DAFTAR LAMPIRAN

Lampiran – 1 *Listing* program *ESP32* menggunakan *Arduino IDE*

```
#include <Arduino.h>
#include <WiFi.h>
#include <FirebaseESP32.h>
#include <addons/TokenHelper.h>
#include <addons/RTDBHelper.h>
#include <TinyGPS++.h>
#include <HardwareSerial.h>
#include <OneWire.h>
#include <DallasTemperature.h>
#include <melody_player.h>
#include <melody_factory.h>

const char *ssid = "HUAWEI nova 5T";
const char *password = "leppangang1";

#define API_KEY "AIzaSyCtaOal6QAq1P2-iiuo0zmLUM-Gg7zMDi4"
#define DATABASE_URL "kucing1-72e99-default-rtdb.asia-southeast1.firebasedatabase.app/"

#define USER_EMAIL "esp32@test.com"
#define USER_PASSWORD "kucing"

#define FCM_SERVER_KEY "AAAAjvzAVEE:APA91bEWSEOGk-fOtfB2w7jU7CBt8cNL-9jc7wxURWKRNnGGVBFvwuQSNxR3gCINCOXzUTaxOFUAu_vtSnGX7-883FNxYNqTp0WuI9thThUmO0iYLlYRnm3qsSSBkla6nbEb832XZXTo"
#define FCM_TOPIC "esp32"

FirebaseData fbdo;
FirebaseData stream;
FirebaseAuth auth;
FirebaseConfig config;

unsigned long dataMillis = 0;

#define RXD2 16
#define TXD2 17
#define ONEWIREBUS 25
#define BUZZERPIN 26

struct Data
{
  double latitude;
  double longitude;
  double suhu;
  double radius;
};

// Data lokasi GPS
Data data;
// Data lokasi sebelumnya
Data prevData;
// Data lokasi pengaturan
Data dataPengaturan;

TinyGPSPlus GPS;

OneWire oneWire(ONEWIREBUS);
DallasTemperature sensors(&oneWire);

String notes[] = {"C4", "G3", "G3", "A3", "G3", "SILENCE", "B3", "C4"};
MelodyPlayer player(BUZZERPIN, 0, LOW);
Melody melody = MelodyFactory.load("Nice Melody", 175, notes, 8);

void initWifi();
```

```
void initFirebase();
void getLokasi();
void getSuhu();
void sendToFirebase();
void sendNotification();
void
streamPengaturanCallback(StreamD
ata data);
void streamTimeoutCallback(bool
timeout);
double haversine(double lat1, double
lon1,
                 double lat2, double lon2);

void setup()
{
  Serial.begin(9600);
  // init hardwareserial GPS
  Serial1.begin(9600, SERIAL_8N1,
RXD2, TXD2);

  initWifi();
  initFirebase();
}

void loop()
{
  while (Serial1.available() > 0)
    if (GPS.encode(Serial1.read()))
    {
      getSuhu();
      getLokasi();
      sendToFirebase();

      delay(5000);
    }

  if (millis() > 5000 &&
GPS.charsProcessed() < 10)
  {
    Serial.println(F("Tidak ada GPS
yang terdeteksi: Periksa kabel."));
    while (true)
      ;
  }
}

void initWifi()
{
  // connect to WiFi
  Serial.printf("Menghubungkan ke
%s ...", ssid);
  WiFi.mode(WIFI_STA);
  WiFi.begin(ssid, password);
  while (WiFi.status() !=
WL_CONNECTED)
  {
    delay(500);
    Serial.print(".");
  }
  Serial.println(" Terhubung");
  Serial.println("");
  Serial.println("WiFi connected.");
  Serial.println("IP address: ");
  Serial.println(WiFi.localIP());
}

void initFirebase()
{
  Serial.printf("Firebase Client
v%s\n\n",
FIREBASE_CLIENT_VERSION);

  config.api_key = API_KEY;
  config.database_url =
DATABASE_URL;
  auth.user.email = USER_EMAIL;
  auth.user.password =
USER_PASSWORD;

  Firebase.reconnectWiFi(true);

  config.token_status_callback =
tokenStatusCallback;

  Firebase.begin(&config, &auth);

  fbdo.fcm.begin(FCM_SERVER_KE
Y);
  fbdo.fcm.setTopic(FCM_TOPIC);
  fbdo.fcm.setPriority("high");
  fbdo.fcm.setTimeToLive(1000);
```

```
  if (!Firebase.beginStream(stream, "/pengaturan"))
    Serial.printf("sream begin error, %s\n\n", stream.errorReason().c_str());

  Firebase.setStreamCallback(stream, streamPengaturanCallback, streamTimeoutCallback);
}

void streamPengaturanCallback(StreamData streamData)
{
  FirebaseJson *json = streamData.to<FirebaseJson *>();

  size_t len = json->iteratorBegin();
  FirebaseJson::IteratorValue value;

