

EE3070 Project Design

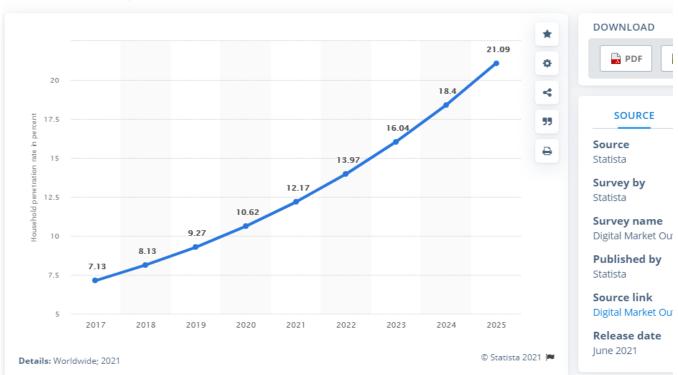
Main Theme: Smart Home

Introduction



- Smart homes use connected devices and appliances to perform actions, tasks, and automated routines to save money, time, and energy.
- Home automation systems allow for the integration of various smart devices and appliances controlled through a centralized system.

Smart Home penetration rate forecast in the World from 2017 to 2025



Retail Environment



How to add intelligent and make a living place more smart?



Some Ideas



10 Creative Home Automation Ideas

https://www.youtube.com/watch?v=Y05tYZ5Lwvg

中電耆樂新一天 (elderly)

https://www.youtube.com/watch?v=5x uBnKj5ig

CleverPet

https://www.youtube.com/watch?v=9H4577C3p-g

Imagine You Are



- In a project team, to suggest and provide solution for an issue in a living place
- to win a contract
 - You are competing with other groups aiming for the contract

