

# Smart Mirror

Team 2\_MoMandelZy

11 김경륜 13 김재우 15 권수민  
16 배홍빈 16 황재윤

# 01 Introduction

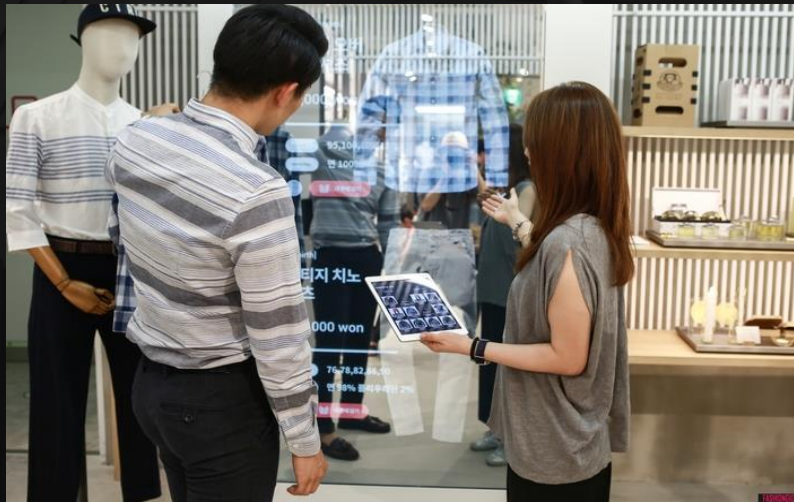
Self Check-In

1-18 A





# 다양한 스마트미러의 활용



패션 업계 스마트미러



화장품 업계 스마트미러



피트니스 업계 스마트미러

# 02 Functions

Self Check-In

1-18 A

1

날짜, 시간,  
일정, 날씨

2

유튜브, 음악  
재생

3

대학 생활 편의  
(교통, 식단표)

4

“음성 인식”

