IoT : Smart Home System

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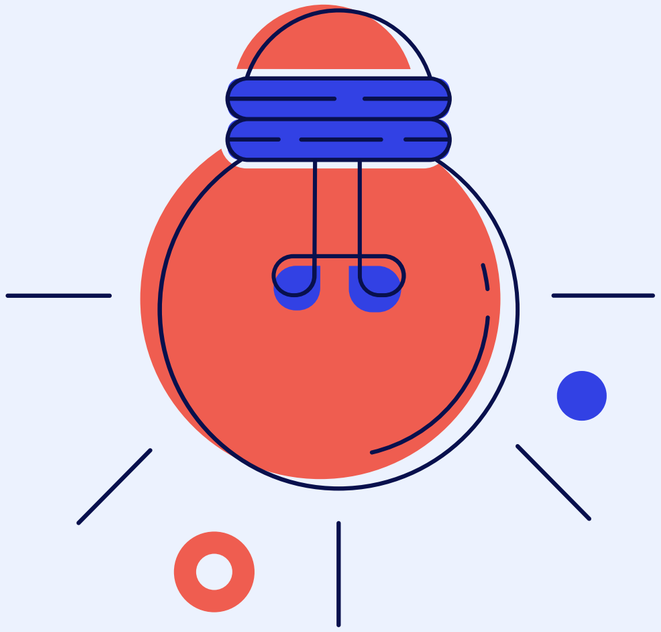
Introduction

One of technologies in the 4th Industrial Revolution is Internet of Things (IoT). IoT is a platform that allows embedded devices to connect to the internet in order to exchange and collect data with other devices.

Iot is deployed in RFID, WiFi, ZigBee and Bluetooth.

We have chosen IoT application for our project.



PROBLEM & SOLUTION

Daily tasks and chores around the house is a hassle. Double checking doors before leaving the house or before sleeping can be tiring.

So, we designed a **Smart Home System** with IoT application to do those chores from security work to small tasks that saves cost, time and energy for you !

OBJECTIVES

- study the challenges in repetitive house chores.
- design impactful Smart Home System features.
- develop game changing IoT technologies.

