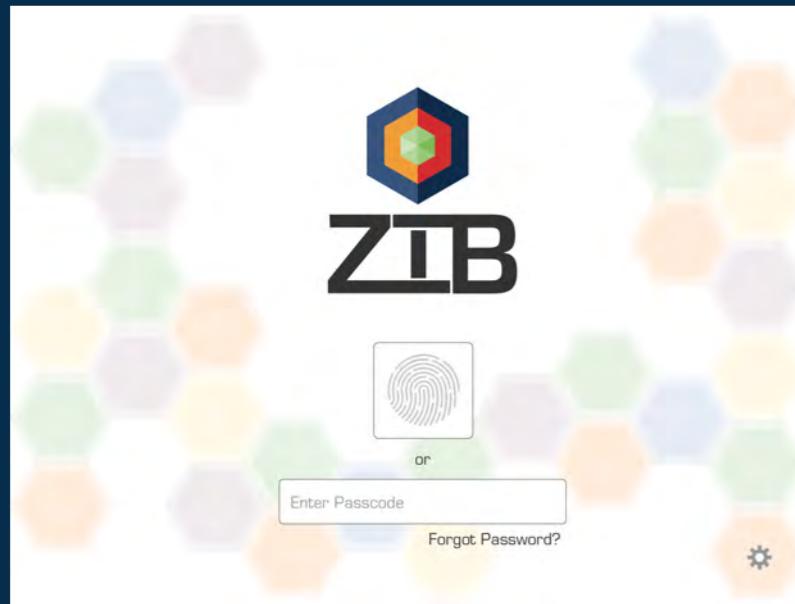
Final Design



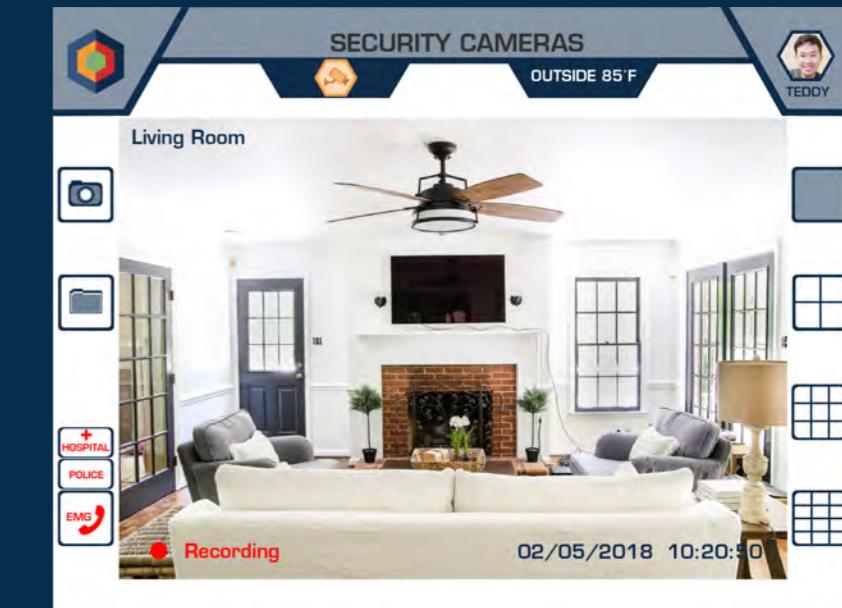
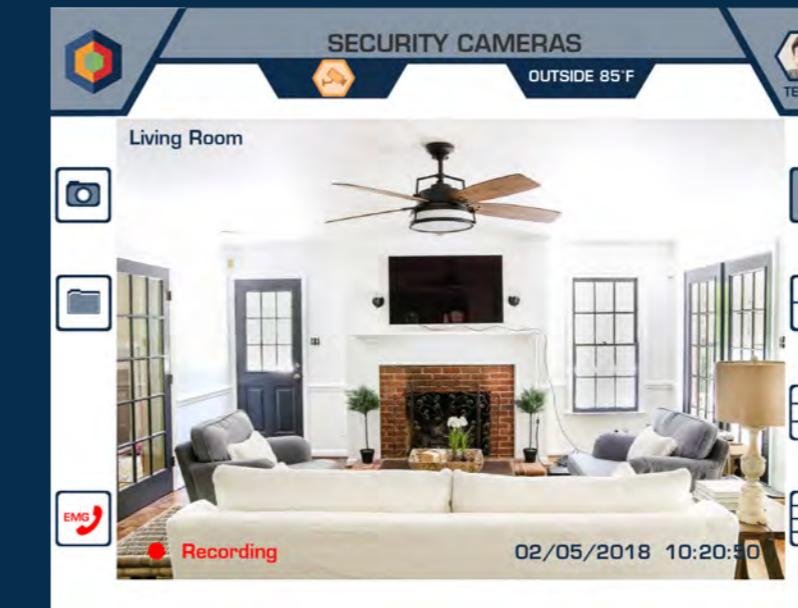
