

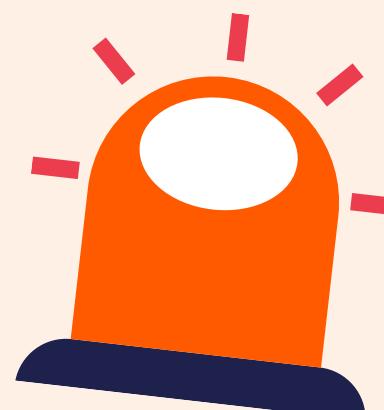


PROJECT BASED LEARNING



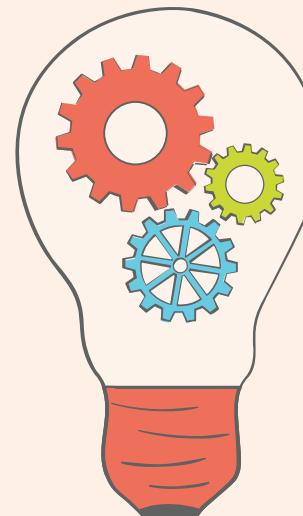
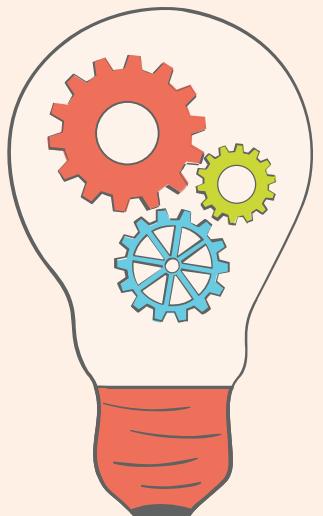
Mobile Application

Baby Monitoring System



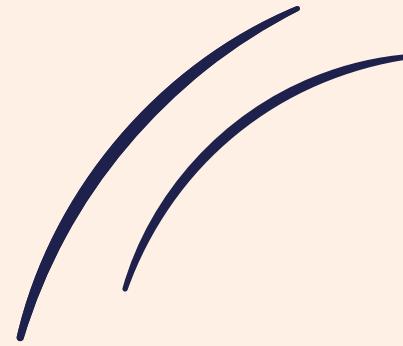
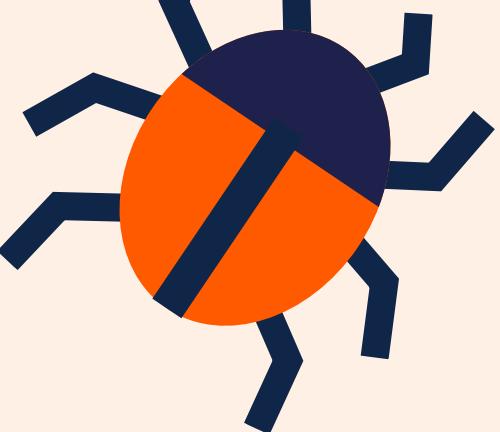
TRM - 410

Project Manager



Agung Riyadi, S.Si., M.Kom

Team Member



Rizki Purnama Saputra
4312211078



Relvin Andika Manda P
4312211065



Salma Isra nabiyya
4312211080



Uci Aulia putri
4312201015



Annisa Triwardani
4312211087

Description Project

Mobile Baby Monitoring System application is an integration between mobile application and IoT System. The idea is a smart cradle system that will help parents monitor their babies remotely. The idea comes up with a crying detection mechanism, live video surveillance, cloud computing data and user interface in mobile or web version. Different sensors mounted on the cradle will check the humidity or temperature of the bed. Surveillance cameras will always transmit footage of the main IoT program. All data will be stored in the cloud.



Contribution Project

Computer System Administration

This course contributes to explaining the basic concepts of computer system administration.

Object Programming

Object programming provides a mechanism to organize data access and manipulate data

Mobile Device Programming

This course contributes to creating user interfaces, integrating with multimedia content such as images, audio or video.

