



Royal University of Phnom Penh Faculty of Engineering



Dept. of Telecommunications and Electronics Eng.

The Design of a Home Appliances Controlling System Based on Internet of Things (IoT)

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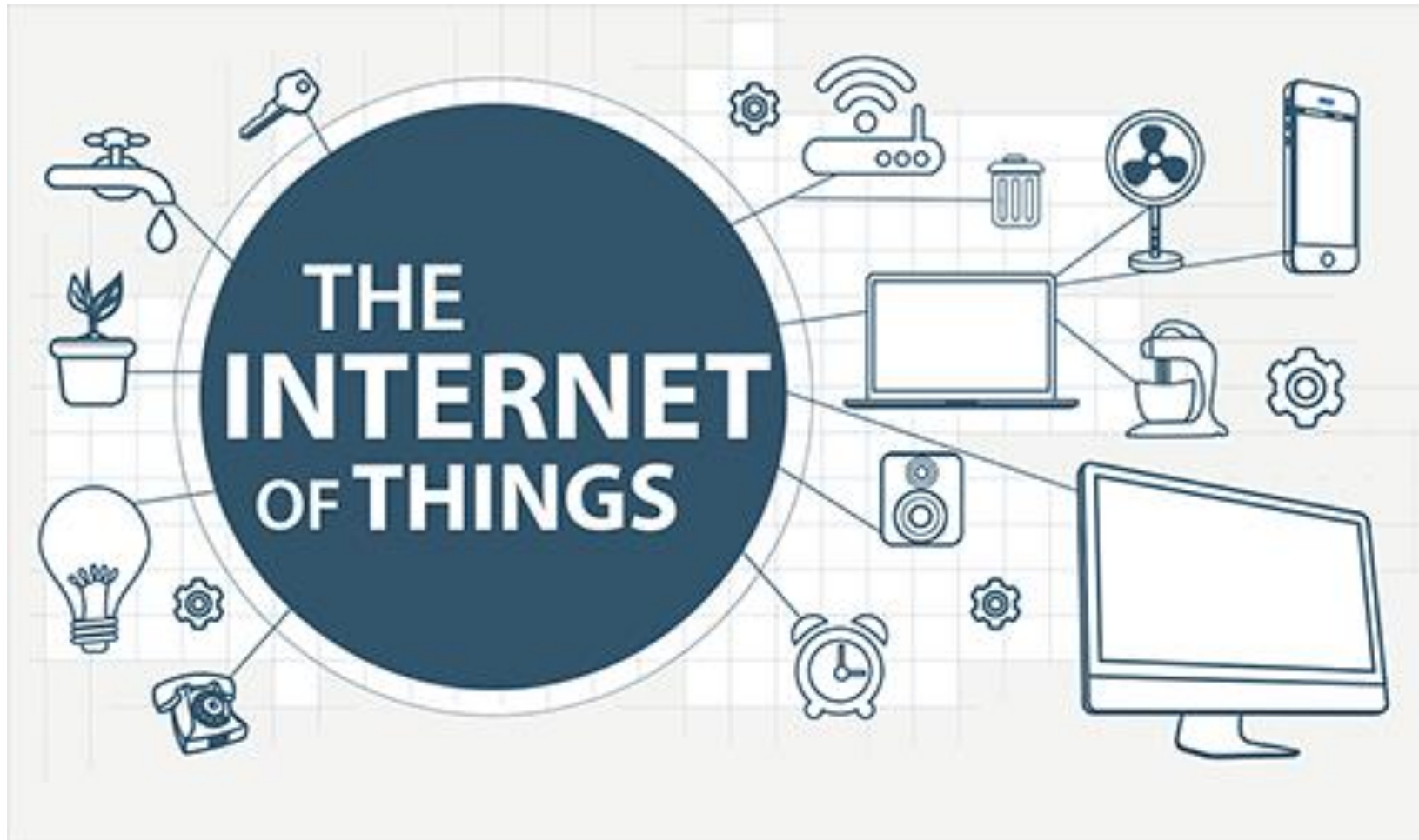
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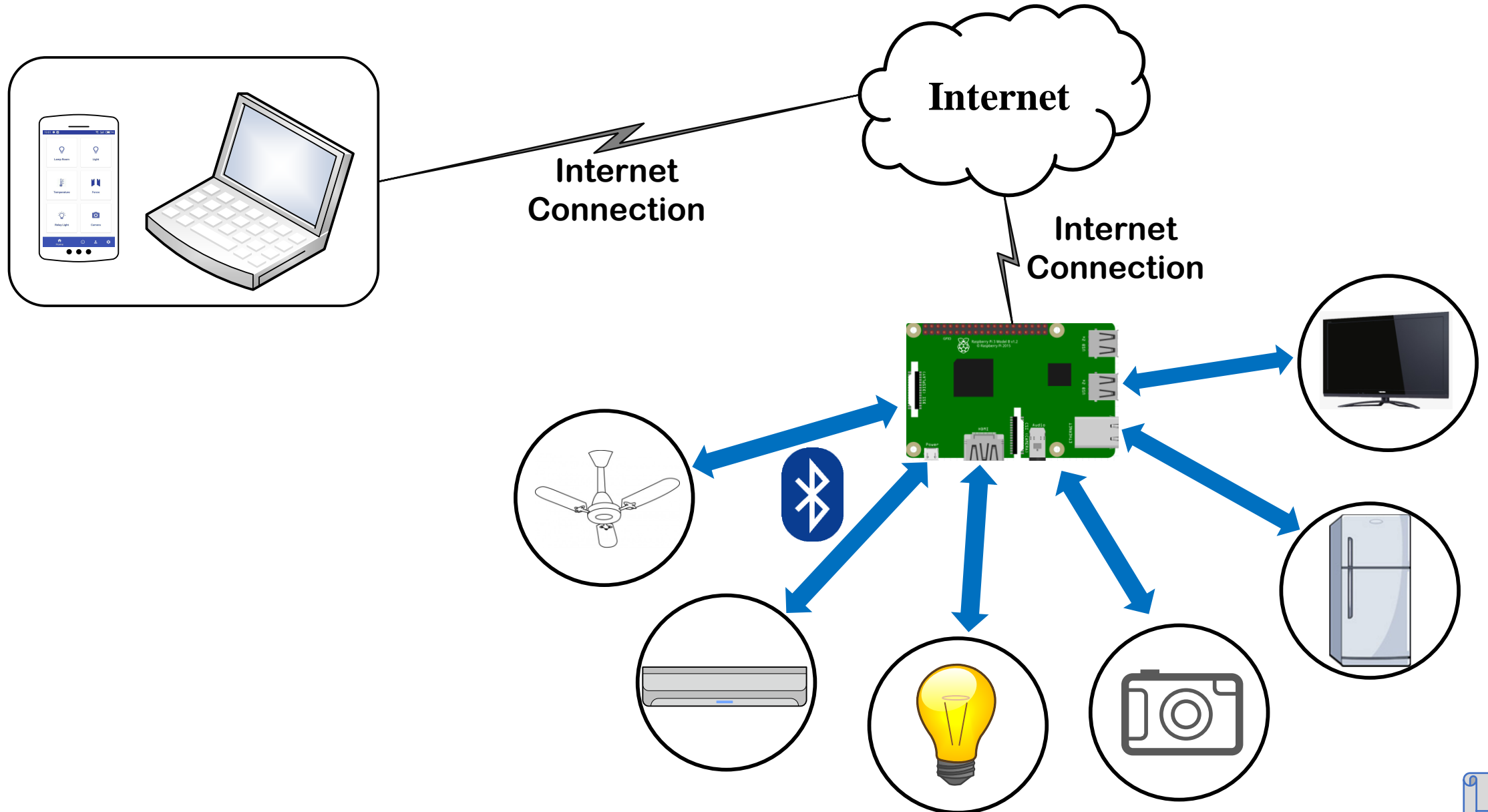
Extensibility and Limitation