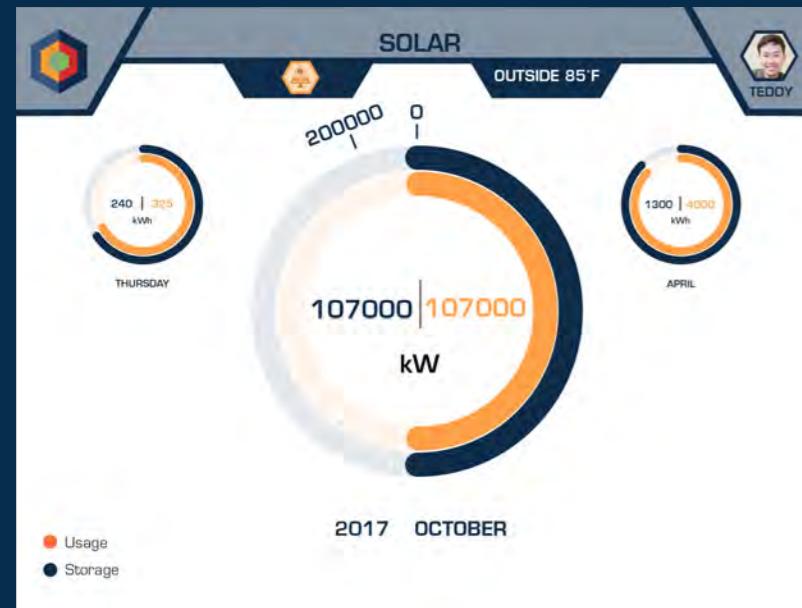
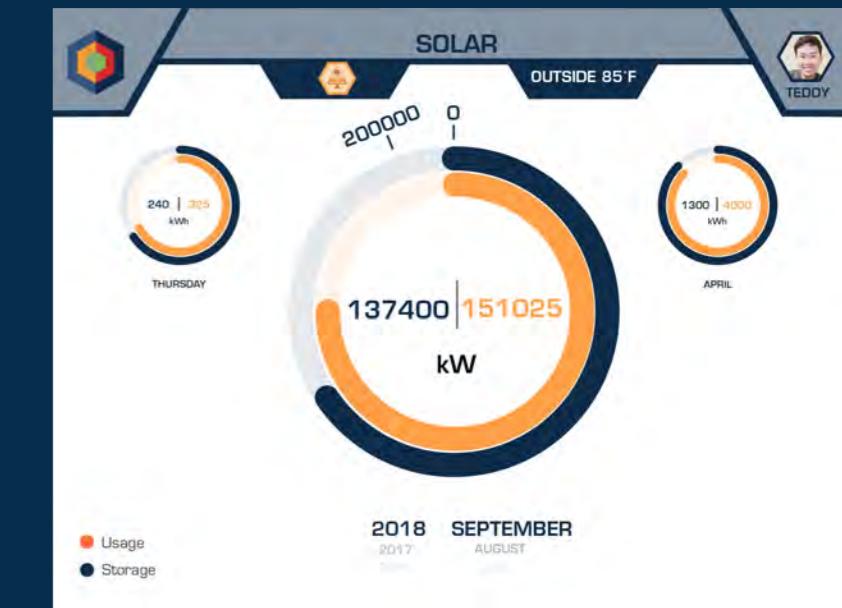
