

CST 699 INDUSTRIAL TRAINING

Faculty of Data Science and Computing (FSDK)

Presenter

— ● NOR AIN SHAPIQA BINTI MOHD SUKERI
2019406252

Organization Supervisor

DR. NURUL IZRIN BINTI MD SALEH

About FSDK

Faculty of Data Science and Computing (FSDK) or known as before Department of Data Science (JSD) was establish at the end of 2020 and upgrade into faculty starting 1st January 2023.

The dean of Faculty of Data Science and Computing is Dr. Hasyiya Karimah binti Adli, followed by the two coordinators which is Dr. Nurul Izrin binti Md Saleh (Postgraduate program coordinator) and Ts. Dr. Hadhrami bin Ab. Ghani (Undergraduate program coordinator), lecturers and administrative and finance department.

The faculty offer postgraduate programs which is Doctor of philosophy (PhD) and Master by research (Computing), and undergraduate program which is Bachelor of Information Technology with Honors.

READ MORE

<https://ds.umk.edu.my/intro-faculty.cfm>





VISION

To become a national model of educational excellence, student success, cutting edge-research and industrial partnership, agile and relevant to meet the dynamics of global transformation.

READ MORE

<https://ds.umk.edu.my/intro-faculty.cfm>





MISSION

To facilitate high quality education, research and industrial collaboration in Data Science and related fields.

READ MORE

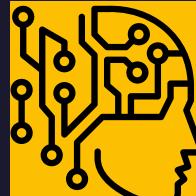
<https://ds.umk.edu.my/intro-faculty.cfm>

Expertise

Internet of Things (IoT)



System of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.



Artificial Intelligence

The ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings.



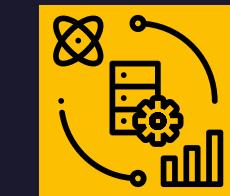
Machine Learning

Scientific study of algorithms and statistical models that computer systems use to perform a specific task without using explicit instructions, but only relying on patterns and inference.



Big Data

Large volume of data - both structured and unstructured - inundates a business on a day-to-day basis.



Data Science

Multi-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from structured and unstructured data.

READ MORE

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70%

GROUP PROJECT

The group project is Smart Home IoT Project where its involves Sensors, Arduino Mega, and others. The project consist of Smart Home model and Smart Home Control Device.