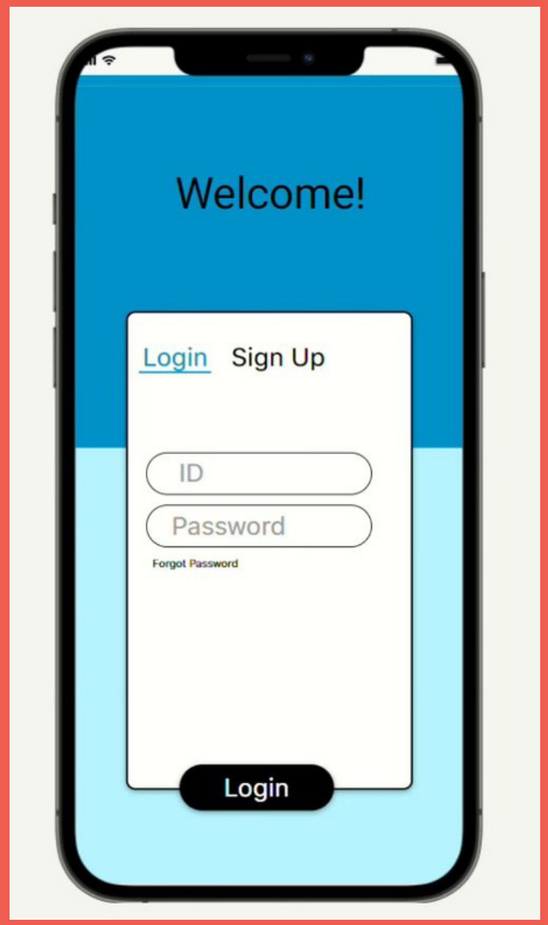
→ limitations

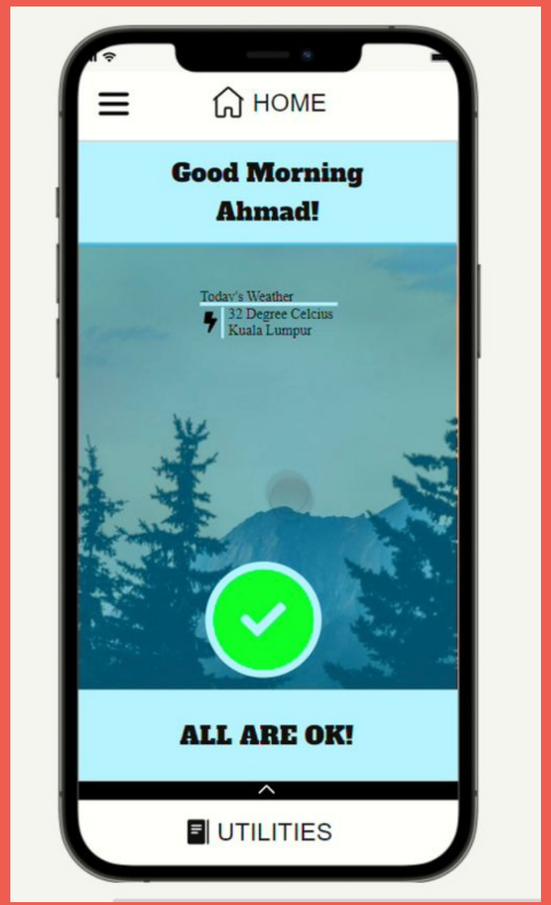
- cost of installation, integration and compatibility
- vulnerability of hacking and other security issues
- latency, bottlenecks and capability for continuous interactions
- ability and expertise to implement hardwares and softwares like Zigbee, Arduino, Intel Galileo or Raspberry Pi.

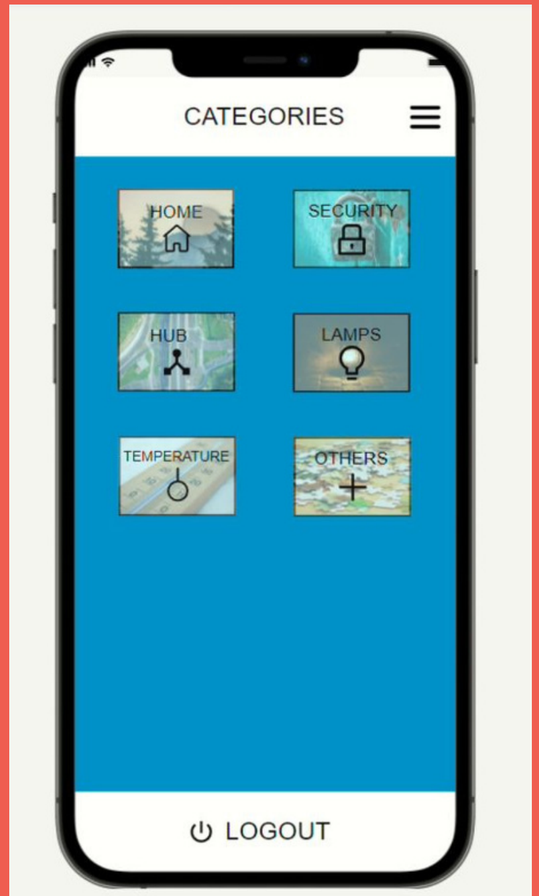
what to expect ←

- general knowledge of IoT applications mechanism, including hardwares, softwares, benefits and backdraws.
- current market and prospects of IoT products
- key things to consider when proposing and creating projects.

