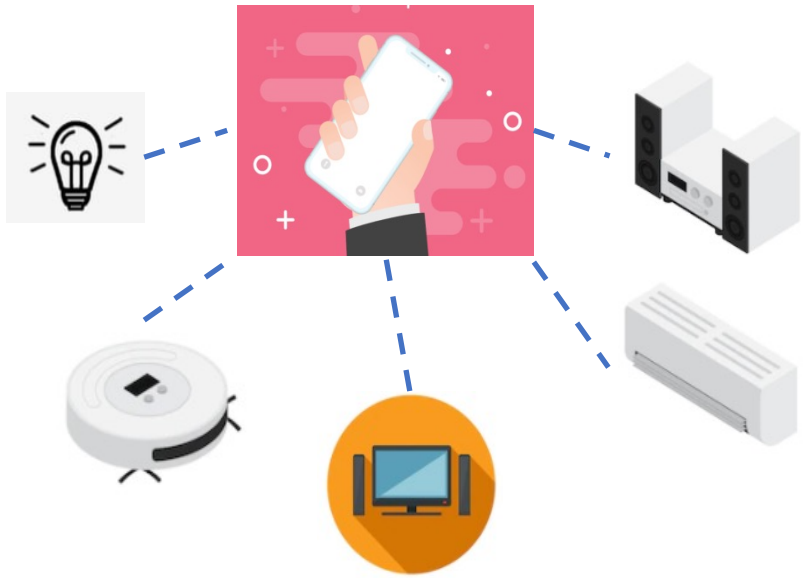
Smart Remote Control



Connect home appliances with single app

Team 12

CONTENTS

PART 1 Overview

1 Problem

2 Goal

01 Overview

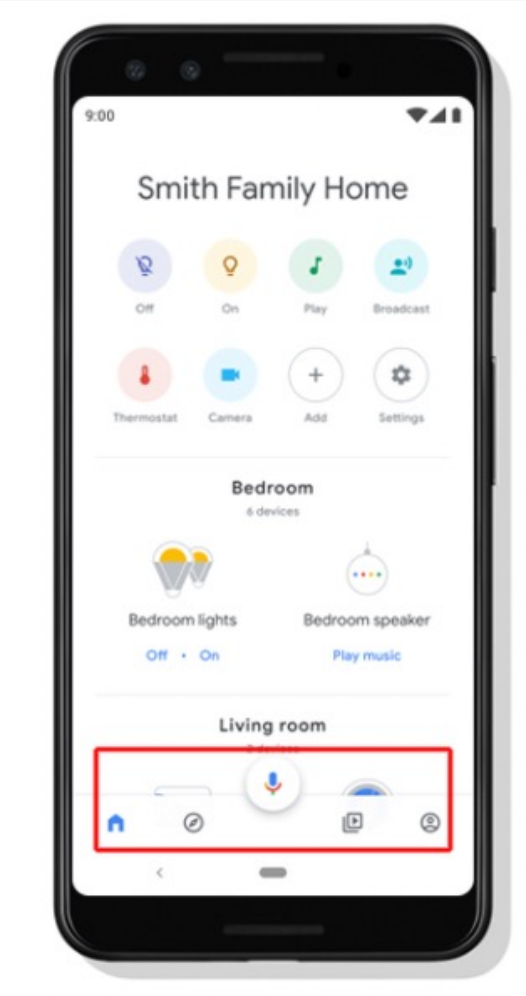
Problem 1

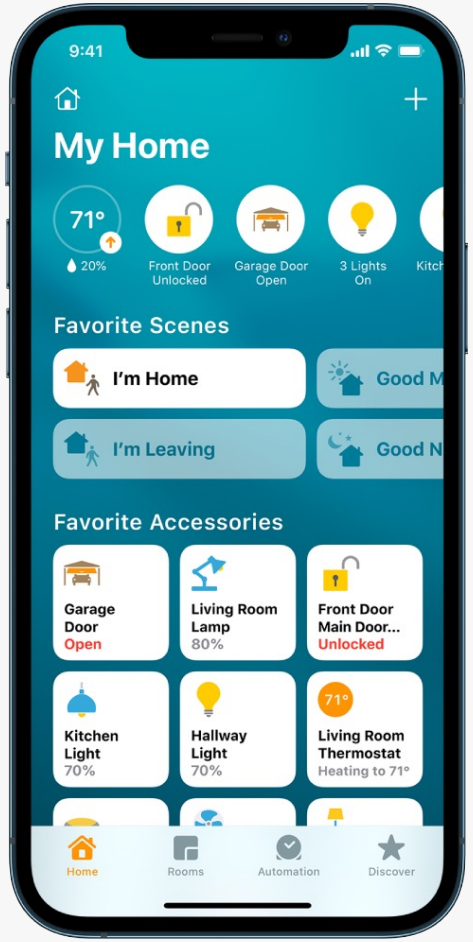
Apple homes and google home are two major smart home applications in the market.