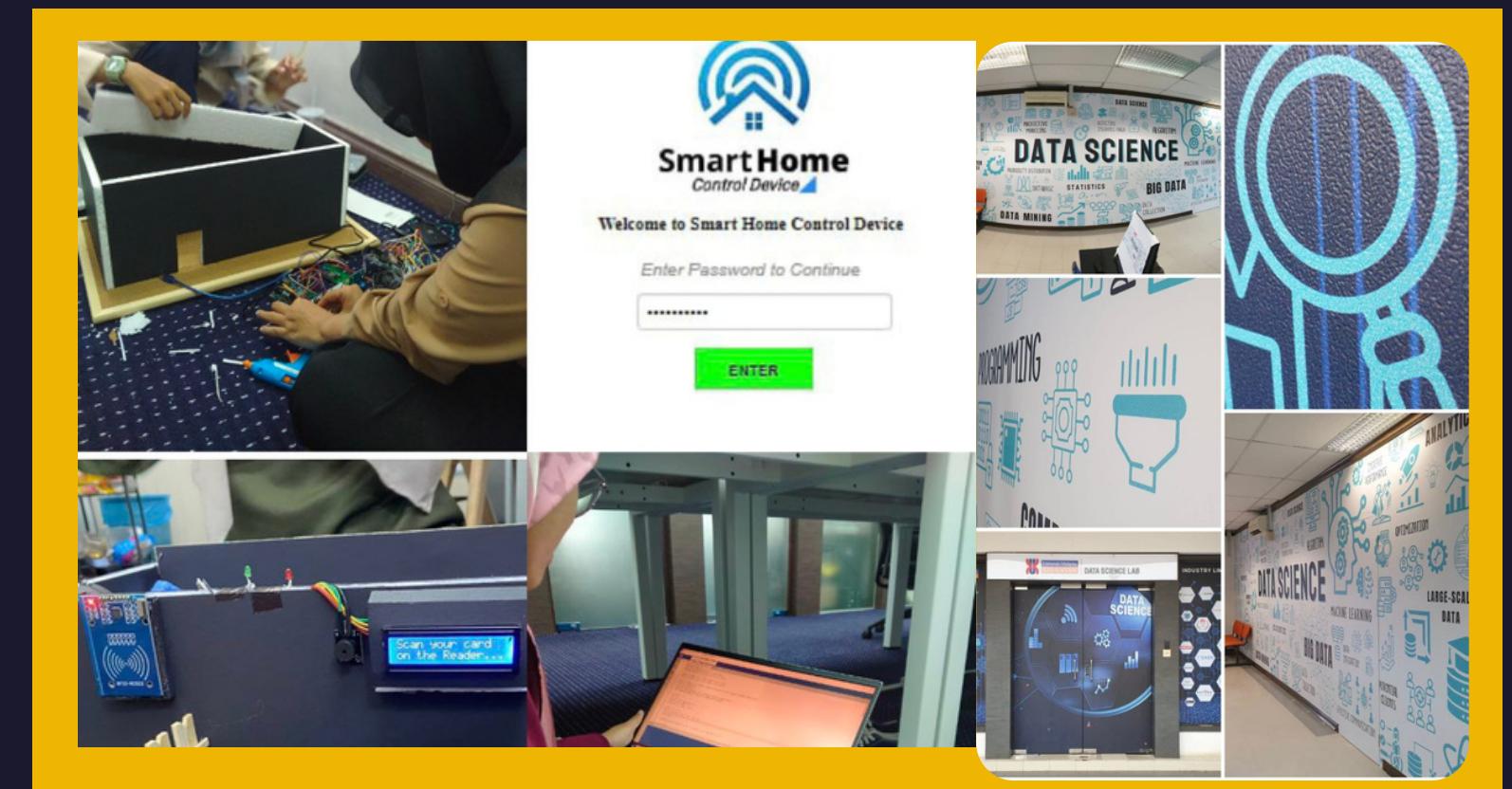
30%

ADMINISTRATION

Administration work like filing, open new documents, copy,etc.

SIDE PROJECT

- Design Wallpaper for Inside and Outside of Data Science Lab.
- Design Logo for Data Science Lab.
- Need to design posters for social media (Facebook and Instagram).
- All designs were designed using Canva Pro and Adobe Photoshop.



Meet Our **Best Team**

SUPERVISORS



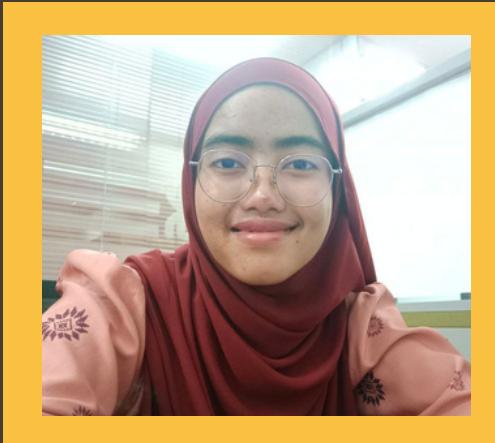
Nursyahida binti Mat Daros

UiTM Kuala Terengganu,
Bachelor of Computer Science
(Hons.)



Fasihah binti Ismail

UiTM Kuala Terengganu,
Bachelor of Computer Science
(Hons.)



Nor Ain Shapiqa Mohd Sukeri

UiTM Shah Alam,
Bachelor of Information Systems
(Hons.) Intelligent Systems Engineering



Dr. Hasyiya Karimah binti Adli

Dean of Faculty of Data Science and
Computing



Ts. Dr. Hadhrami bin Ab. Ghani

Senior Lecturer



Dr. Nurul Izrin binti Md Saleh

Senior Lecturer

PROJECT TASK

Smart Home IoT Project

01

Sensors

- List all components available in the department.
- List all possible sensors used in the project
- Study the sensor
- Set up the sensor

03

Design Apps

- Design user interfaces using MIT App Inventor
- Connect to Arduino Mega using Bluetooth Module HC-06
- Set Up the led for Smart Home Control Device.

02

Compilation

- Compile all the sensor to Arduino Mega

04

Smart Home Model

- Build Smart Home Model

Project Progress

Smart Home IoT Project

There are four sensors used in this Smart Home IoT Project which are RFID sensor (for door lock), Flame sensor (detect fire in the kitchen), DHT sensor (detect room temperature), and Photoresistor sensor (detect light intensity).

There is an application to control lights in each room using Smart Home Control Device Application. This application was developed using MIT App Inventor.

The Smart Home model have four room which are 1 bedroom, 1 bathroom, 1 study room, 1 living room, and kitchen.