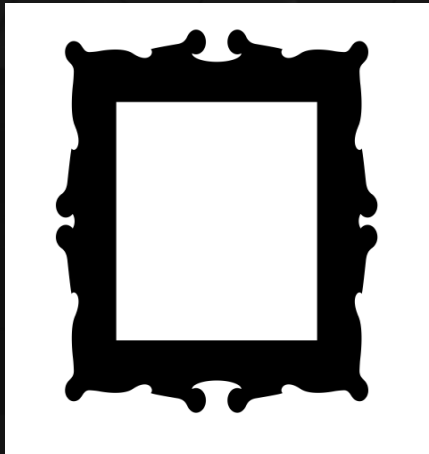
Self Check-In

# 03 Design

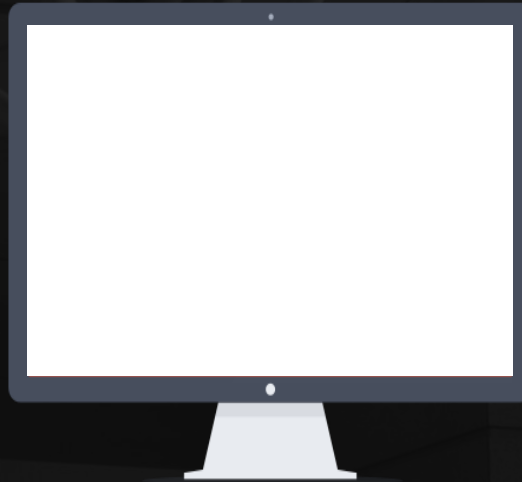
Self Check-In

1-18 A

# Design - ① 하드웨어



One-way  
mirror



HDMI Monitor



Api server

-라즈베리파이





## Design - ② 소프트웨어

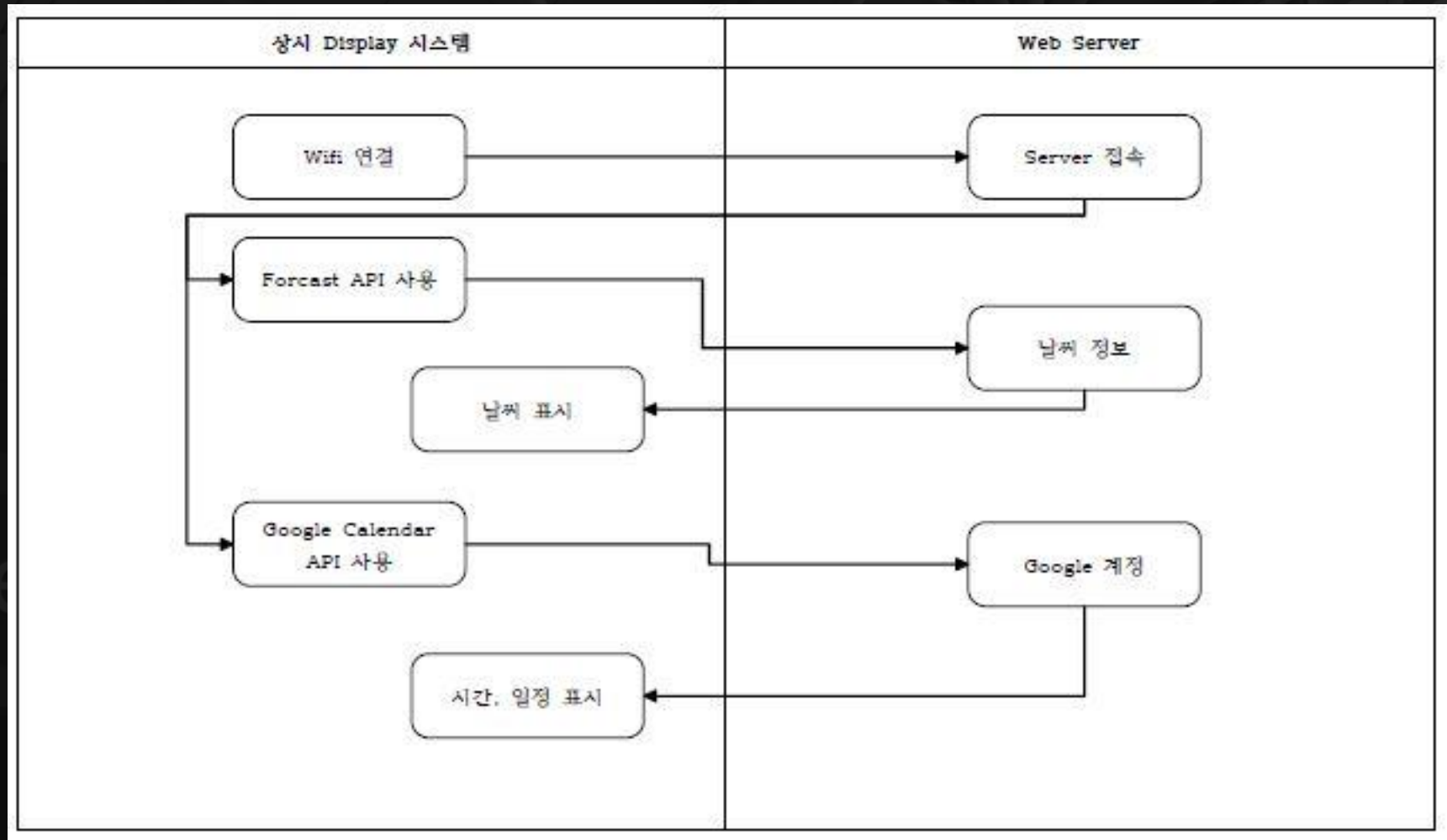
**상시 설정 시스템**

: 일정, 시간, 날짜, 날씨

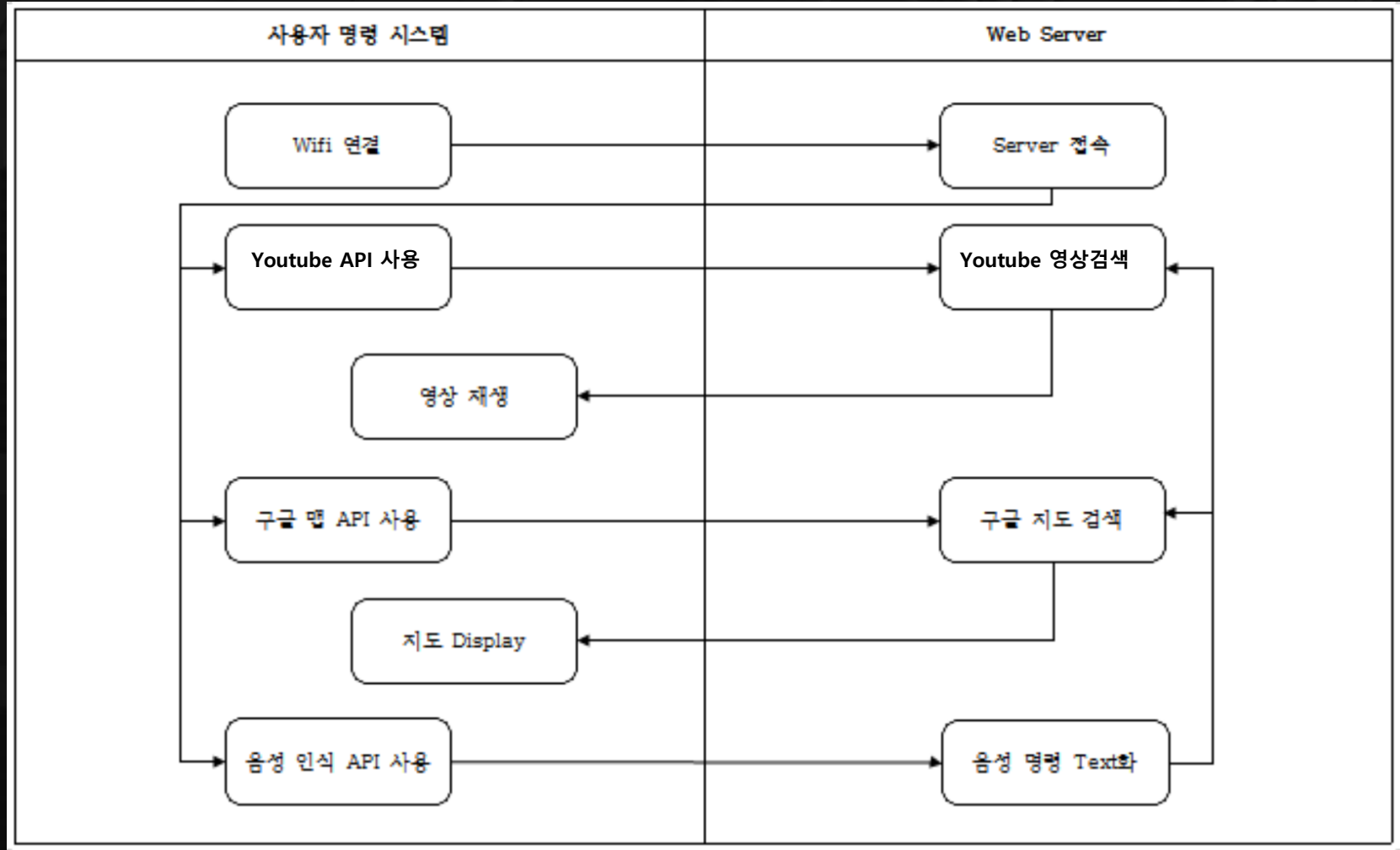
**사용자 명령 시스템**

: 지도, 식단표  
동영상, 음악 재생

# Activity Diagram - 상시 설정 시스템



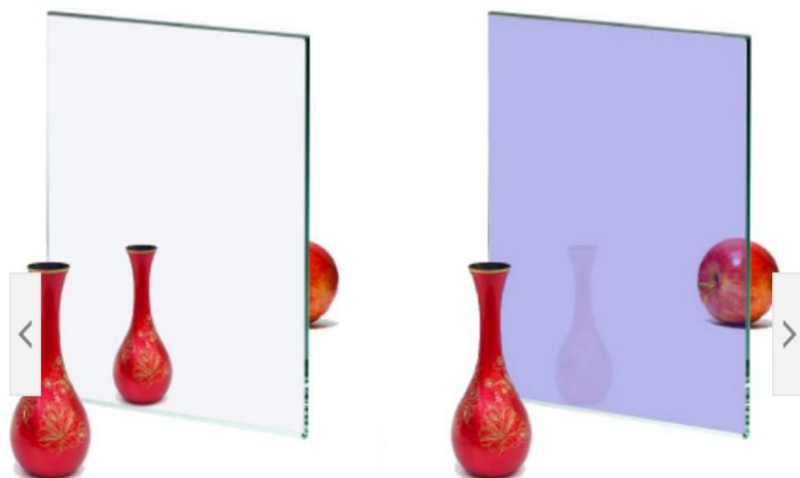
# Activity Diagram - 사용자 설정 시스템



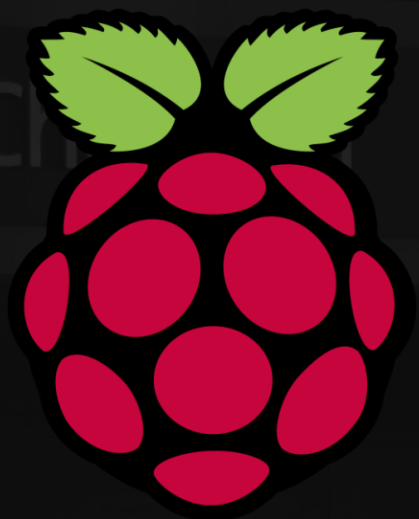
04

# Development Environment

## 70 : 30 비전도 하프미러 글라스



은색거울 ← 푸른투명유리