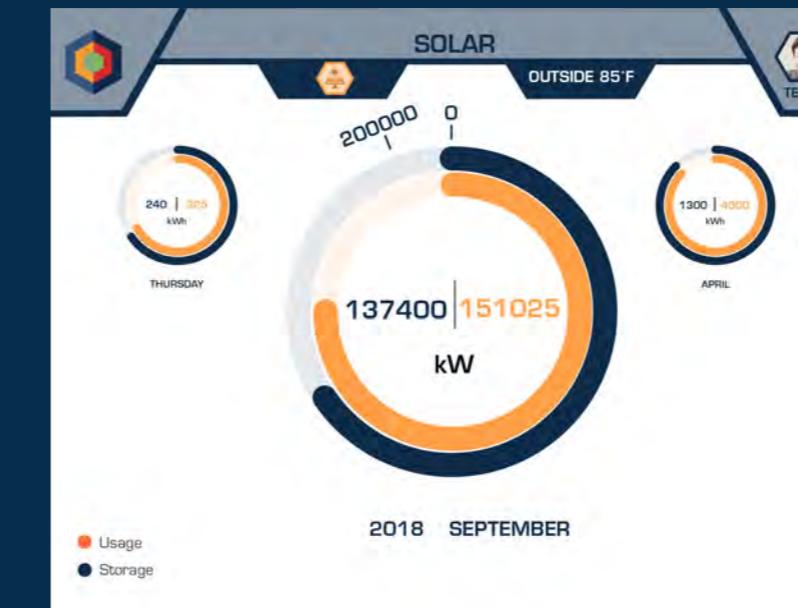
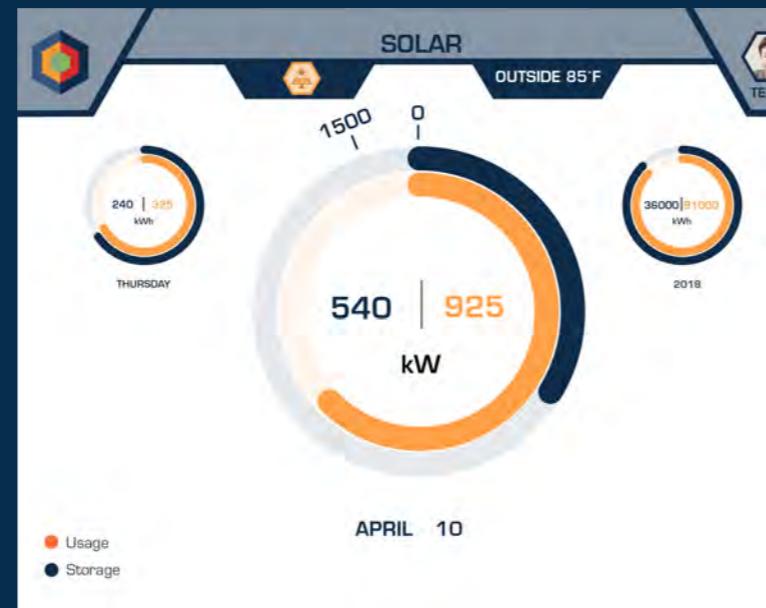
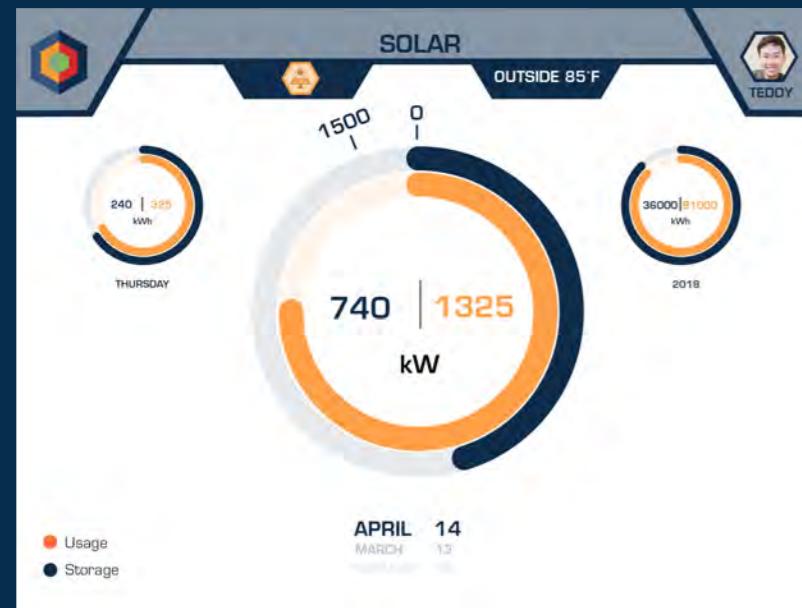
Final Design