01

Overview

Problem 1



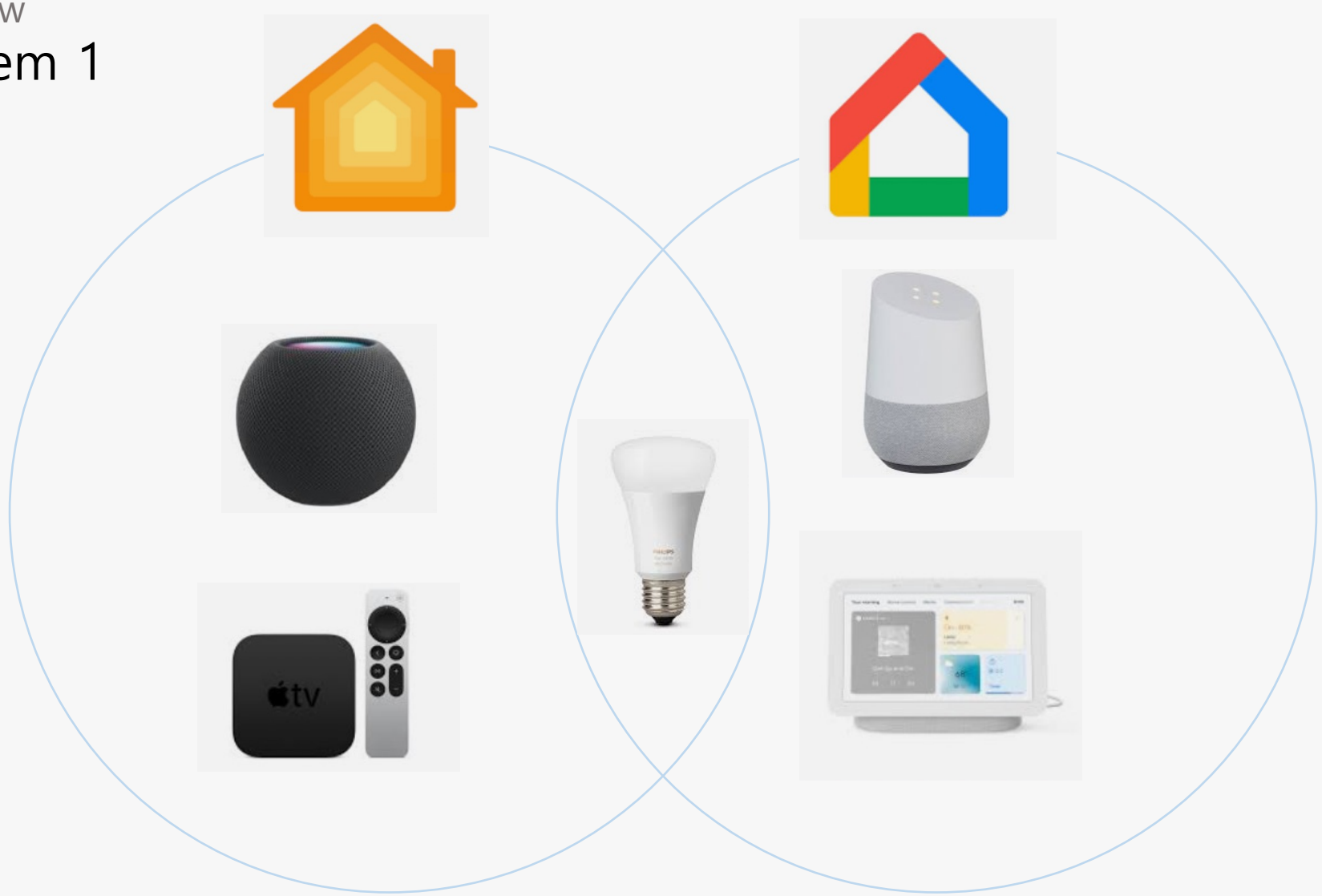


Apple homes and google home are two major smart home applications in the market.

01

Overview

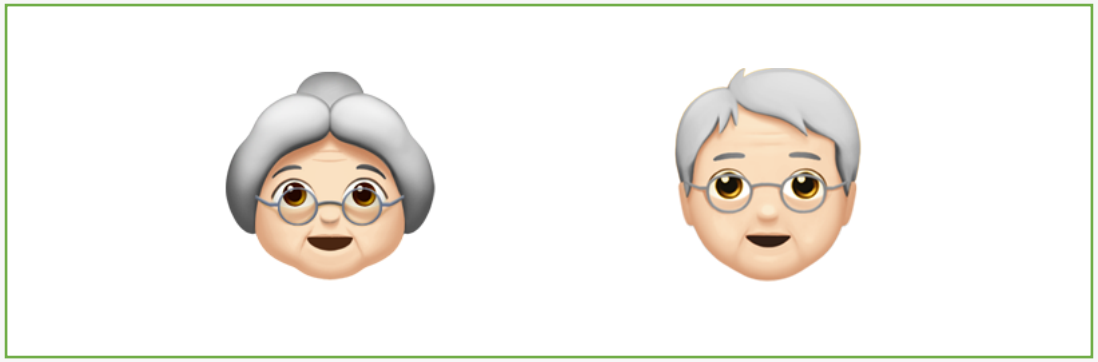
Problem 1

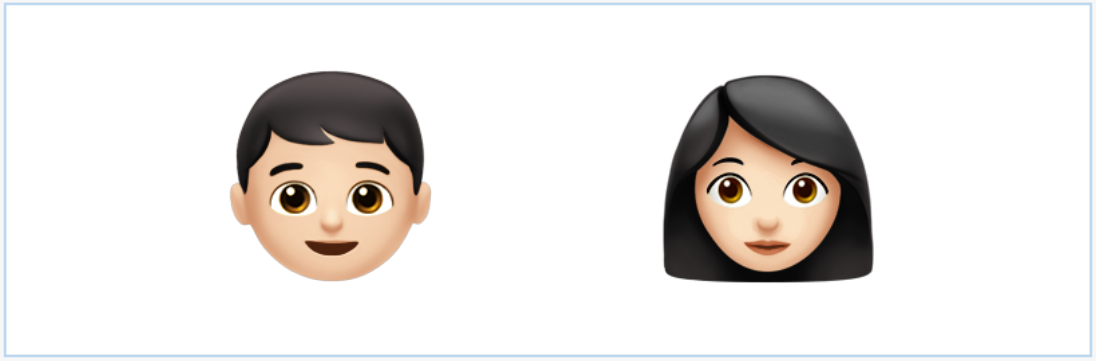


There are various devices that each apps support. But there are not much devices that is supported by both apps