1. Introduction

Internet of Things is a cutting edge technology connecting physical devices to the Internet.



1. Introduction



2. What we did



Develop App for Smart phone.



Webpage: for Camera controlling.



Raspberry Pi & Sensors Configuration.

Camera Module, Gas/Smoke sensor, Temperature sensor



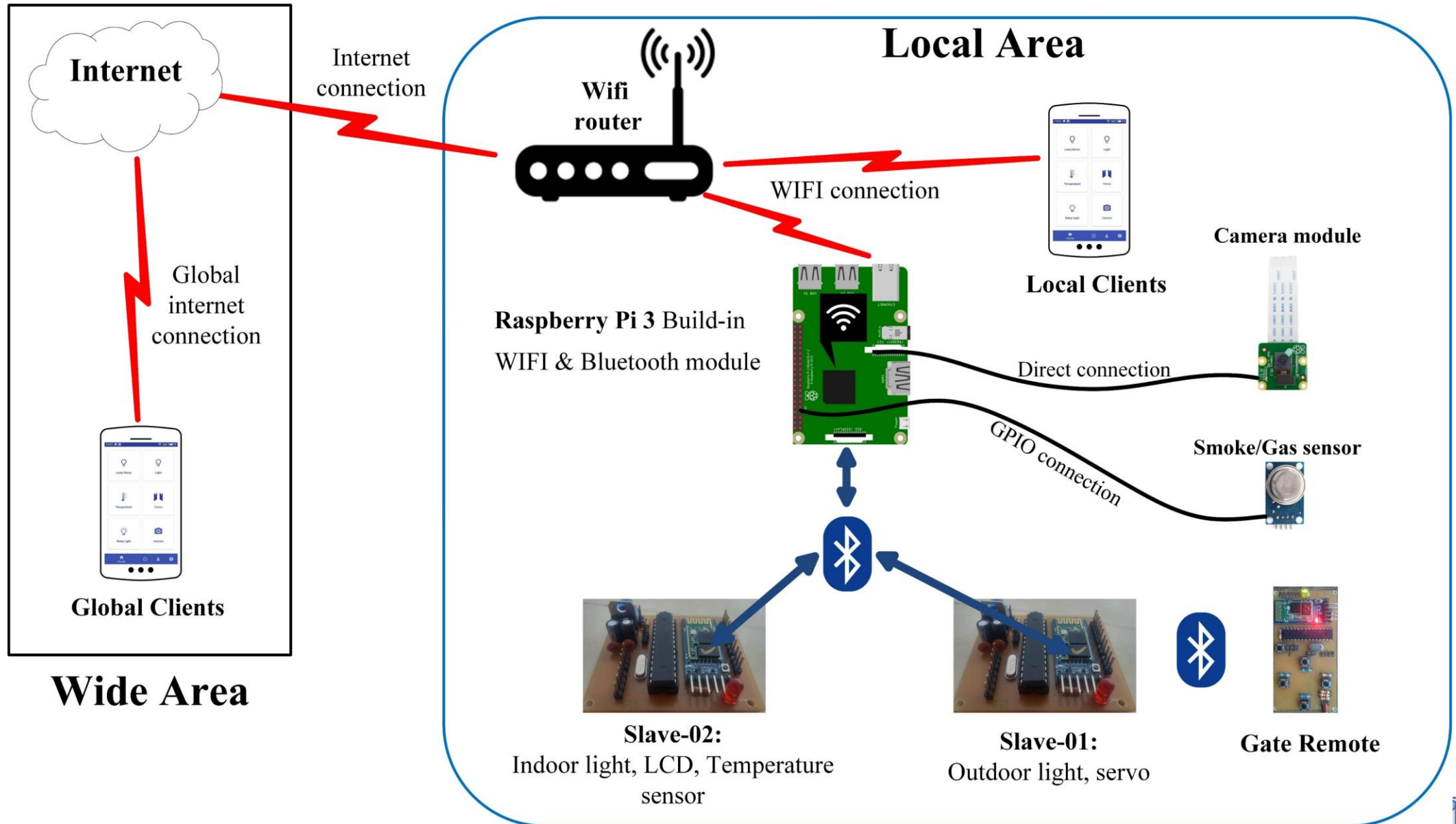
Master ↔ Slave connection config.