- TASK 1: Sensors**
- TASK 2: Compilation**
- TASK 3: Design Apps**
- TASK 4: Build Smart Home Model**

INDICATOR
NOT STARTED
DELAYED
IN PROGRESS
COMPLETED

TASK	START DATE	DU DATE	PROGRESS
TASK 1: List All Components available in JSD	Week 2	Week 2	<div style="width: 100%; background-color: #2e7131; height: 10px;"></div>
TASK 1: List possible sensor/features used in the project	Week 2	Week 2	<div style="width: 100%; background-color: #2e7131; height: 10px;"></div>
TASK 1: Study the sensor	Week 2	Week 8	<div style="width: 100%; background-color: #2e7131; height: 10px;"></div>
TASK 1: Set Up the sensor	Week 2	Week 10	<div style="width: 100%; background-color: #2e7131; height: 10px;"></div>
TASK 2: Compile all the sensors	Week 10	Week 11	<div style="width: 100%; background-color: #2e7131; height: 10px;"></div>
TASK 3: Design Apps (MIT APP INVENTOR)	Week 11	Week 14	<div style="width: 100%; background-color: #2e7131; height: 10px;"></div>
TASK 3: Connect to Arduino using Bluetooth Module HC-06	Week 14	Week 15	<div style="width: 100%; background-color: #2e7131; height: 10px;"></div>
TASK 3: Set Up the led for Smart Home Control Device using Bluetooth module and MIT APP Inventor	Week 15	Week 18	<div style="width: 100%; background-color: #ffcc00; height: 10px;"></div>
TASK 4: Build Smart Home Model	Week 11	Week 18	<div style="width: 100%; background-color: #ffcc00; height: 10px;"></div>

SMART HOME MODEL

Smart Home IoT Project

Sensors Used :

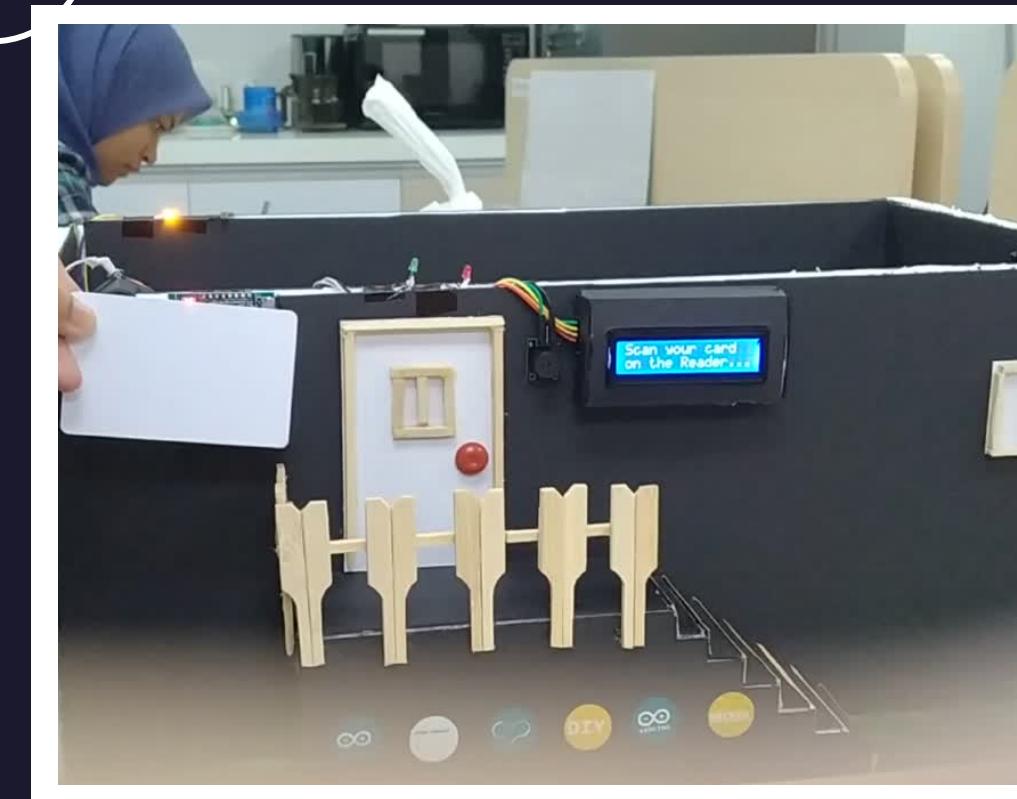
- RFID Sensor
- Flame Sensor
- DHT Sensor
- Photoresistor Sensor