Hardware

개발보드

Raspberry Pi 3

OS

Raspbian Jessie 16.05.27

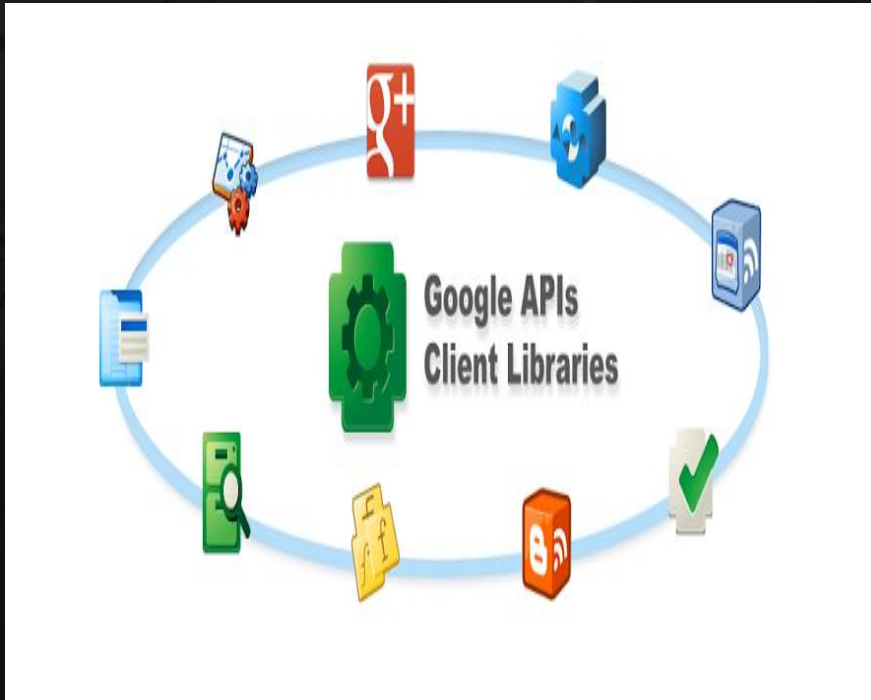
Half Mirror

R70 : T30, A3 size

Monitor

HDMI cable, 12~18 inch





## Software

### Web Client

HTML 5

CSS 3

JavaScript

jQuery

Electron.js

Angular.js

### Web Server

Node.js

### API

음성인식 : Annyang API

음성출력 : ResponsiveVoice API

일 정 : Google Calender

지 도 : Google Map

동 영 상 : Youtube Data API

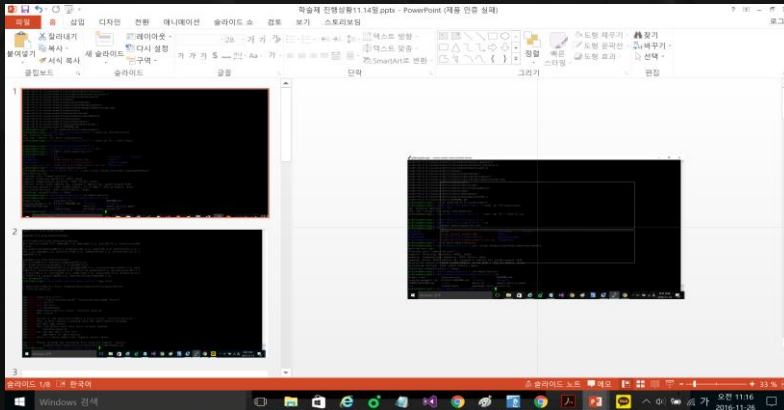


05

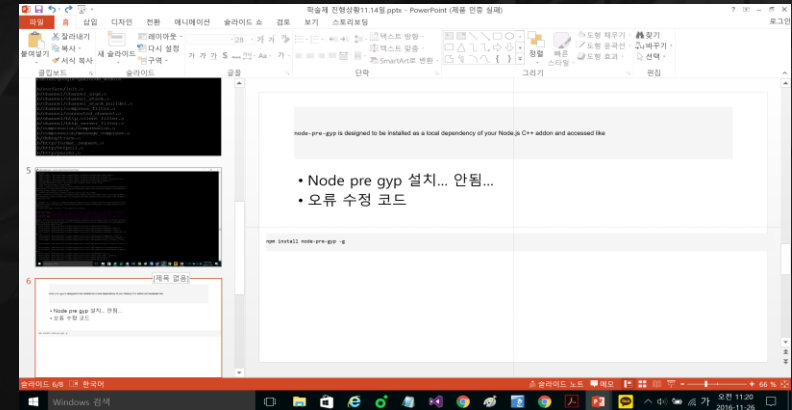
# Manufacture & Modification

Self Check-In

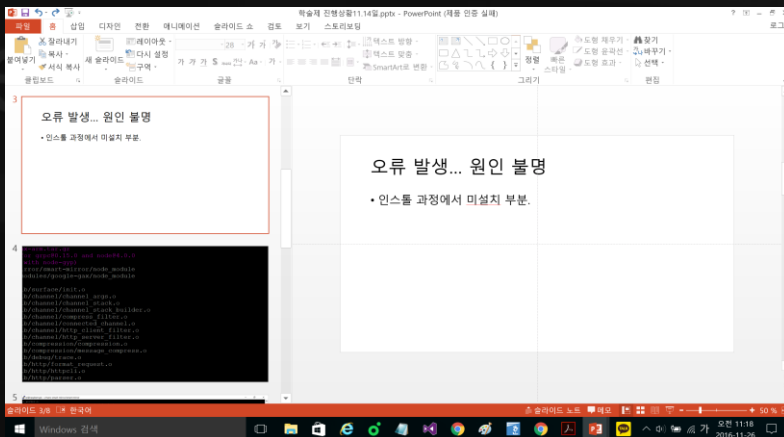
