



**ROYAL UNIVERSITY OF PHNOM PENH**  
**FACULTY OF ENGINEERING**



# **Preparation on Smart Grid development in the Faculty of Engineering, RUPP**

By Dr. Srun Sovila

Presenter: Dr. Tharoeun Thap

**03-Dec-2019**

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**The Faculty of Engineering**

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**What you could help and cooperate**

# Royal University of Phnom Penh (RUPP)

## Current Profile (Division)



Faculty of  
Social  
Science

Faculty of  
Science

Faculty of  
Engineering  
(11.12.2014)  
~ 6 years

Faculty of  
Development  
Study

Institute of  
Foreign  
Language

ផែនទីសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ  
Map of Royal University of Phnom Penh

1. មជ្ឈមណ្ឌលសហប្រតិបត្តិការ កម្ពុជា-កូរ៉េ (CKCC)

2. បណ្ណាល័យហ៊ុនសែន (Hun Sen Library)

3. អគារ D (Building D)

4. អគារ B (Building B)

Centers (IT center, CJCC, CKCC and etc.)

5. អគារ A (Building A)

6. អាហារដ្ឋាន ១ (Canteen 1)

7. អាហារដ្ឋាន ២ (Canteen 2)

8. អគារ C (Building C)

9. សាលប្រជុំជួបប្រជុំ (Auditorium Hall)

10. ភោជនីយដ្ឋាន Blend Cafe

11. អគារ T (Building T)

12. អគារដេប៉ាតឺម៉ង់ប្រព័ន្ធផ្សព្វផ្សាយ និងសារគមនាគមន៍ (DMC)

13. បណ្ណាល័យភាសាបារាំង (French Library)

14. អគារ D (Building D IFL)

15. អគារ C (Building C IFL)

16. អគារ E (Building E IFL)

17. អាហារដ្ឋាន IFL (Canteen IFL)

18. មជ្ឈមណ្ឌលសហប្រតិបត្តិការ កម្ពុជា-ជប៉ុន (CJCC)

19. អគារ G (Building G IFL)

20. អគារ A (Building A IFL)

21. អគារ B (Building B IFL)



# Faculty of Engineering

established in 11.Dec.2013 (6 years)

- Departments:
  - Telecommunication & Electronic Engineering
  - Information Technology Engineering
  - Bio-Engineering
- Lecturers & researchers
  - 8 (PhD) + 15 (MS) staff, and 5 part-time staff
- Students about 800 totally

# *Future Plan* at the Faculty of Engineering

- Establish three more department by 2021
  - Electrical Engineering
  - Urban Science & Architectural Engineering
  - Industrial Engineering
- Strengthen collaboration with Partners, especially industrial
- Research should be oriented on social & community problems

# **Student's Thesis on**

# Modeling System of Solar Energy to Minimize the Peak Energy from the Grid



សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ  
ROYAL UNIVERSITY OF PHNOM PENH

ប្រព័ន្ធម៉ូដែលនៃការថតថាមពលព្រះពន្លឺ  
ដើម្បីធ្វើឱ្យការប្រើប្រាស់ថាមពលអគិបមាពី Grid ថយចុះ

Modeling System of Solar Energy to Minimize  
the Peak Energy from the Grid

សារណាមក្សាប័ណ្ណបក្ស

A Thesis

In Partial Fulfillment of the Requirement for Bachelor Degree of  
Electronic and Telecommunication Engineering

ជា នាគាមីម

CHEA NAKHIM

July 2018



**សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ**  
ROYAL UNIVERSITY OF PHNOM PENH

**ការរចនាប្រព័ន្ធគ្រប់គ្រងឧបករណ៍អេឡិចត្រូនិចនៅក្នុងផ្ទះ  
ដោយផ្អែកលើមូលដ្ឋាន IoT**

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

របាយការណ៍បញ្ចប់ថ្នាក់បរិញ្ញាបត្រ  
វិស្វកម្មទូរគមនាគមន៍ និងអេឡិចត្រូនិច

A Final Report  
In Partial Fulfilment of the Requirement for the Degree of  
Bachelor in Telecommunications and Electronics Engineering



**សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ**  
ROYAL UNIVERSITY OF PHNOM PENH

**កម្មវិធីទូរស័ព្ទដែលសម្រាប់ប្រើប្រាស់ដោយប្រជាជន  
សាធារណៈក្នុងរាជធានីភ្នំពេញ**

Mobile Application for Phnom Penh Public Transportation

A Thesis  
In Partial Fulfilment of the Requirement for the Degree of  
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Lim Chhayly

June 2019



**សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ**  
ROYAL UNIVERSITY OF PHNOM PENH

**ការអភិវឌ្ឍន៍លើ Raspberry Pi Board សម្រាប់ការអប់រំលើគម្រោង**

ទូរគមនាគមន៍ និង អេឡិចត្រូនិច  
Development on Raspberry Pi Board for Education on  
Telecommunication and Electronic project

គម្រោងបញ្ចប់ថ្នាក់បរិញ្ញាបត្រ វិស្វកម្មទូរគមនាគមន៍ និងអេឡិចត្រូនិច

A Research Report  
In Partial Fulfilment of the Requirement for the Degree of Bachelor of  
Telecommunication and Electronic Engineering



**សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ**  
ROYAL UNIVERSITY OF PHNOM PENH

**ការគ្រប់គ្រងលើសញ្ញាបញ្ជីបណ្តាញដោយប្រើប្រាស់ Raspberry Pi 2  
ដើម្បីសម្រួលបញ្ហាបណ្តាញ**

Raspberry Pi 2 Control Traffic Light Based Traffic Density for Solving Traffic Problem

គម្រោងបញ្ចប់ថ្នាក់បរិញ្ញាបត្រ វិស្វកម្មទូរគមនាគមន៍ និង អេឡិចត្រូនិច

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**សេង ចាន់ណារ៉ា ឈុន ប៊ុនហេង ហម ហ្វឺនេក**  
Seng Channara Chhun Bunheng Horm Sreyneak

July 2019



**សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ**  
ROYAL UNIVERSITY OF PHNOM PENH

**ការសិក្សាលើគម្រោង IoT ដោយប្រើប្រាស់ Microcontroller**

សម្រាប់ការអប់រំលើទូរគមនាគមន៍

Microcontroller Based IoT Projects for Education Purpose on  
Telecommunication

គម្រោងបញ្ចប់ថ្នាក់បរិញ្ញាបត្រ វិស្វកម្មទូរគមនាគមន៍ និងអេឡិចត្រូនិច

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**សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ**  
ROYAL UNIVERSITY OF PHNOM PENH

**ការសិក្សាពីការអភិវឌ្ឍន៍ EMI/EMC នៅក្នុងប្រព័ន្ធគ្រប់គ្រង**

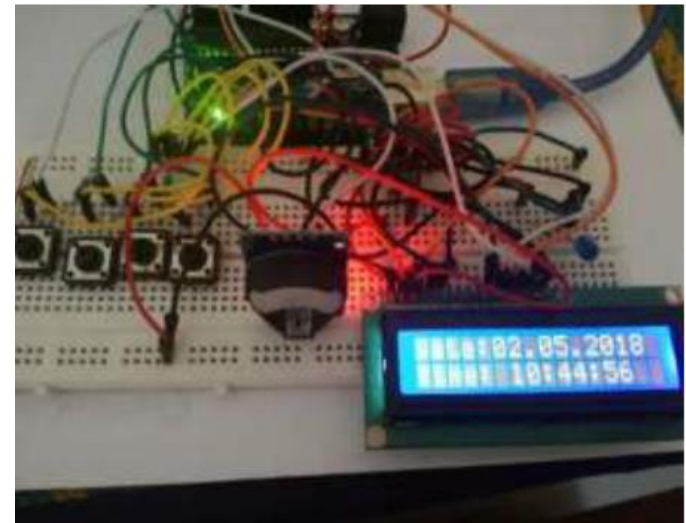
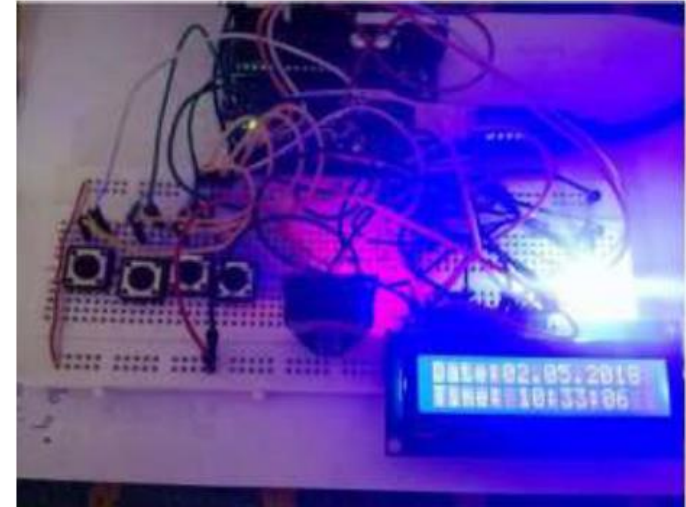
Study on Development of EMI/EMC in Smart System

A Thesis  
In Partial Fulfilment of the Requirement for the Degree of  
Bachelor in Telecommunications and Electronics Engineering