  Serial.println("Load data dari firebase");

  for (size_t i = 0; i < len; i++)
  {
    value = json->valueAt(i);

    if (value.key.equals("latitude"))
    {
      dataPengaturan.latitude = value.value.toDouble();
      Serial.printf("Latitude Rumah: %f \n", dataPengaturan.latitude);

      if (data.latitude == 0.0)
        data.latitude = dataPengaturan.latitude;
    }
    else if (value.key.equals("longitude"))
    {
      dataPengaturan.longitude = value.value.toDouble();
      Serial.printf("longitude Rumah: %f \n", dataPengaturan.longitude);

      if (data.longitude == 0.0)
        data.longitude = dataPengaturan.longitude;
    }
    else if (value.key.equals("radius"))
    {
      dataPengaturan.radius = value.value.toDouble();
      Serial.printf("radius : %4.2f M \n", dataPengaturan.radius);
    }
  }
  Serial.println("-------------------------");

  json->iteratorEnd();
  json->clear();
}

void streamTimeoutCallback(bool timeout)
{
  if (timeout)
    Serial.println("stream timed out, resuming...\n");

  if (!stream.httpConnected())
    Serial.printf("error code: %d, reason: %s\n\n", stream.httpCode(), stream.errorReason().c_str());
}

void getSuhu()
{
  sensors.requestTemperatures();
  data.suhu = sensors.getTempCByIndex(0);
  Serial.printf("Suhu : %4.2f C \n", data.suhu);
}

void getLokasi()
{
```

```
  if (GPS.location.isValid())
  {
    data.latitude = GPS.location.lat();
    data.longitude =
GPS.location.lng();
  }

  Serial.printf("Latitude : %f \n",
data.latitude);
  Serial.printf("Longitude : %f \n",
data.longitude);

  if (dataPengaturan.latitude != 0.0 ||
dataPengaturan.longitude != 0.0)
  {
    double jarak =
haversine(data.latitude,
data.longitude,
dataPengaturan.latitude,
dataPengaturan.longitude);
    Serial.printf("Jarak : %4.2f M \n",
jarak);
    Serial.println("----------------------
-----------");

    if (jarak >
dataPengaturan.radius)
    {
      sendNotification();
      player.play(melody);
    }
  }
  else
    Serial.println("----------------------
-----------");
}

void sendToFirebase()
{
  if (millis() - dataMillis > 5000 &&
Firebase.ready())
  {
    dataMillis = millis();

    // Jika nilai sebelumnya berbeda,
maka data akan disimpan
    if (prevData.latitude !=
data.latitude || prevData.longitude
!= data.longitude || prevData.suhu
!= data.suhu)
    {
      FirebaseJson json;

      json.set("latitude", data.latitude);
      json.set("longitude",
data.longitude);
      json.set("suhu", data.suhu);
      json.set("waktu/.sv",
"timestamp");

      Serial.printf("Simpan data ke
firebase... %s\n",
Firebase.setJSON(fbdo, "/data",
json) ? "berhasil" :
fbdo.errorReason().c_str());
      Serial.println("----------------------
-----------");

      prevData.latitude =
data.latitude;
      prevData.longitude =
data.longitude;
      prevData.suhu = data.suhu;
    }
  }
}

void sendNotification()
{
  fbdo.fcm.setNotifyMessage("Inform
asi", "Kucing anda keluar dari
radius! ");
  Serial.println("Kirim notifikasi... ");
  Serial.printf("%s\n",
Firebase.sendTopic(fbdo) ? "ok" :
fbdo.errorReason().c_str());
  Serial.println("----------------------
---------");
}

double haversine(double lat1, double
lon1,
```

```
            double lat2, double lon2)
{
  double m_pi = 3.1415926536;

  double dLat = (lat2 - lat1) *
            m_pi / 180.0;
  double dLon = (lon2 - lon1) *
            m_pi / 180.0;

  lat1 = (lat1)*m_pi / 180.0;
  lat2 = (lat2)*m_pi / 180.0;

  double a = pow(sin(dLat / 2), 2) +
          pow(sin(dLon / 2), 2) *
             cos(lat1) * cos(lat2);
  double rad = 6371;
  double c = 2 * asin(sqrt(a));
  return (rad * c) * 1000; // ubah ke
meter
}
```