# Software developing



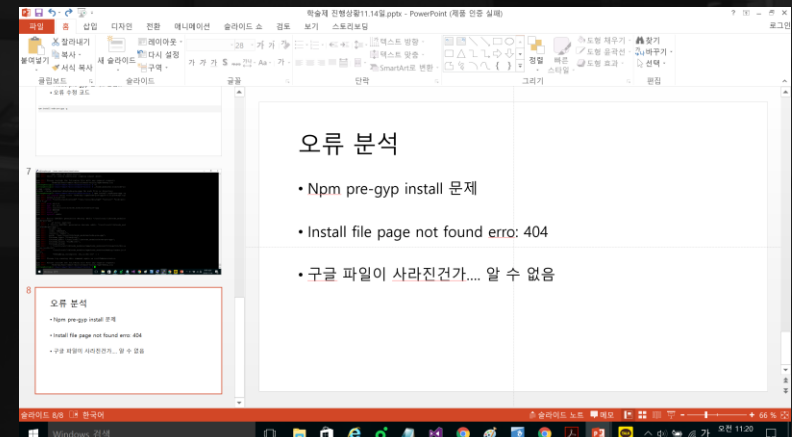
## 10월 4주차



11월 2주차



## 11월 1주차

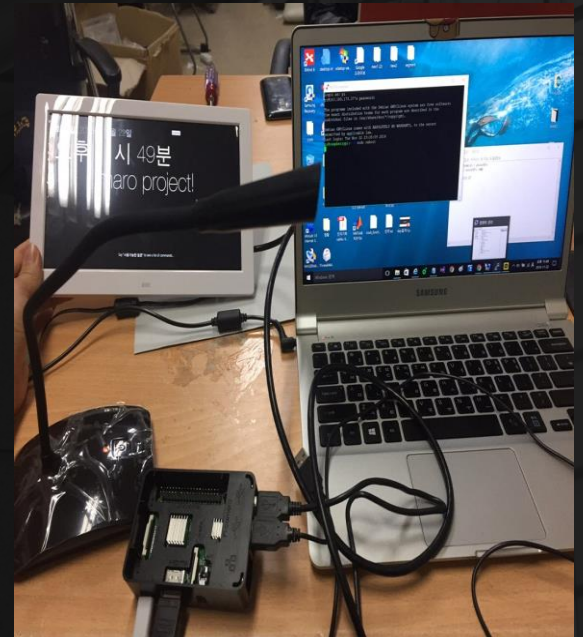


## 11월 3주차

# Hardware developing



거울 앞, 뒷면



Raspberry pi & Monitor

# Problems

- 1. npm install error- download page not found. 404 error
- 2. 마이크와 구글 음성 API 문제
  - 음성 인식 사용불가



# Modification

Google API 음성 인식 실패

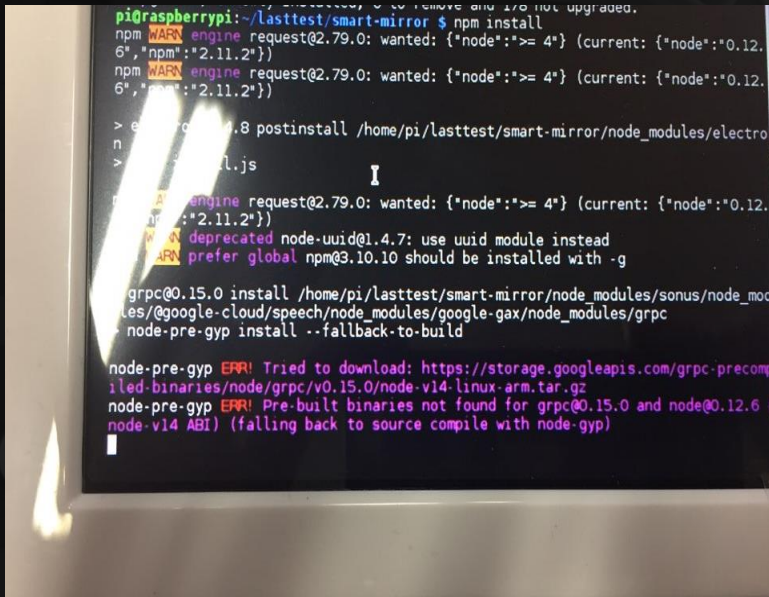


사용자 명령 시스템 구동 불가

# 06 Problem Shooting

# 1. Npm Install 실패

- Node Version 문제?



```
pi@raspberrypi:~/lasttest/smart-mirror $ npm install