READ MORE

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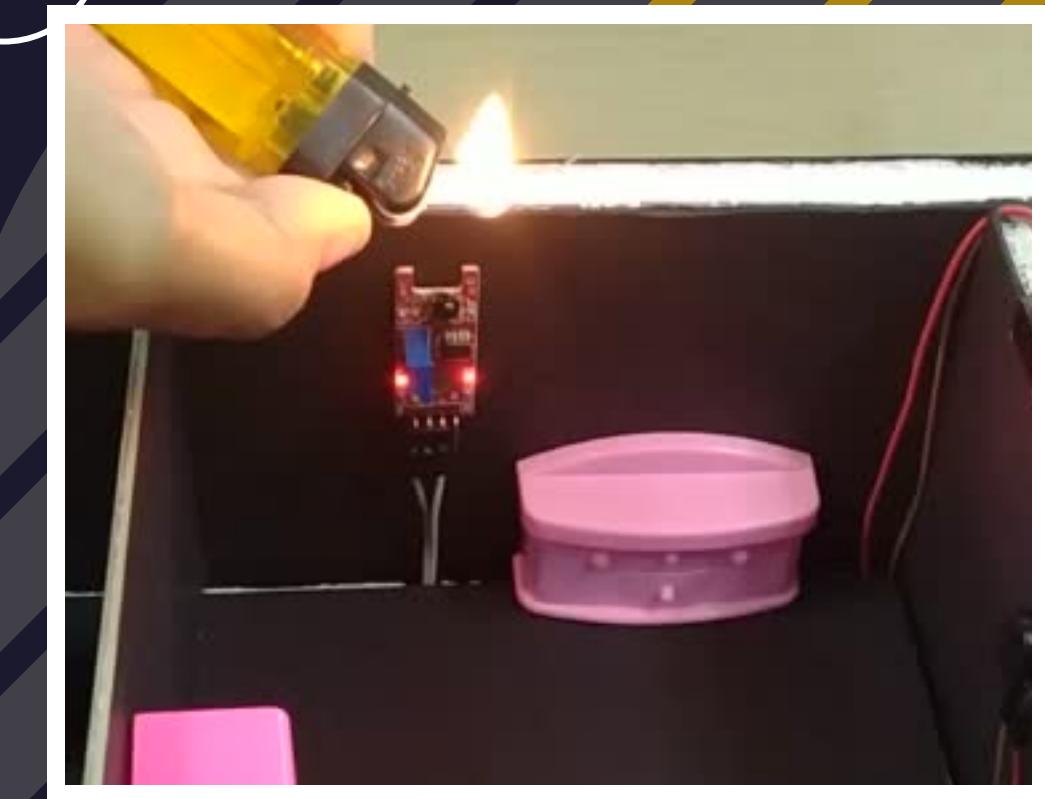
1