Lampiran – 2 *Listing program android*

(lokasi_controller.dart)

```
import 'dart:async';

import
'package:firebase_database/firebase_da
tabase.dart';
import 'package:get/get.dart';
import
'package:google_maps_flutter/google_m
aps_flutter.dart';
import
'package:iot_GPS_kucing/app/data/mod
els/lokasi_model.dart';
import
'package:iot_GPS_kucing/app/data/mod
els/pengaturan_model.dart';
import
'package:iot_GPS_kucing/app/themes/a
pp_colors.dart';

class LokasiController extends
GetxController {
  late
Completer<GoogleMapController>
gmapController;
  late FirebaseDatabase database;
  late DatabaseReference
refPengaturan;
  late DatabaseReference refLokasi;

  RxBool loading = true.obs;

  // Lokasi Alat
  Rx<LokasiModel> lokasi =
LokasiModel().obs;

  // Koordinat Rumah
  RxDouble latitude = 0.0.obs;
  RxDouble longitude = 0.0.obs;

  late Circle circle;
  late Marker marker;
  late Marker markerPengaturan;

  RxDouble radius = 0.0.obs;

  @override
  void onInit() async {
    super.onInit();

    gmapController = Completer();
    database =
FirebaseDatabase.instance;
```

```
    refPengaturan =
database.ref("pengaturan");
    refLokasi = database.ref("data");

    await initDataPengaturan();
    streamDataLokasi();

    loading.value = false;
  }

  void
onMapCreated(GoogleMapController
c) {
    if (!gmapController.isCompleted)
gmapController.complete(c);
  }

  Future initDataPengaturan() async {
    DatabaseEvent event = await
refPengaturan.once();

    Map<dynamic, dynamic> values =
        event.snapshot.value as
Map<dynamic, dynamic>;

    PengaturanModel _pengaturan =
PengaturanModel.fromMap(values);

    latitude.value = _pengaturan.latitude;
    longitude.value =
_pengaturan.longitude;

    radius.value = _pengaturan.radius;

    initCircleMarker();
  }

  void initCircleMarker() {
    circle = Circle(
      circleId: CircleId('rumah'),
      center: LatLng(latitude.value,
longitude.value),
      radius: radius.value,
      fillColor:
secondaryColor.withOpacity(.5),
      strokeColor: primaryColor,
      strokeWidth: 3,
    );

    marker = Marker(
      markerId: MarkerId('posisi'),
      position: LatLng(
        lokasi.value.latitude ?? 0.0,
        lokasi.value.longitude ?? 0.0,
      ),
      infoWindow: InfoWindow(
        title: 'Lokasi Kucing',
        snippet: '${latitude.value},
${longitude.value}',
      ),
    );

    markerPengaturan = Marker(
      markerId: MarkerId('rumah'),
      position: LatLng(latitude.value,
longitude.value),
      draggable: true,
      onDragEnd: changeTitikKoordinat,
    );
  }

  void streamDataLokasi() {
    Stream<DatabaseEvent> stream =
refLokasi.onValue;

    stream.listen((DatabaseEvent event) {
      if (event.snapshot.exists) {
        Map<dynamic, dynamic> values =
            event.snapshot.value as
Map<dynamic, dynamic>;

        LokasiModel _lokasi =
LokasiModel.fromMap(values);

        lokasi.update((val) {
          val!.latitude = _lokasi.latitude;
          val.longitude = _lokasi.longitude;
          val.suhu = _lokasi.suhu;
          val.waktu = _lokasi.waktu;
        });

        initCircleMarker();
      }
    });
  }

  void changeTitikKoordinat(LatLng?
val) {
    latitude.value = val!.latitude;
```

```
    longitude.value = val.longitude;

    refPengaturan.update({
      "latitude": latitude.value,
      "longitude": longitude.value,
    });

    initCircleMarker();
    changeCamera();

    Get.snackbar(
      "Informasi",
      "Titik Koordinat berhasil disimpan",
      backgroundColor: primaryColor,
    );
  }

  void changeRadius(double val) {
    radius.value =
double.parse(val.toStringAsFixed(0));

    refPengaturan.update({
      "radius": radius.value,
    });

    initCircleMarker();

    Get.snackbar(
      "Informasi",
      "Radius berhasil disimpan",
      backgroundColor: primaryColor,
    );
  }

  void changeCamera() async {
    final GoogleMapController c = await
gmapController.future;

    c.moveCamera(
      CameraUpdate.newCameraPosition
(
        CameraPosition(
          target: LatLng(latitude.value,
longitude.value),
          zoom: 18,
        ),
      ),
    );
  }
}
```