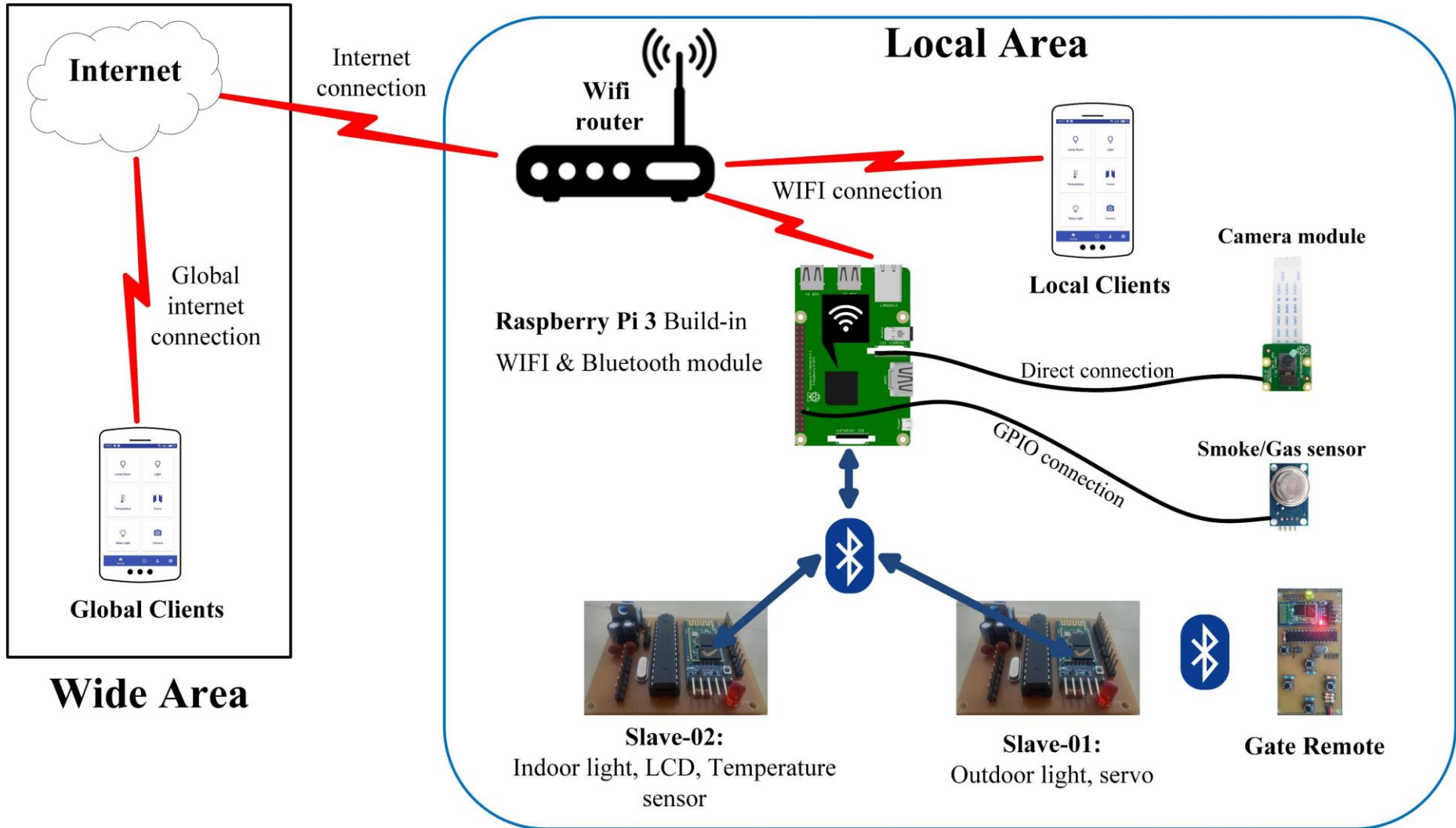
KAO Sethkosal

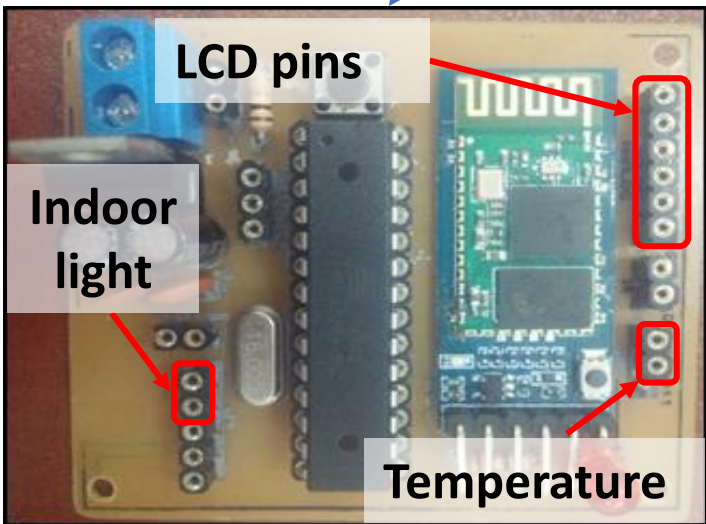
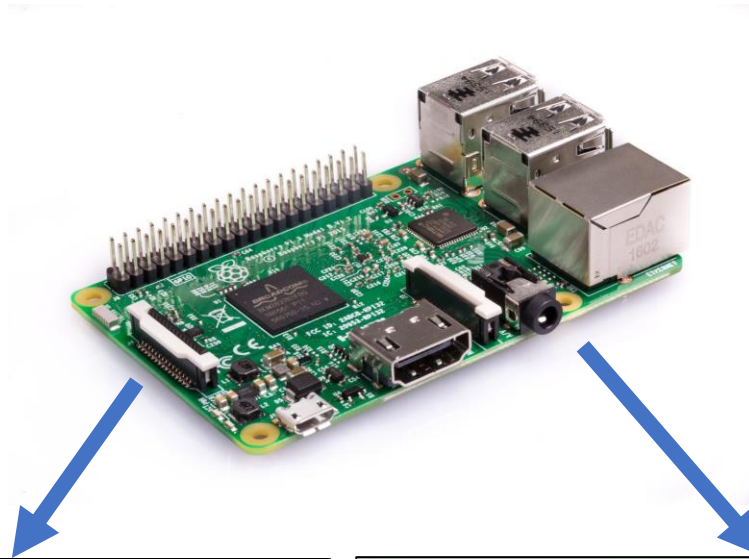
July 2018