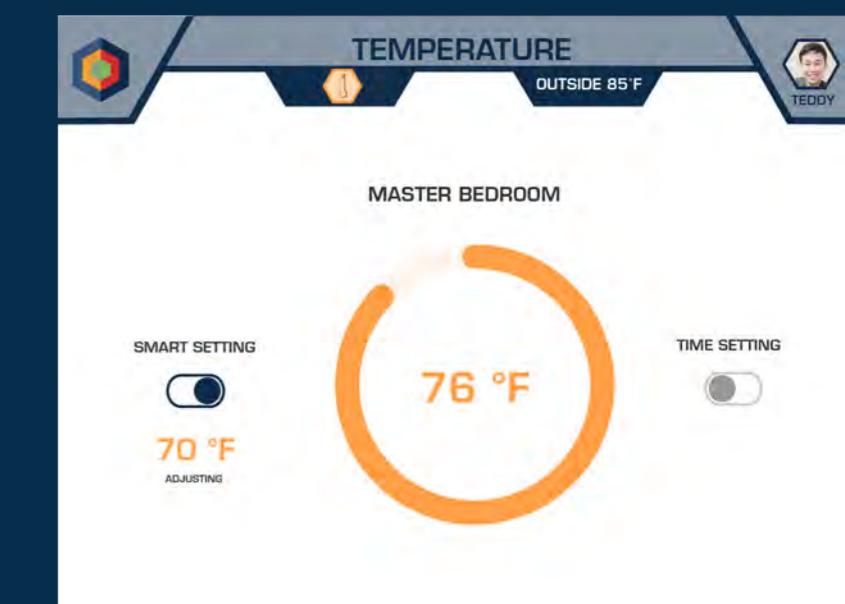
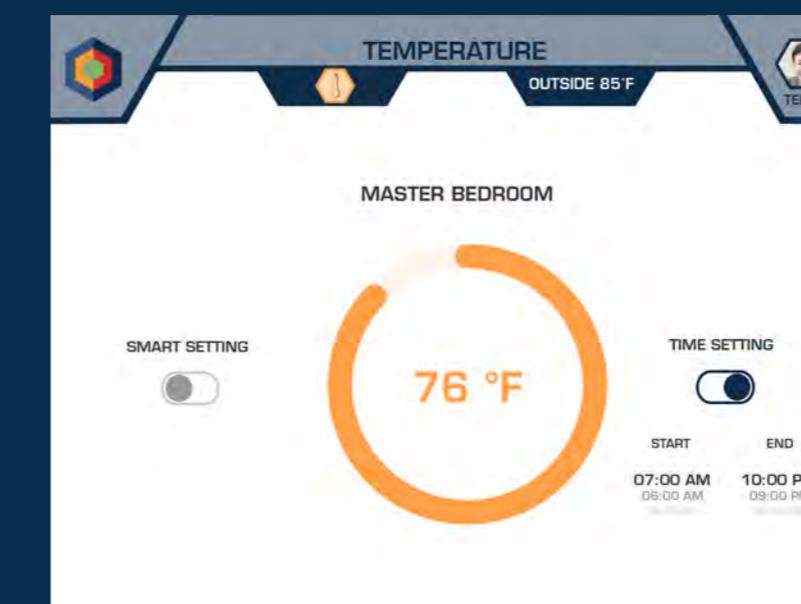
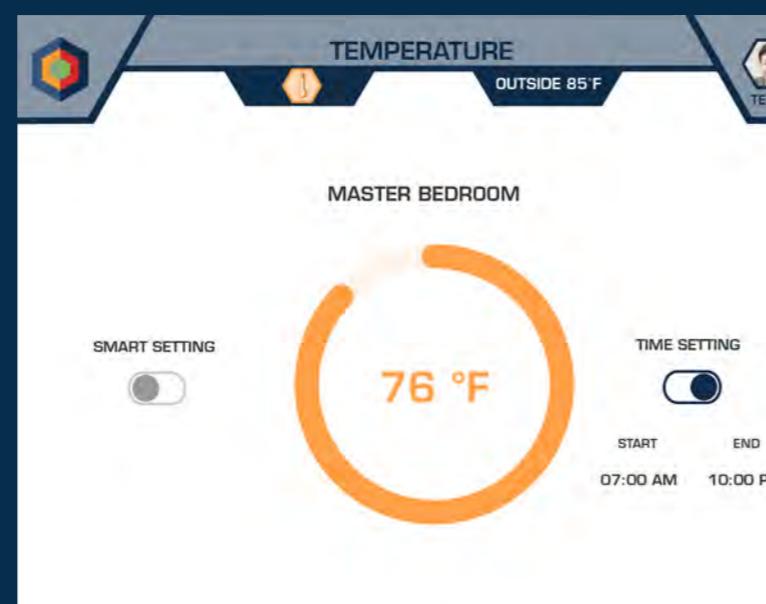