01 Overview

Problem 1



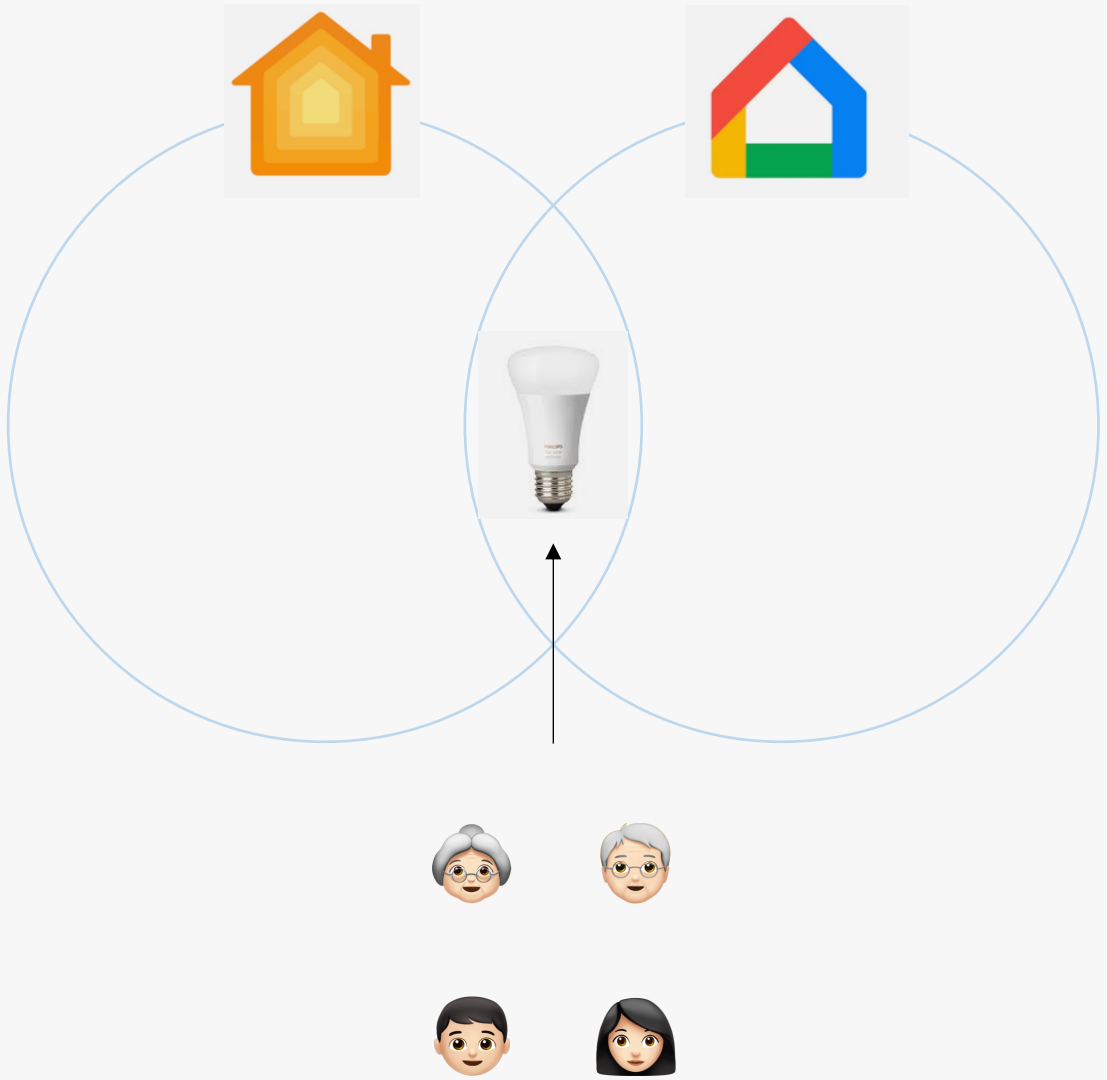


Family who have mixed use of Android phones and iPhones get limited choices.

01

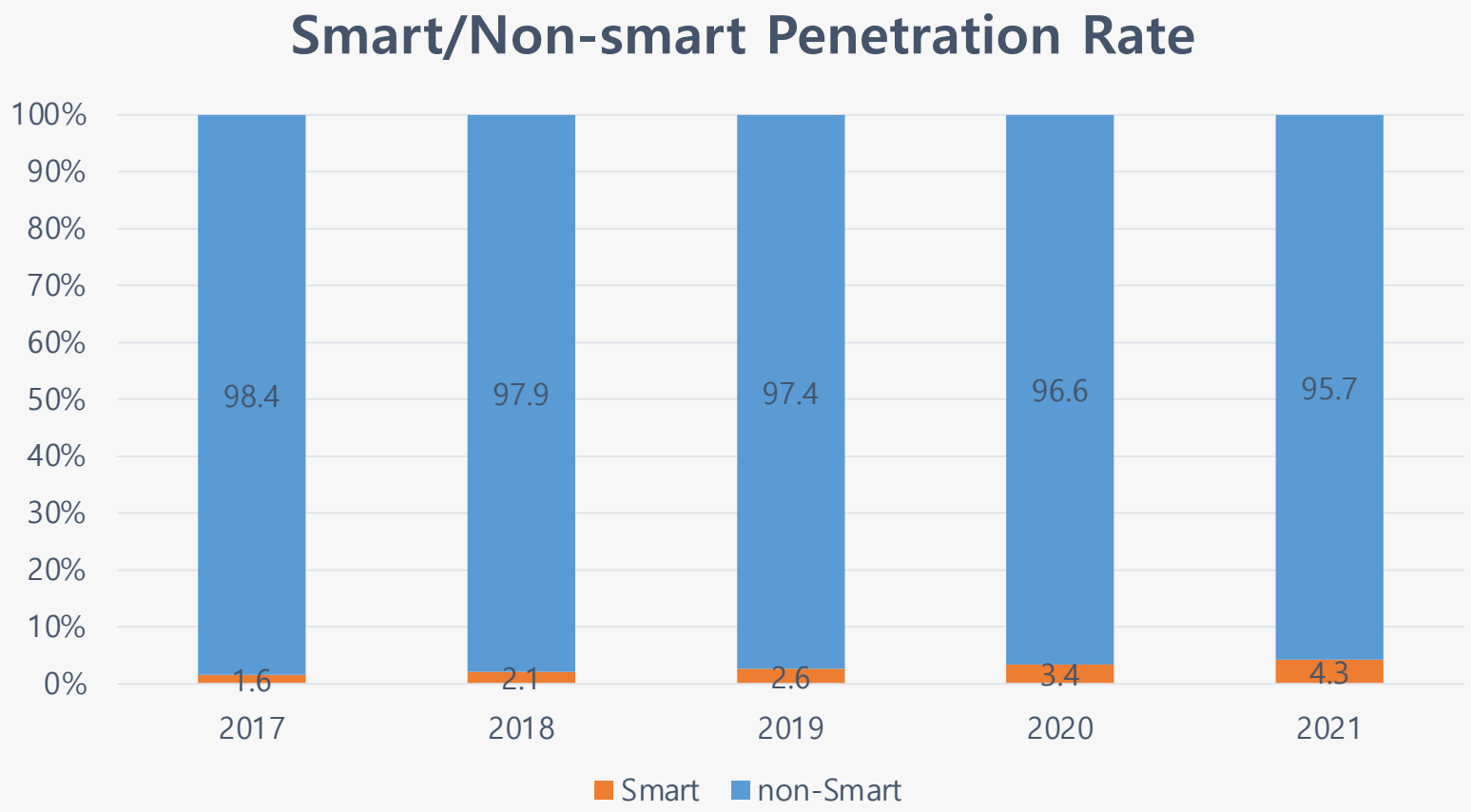
Overview

Problem 1



Family who have mixed use of Android phones and iPhones get limited choices.

Problem 2



Smart home appliances market share is still very low. Most of the households use regular home appliances.