Bluetooth & Public IP

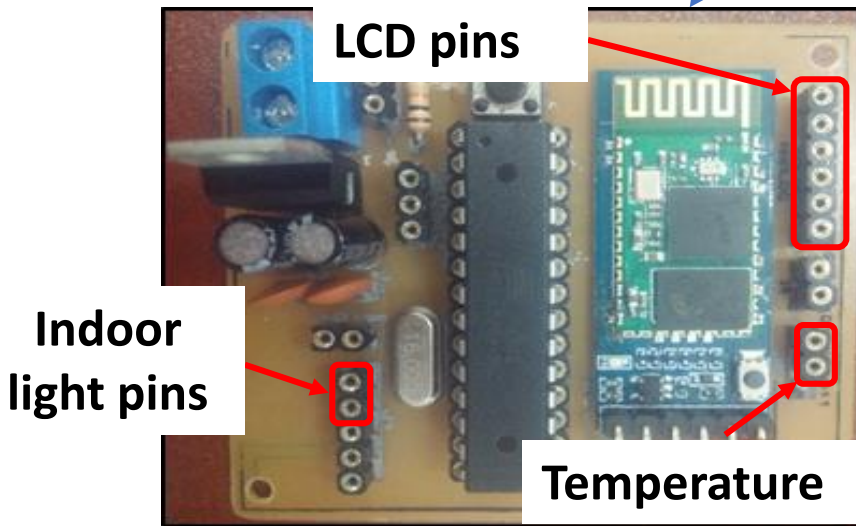


Prototype Design: PCB fabrication, House modeling

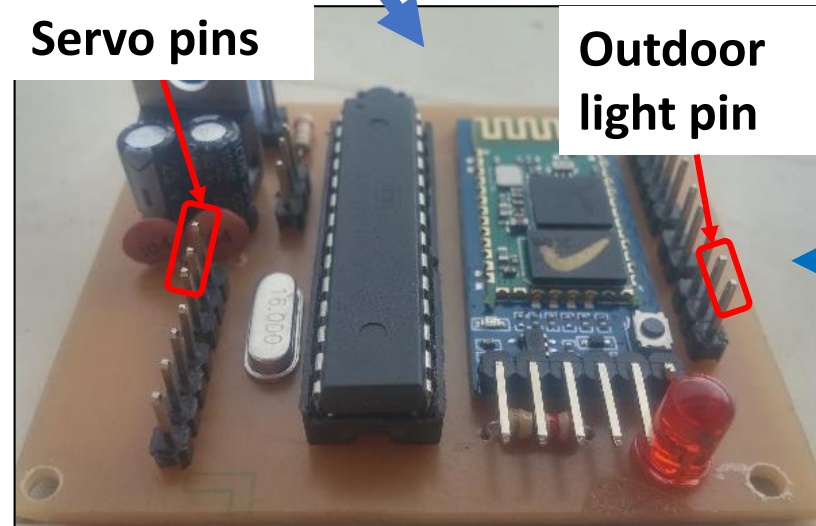
3. Methodology



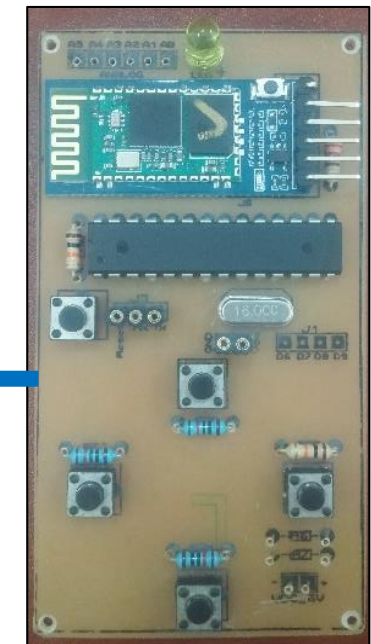
4. Experiments



Slave02: Temperature, LCD & indoor Light



Slave01: Gate + Outdoor Light

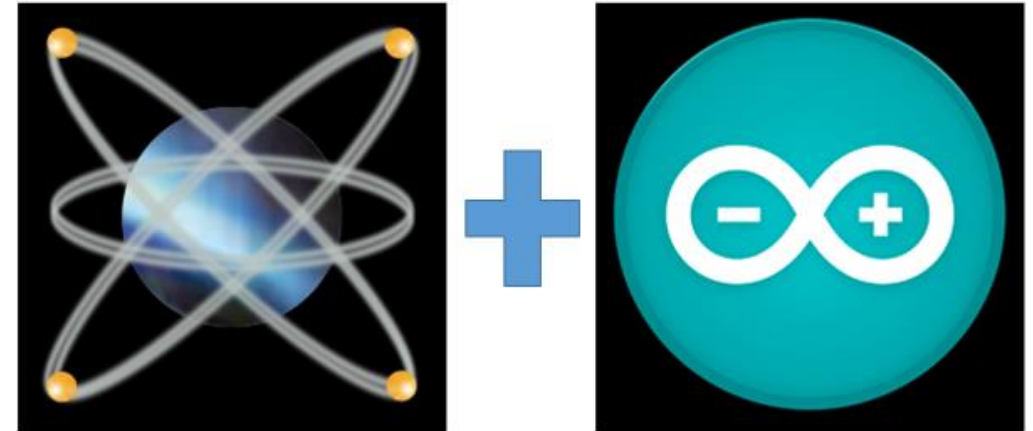


Gate remote

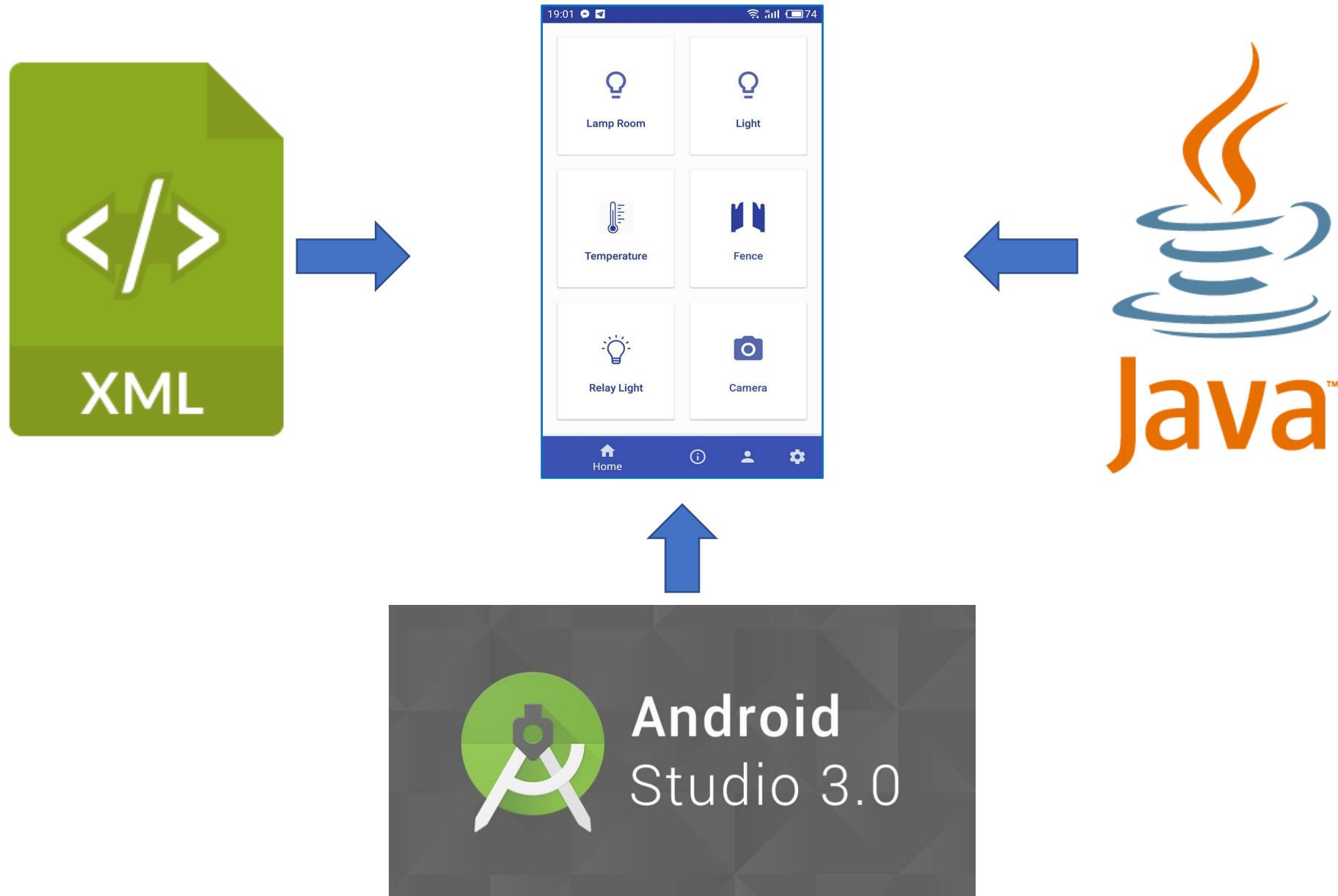
4. Experiments



Proteus & Arduino



4. Experiments



4. Experiments

TP-LINK®

Status

Quick Setup

WPS

Network

Wireless

DHCP

Forwarding

- Virtual Servers

- Port Triggering

- DMZ

- UPnP

Security

Parental Control

Access Control

Advanced Routing

Bandwidth Control

IP & MAC Binding

Dynamic DNS

System Tools

Logout

Virtual Servers

ID	Service Port	Internal Port	IP Address	Protocol	Status	Modify
1	8888	8888	192.168.0.11	All	Enabled	Modify Delete

Add New...