RFID SENSOR



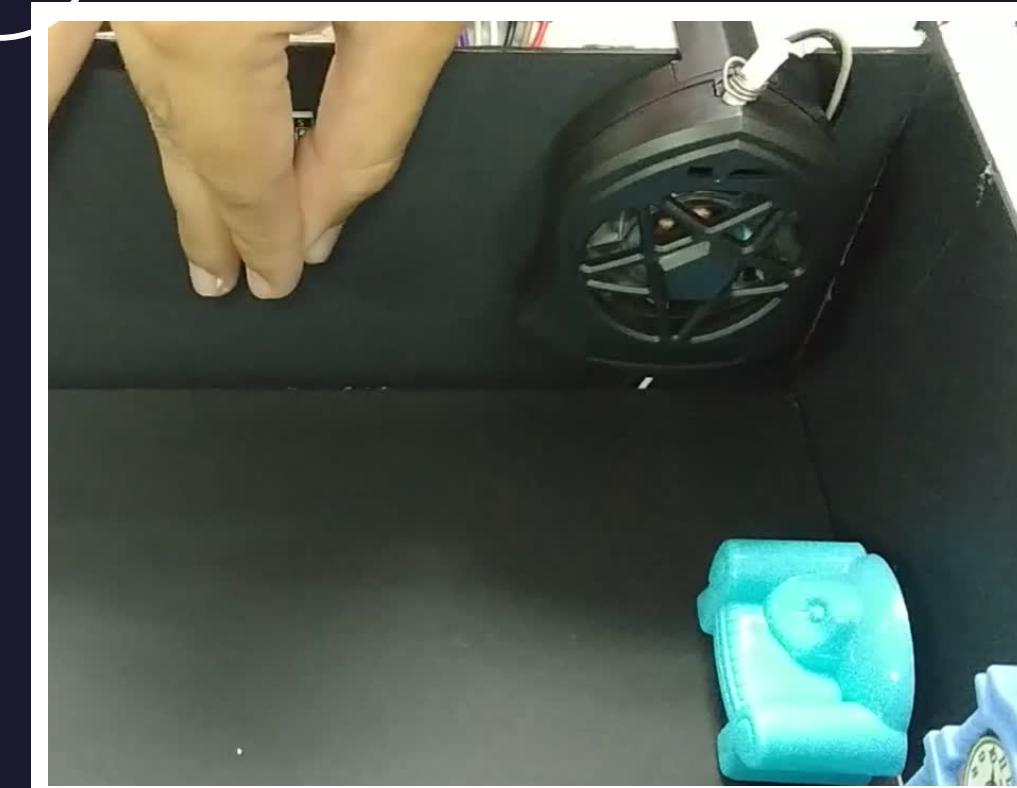
2

FLAME SENSOR



3

DHT SENSOR

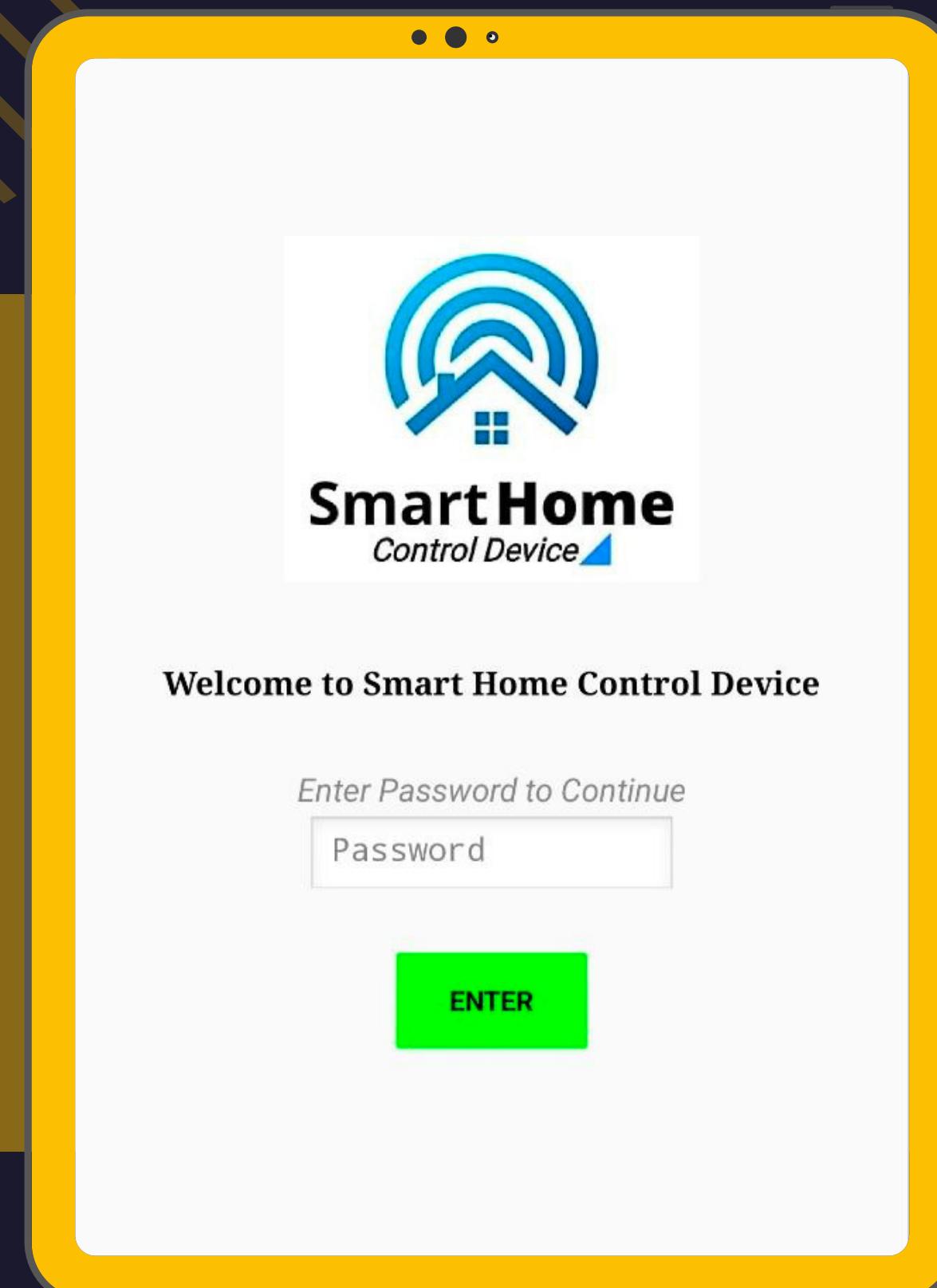