01

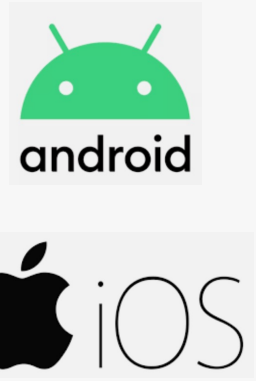
Overview

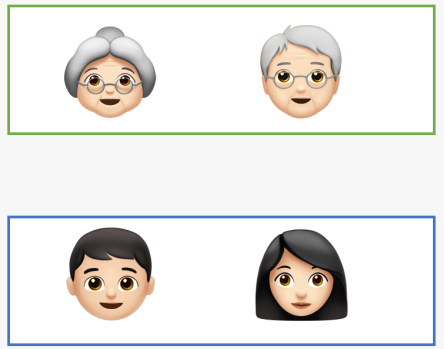
Goal

Using non-Smart home appliances

+

Using both Android/iPhone





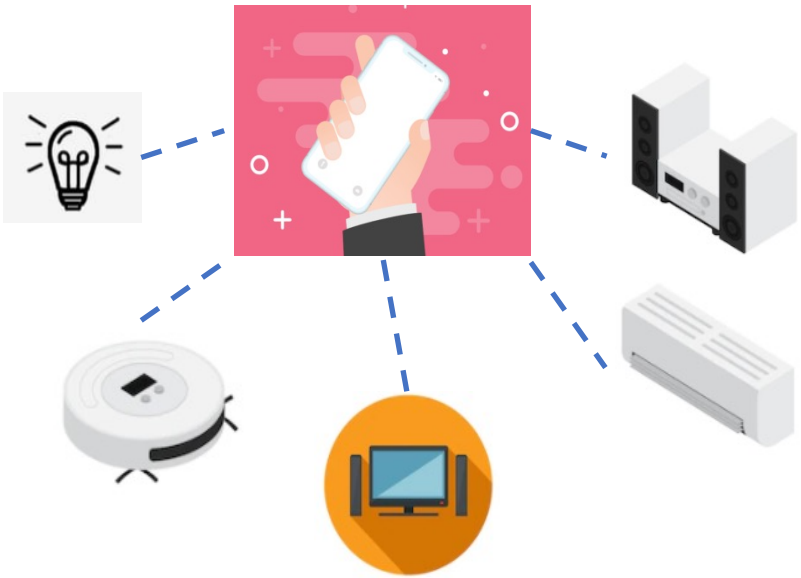
Our product target families who 1) use regular home appliances and
2) have both Android and iPhones

PART 2 Goals & Methods

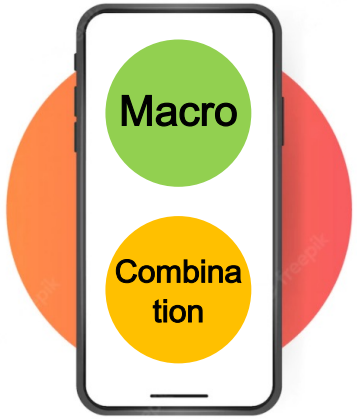
1. Goals
2. Methods
    1. System Flow
    2. Development tools

Goals

Smart Remote Control



Use multiple products with smart phone



Macro & Combination

Reinforcement Learning

Goals

Macro & Combination

Example

Save sequence

Save your control actions as a single button!

Reinforcement Learning

The app learns the user's behaviors and recommends control in a specific environment.

- Users usually turn off the lights at 12pm.

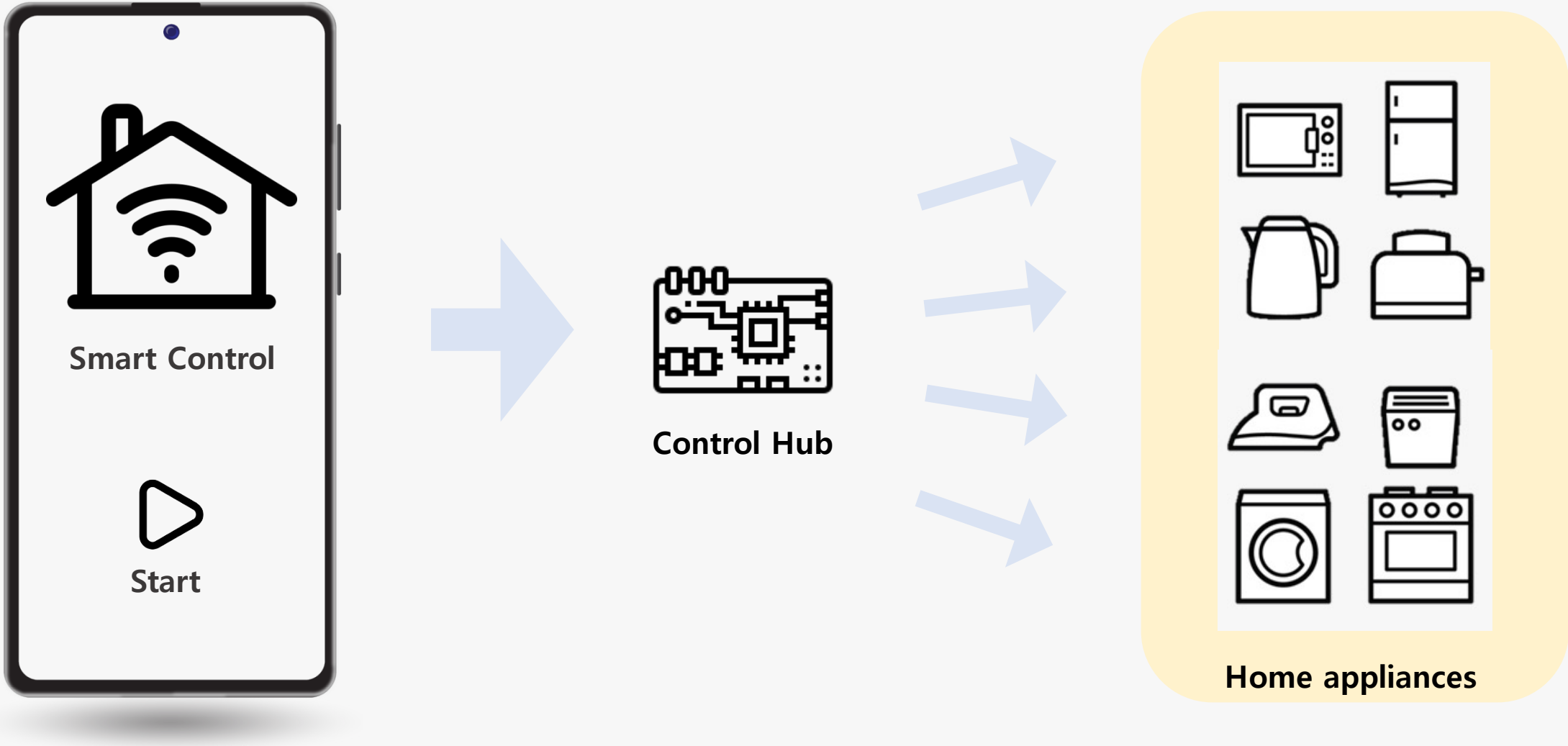
Will you turn off the light?
Click Here!
12:00 PM

Recommends the common behavior of the users who installed the app.