Enable All

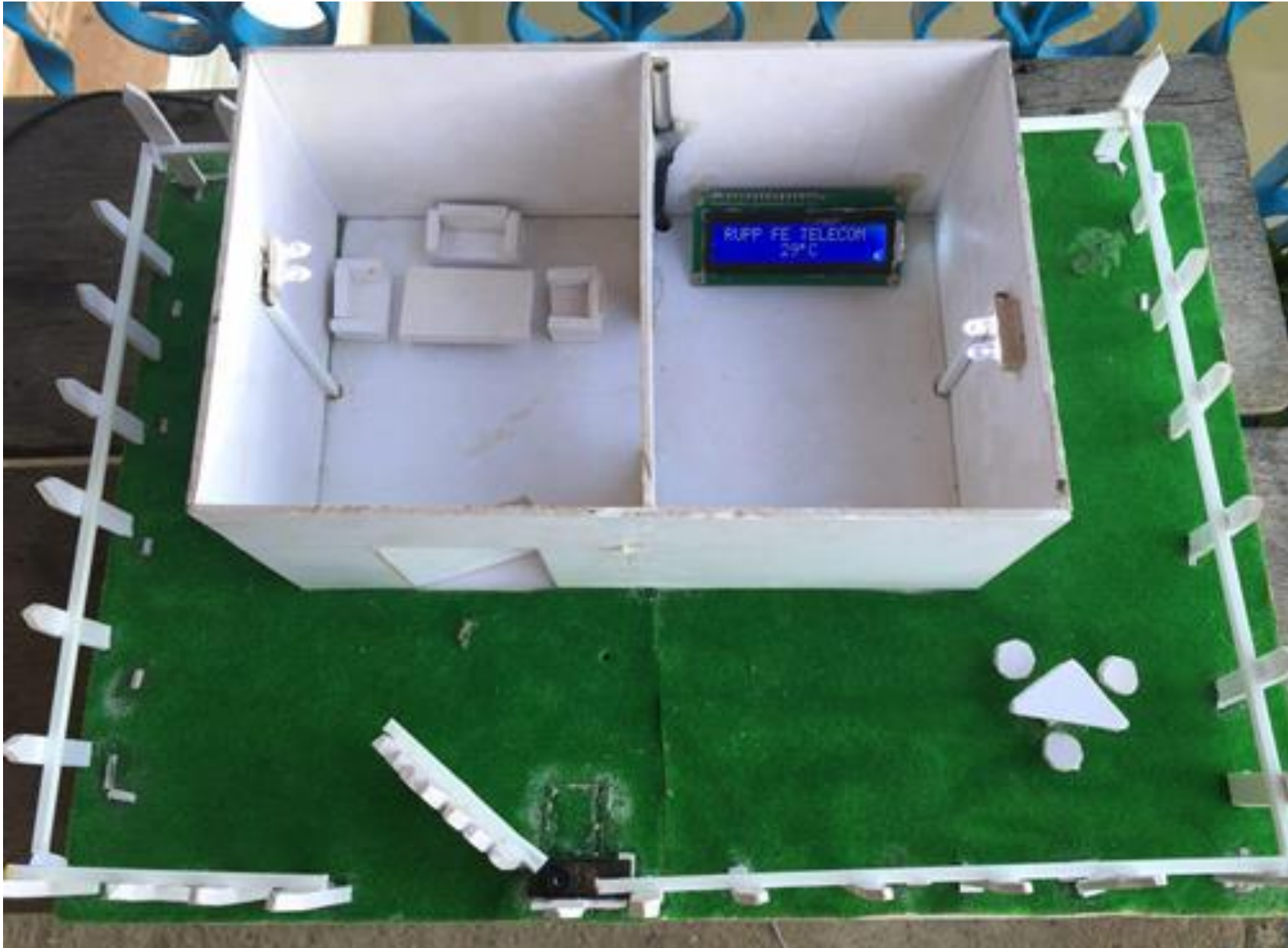
Disable All

Delete All