npm WARN engine request@2.79.0: wanted: {"node": ">= 4"} (current: {"node": "0.12.6", "npm": "2.11.2"})
npm WARN engine request@2.79.0: wanted: {"node": ">= 4"} (current: {"node": "0.12.6", "npm": "2.11.2"})
v8.8.0 postinstall /home/pi/lasttest/smart-mirror/node_modules/electro
v8.8.0 postinstall /home/pi/lasttest/smart-mirror/node_modules/electro
I
npm WARN engine request@2.79.0: wanted: {"node": ">= 4"} (current: {"node": "0.12.6", "npm": "2.11.2"})
npm WARN deprecated node-uuid@1.4.7: use uuid module instead
npm WARN prefer global npm@3.10.10 should be installed with -g
grpc@0.15.0 install /home/pi/lasttest/smart-mirror/node_modules/sonus/node_modules/@google-cloud/speech/node_modules/google-gax/node_modules/grpc
node-pre-gyp install --fallback-to-build
node-pre-gyp ERR! Tried to download: https://storage.googleapis.com/grpc-precompiled-binaries/node/grpc/v0.15.0/node-v14-linux-arm.tar.gz
node-pre-gyp ERR! Pre-built binaries not found for grpc@0.15.0 and node@0.12.6 (node-v14 ABI) (falling back to source compile with node-gyp)
```



hihas93 @hihas93

failed to file://home/pi/test/smart-mirror/text/javascript

and i have errors when npm install already.... node-pre-gyp ERR! Tried to download(404)