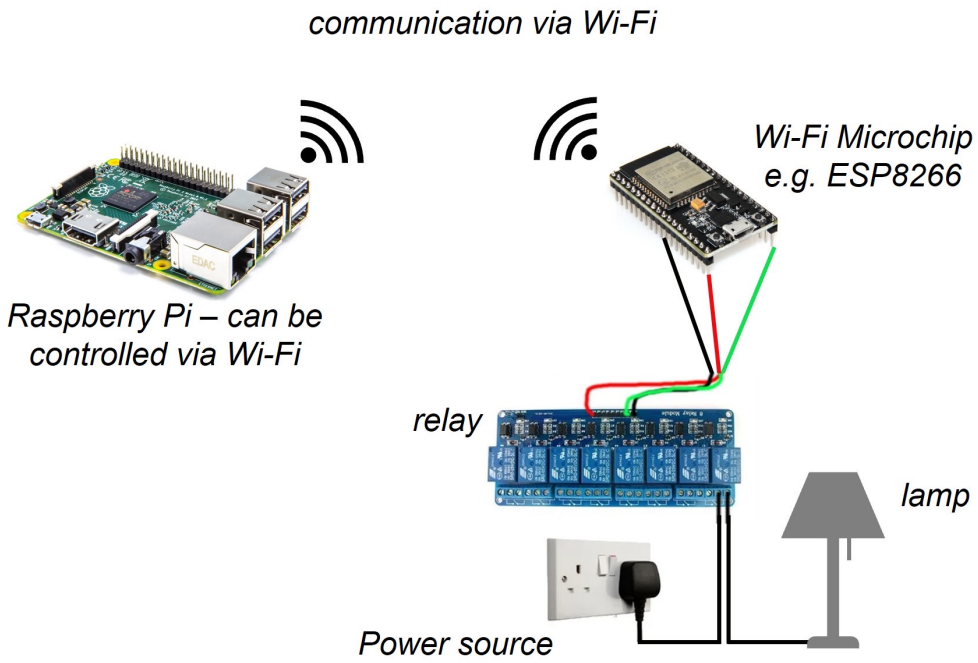
- Extremely humid weather-> Most user control air conditioner

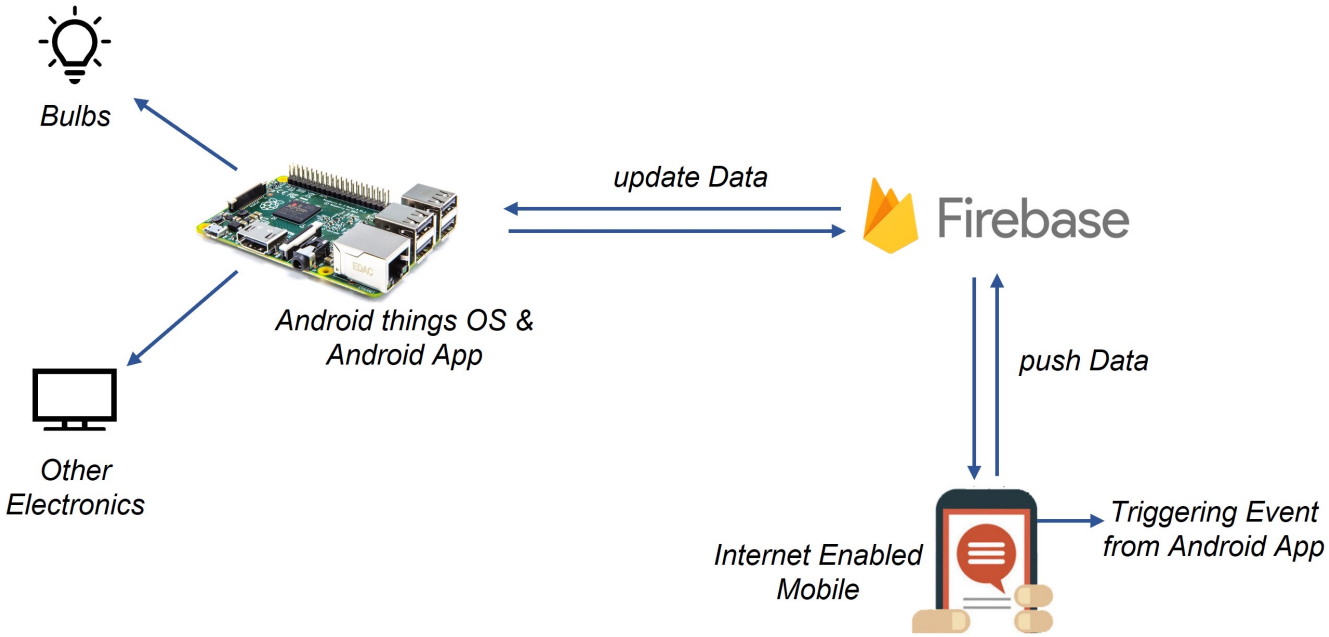
Will you turn on the air-conditioner?