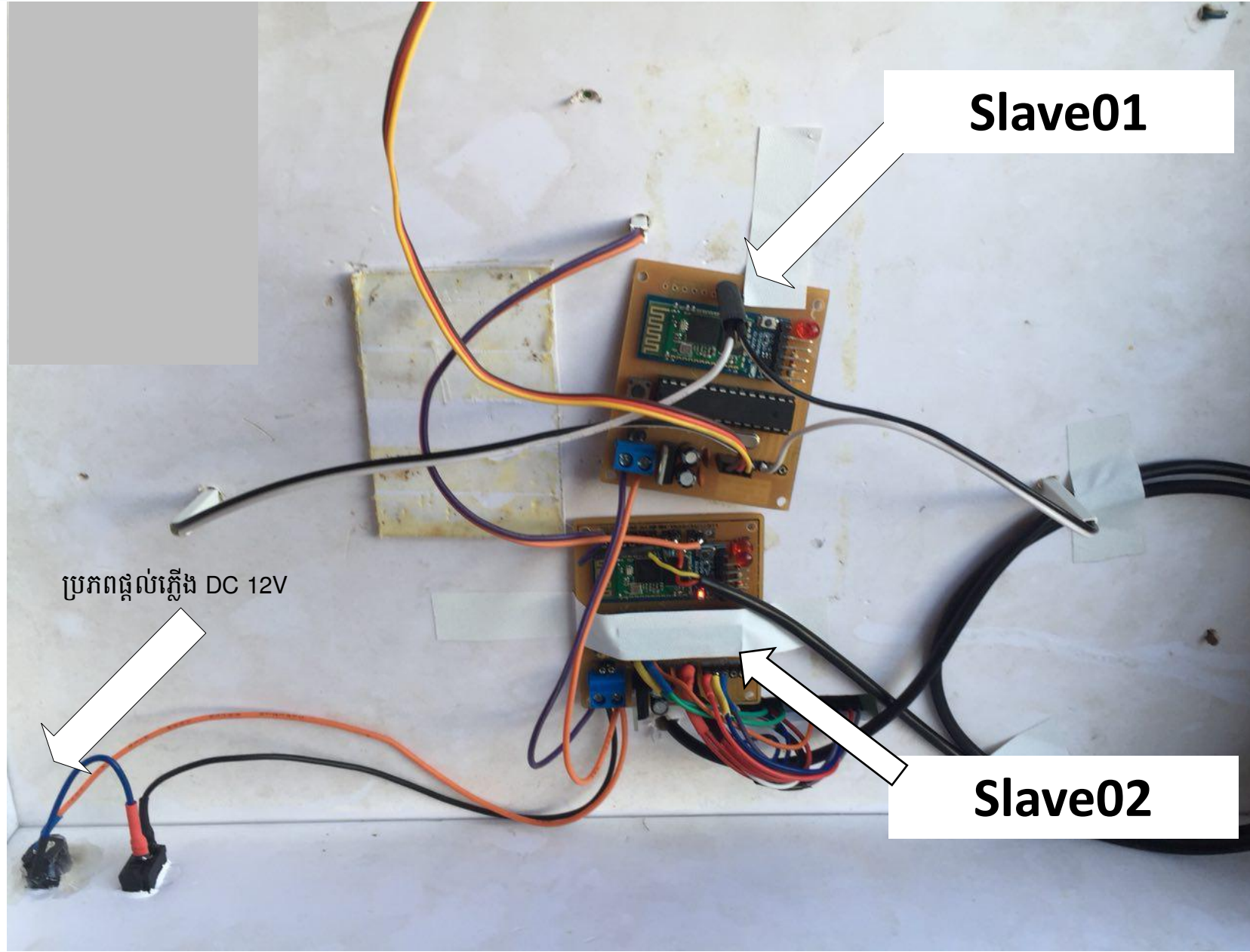
Previous

Next

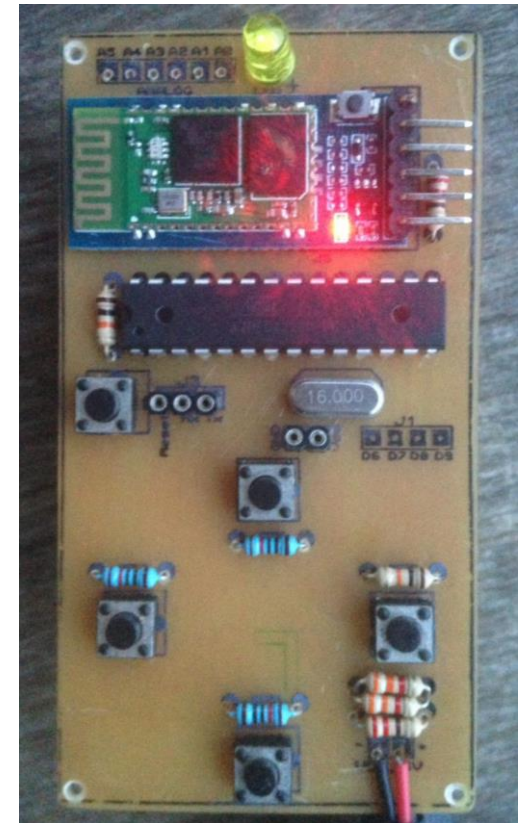