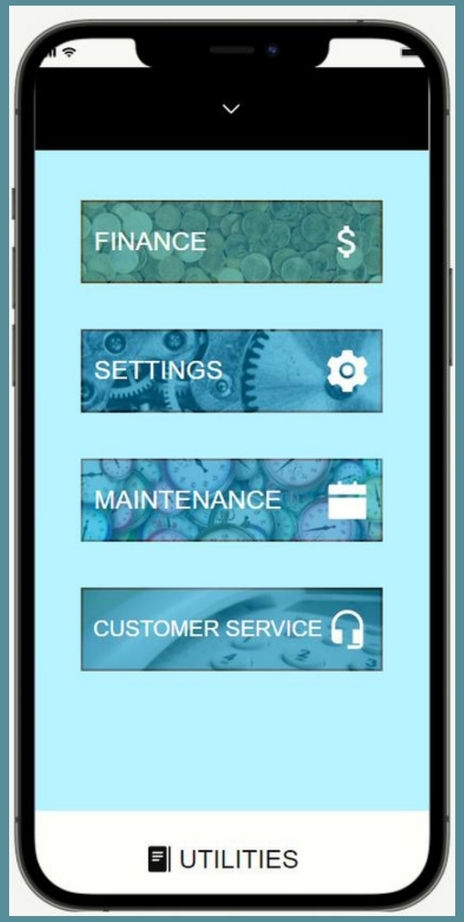
PROTOTYPE

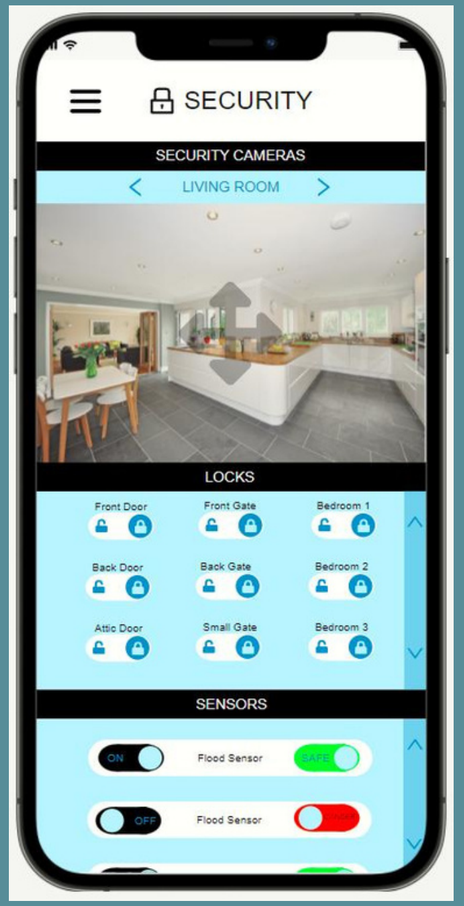

Welcome!
Login
Sign Up
ID
Password
Forgot Password
Login

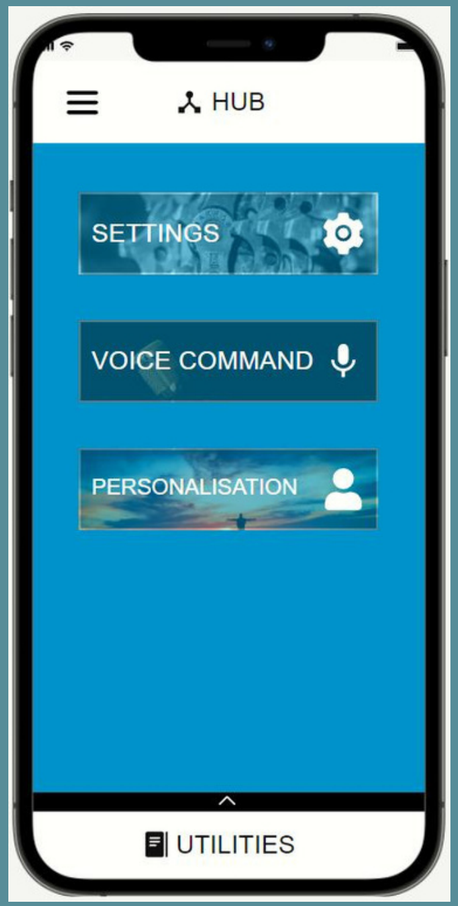

HOME
Good Morning
Ahmad!
Today's Weather
32 Degree Celcius
Kuala Lumpur
ALL ARE OK!
UTILITIES