Methods – System Flow

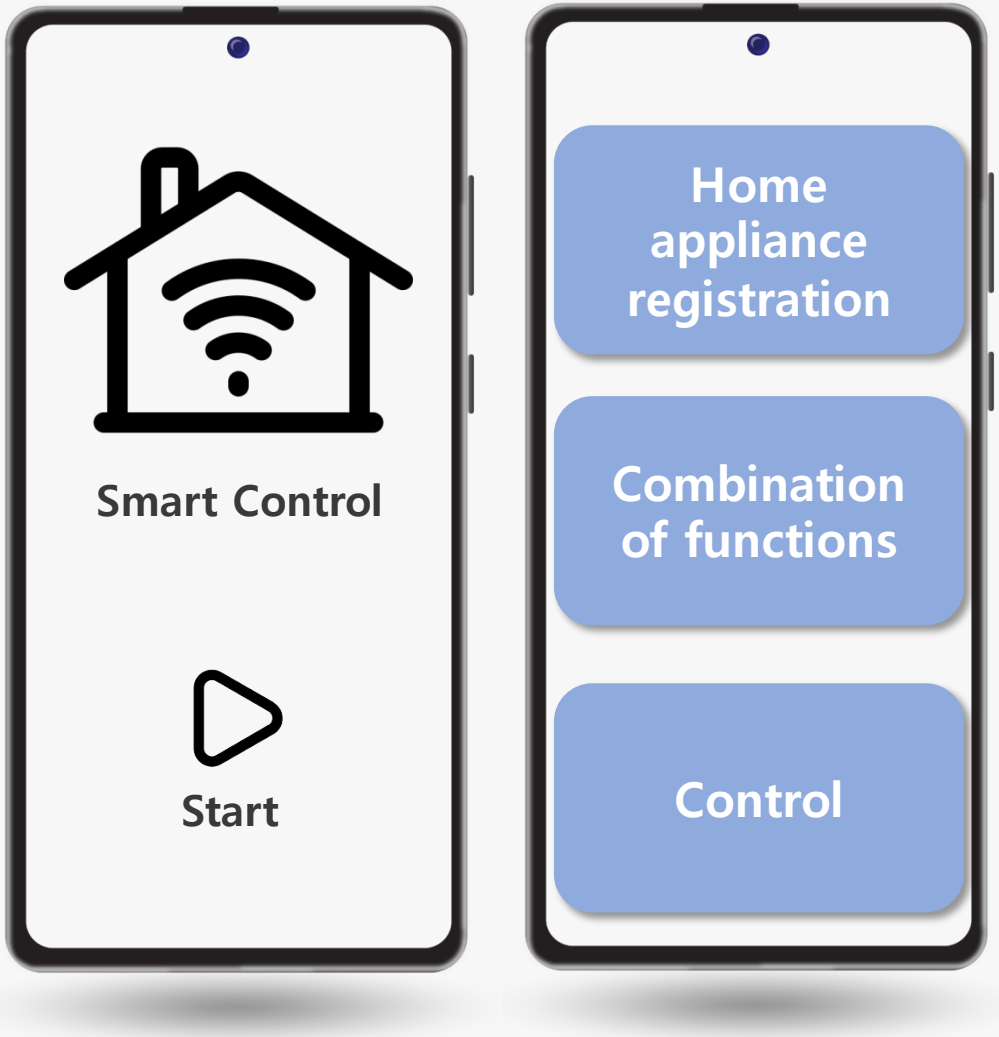


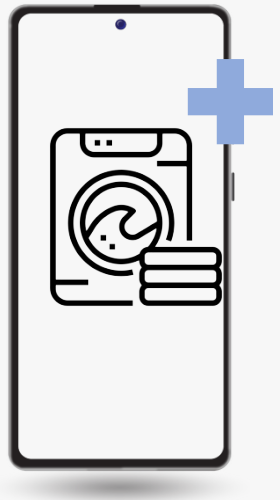
Methods – System Flow





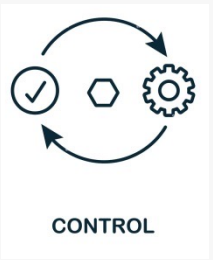
Methods – System Flow





Home appliance registration

Control



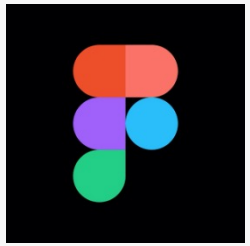
Combination of functions

Methods – Development Tool

UI/UX design

Design prototyping

Adobe Xd

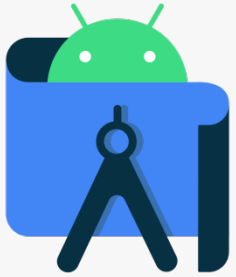


Figma

Design component

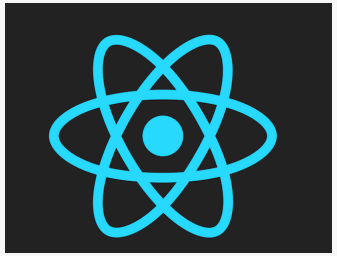
Adobe Photoshop

Application



Android Studio

Xcode



React Native

Methods – Development Tool

Server

Tools

Server

Node.js

DB

Mongo DB

Github
Open source

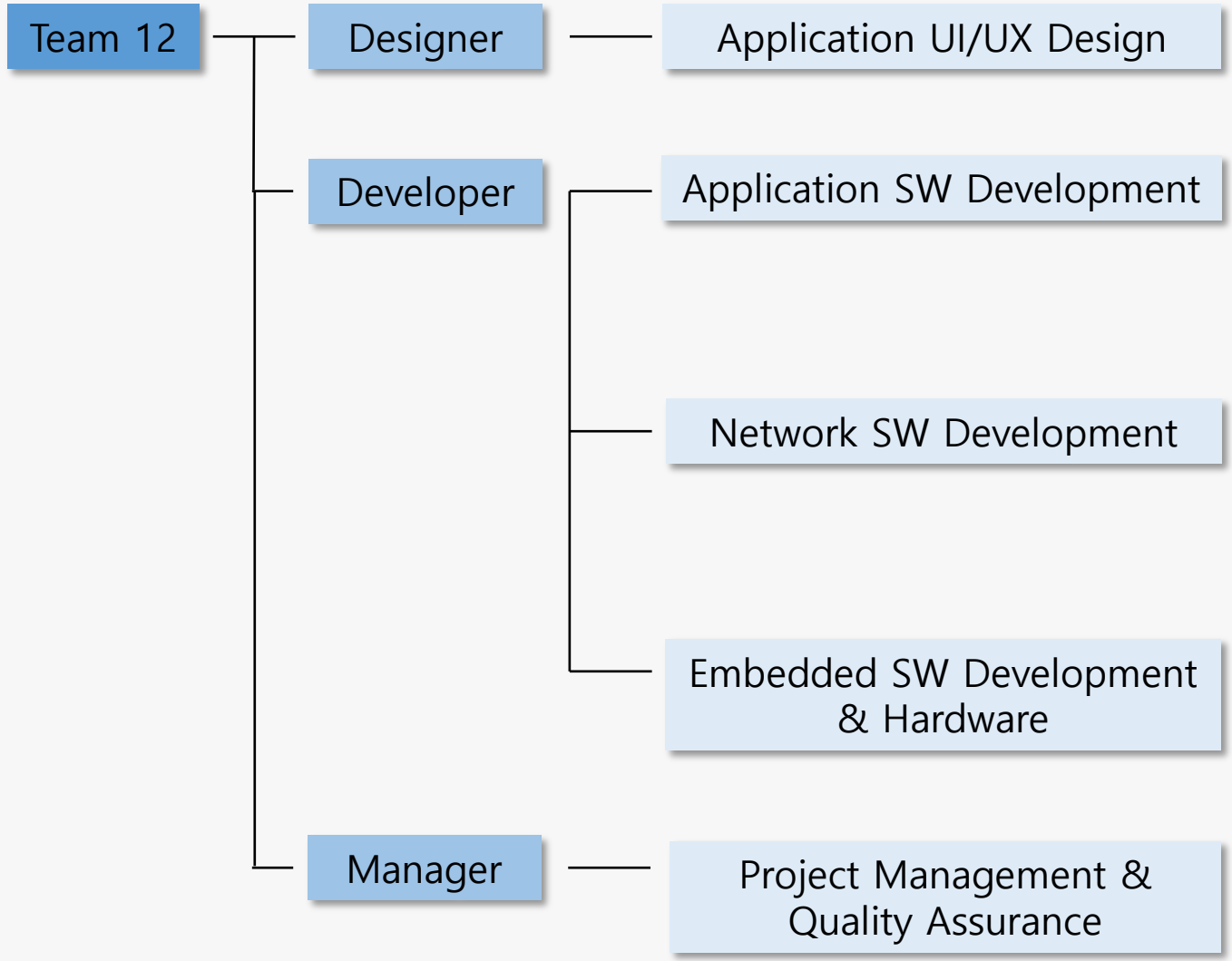
Raspberry Pi

PART 3

Team & Development plan

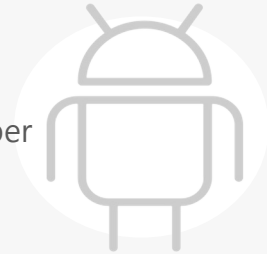
1. Organizational Chart
2. Development Process
3. Development Schedule

