LAPORAN GUIDED & UNGUIDED
PEMROGRAMAN PERANGKAT BERGERAK

MODUL IX

API PERANGKAT KERAS

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PROGRAM STUDI S1 SOFTWARE ENGINEERING

FAKULTAS INFORMATIKA

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TUGAS PENDAHULUAN

A. SOAL NOMOR 1

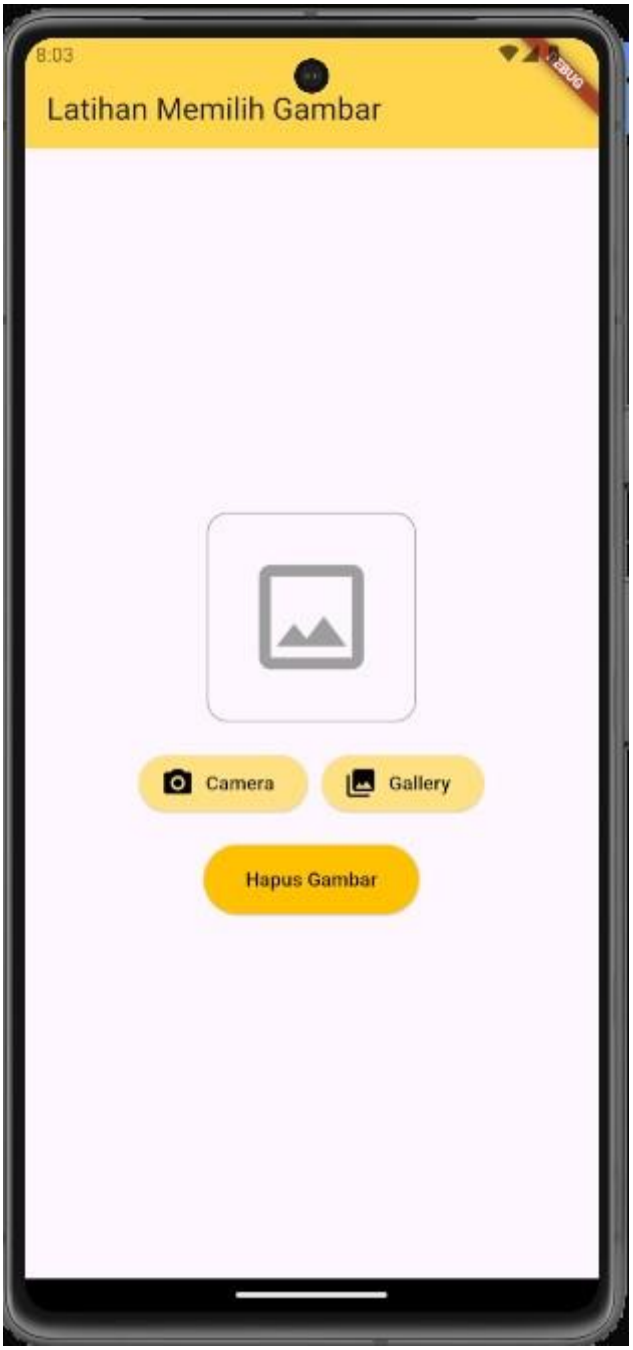
a) Buatlah satu project baru, yang mana di dalamnya memuat container berisi Icons.image_outlined, button camera, button gallery dan button hapus gambar. Button tidak harus berfungsi.

Contoh tampilan

- **Source code**

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

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: ImageSelectionScreen(),
    );
  }
}

class ImageSelectionScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Latihan Memilih Gambar'),
        backgroundColor: Colors.amber[300],
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            // Container for the image icon
            Container(
              width: 150,
              height: 150,
              decoration: BoxDecoration(
                border: Border.all(color: Colors.grey),
                borderRadius: BorderRadius.circular(15),
              ),
              child: Icon(
                Icons.image_outlined,
                size: 100,
                color: Colors.grey,
              ),
            ),
            SizedBox(height: 20),
            // Row for camera and gallery buttons
            Row(
              mainAxisAlignment: MainAxisAlignment.center,
              children: [
                ElevatedButton.icon(
                  onPressed: () {},
                  icon: Icon(Icons.camera_alt),
                  label: Text('Camera'),
                  style: ElevatedButton.styleFrom(
                    backgroundColor: Colors.amber[200],
                    foregroundColor: Colors.black,
                  ),
                ),
                SizedBox(width: 10),
                ElevatedButton.icon(
                  onPressed: () {},
                  icon: Icon(Icons.photo_library),
                  label: Text('Gallery'),
                  style: ElevatedButton.styleFrom(
                    backgroundColor: Colors.amber[200],
                    foregroundColor: Colors.black,
                  ),
                ),
              ],
            ),
            SizedBox(height: 20),
            // Button to delete the image
            ElevatedButton(
              onPressed: () {},
              child: Text('Hapus Gambar'),
              style: ElevatedButton.styleFrom(
                backgroundColor: Colors.amber,
                foregroundColor: Colors.black,
                padding: EdgeInsets.symmetric(horizontal: 30, vertical:
15),
              ),
            ),
          ],
        ),
      ),
    );
  }
}
```

- **Screenshoot Output**



Deskripsi Program

Kode di atas membuat aplikasi Flutter sederhana dengan antarmuka untuk latihan memilih gambar. Terdapat tampilan utama berupa AppBar dengan judul "Latihan Memilih Gambar." Di dalam Scaffold, komponen utama adalah Column yang menampilkan ikon gambar dalam Container, diikuti oleh dua tombol untuk "Camera" dan "Gallery," serta satu tombol "Hapus Gambar." Tombol-tombol ini diatur dalam Row dan diberi warna latar kuning muda dengan tulisan hitam agar serasi. Semua tombol saat ini tidak memiliki fungsi dan hanya untuk tampilan antarmuka.

B. UNGUIDED

- Code Program :
  a. Main.dart.

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

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Latihan Memilih Gambar',
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: ImagePickerPage(),
    );
  }
}

class ImagePickerPage extends StatefulWidget {
  @override
  _ImagePickerPageState createState() => _ImagePickerPageState();
}

class _ImagePickerPageState extends State<ImagePickerPage> {
  File? _imageFile;
  final ImagePicker _picker = ImagePicker();

  Future<void> _pickImageFromGallery() async {
    final pickedFile = await _picker.pickImage(source:
ImageSource.gallery);
    if (pickedFile != null) {
      setState(() {
        _imageFile = File(pickedFile.path);
      });
    }
  }

  Future<void> _pickImageFromCamera() async {
    final pickedFile = await _picker.pickImage(source: ImageSource.camera);
    if (pickedFile != null) {
      setState(() {
        _imageFile = File(pickedFile.path);
      });
    }
  }

  void _clearImage() {
    setState(() {
      _imageFile = null;
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Latihan Memilih Gambar'),
        backgroundColor: Colors.blue,
      ),
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.center,
          children: [
            SizedBox(height: 30),
            Container(
              height: 350,
              width: 350,
              decoration: BoxDecoration(
                border: Border.all(color: Colors.grey),
                borderRadius: BorderRadius.circular(8),
              ),
              child: _imageFile != null
                  ? Image.file(_imageFile!, fit: BoxFit.cover)
                  : Icon(
                      Icons.image_outlined,
                      size: 250,
                      color: Colors.grey,
                    ),
            ),
            SizedBox(height: 32),
            Row(
              mainAxisAlignment: MainAxisAlignment.spaceEvenly,
              children: [
                ElevatedButton.icon(
                  onPressed: _pickImageFromCamera,
                  icon: Icon(Icons.camera),
                  label: Text('Camera'),
                  style: ElevatedButton.styleFrom(
                    backgroundColor: Colors.blue,
                  ),
                ),
                ElevatedButton.icon(
                  onPressed: _pickImageFromGallery,
                  icon: Icon(Icons.photo),
                  label: Text('Gallery'),
                  style: ElevatedButton.styleFrom(
                    backgroundColor: Colors.blue,
                  ),
                ),
              ],
            ),
            SizedBox(height: 16),
            ElevatedButton(
              onPressed: _clearImage,
              child: Text('Hapus Gambar'),
              style: ElevatedButton.styleFrom(
                backgroundColor: Colors.blue,
                minimumSize: Size(double.infinity, 40),
              ),
            ),
          ],
        ),
      ),
    );
  }
}
```