CATEGORIES
HOME
SECURITY
HUB
LAMPS
TEMPERATURE
OTHERS
LOGOUT

PROTOTYPE

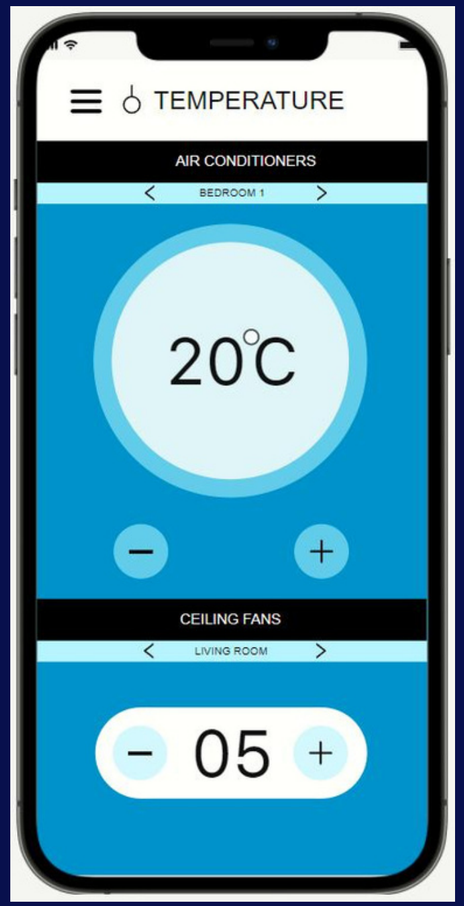

FINANCE
SETTINGS
MAINTENANCE
CUSTOMER SERVICE
UTILITIES

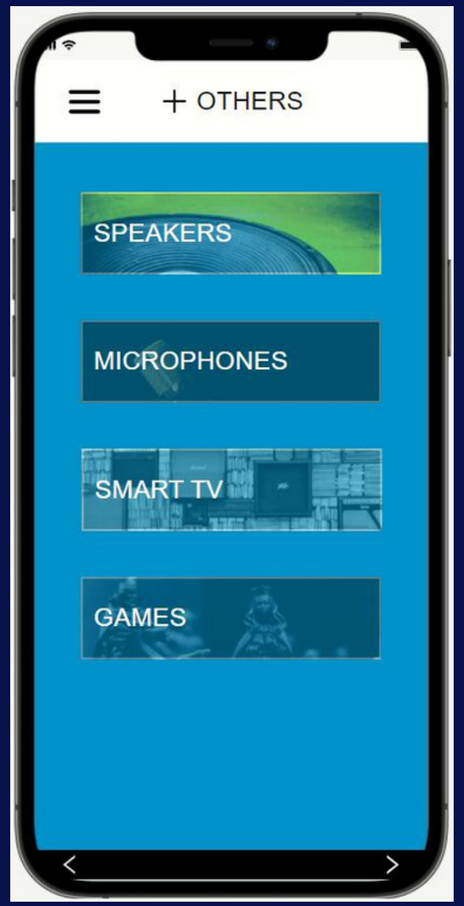

SECURITY
SECURITY CAMERAS
LIVING ROOM
LOCKS
Front Door
Front Gate
Bedroom 1
Back Door
Back Gate
Bedroom 2
Attic Door
Small Gate
Bedroom 3
SENSORS
ON
Flood Sensor
SAFE
OFF
Flood Sensor


HUB
SETTINGS
VOICE COMMAND
PERSONALISATION
UTILITIES

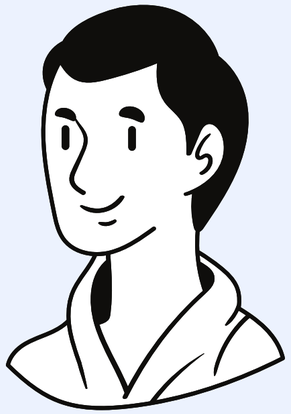
PROTOTYPE

LAMPS
ON
Living Room A
ON
ON
Living Room B
ON
ON
Living Room C
ON
ON
Bathroom
ON
ON
Laundry Room
ON
ON
Bedroom 1 A
ON
ON
Bedroom 1 B
ON