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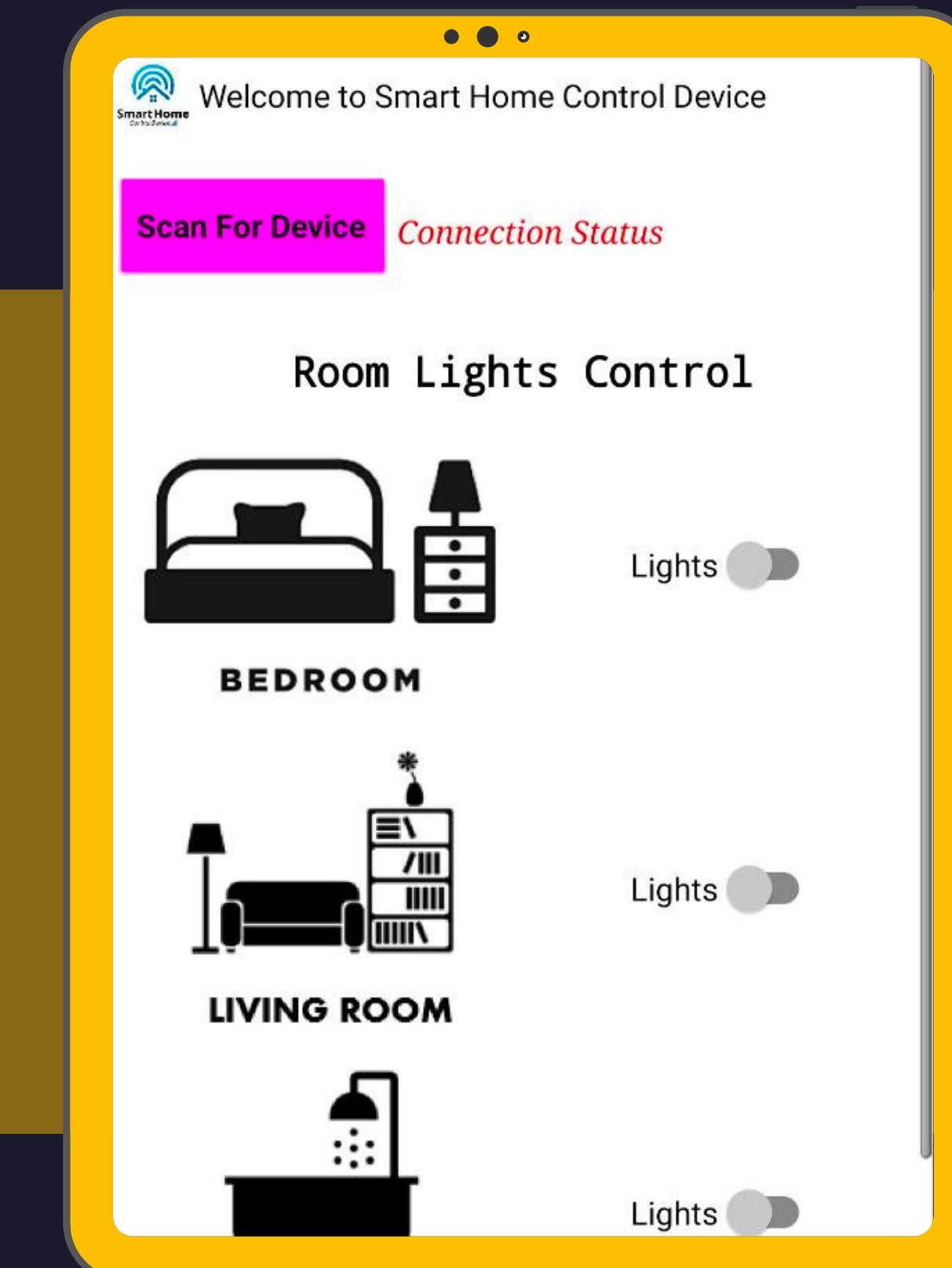
PHOTORESISTOR SENSOR