03 Team & Development Plan
Organizational chart



- 금상인

  UI/UX Designer
  Design our application
  Enhance user experience



- 이대희

  Mobile Application Developer
  Overall app development

- 전종문

  Enable communication between the target HW and our app

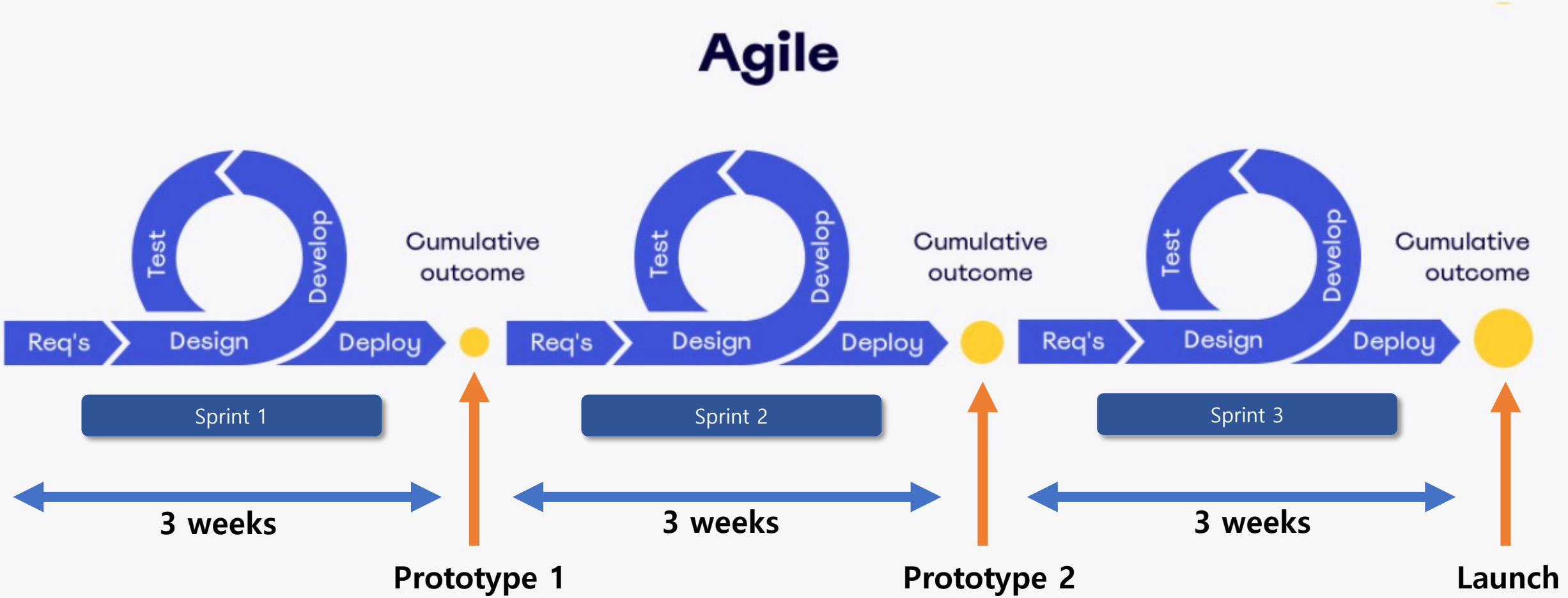
- Stefan

  Design and build hardware using Raspberry Pi
  Develop SW for the HW

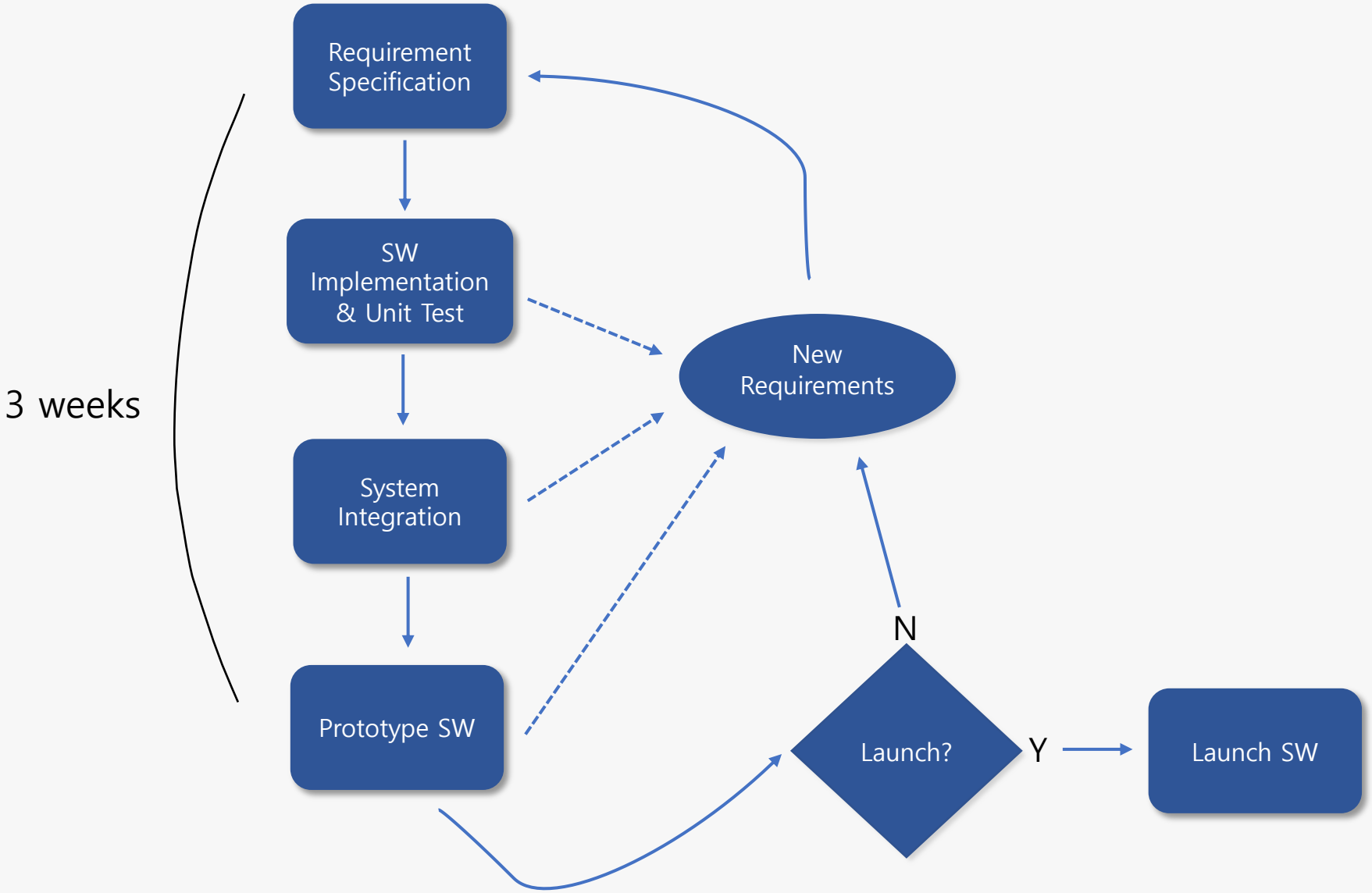
- 조윤근

  Test functionalities & performance of each component
  Integrate components and test the whole system
  Make new requirements based on the results

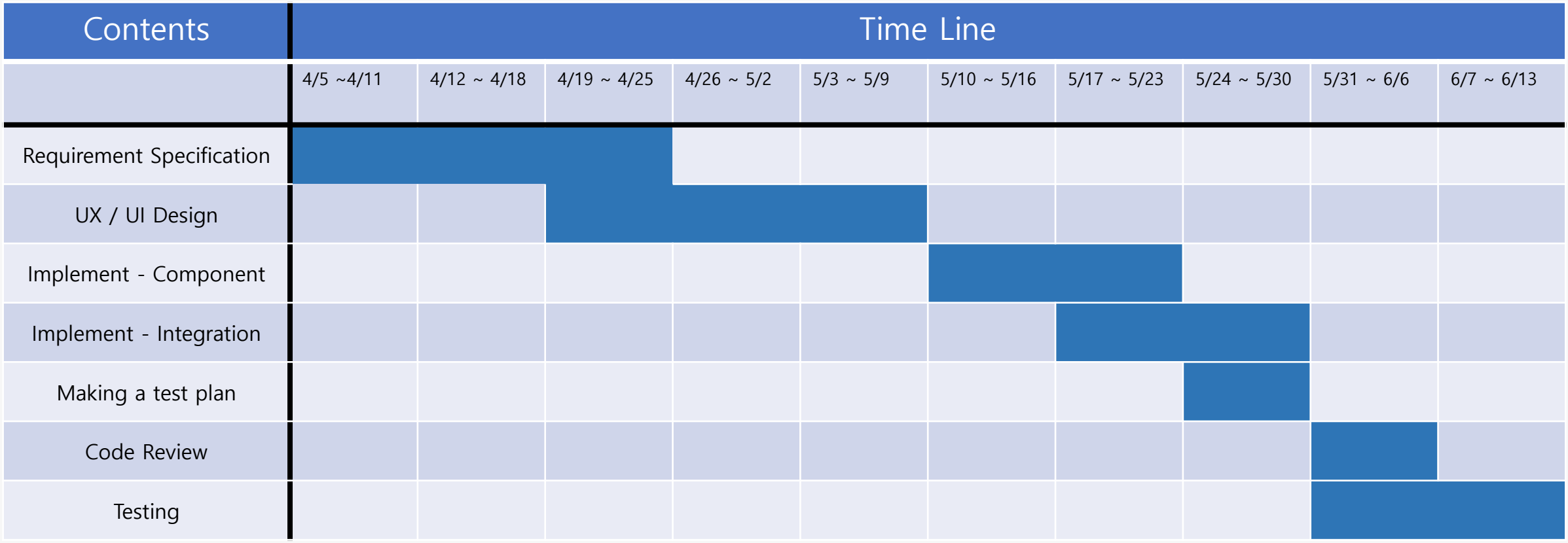
Development Process



Development Process



03 Team & Development Plan
Development Schedule



PART 4

Uses & Expected Effects

1. Uses
2. Expected Effects

Uses