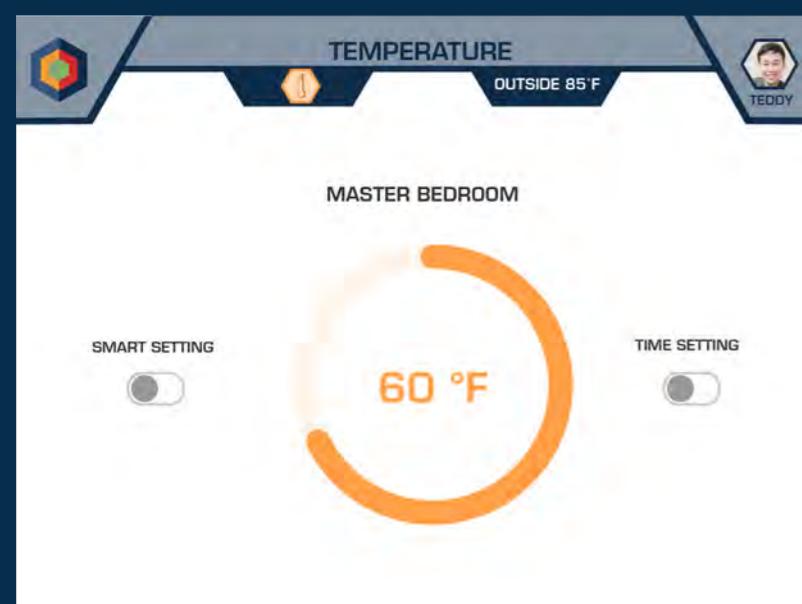
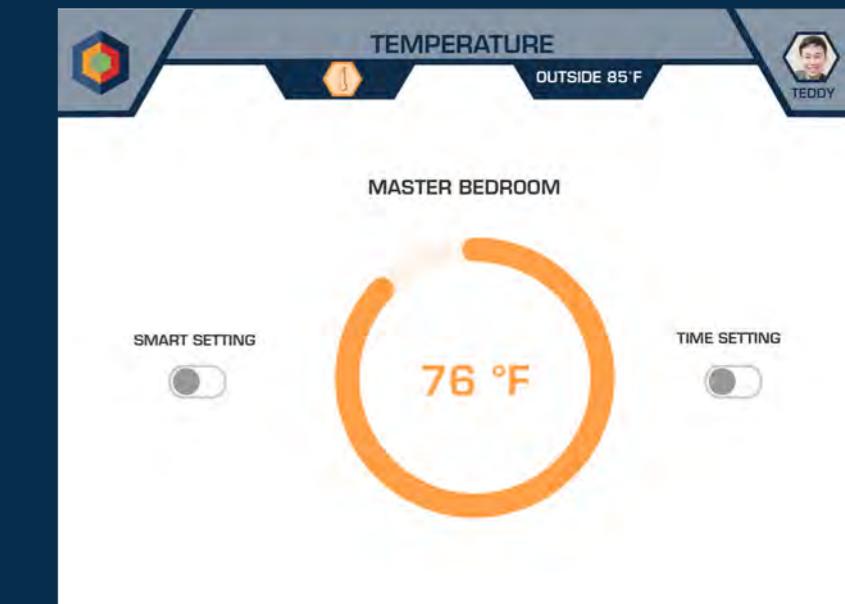
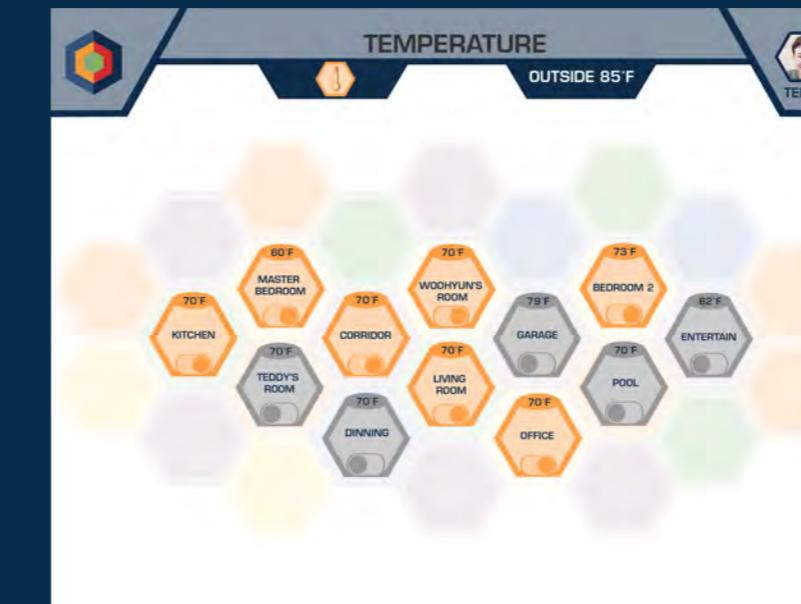
Final Design (Main Device)