User Interfaces



Login page



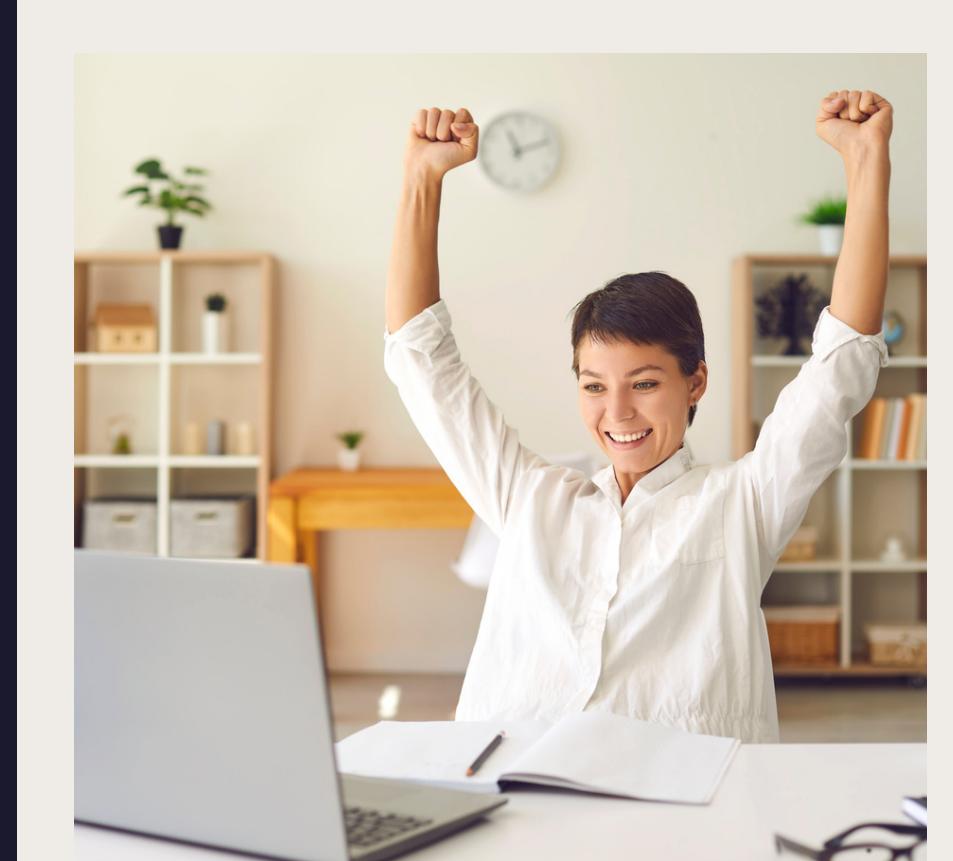
Homepage

ADMINISTRATION

Admin and Financial Task



File Classification



Manage File Documents



Financial Report



Program used:

- Open new files (file Sulit and Terbuka, Student File)
- Register each new administrative files classification codes.
- Sort out the documents.



Program used:

Skills and Knowledge

01

Internet of Things (IoT)

- Able to explore Arduino components, sensors, wiring etc.
- Able to build Smart Home IoT Project using Arduino IDE and MIT App Inventor.

02

C++ Programming Language

- Able to apply programming language C++ in Arduino IDE.

03

Graphic Design

- Able to design posters, wallpapers using Adobe Photoshop and Canva Pro.

04

Administration

- Able to do administration work like manage documents, filing documents, make financial report etc.