b. Build.gradle (android)

```
allprojects {
    repositories {
        google()
        mavenCentral()
    }
}

rootProject.buildDir = "../build"
subprojects {
    project.buildDir =
}${rootProject.buildDir}/${project.name}"
subprojects {
    project.evaluationDependsOn(":app")
}

tasks.register("clean", Delete) {
    delete rootProject.buildDir
}
```

c. Build.gradle (app)

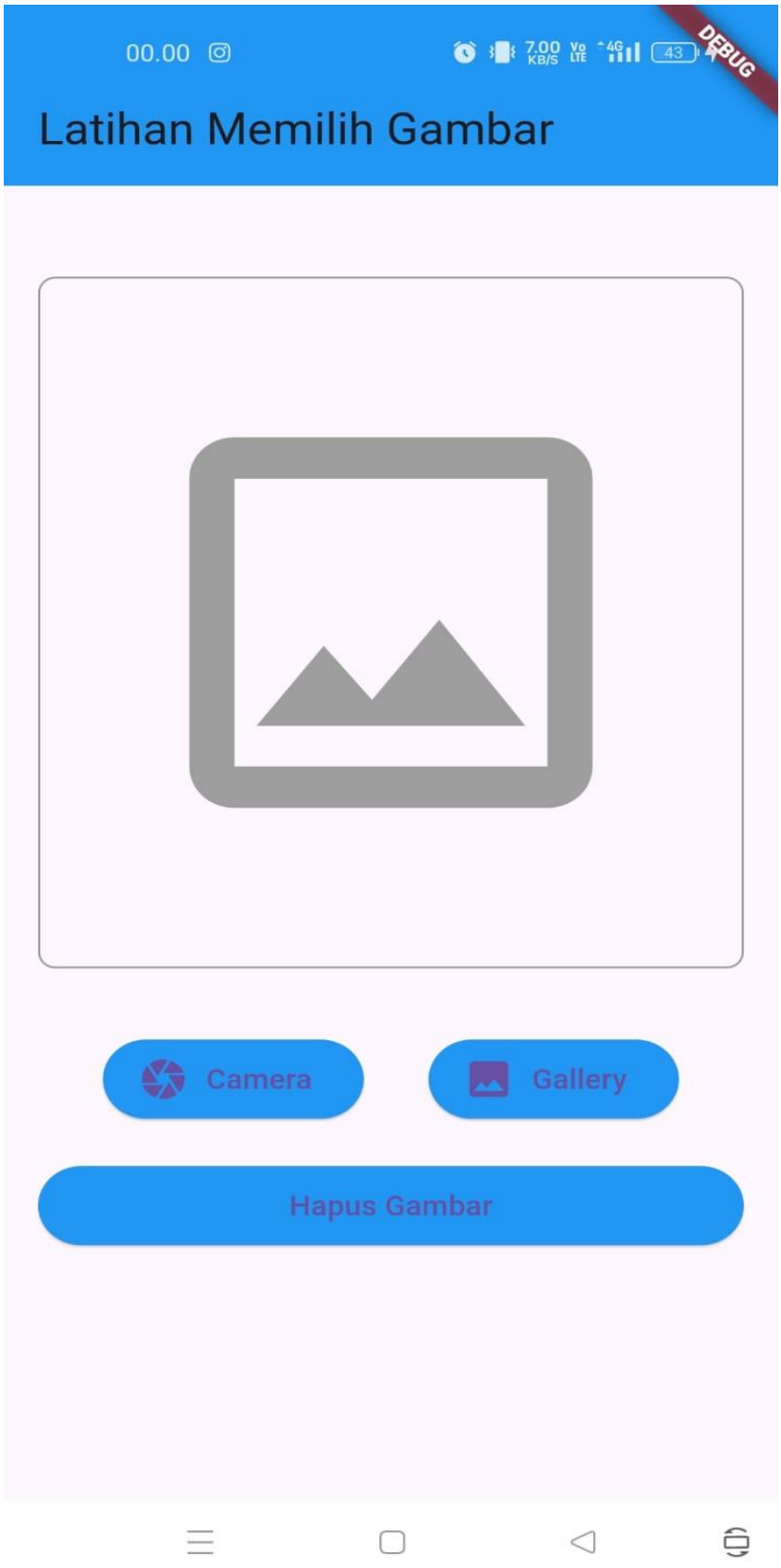
```
plugins {
    id "com.android.application"
    id "kotlin-android"
    // The Flutter Gradle Plugin must be applied after the Android and Kotlin Gradle plugins.
    id "dev.flutter.flutter-gradle-plugin"
}

android {
    namespace = "com.example.tugas9"
    compileSdk = flutter.compileSdkVersion
    ndkVersion = flutter.ndkVersion

    compileOptions {
        sourceCompatibility = JavaVersion.VERSION_1_8
        targetCompatibility = JavaVersion.VERSION_1_8
    }

    kotlinOptions {
        jvmTarget = JavaVersion.VERSION_1_8
    }

    defaultConfig {
        // TODO: Specify your own unique Application ID
(https://developer.android.com/studio/build/application-id.html).
        applicationId = "com.example.tugas9"
        // You can update the following values to match your application needs.
        // For more information, see: https://flutter.dev/to/review-gradle-config.
        minSdkVersion 21
        targetSdk = flutter.targetSdkVersion
        versionCode = flutter.versionCode
        versionName = flutter.versionName
    }

    buildTypes {
        release {
            // TODO: Add your own signing config for the release build.
            // Signing with the debug keys for now, so flutter run --release works.
            signingConfig = signingConfigs.debug
        }
    }
}

flutter {
    source = "../.."
}
```