Lampiran – 3 *Listing program android (lokasi_model.dart)*

```
import 'package:intl/intl.dart';

class LokasiModel {
  late double? latitude;
  late double? longitude;
  late double? suhu;
  late String? waktu;

  LokasiModel({
    this.latitude,
    this.longitude,
    this.suhu,
    this.waktu,
  });

  LokasiModel.fromMap(Map<dynamic,
dynamic> map) {
    latitude =
map['latitude'].runtimeType == double
        ? map['latitude']
        : (map['latitude'] as
int).toDouble();
    longitude =
map['longitude'].runtimeType ==
double
        ? map['longitude']
        : (map['longitude'] as
int).toDouble();
    suhu = map['suhu'].runtimeType ==
double
        ? map['suhu']
        : (map['suhu'] as int).toDouble();

    waktu = DateFormat("dd-MM-yyyy
HH:mm:ss")
        .format(DateTime.fromMillisecond
sSinceEpoch(map['waktu']));
  }
}
```

Lampiran – 4 *Listing program android*

(pengaturan_model.dart)

```
class PengaturanModel {
  late double latitude;
  late double longitude;
  late double radius;

  PengaturanModel({
    required this.latitude,
    required this.longitude,
    required this.radius,
  });

  PengaturanModel.fromMap(Map<dyn
amic, dynamic> map) {
    latitude =
map['latitude'].runtimeType == double
        ? map['latitude']
        : (map['latitude'] as
int).toDouble();
    longitude =
map['longitude'].runtimeType ==
double
        ? map['longitude']
        : (map['longitude'] as
int).toDouble();
    radius = map['radius'].runtimeType
== double
        ? map['radius']
        : (map['radius'] as int).toDouble();
  }
}
```

lampiran – 5 *Listing program android*

(landing_binding.dart)

```
import
    'package:get/get.dart';
import
'package:iot_GPS_kucing/app/controlle
rs/lokasi_controller.dart';
```

```
import
'../controllers/landing_controller.dart';

class LandingBinding extends Bindings
{
  @override
  void dependencies() {
    Get.lazyPut<LandingController>(
      () => LandingController(),
    );
    Get.lazyPut<LokasiController>(
      () => LokasiController(),
    );
  }
}
```

Lampiran – 6 *Listing program android (firebase option.dart)*

```
import
'package:firebase_messaging/firebase_
messaging.dart';
import 'package:flutter/material.dart';
import 'package:get/get.dart';
import
'package:iot_GPS_kucing/app/themes/a
pp_colors.dart';

class LandingController extends
GetxController {
  late FirebaseMessaging
firebaseMessaging;
  var currentIndex = 0.obs;

  @override
  void onInit() async {
    super.onInit();

    firebaseMessaging =
FirebaseMessaging.instance;

    String? token = await
firebaseMessaging.getToken();

    print(token);

    firebaseMessaging.subscribeToTopic(
"esp32");

    FirebaseMessaging.onMessage.listen(
(event) {
      Get.snackbar(
        event.notification!.title ??
"Informasi",
        event.notification!.body ?? "Kucing
anda keluar dari radius",
        backgroundColor: dangerColor,
        icon: Icon(Icons.warning),
      );
    });
  }

  void changePage(int index) {
    currentIndex.value = index;
  }
}
```