Evan Cohen @evancohen

@hihas93 this is probably also due not not using the most recent version of node

Node-pre-gyp has issues with node 7

There's an issue about it on GitHub

최신 버전 Node v6.9.1 install..... 오류 해결 실패

## 2. Google API Server & MIC

is this all i have to do for using the cloud speech?  
but when i run the npm google apis didn;t work

[illegible]

and... first problem still exist...



Evan Cohen @evancohen

## Have you enabled billing?

have you tried the troubleshooting steps in the docs?



kermit-kr

There are no errors in all sources  
USB microphone not recognized

This is the situation now.

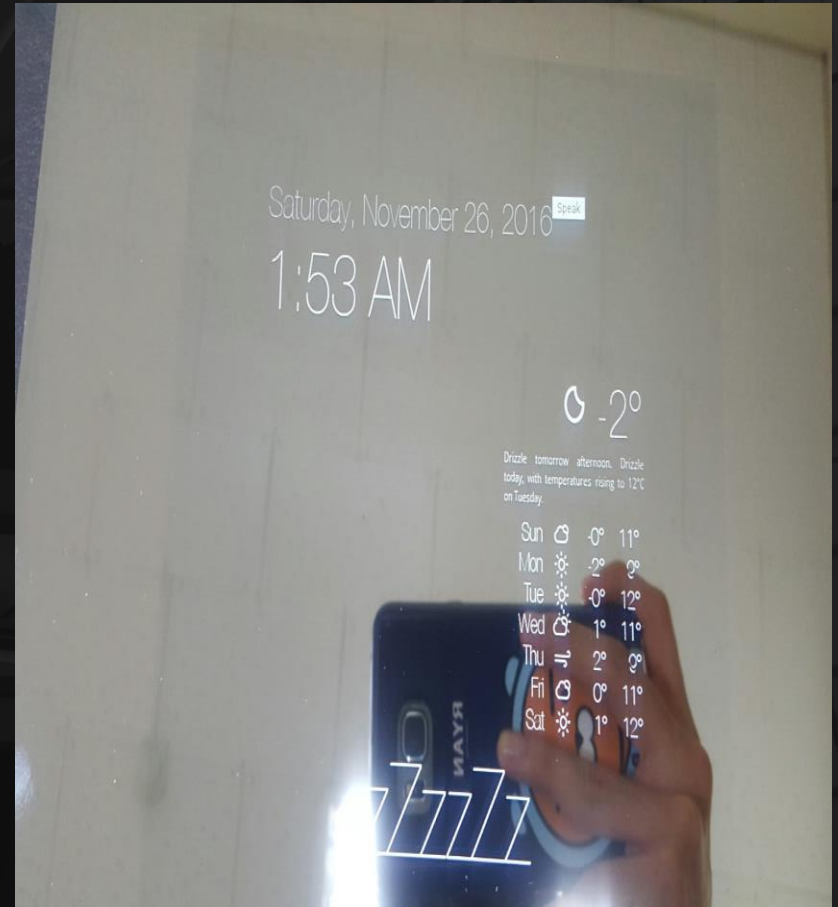
```
pi@raspberrypi:~/smart-mirror $ aplay -l
**** List of PLAYBACK Hardware Devices ****
card 0: ALSA [bcm2835 ALSA], device 0: bcm2835 ALSA [bcm2835]
  Subdevices: 7/8
    Subdevice #0: subdevice #0
    Subdevice #1: subdevice #1
    Subdevice #2: subdevice #2
    Subdevice #3: subdevice #3
    Subdevice #4: subdevice #4
    Subdevice #5: subdevice #5
    Subdevice #6: subdevice #6
    Subdevice #7: subdevice #7
card 0: ALSA [bcm2835 ALSA], device 1: bcm2835 ALSA [bcm2835]
  Subdevices: 1/1
    Subdevice #0: subdevice #0
```