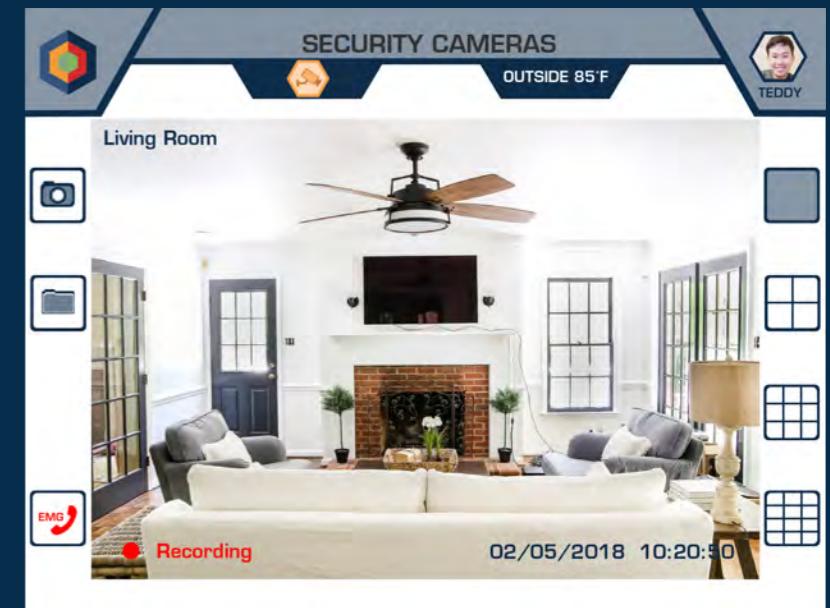
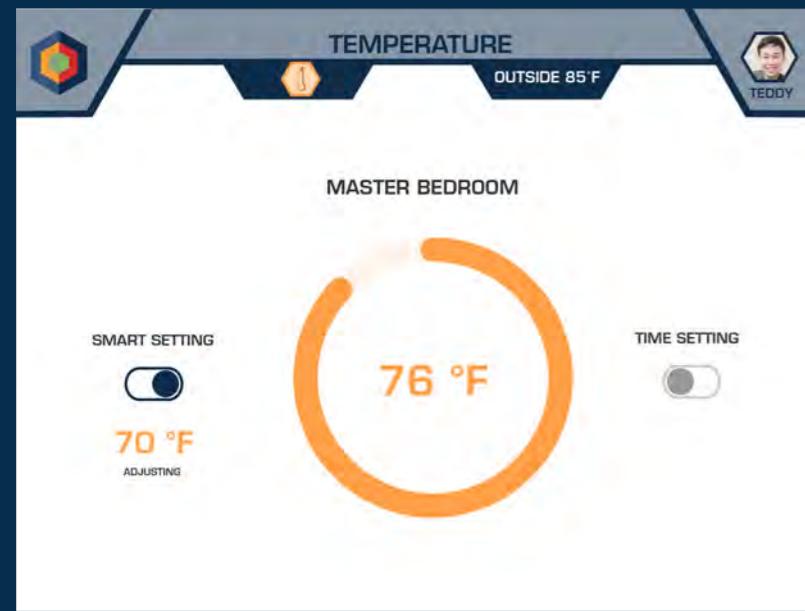
Final Design (Main Device)



Final Design (Main Device)



Final Design (Main Device)



Prototype

Mobile

https://invis.io/QCJGT18MF57#/299214724_landing

Mobile - Alert

https://invis.io/J8JGT3QYGFZ2#/299219611_Protect_Alert1

Main Device

https://invis.io/9ZJGT5JTSEJ#/299220995_Login

Main Device - Alert

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