Lampiran – 7 *Listing program android (landing view.dart)*

```
import 'package:flutter/material.dart';

import 'package:get/get.dart';
import
'package:iot_GPS_kucing/app/modules/l
okasi/views/lokasi_view.dart';
import
'package:iot_GPS_kucing/app/modules/
pengaturan/views/pengaturan_view.dart
';
import
'package:iot_GPS_kucing/app/modules/
profil/views/profil_view.dart';
import
'package:iot_GPS_kucing/app/themes/a
pp_colors.dart';

import
'../controllers/landing_controller.dart';

class LandingView extends
GetView<LandingController> {
  @override
  Widget build(BuildContext context) {
    return Obx(
      () => Scaffold(
        body: IndexedStack(
          index:
controller.currentIndex.value,
          children: [
            ProfilView(),
            LokasiView(),
            PengaturanView(),
          ],
        ),
        bottomNavigationBar:
BottomNavigationBar(
          items: const
<BottomNavigationBarItem>[
            BottomNavigationBarItem(
              icon: Icon(Icons.person),
              label: 'Profil',
            ),
            BottomNavigationBarItem(
              icon: Icon(Icons.location_pin),
              label: 'Lokasi',
            ),
            BottomNavigationBarItem(
              icon: Icon(Icons.settings),
              label: 'Pengaturan',
            ),
          ],
          currentIndex:
controller.currentIndex.value,
          backgroundColor: primaryColor,
          selectedItemColor: Colors.black,
          unselectedItemColor:
dangerColor,
          onTap: controller.changePage,
        ),
      ),
    );
  }
}
```

Lampiran – 8 *Listing program android (lokasi veiw.dart*

```
import 'package:flutter/material.dart';

import 'package:get/get.dart';
import
'package:google_maps_flutter/google_m
aps_flutter.dart';
import
'package:iot_GPS_kucing/app/controlle
rs/lokasi_controller.dart';
import
'package:iot_GPS_kucing/app/themes/a
pp_colors.dart';

class LokasiView extends
GetView<LokasiController> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Lokasi'),
        centerTitle: true,
      ),
      body: Obx(
        () => controller.loading.value
            ? Center(child:
CircularProgressIndicator())
            : Column(
                children: <Widget>[
                  Container(
                    margin: const
EdgeInsets.all(12),
                    width: double.infinity,
                    decoration: BoxDecoration(
                      color: secondaryColor,
                      shape:
BoxShape.rectangle,
                      boxShadow: [
                        BoxShadow(
                          color:
Colors.grey.withOpacity(0.5),
                          spreadRadius: 1,
                          offset: Offset(-5, 5), //
changes position of shadow
                        ),
                      ],
                    ),
                    child: Column(
                      crossAxisAlignment:
CrossAxisAlignment.start,
                      children: <Widget>[
                        ListTile(
                          dense: true,
                          leading:
Text("Latitude"),
                          title: Text(":
${controller.lokasi.value.latitude}"),
                          horizontalTitleGap: 30,
                        ),
                        ListTile(
                          dense: true,
                          leading:
Text("Longitude"),
                          title: Text(":
${controller.lokasi.value.longitude}"),
                          horizontalTitleGap: 24,
                        ),
                        ListTile(
                          dense: true,
                          leading: Text("Suhu"),
                          title: Text(":
${controller.lokasi.value.suhu} C"),
                          horizontalTitleGap: 35,
                        ),
                        ListTile(
                          dense: true,
                          leading: Text("Waktu"),
                          title: Text(":
${controller.lokasi.value.waktu}"),
                          horizontalTitleGap: 35,
                        ),
                      ],
                    ),
                  ),
                  // const SizedBox(height: 10),
                  Expanded(
                    child: Container(
                      padding: const
EdgeInsets.all(4),
                      margin: const
EdgeInsets.all(12),
                      decoration:
BoxDecoration(
                        color: secondaryColor,
                        shape:
BoxShape.rectangle,
                        boxShadow: [
                          BoxShadow(
```

```
                    color:
Colors.grey.withOpacity(0.5),
                    spreadRadius: 1,
                    offset: Offset(-5, 5), //
changes position of shadow
                  ),
                ],
              ),
              child: GoogleMap(
                mapType:
MapType.hybrid,
                initialCameraPosition:
CameraPosition(
                  target: LatLng(
                    controller.latitude.valu
e,
                    controller.longitude.va
lue,
                  ),
                  zoom: 18,
                ),
                circles:
{controller.circle},
                markers:
{controller.marker},
                onMapCreated:
controller.onMapCreated,
              ),
            ),
          ),
        ],
      ),
    ),
  );
 }
}
```