Multimedia IoT System

This course contributes to the programming of IoT devices, implements several communication methods on IoT devices.

Contribution Project

General English

We can learn to speak for interaction, namely informal interaction (Greetings and Farewells, Describing Something), and vocabulary.

Civic education

we can explains the importance of national identity, national integration, institutions Republic of Indonesia.

Statistics

This course contributes to generate or create basic concepts of data collection, chance/probability and sampling distribution,



Output To Be Produced

Final Report

Manual Book

Video Demo

Mobile Application

PBL Handover News

Competition Proposal

Poster

HKI



History logbook

Week 1

Plan what tools will be needed such as the dht11 sensor, wemos, sound sensor, and PIR sensor.

Week 2

Check and list the items that will be prepared and contribute with manpro.

Week 3

Learn about IOT devices such as arduino uno, usb cables, jumper cables, LED and ARDUINO IDE software.

Week 4

Designing interfaces for app development through figma.

History logbook

Week 5

Create a mobile baby monitoring application project on the flutter framework using vs code.

Week 6

Create mobile app interfaces and widgets such as Parent, Baby, and settings.

Week 7

Design Use case and also Er-diagram on mobile applications.

Week 8

we installed the camera in the pubspec file and create the camera feature in the baby monitoring application.

History logbook

Week 9

Delete or remove the settings feature because, ngestuck in the language and history section

Week 10

Creating an API using node js to create video via stream in baby monitoring application

Week 11

We proceeded to create the API for the baby monitoring application.