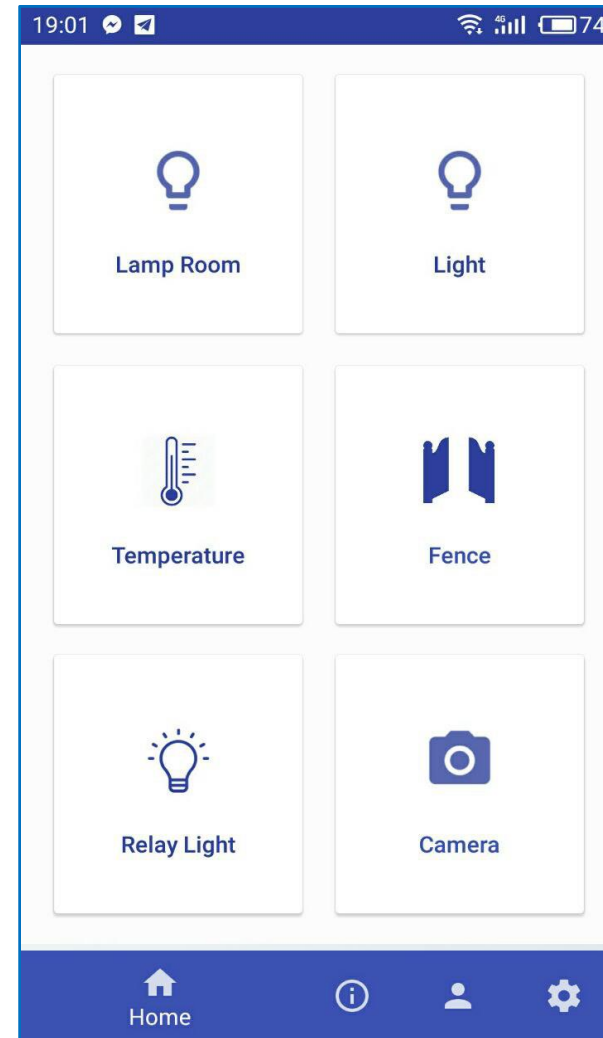
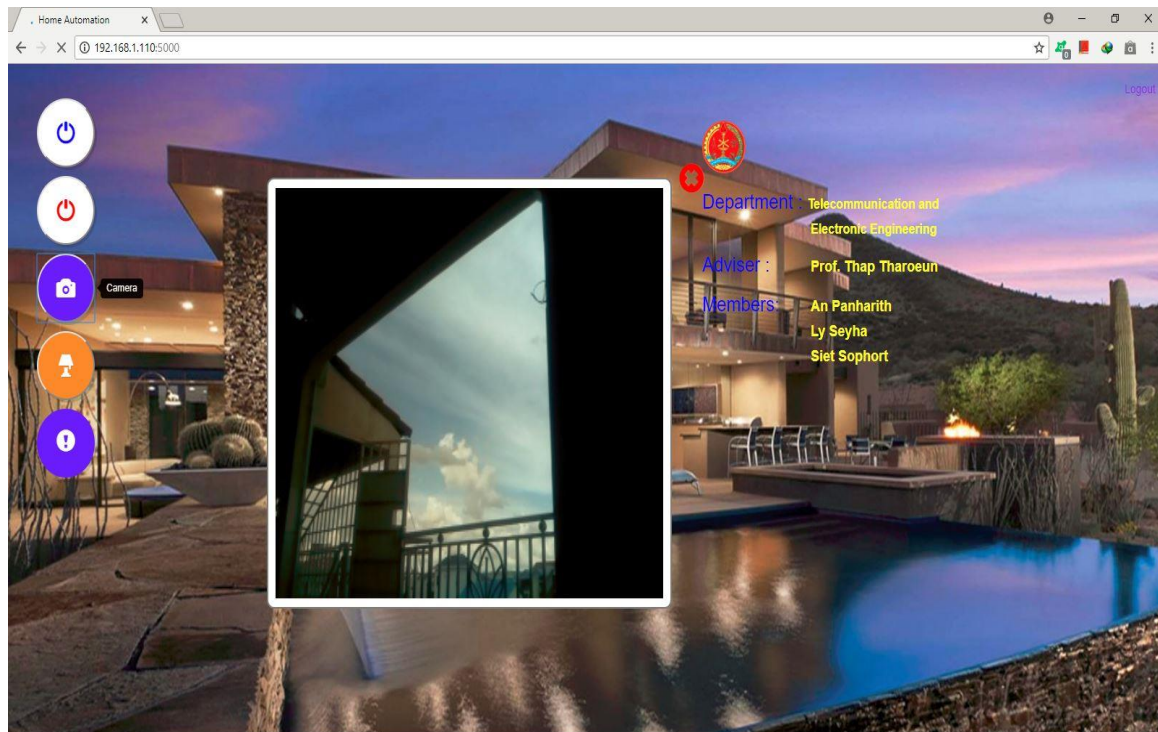
5. Result and Discussion