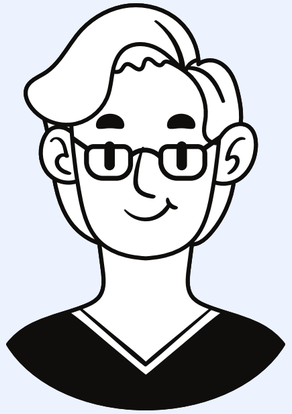

TEMPERATURE
AIR CONDITIONERS
BEDROOM 1
20°C
CEILING FANS
LIVING ROOM
05


OTHERS
SPEAKERS
MICROPHONES
SMART TV
GAMES

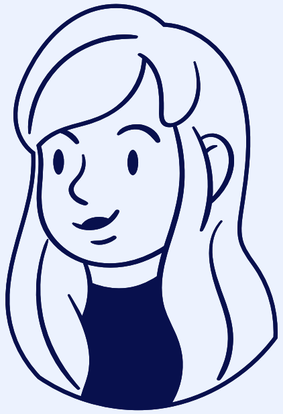
How We Delegate Tasks



Ahmad Jalkhan
Introduction, Part of Description, Low-fidelity mock-ups & Conclusion



Airil Haziq
Selection of 4th IR technology, Steps & Part of Description



Nik Aishah
Potential Client Identification & Business process flow diagram and its description

Hazman
Cloud Architecture Planning and Design & AWS

reflections

Iot technologies are crucial.

We've learnt how despite its convenience, it hasn't been implemented as vastly as it should. So, we had to overcome some issues, regarding the planning and design of our project. Our understanding of 4th IR is quite sparse, so after our intensive research we were able to succesfully create our Smart Home System.

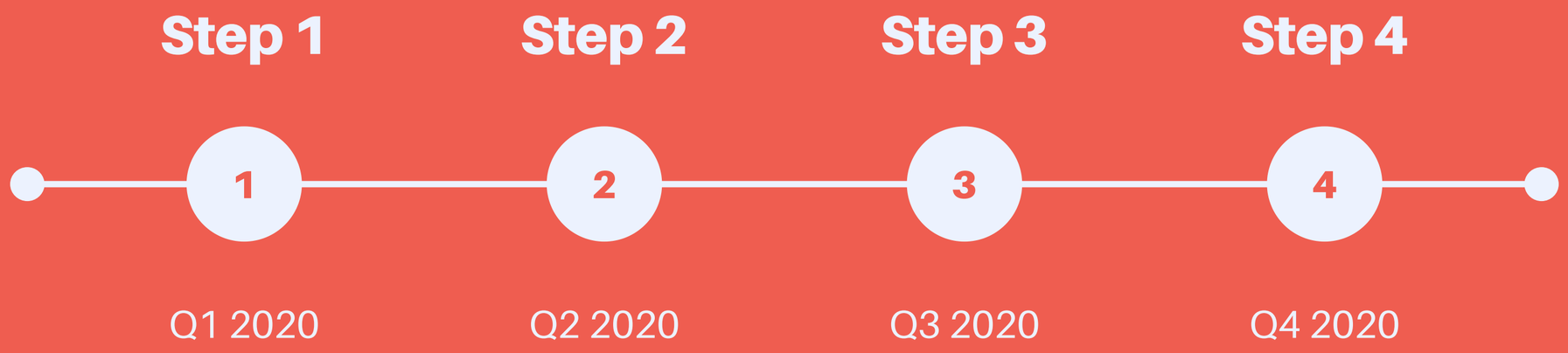
We hope to experiment and explore more on project making and any potential markets that implement the technologies of the 4th Industrial Revolution. We also hope to learn more about cloud computing and create other projects using IoT application.

CONCLUSION

The priority of our project is to create a system that assists people in repetitive household tasks, saving time for leisure or work. With the use of Internet of Things technology and cloud architecture assistance, our system will have the ability to automate every task from lighting to security, enhancing our user’s experience and boosting productivity and efficiency, a holistic Smart Home System.

Future Roadmap

What are your next steps and goals? How much support do you need from investors and what will it get you?



Free Resources

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