Lampiran – 9 *Listing program android (pengaturan view.dart)*

```
import 'package:flutter/material.dart';

import 'package:get/get.dart';
import
'package:google_maps_flutter/google_m
aps_flutter.dart';
import
'package:input_slider/input_slider.dart';
import
'package:iot_GPS_kucing/app/controlle
rs/lokasi_controller.dart';
import
'package:iot_GPS_kucing/app/themes/a
pp_colors.dart';

class PengaturanView extends
GetView<LokasiController> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Pengaturan'),
        centerTitle: true,
      ),
      body: Padding(
        padding: const EdgeInsets.all(8.0),
        child: ListTileTheme(
          iconColor: dangerColor,
          tileColor: secondaryColor,
          style: ListTileStyle.list,
          child: Obx(
            () => Column(
              children: <Widget>[
                ListTile(
                  leading:
Icon(Icons.location_searching),
                  title: Text("Titik Koordinat"),
                  subtitle: Text(
                      "Latitude :
${controller.latitude.value} \nLongitude
: ${controller.longitude.value}"),
                  trailing:
Icon(Icons.edit_location_alt),
                  isThreeLine: true,
                  onTap: () {
                    Get.bottomSheet(
                      Column(
                        children: [
                          Container(
                            padding: const
EdgeInsets.all(4),
                            margin: const
EdgeInsets.all(12),
                            width: double.infinity,
                            decoration:
BoxDecoration(
                              color:
secondaryColor,
                              shape:
BoxShape.rectangle,
                              boxShadow: [
                                BoxShadow(
                                  color:
Colors.grey.withOpacity(0.5),
                                  spreadRadius: 1,
                                  offset: Offset(
                                    -5, 5), // changes
position of shadow
                                ),
                              ],
                            ),
                            child: Center(
                              child: Text(
                                "Silahkan Geser
Marker Ke Lokasi Yang Diinginkan",
                                style:
TextStyle(fontSize: 18),
                              ),
                            ),
                          ),
                          Expanded(
                            child: Container(
                              padding: const
EdgeInsets.all(4),
                              margin: const
EdgeInsets.only(
                                left: 12,
                                right: 12,
                                bottom: 12,
                              ),
                              decoration:
BoxDecoration(
                                color:
secondaryColor,
                                shape:
BoxShape.rectangle,
                                boxShadow: [
                                  BoxShadow(
```

```
                        color:
Colors.grey.withOpacity(0.5),
                        spreadRadius: 1,
                        offset: Offset(
                          -5, 5), //
changes position of shadow
                        ),
                      ],
                    ),
                    child: GoogleMap(
                      mapType:
MapType.hybrid,
                      initialCameraPositi
on: CameraPosition(
                        target: LatLng(
                          controller.latitude
.value,
                          controller.longitu
de.value,
                        ),
                        zoom: 18,
                      ),
                      markers:
{controller.markerPengaturan},
                      onMapCreated:
controller.onMapCreated,
                    ),
                  ),
                ),
              ],
            ),
            enableDrag: false,
          );
        },
      ),
      SizedBox(height: 8),
      ListTile(
        leading: Icon(Icons.radar),
        title: Text("Radius"),
        subtitle:
Text("${controller.radius.value}
Meter"),
        trailing: Icon(
          Icons.edit_location_alt,
        ),
        onTap: () {
          Get.bottomSheet(
            Column(
              children: [
                Container(
                  padding: const
EdgeInsets.all(4),
                  margin: const
EdgeInsets.all(12),
                  width: double.infinity,
                  decoration:
BoxDecoration(
                    color:
secondaryColor,
                    shape:
BoxShape.rectangle,
                    boxShadow: [
                      BoxShadow(
                        color:
Colors.grey.withOpacity(0.5),
                        spreadRadius: 1,
                        offset: Offset(
                          -5, 5), // changes
position of shadow
                      ),
                    ],
                  ),
                  child: Center(
                    child: Text(
                      "Silahkan Geser
Radius Yang Diinginkan",
                      style:
TextStyle(fontSize: 18),
                    ),
                  ),
                ),
                Container(
                  padding: const
EdgeInsets.all(4),
                  margin: const
EdgeInsets.only(
                    left: 12,
                    right: 12,
                    bottom: 12,
                  ),
                  decoration:
BoxDecoration(
                    color:
secondaryColor,
                    shape:
BoxShape.rectangle,
                    boxShadow: [
                      BoxShadow(
                        color:
Colors.grey.withOpacity(0.5),
```

```
                        spreadRadius: 1,
                        offset: Offset(
                            -5, 5), // changes
position of shadow
                      ),
                    ],
                  ),
                  child: InputSlider(
                    onChangeEnd:
controller.changeRadius,
                    defaultValue:
controller.radius.value,
                    min: 0.0,
                    max: 1000.0,
                    decimalPlaces: 0,
                    activeSliderColor:
dangerColor,
                    onChange: (double)
{},
                  ),
                ),
              ],
            ),
          );
        },
      ),
    ],
  ),
 ),
 ),
 ),
 );
 }
}
```