# Turn the Relay ON/OFF via Time Setting

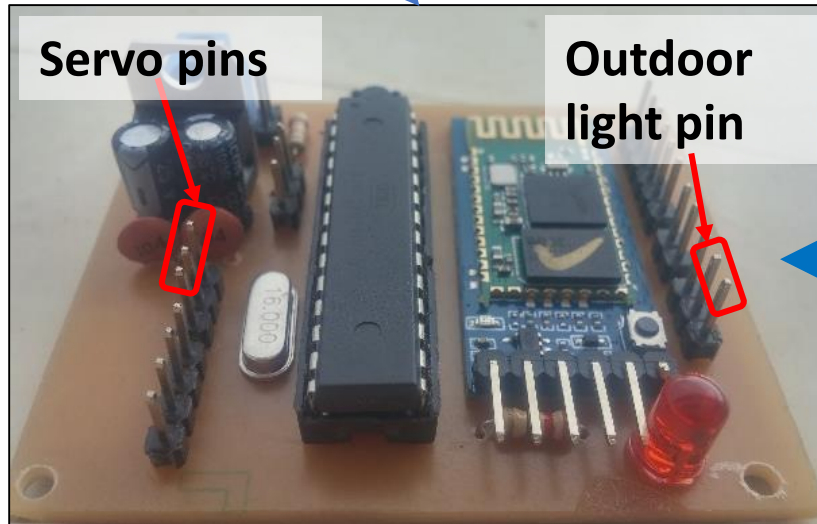


# IoT Project

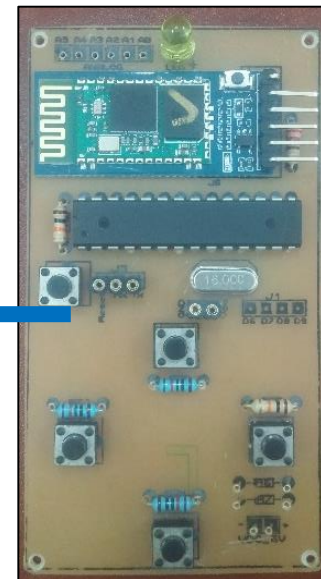