Week 12

Assembling IoT devices using sura sensor, dht11, breadboard, and wemos d1

History logbook

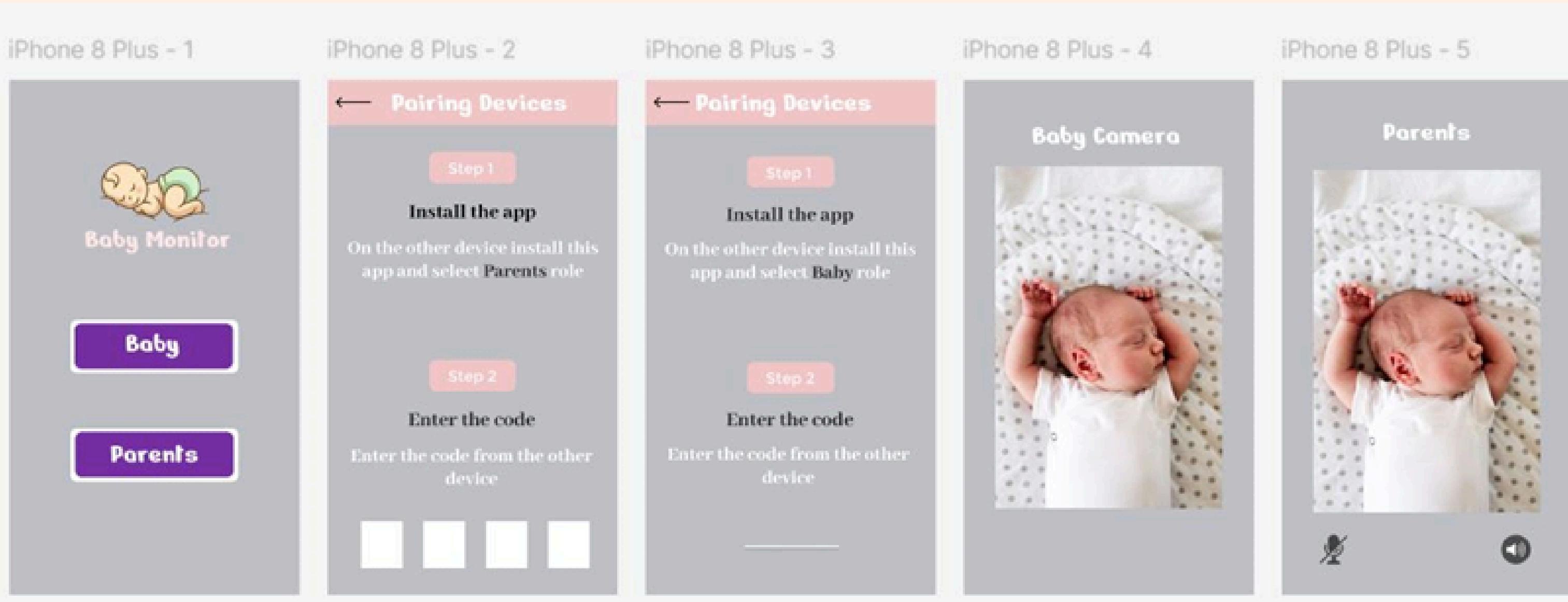
Week 13

We installed the IoT device using arduino ide which contains the dht library

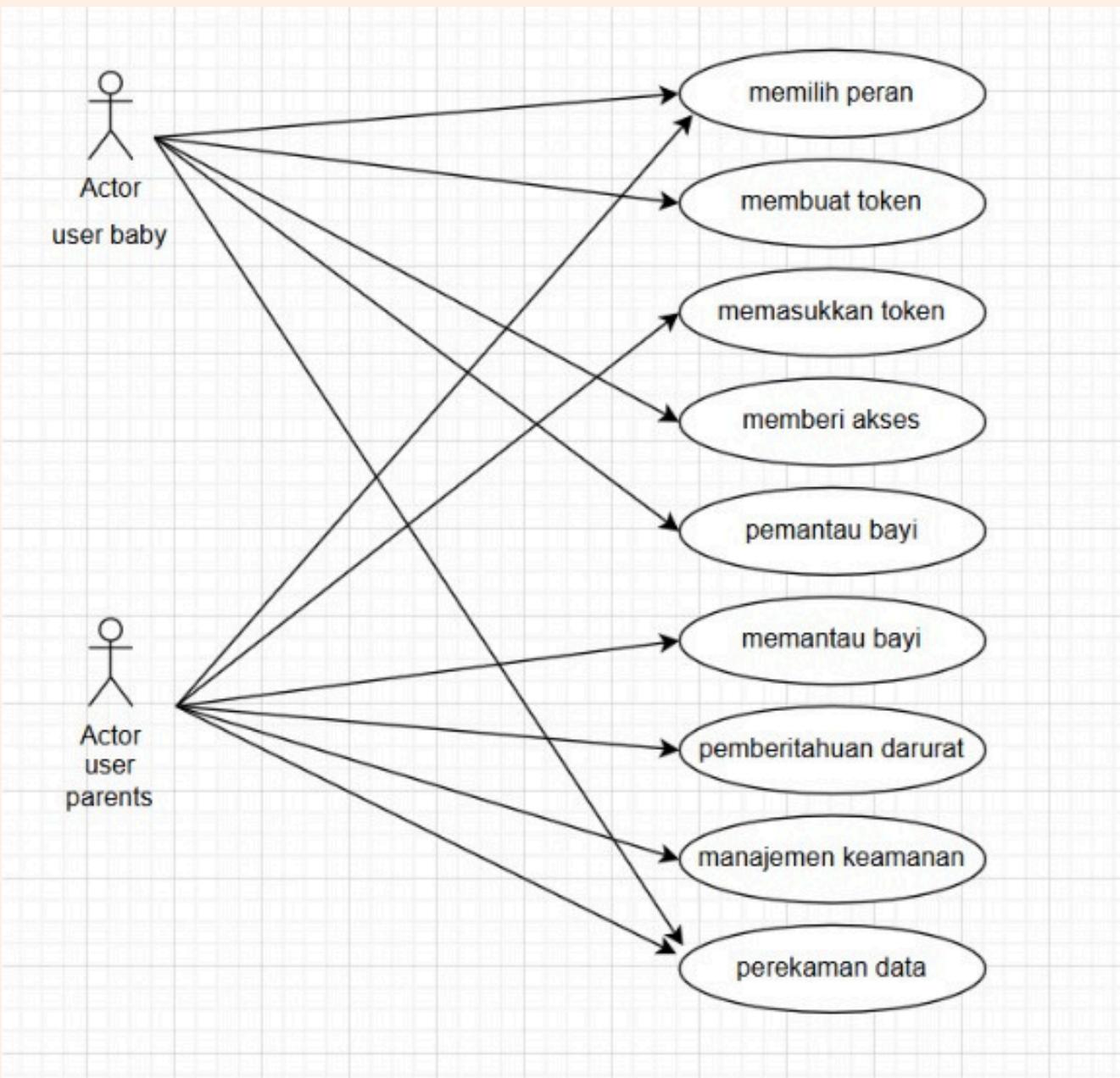
Week 14

Complete the documents collected and refine the application

Documentation Of Project Work Progress



Documentation Of Project Work Progress



Documentation Of Project Work Progress

A screenshot of the Visual Studio Code interface showing the code editor and file explorer for a Flutter project named "babymonitoring".

The code editor displays the file `baby.dart` with the following content:

```
// ignore_for_file: prefer_const_constructors, use_super_parameters, library_private_types_in_public_api
import 'package:flutter/material.dart';
import 'package:camera/camera.dart';
import 'dart:math';

void main() {
    String token = generateToken(); // Generate token saat aplikasi dimulai
    runApp(MaterialApp(
        home: BabyView(token: token), // Teruskan token ke BabyView
    )); // MaterialApp
}

String generateToken() {
    Random random = Random();
    String token = '';
    for (int i = 0; i < 6; i++) {
        token += random.nextInt(10).toString();
    }
    return token;
}

class BabyView extends StatefulWidget {
    final String token;

    const BabyView({Key? key, required this.token}) : super(key: key);

    @override
    _BabyViewState createState() => _BabyViewState();
}
```