Lampiran – 10 *Listing program android (profil view.dart*

```
import 'package:flutter/material.dart';

import
'package:iot_GPS_kucing/app/themes/a
pp_colors.dart';

class ProfilView extends
StatelessWidget {
  final String judul = 'IOT GPS Kucing';
  final String nama = 'Ainun Mayada';
  final String nim = '217280078';
  final String pembimbing1 = "Ade
Hastuti, ST., S. Kom., MT";
  final String pembimbing2 = "Ahmad
Selao, S.Tp., M.Sc";
  final String penguji1 = "Ir. Untung
Suwardoyo, S.Kom., MT";
  final String penguji2 = "Ferdinsyah
Saing, S.Kom., M.Kom";

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('IOT GPS Kucing'),
        centerTitle: true,
      ),
      body: Column(
        children: <Widget>[
          Container(
            padding: const
EdgeInsets.all(12),
            margin: const
EdgeInsets.all(12),
            decoration: BoxDecoration(
              color: secondaryColor,
              shape: BoxShape.rectangle,
              boxShadow: [
                BoxShadow(
                  color:
Colors.grey.withOpacity(0.5),
                  spreadRadius: 1,
                  offset: Offset(-5, 5), //
changes position of shadow
                ),
              ],
            ),
            child: Column(
              children: <Widget>[
                const SizedBox(height: 5),
                Center(
                  child: Text(
                    'Informasi',
                    textAlign:
TextAlign.center,
                    style: TextStyle(
                      fontSize: 18,
                      fontWeight:
FontWeight.bold,
                    ),
                  ),
                ),
                const Divider(
                  thickness: 2,
                  color: dangerColor,
                ),
                const SizedBox(height: 10),
                Center(
                  child: Text(
                    judul,
                    textAlign:
TextAlign.center,
                    style: TextStyle(
                      fontSize: 18,
                      fontWeight:
FontWeight.bold,
                    ),
                  ),
                ),
                const SizedBox(height: 15),
                Center(
                  child: Text(
                    '$nama \n$nim',
                    style: TextStyle(
                      fontSize: 20,
                      fontWeight:
FontWeight.bold,
                    ),
                    textAlign:
TextAlign.center,
                  ),
                ),
                // const Divider(thickness: 1),
                const SizedBox(height: 15),
                Column(
                  crossAxisAlignment:
CrossAxisAlignment.start,
                  children: <Widget>[
```

```
                    ..._dosenInfo("Pembimbin
g", 1, pembimbing1),
                    ..._dosenInfo("Pembimbin
g", 2, pembimbing2),
                    ..._dosenInfo("Penguji", 1,
penguji1),
                    ..._dosenInfo("Penguji", 2,
penguji2),
                  ],
                ),
              ],
            ),
          ),
        ],
      ));
  }
}

List<Widget> _dosenInfo(String jenis,
int angka, String nama) {
  return [
    ListTile(
      contentPadding: const
EdgeInsets.all(0),
      leading: Text("$jenis $angka"),
      title: Transform.translate(
        offset: Offset(0, -5),
        child: Text(": $nama"),
      ),
      horizontalTitleGap: (jenis ==
'Pembimbing' ? 29.0 : 55.0) -
          (angka + (jenis == 'Penguji' &&
angka == 2 ? 2 : 0)),
    ),
    Transform.translate(
      offset: Offset(0, -15),
      child: const Divider(
        height: 0,
        thickness: 0,
        color: warningColor,
      ),
    )
  ];
}
```