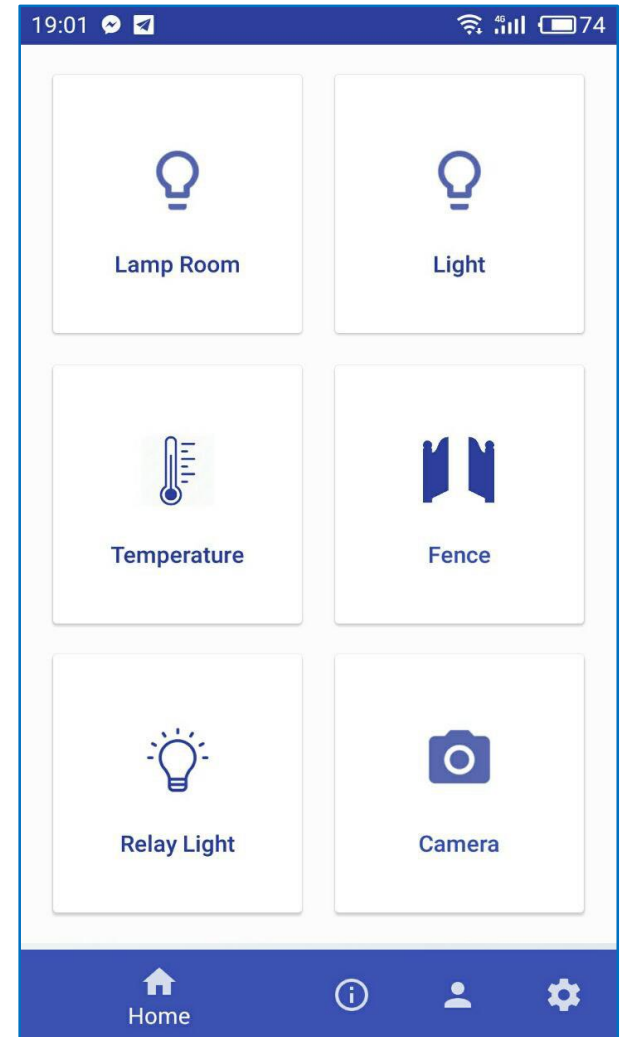
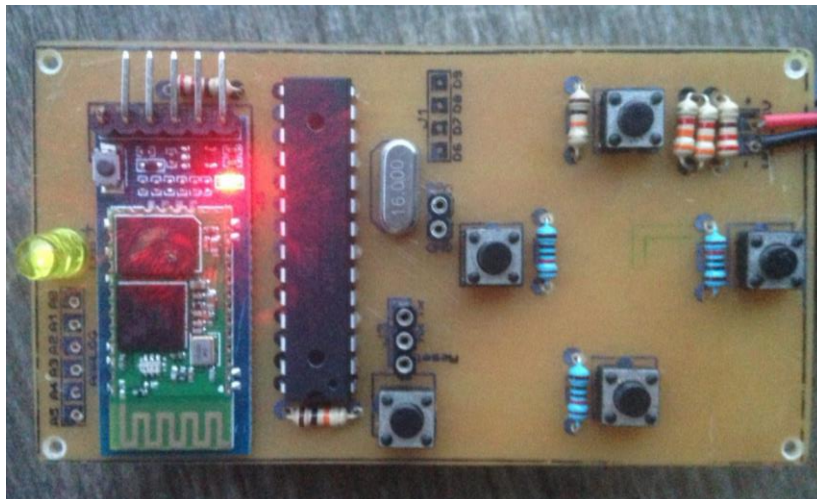
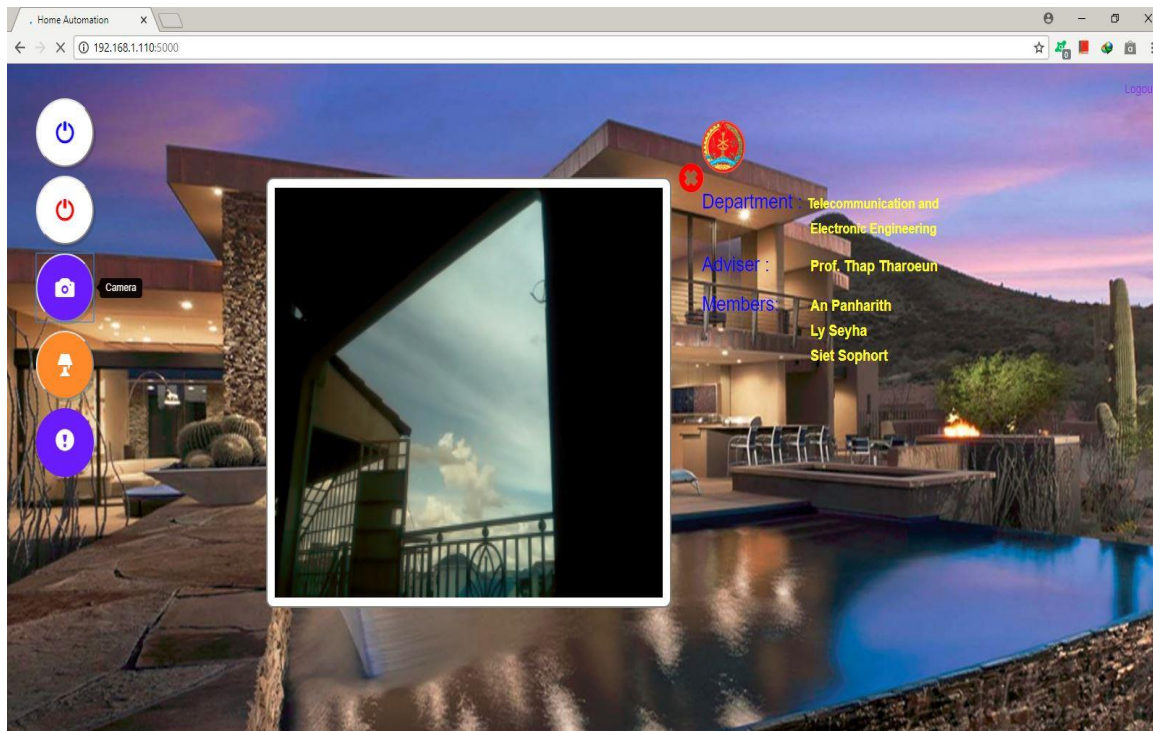