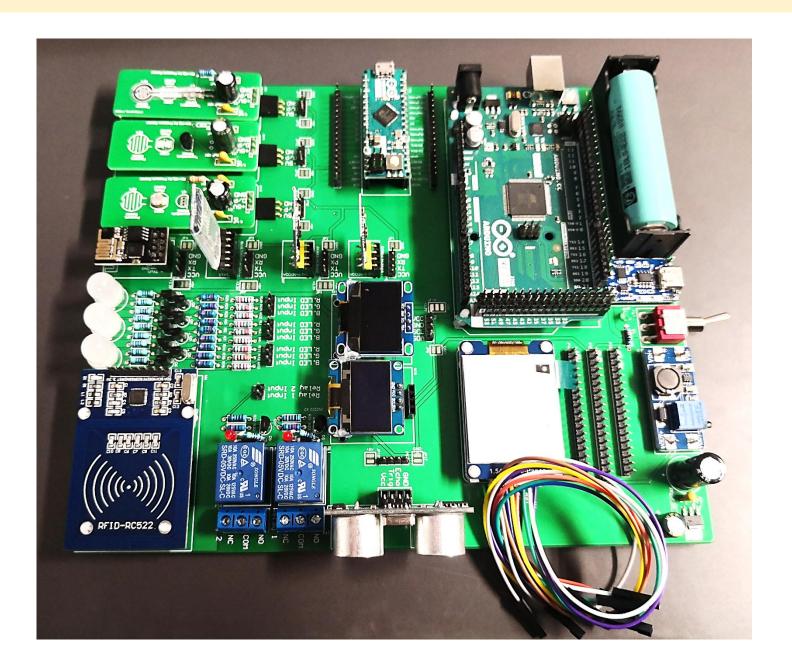


Project Management



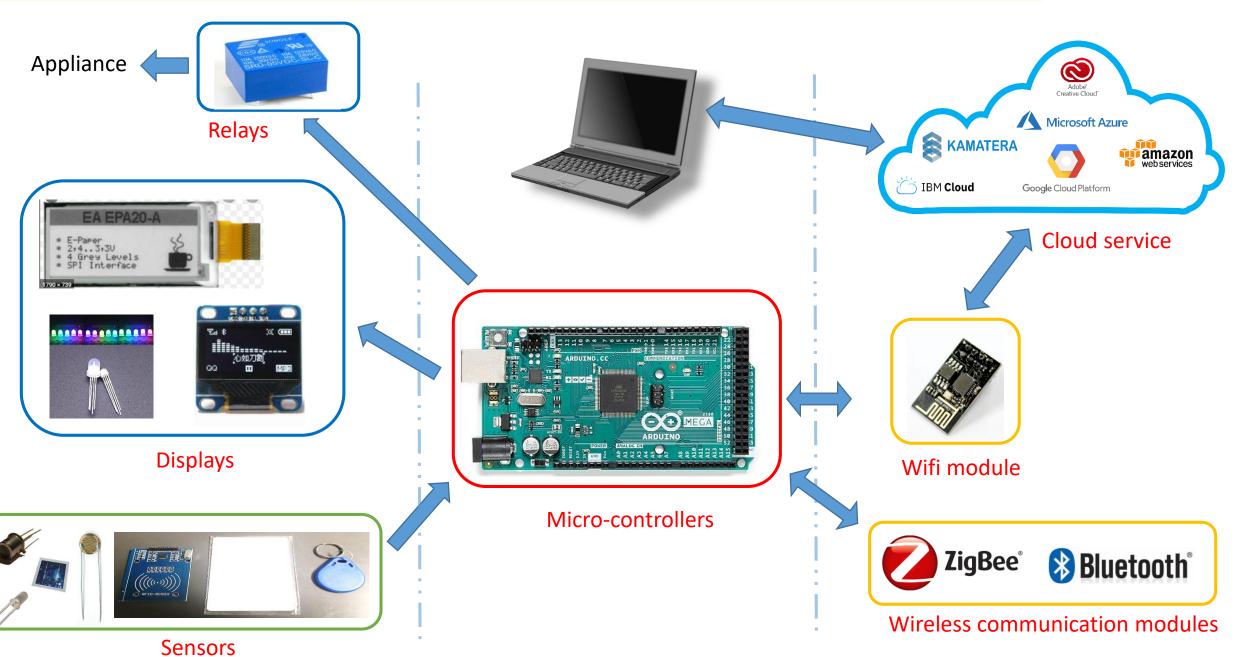
Generic Platform





General System Architecture





Questions to Ask



Define Phase

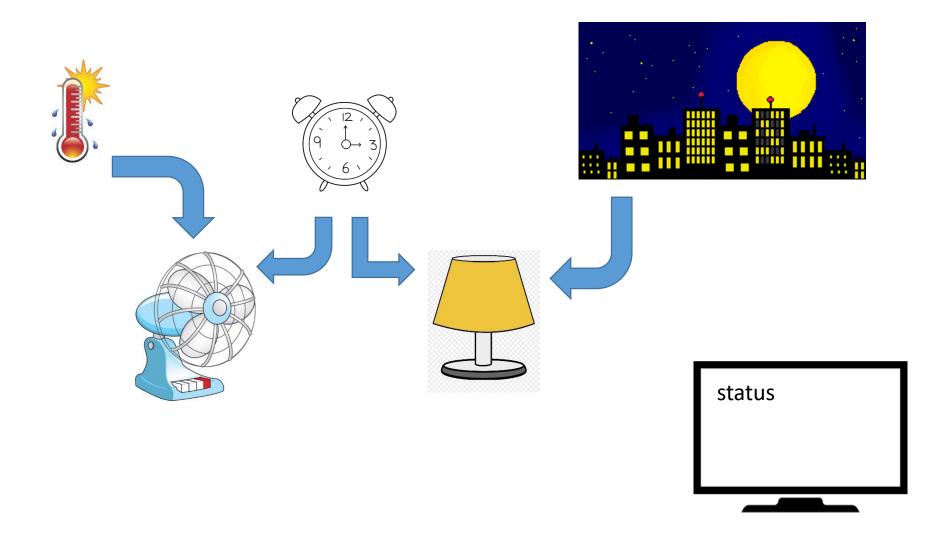
- What scenarios that you are targeting for smart home?
- How can your idea enhance the living / help people?
- What is the design scope?

Plan

- How can the design platform fit for the scenario?
- What are needed to further advance your design?
- What the team need to do? Can it be finished within the timeframe?
- What are the risks?