Lampiran – 11 *Listing program android (app pages.dart)*

```
import 'package:get/get.dart';

import
'../modules/landing/bindings/landing_b
inding.dart';
import
'../modules/landing/views/landing_view
.dart';

part 'app_routes.dart';

class AppPages {
 AppPages._();

 static const INITIAL = Routes.LANDING;

 static final routes = [
  GetPage(
   name: _Paths.LANDING,
   page: () => LandingView(),
   binding: LandingBinding(),
  ),
 ];
}
```

Lampiran – 12 *Listing program android (app rautes.dart)*

```
part of 'app_pages.dart';

// DO NOT EDIT. This is code
generated via
package:get_cli/get_cli.dart

abstract class Routes {
 Routes._();
 static const LANDING =
_Paths.LANDING;
}

abstract class _Paths {
 _Paths._();
 static const LANDING = '/landing';
```

*}**Lampiran – 13** Listing program android (firebase option.dart)*

```
/ File generated by FlutterFire CLI.

// ignore_for_file: lines_longer_than_80_chars

import 'package:firebase_core/firebase_core.dart' show FirebaseOptions;

import 'package:flutter/foundation.dart'

    show defaultTargetPlatform, kIsWeb, TargetPlatform;


/// Default [FirebaseOptions] for use with your Firebase apps.

///

/// Example:

/// ```dart

/// import 'firebase_options.dart';

/// // ...

/// await Firebase.initializeApp(

///   options: DefaultFirebaseOptions.currentPlatform,

/// );

/// ```

class DefaultFirebaseOptions {

  static FirebaseOptions get currentPlatform {

    if (kIsWeb) {

      throw UnsupportedError(

        'DefaultFirebaseOptions have not been configured for web - '

        'you can reconfigure this by running the FlutterFire CLI again.',

      );

    }

    // ignore: missing_enum_constant_in_switch

    switch (defaultTargetPlatform) {

      case TargetPlatform.android:

        return android;

      case TargetPlatform.iOS:

        throw UnsupportedError(

          'DefaultFirebaseOptions have not been configured for ios - '

          'you can reconfigure this by running the FlutterFire CLI again.',

        );

      case TargetPlatform.macOS:

        throw UnsupportedError(

          'DefaultFirebaseOptions have not been configured for macos - '

          'you can reconfigure this by running the FlutterFire CLI again.',

        );

    }


    throw UnsupportedError(

      'DefaultFirebaseOptions are not supported for this platform.',

    );

  }
```

```
  static const FirebaseOptions android =
FirebaseOptions(

    apiKey:
'AIzaSyDHWVTcj9byOqzwCdGq2crTdd
YKbt0GV78',

    appId:
'1:614125818945:android:923c83eb120
10e67bea2c0',

    messagingSenderId: '614125818945',

    projectId: 'kucing1-72e99',

    databaseURL:

      'https://kucing1-72e99-default-
rtdb.asia-
southeast1.firebasedatabase.app',

    storageBucket: 'kucing1-
72e99.appspot.com',

  );
```

Lampiran – 14 *Listing program android (main.dart)*

```
import 'package:flutter/material.dart';
import
'package:firebase_core/firebase_core.da
rt';
import 'firebase_options.dart';

import 'package:get/get.dart';

import 'app/routes/app_pages.dart';
import 'app/themes/app_theme.dart';

void main() async {
  WidgetsFlutterBinding.ensureInitialize
d();
  await Firebase.initializeApp(
    options:
DefaultFirebaseOptions.currentPlatfor
m,
  );

  runApp(
    GetMaterialApp(
      title: "IOT GPS Kucing",
      theme: AppTheme.basic,
      initialRoute: AppPages.INITIAL,
      getPages: AppPages.routes,
    ),
  );
```