**Slave02:** Temperature, LCD & indoor Light

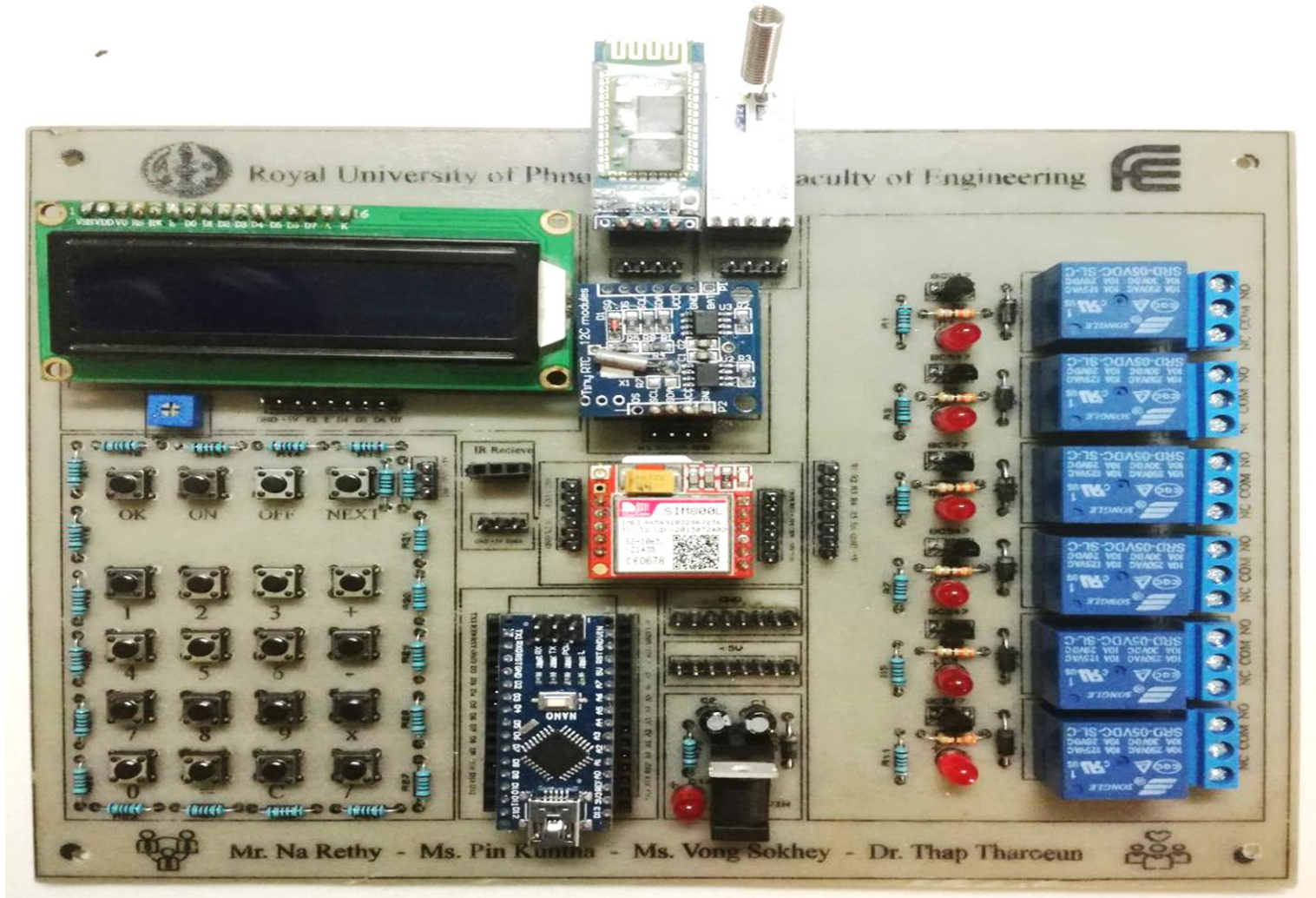


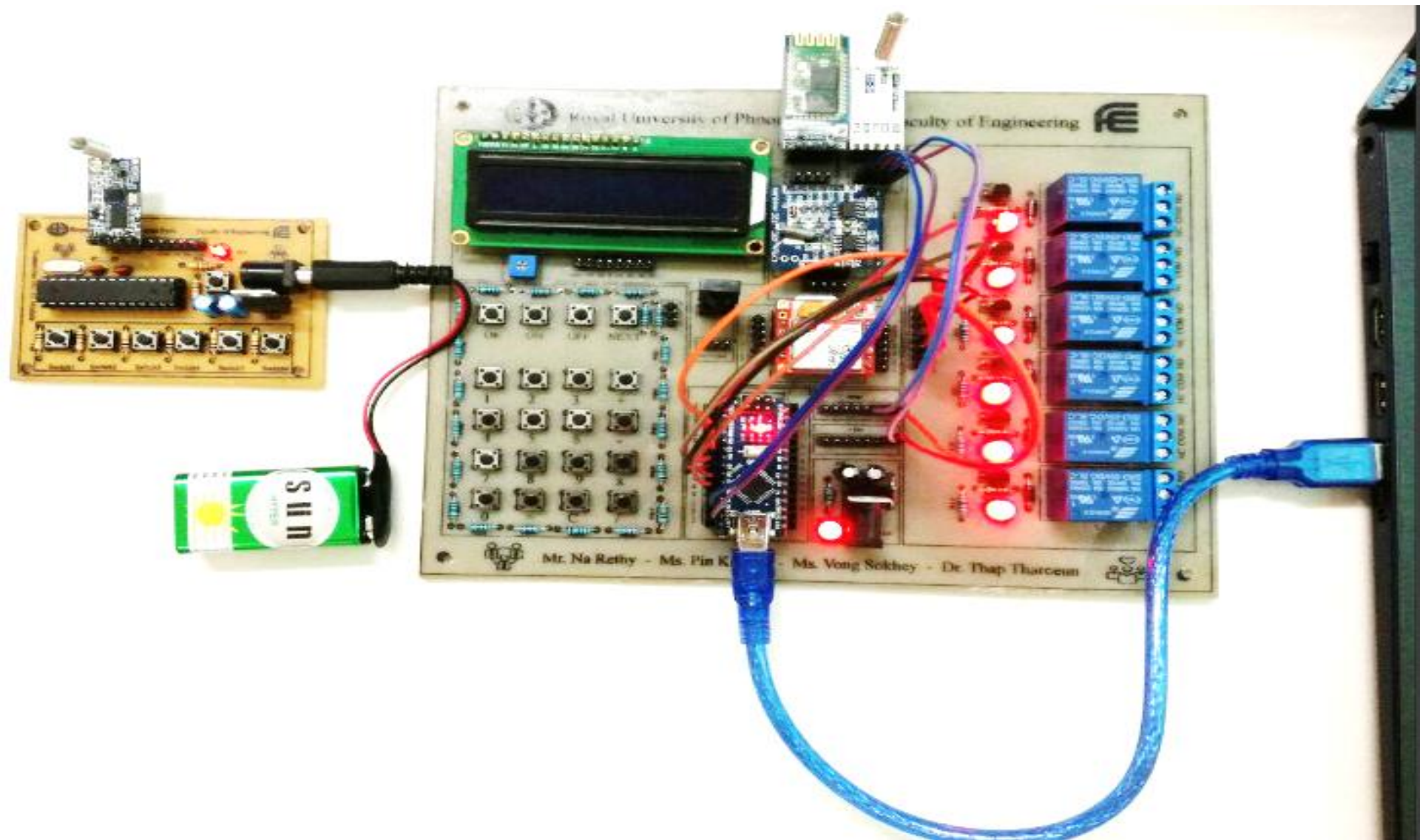