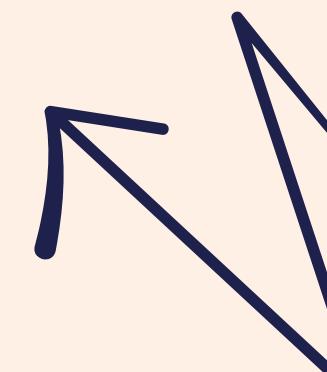
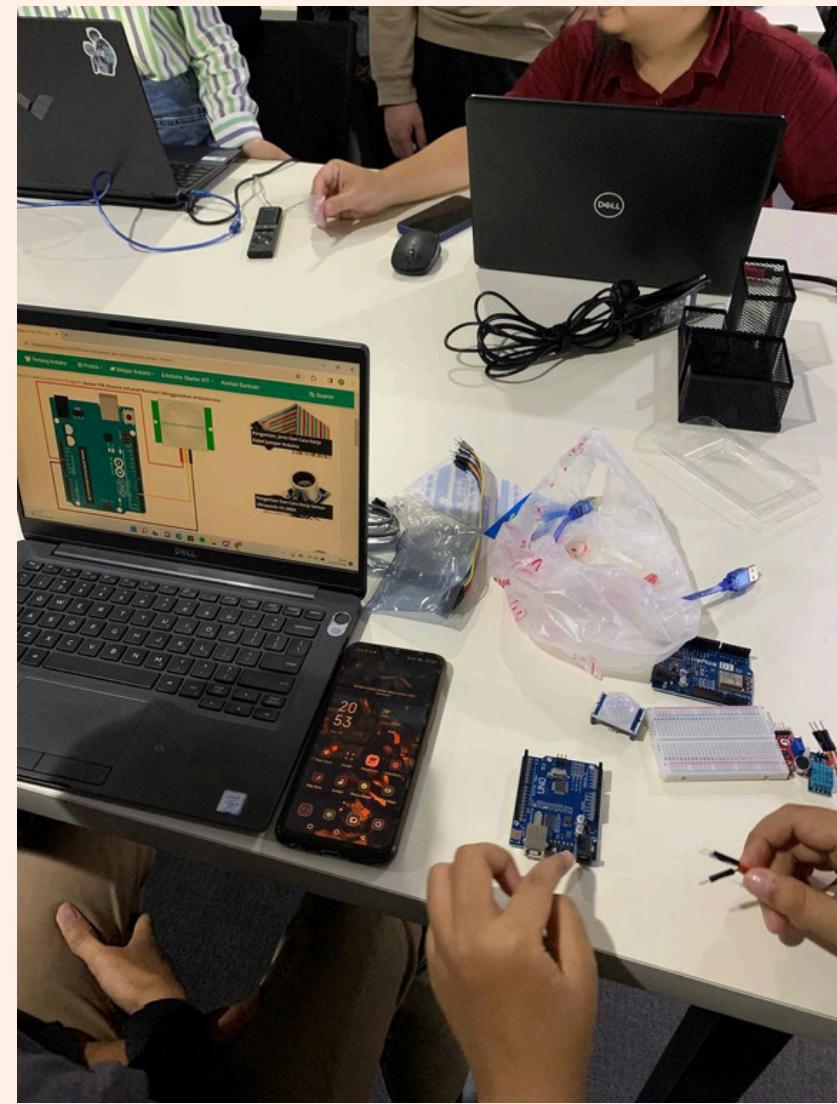
The file explorer shows the project structure:

- `build.gradle`
- `AndroidManifest.xml`
- `pubspec.yaml`
- `setting.dart`
- `launch.json`
- `parent.dart`
- `baby.dart` (selected)
- `main.dart`

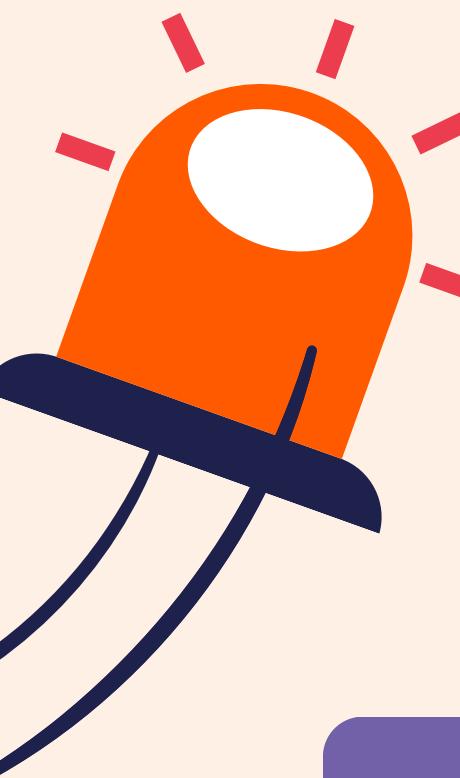
Below the code editor, the terminal window shows the command:

```
PS D:\Babymonitoring>
```

Documentation Of Project Work Progress



Task of each division



Rizki Purnama Saputra

Responsible for
programming mobile
applications with dart

Relvin Andika Manda P

Responsible for
programming IoT
systems using arduino

Salma Isra Nabiyya

Responsible for
creating project output
creativity design

Uci Aulia Putri

Responsible for
assembling required iot
component

Annisa Triwardani

Responsible for
creating application UI
Design



Problem & Solving

Problem

1. where to do pbl in campus
2. iot equipment purchase cost
3. difficult to understand API flutter

Solving

1. looking for an empty spot at techno
2. trying to understand API flutter



Thank you !!

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