Improvements

The improvements during Internship



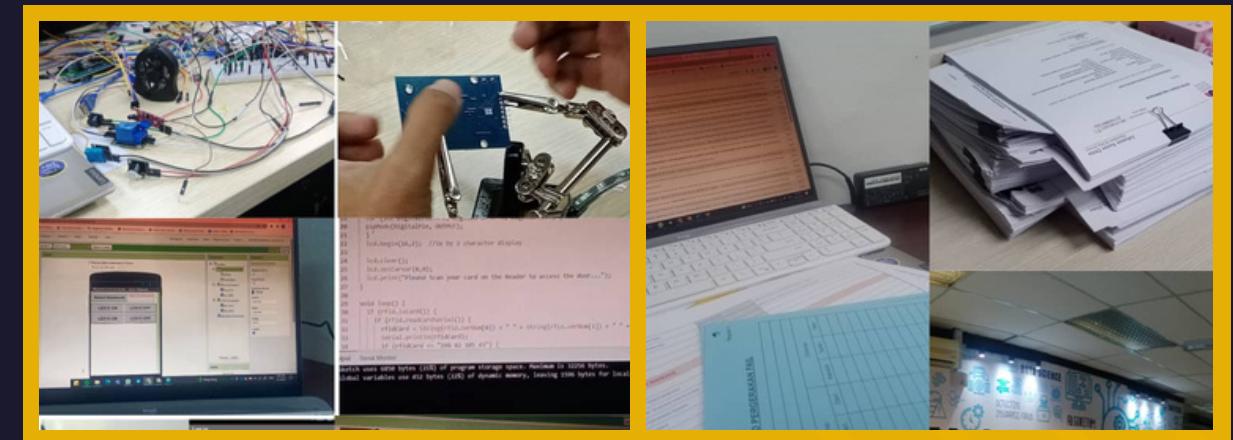
Adobe Photoshop

Able to improve editing skills using Adobe Photoshop



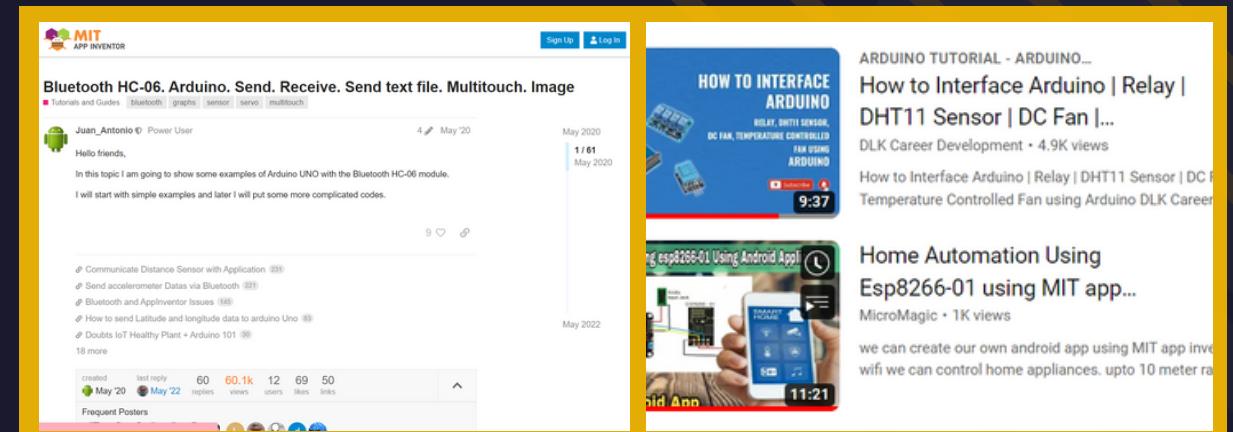
Communication Skills

Able to improve communication skills with the staffs and vendor



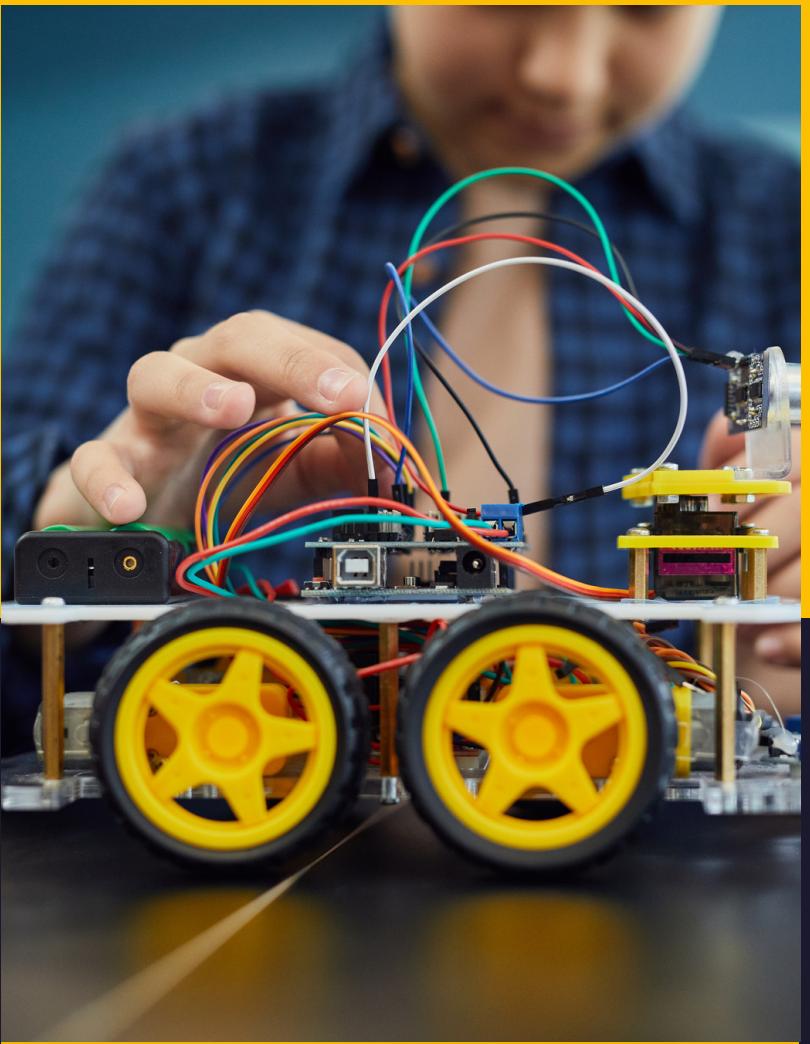
Multi-Task

Able to do multi-tasking job like editing, administration work and IoT project.



Self-Learning

Able to self-learning on how to develop and build Smart Home IoT Project using Arduino and MIT App Inventor



IoT Project



Graphic Design



Administration



Programming

RECOMMENDATION

This internship is recommended to the students who are passionate in learning IoT project, programming, graphic design and Administration.

THANK
YOU

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