**Slave01:** Gate + Outdoor Light

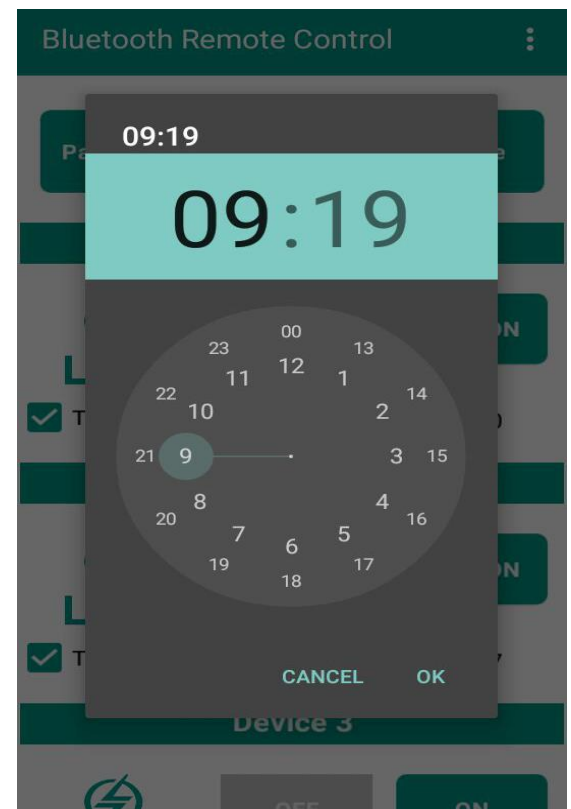
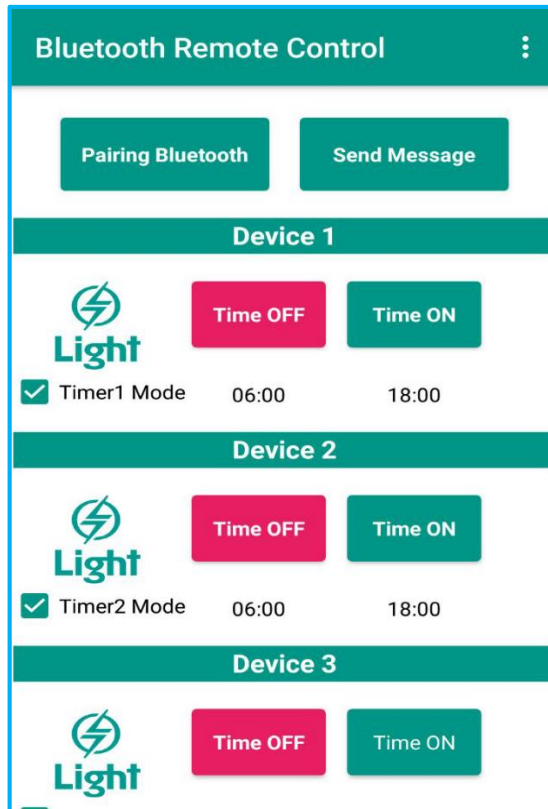
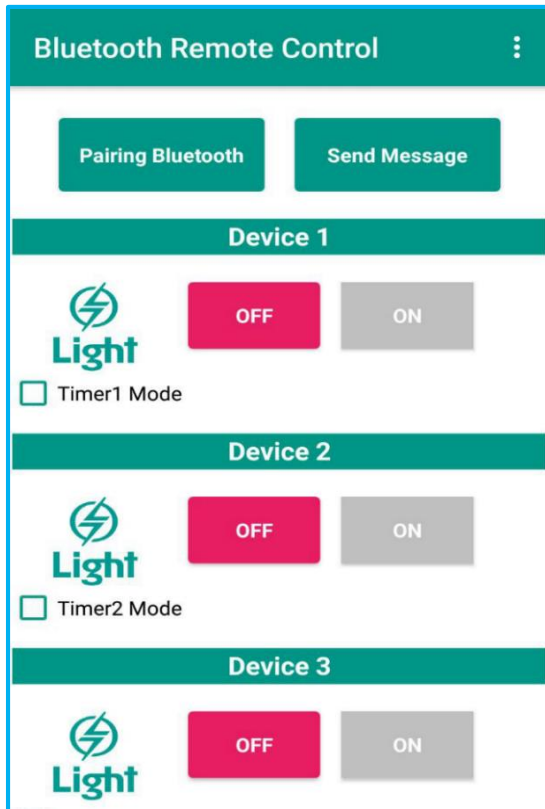