Add Connectivity

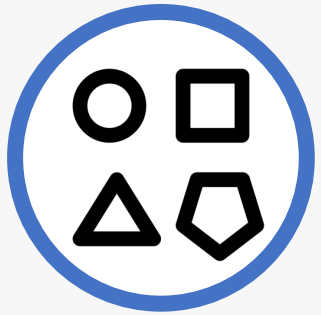
- You can add connectivity to your applian ces in your house.
- Connected appliances can communicate with your mobile phone.

Timer Function

- Set timers for your appliances using the application.
- When the time is up, appliances are auto matically turned on or off.

Remote Control

- You can use your mobile app to control y our appliances.



Versatility

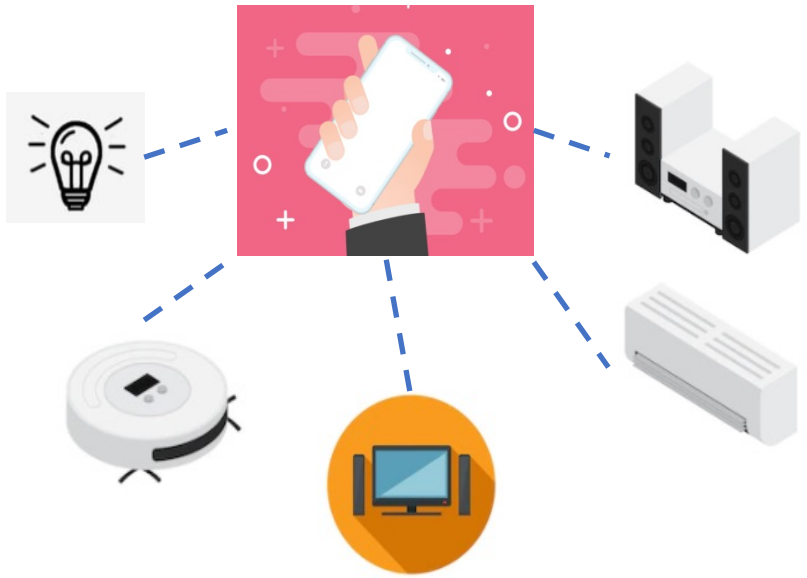
- Can be applied to many kinds of applian ces.

Expected Effects

- You can conveniently use your app to turn on or off connected appliances and set timer s for them wherever you are.

- Remote controlling system will save your time because you don’t need to physically con trol connected appliances.

Thank you



Team 12