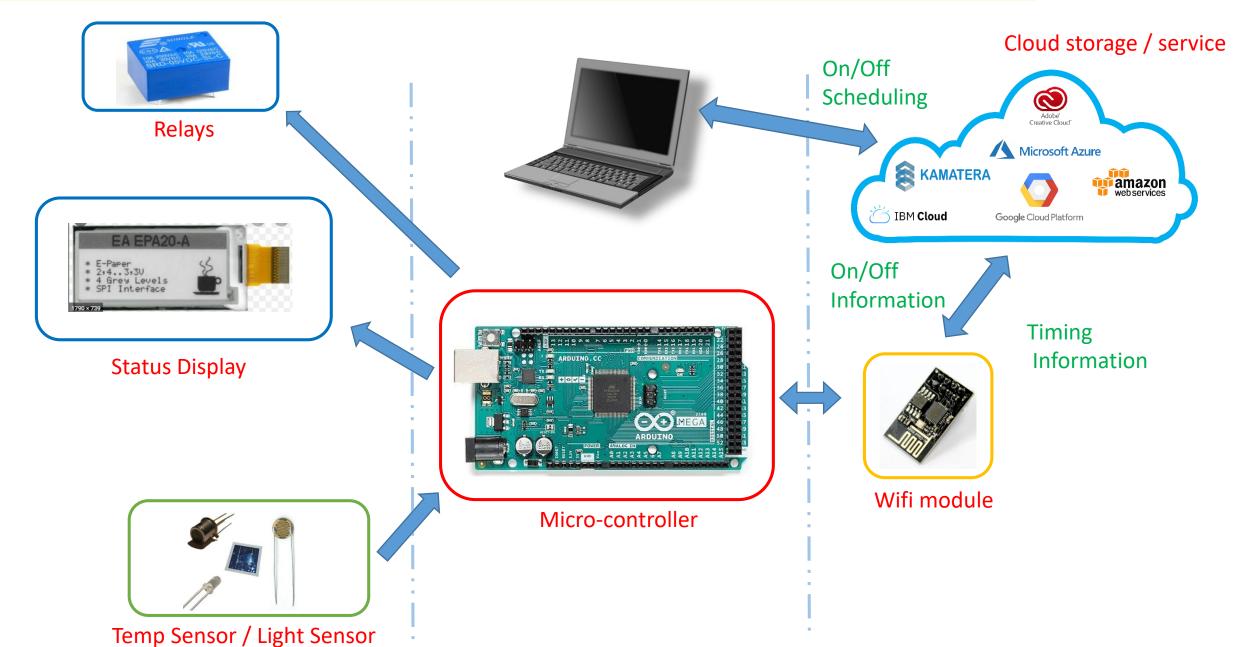


Example 1: Appliance Control System



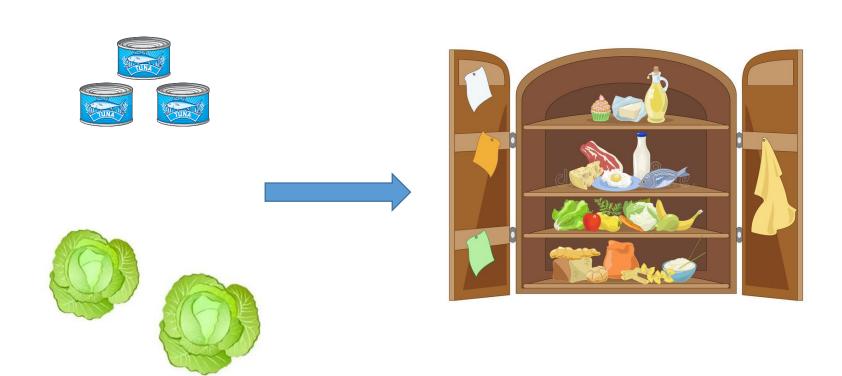
General System Architecture

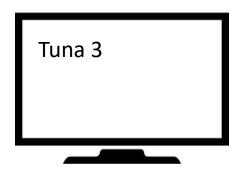






Example 2: Smart Cabinet





Disk suggestion

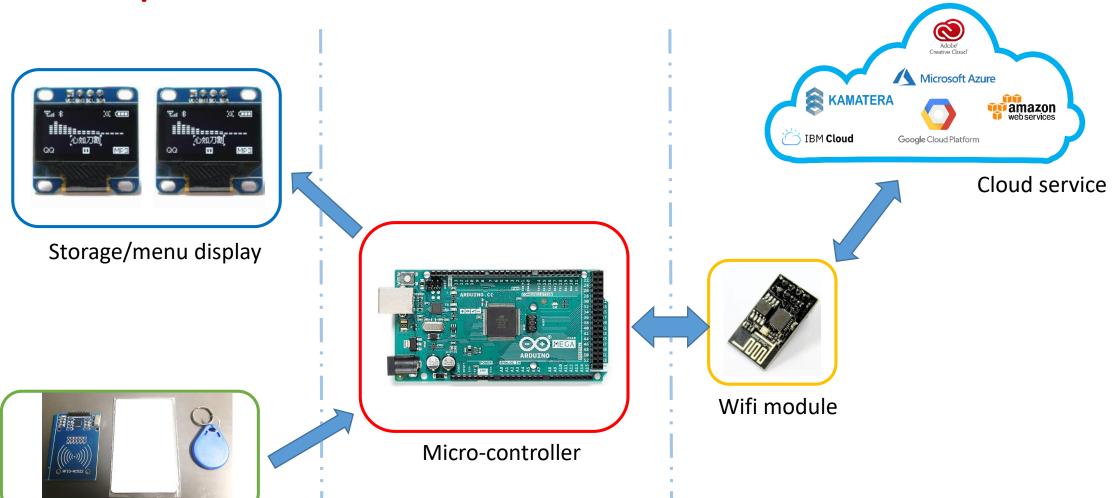


Examples

RFID card/reader



Basic Sample Kit for Smart Carbinet



Key To Success



The project proposal and outcome are to be

- Creative
- Practical and Giving Effective Solutions
- Attractive Outputs
- And well demonstrate solid and advanced (in UG level) technical contents
 - Multiple and interdependent functions
 - User-machine OR machine-machine communications
 - •

END