# Google 계정 확인

## 마이크 설정& test완료

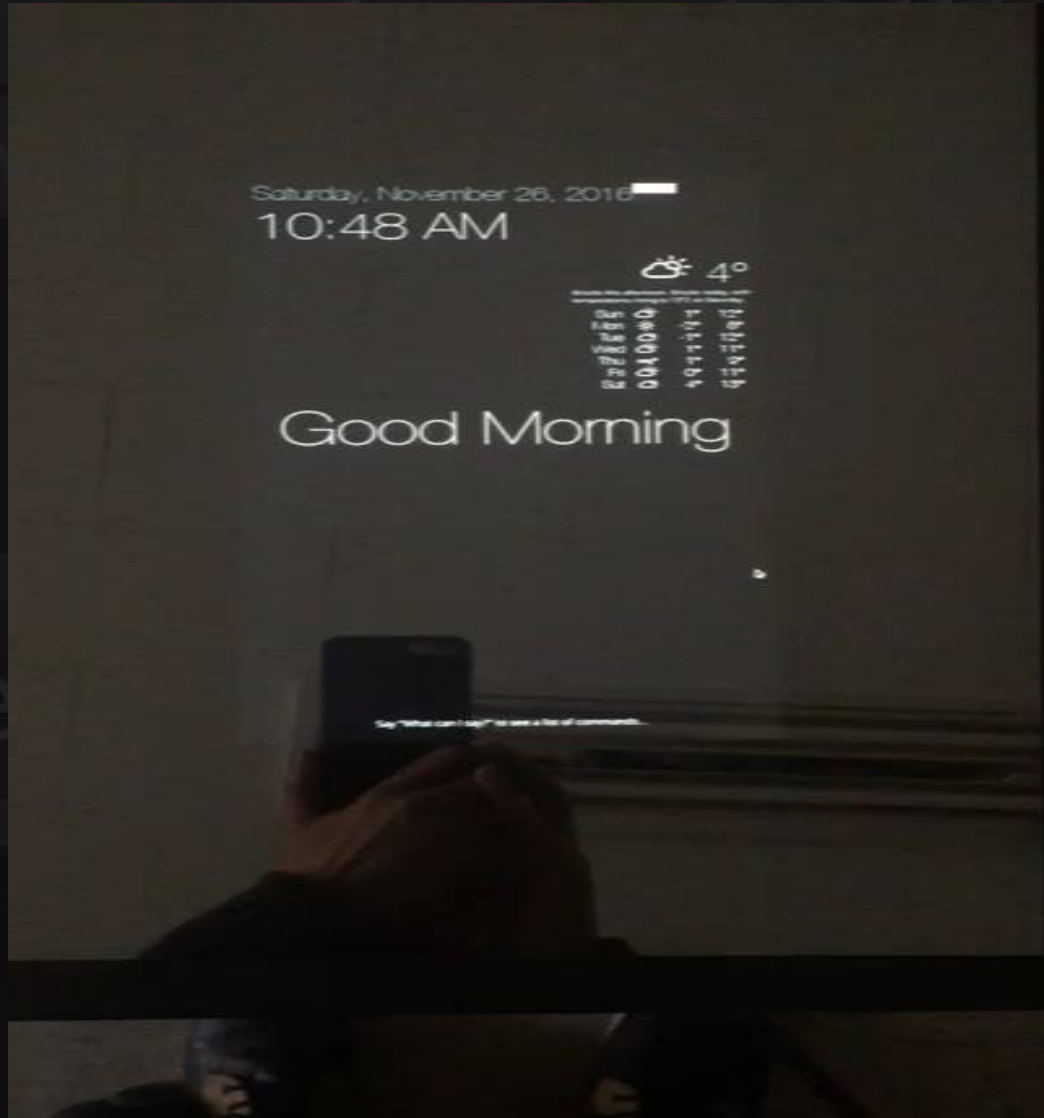
## 완료 후에도 마이크 인식 불가!!

# Result





# 동영상



# 07 Reference

Github :

<https://github.com/evancohen/smart-mirror>

Angular js:

<http://www.nexttree.co.kr/p3241/>

Electron.js:

<https://github.com/electron/electron/blob/master/docs-translations/ko-KR/tutorial/quick-start.md>

Jquery: <https://opentutorials.org/course/1375/6630>

<http://jquery.com/>

감사합니다.

1-18A

Self Check-In