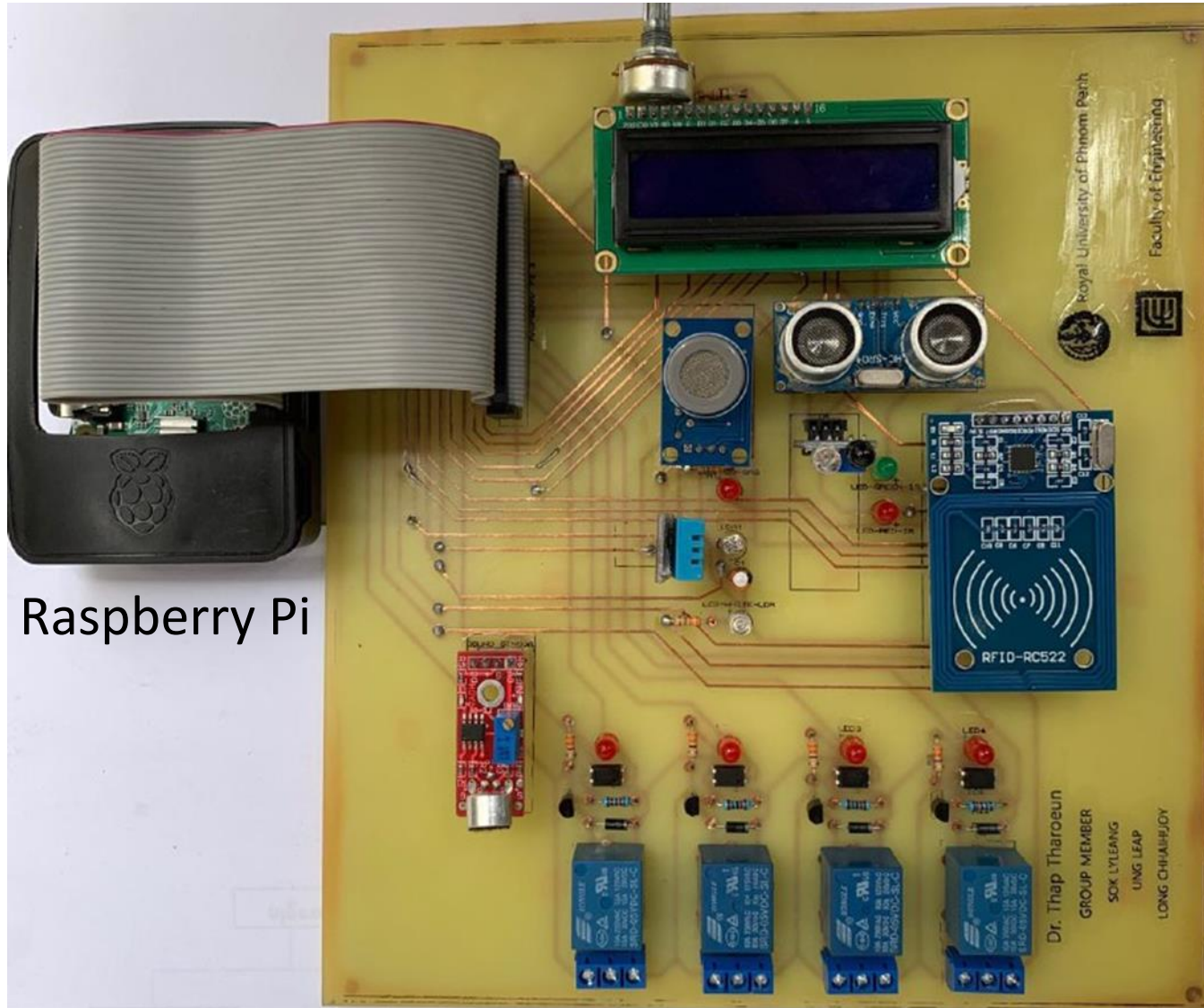
# Microcontroller Kit







# Raspberry Pi Kit



# Research fields

Dept. of Telecom. and Electronic Eng.

- IoT, Automation, and PLC
- Smartphone App Development
- Smart system and Security
- RF Environment Analysis
- Antenna Design and Mobile Communication
- Computer Networking

# The Department of Electrical Engineering



**2021**