5. Result and Discussion

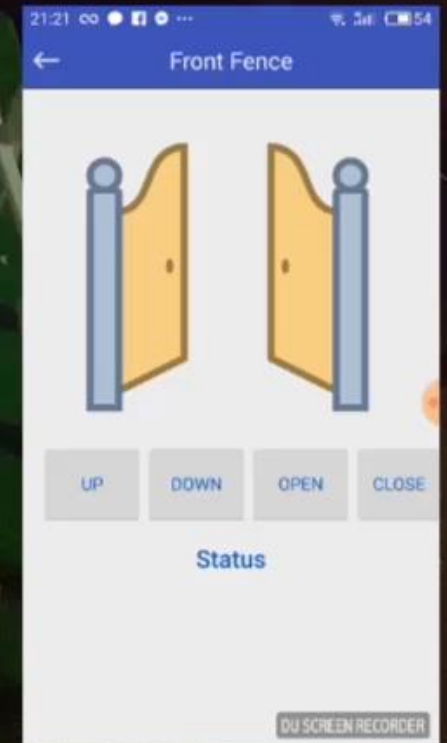


5. Result and Discussion



Project Experiment

Open gate via mobile app



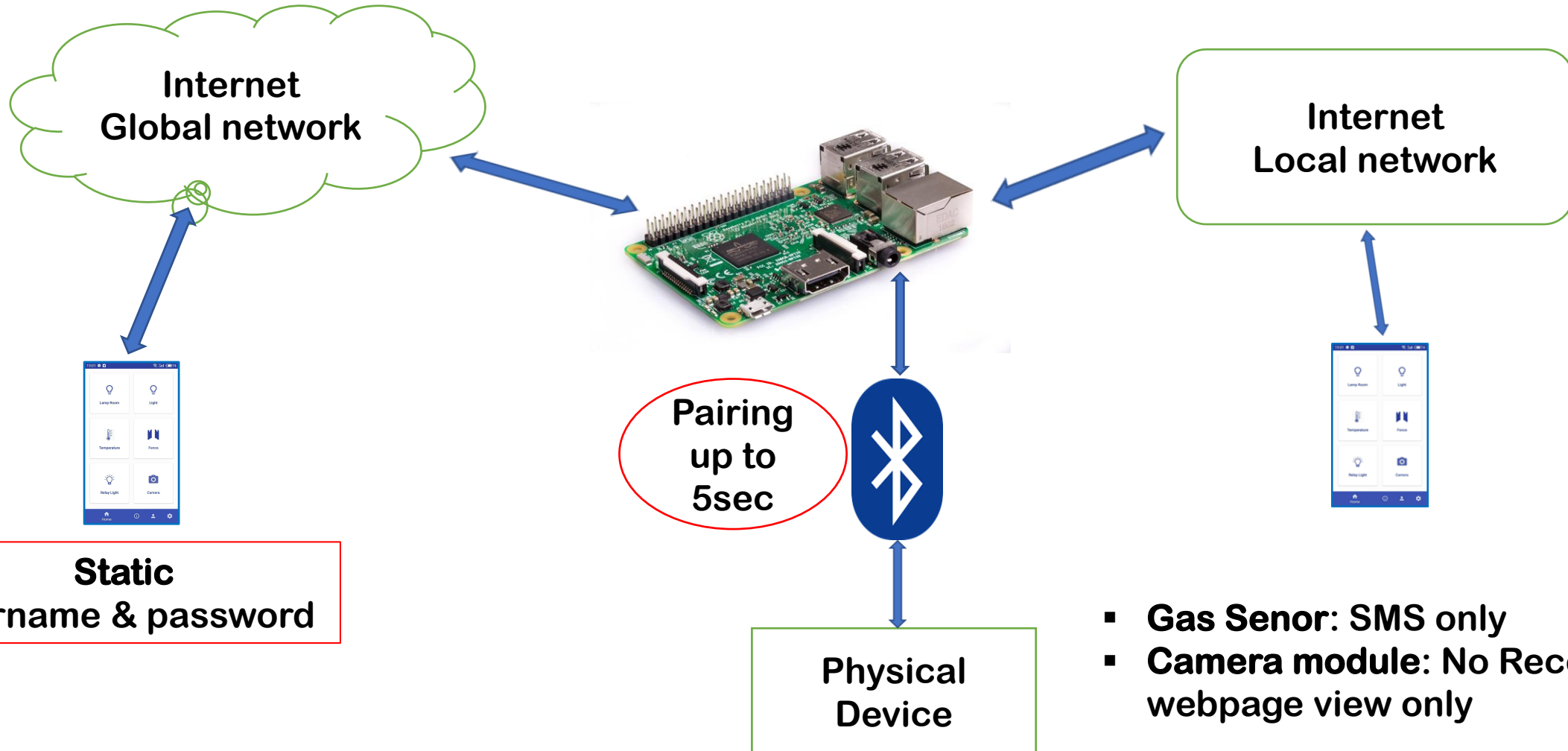
5. Extensibility and Limitation

Extensibility

- Smart farm system
- Smart office system
- Home automation system
- Smart city

5. Extensibility and Limitation

Limitation



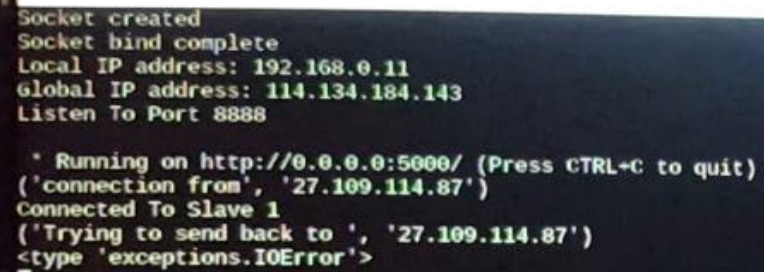
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- [8] Other references are available for any request.

Thank You!



Connection from wide area client



A terminal window with a blue title bar and a dark background. The window title is 'sh'. The terminal output shows the following text:

```
Socket created
Socket bind complete
Local IP address: 192.168.0.11
Global IP address: 114.134.184.143
Listen To Port 8888

* Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)
('connection from', '27.109.114.87')
Connected To Slave 1
('Trying to send back to ', '27.109.114.87')
<type 'exceptions.IOError'>
```