d. Pubspec.yaml

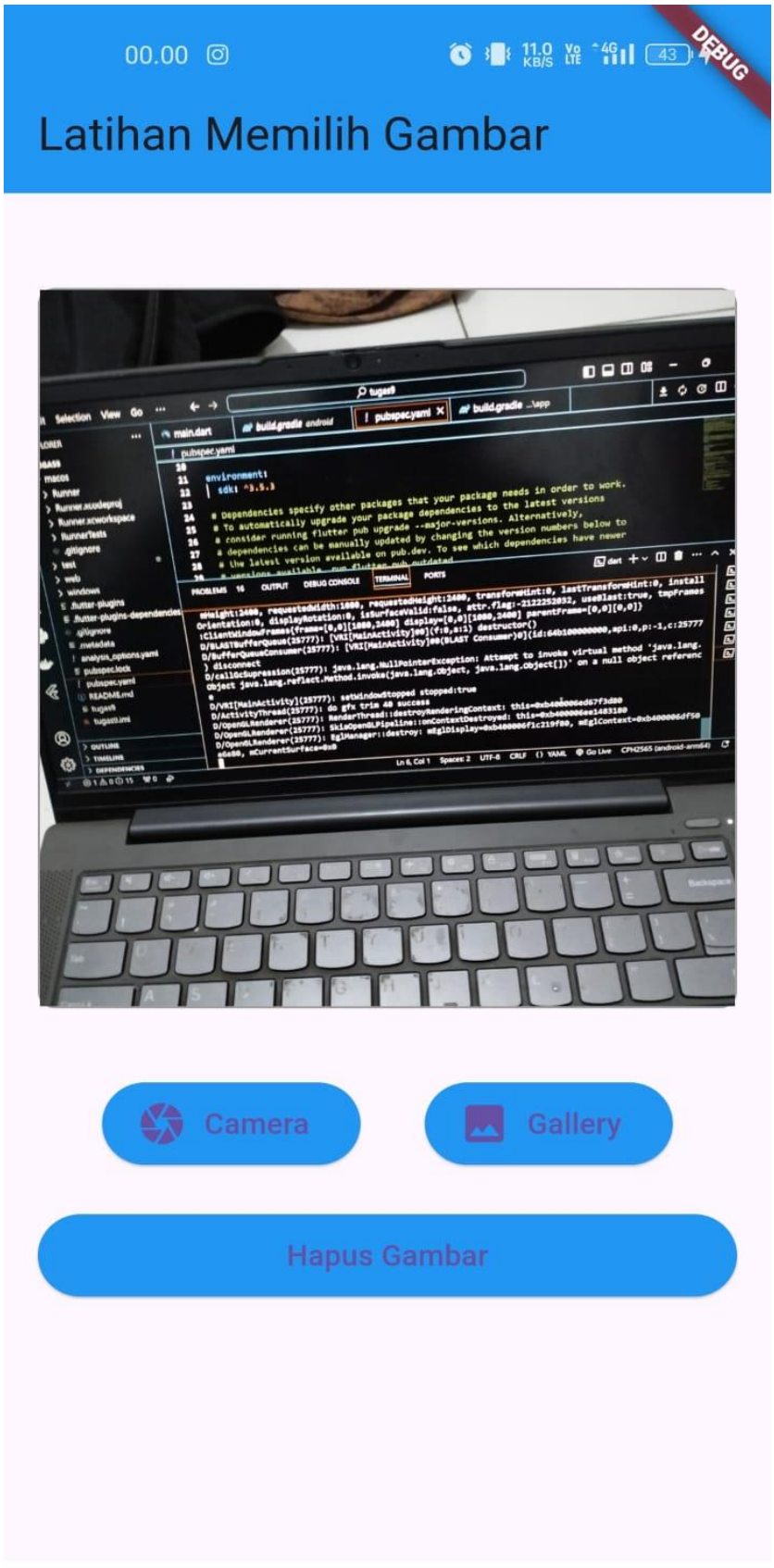
```yaml
name: tugas9
description: "A new Flutter project."
# The following line prevents the package from being accidentally published to
# pub.dev using flutter pub publish. This is preferred for private packages.
publish_to: 'none' # Remove this line if you wish to publish to pub.dev

# The following defines the version and build number for your application.
# A version number is three numbers separated by dots, like 1.2.43
# followed by an optional build number separated by a +.
# Both the version and the builder number may be overridden in flutter
# build by specifying --build-name and --build-number, respectively.
# In Android, build-name is used as versionName while build-number used as versionCode.
# Read more about Android versioning at https://developer.android.com/studio/publish/versioning
# In iOS, build-name is used as CFBundleShortVersionString while build-number is used as
CFBundleVersion.
# Read more about iOS versioning at
#
https://developer.apple.com/library/archive/documentation/General/Reference/InfoPlistKeyReference/Artic
les/CoreFoundationKeys.html
# In Windows, build-name is used as the major, minor, and patch parts
# of the product and file versions while build-number is used as the build suffix.
version: 1.0.0+1

environment:
  sdk: ^3.5.3

# Dependencies specify other packages that your package needs in order to work.
# To automatically upgrade your package dependencies to the latest versions
# consider running flutter pub upgrade --major-versions. Alternatively,
# dependencies can be manually updated by changing the version numbers below to
# the latest version available on pub.dev. To see which dependencies have newer
# versions available, run flutter pub outdated.
dependencies:
  flutter:
    sdk: flutter


  # The following adds the Cupertino Icons font to your application.
  # Use with the CupertinoIcons class for iOS style icons.
  cupertino_icons: ^1.0.8
  image_picker: ^1.1.2

dev_dependencies:
  flutter_test:
    sdk: flutter

  # The "flutter_lints" package below contains a set of recommended lints to
  # encourage good coding practices. The lint set provided by the package is
  # activated in the analysis_options.yaml file located at the root of your
  # package. See that file for information about deactivating specific lint
  # rules and activating additional ones.
  flutter_lints: ^4.0.0

# For information on the generic Dart part of this file, see the
# following page: https://dart.dev/tools/pub/pubspec

# The following section is specific to Flutter packages.
flutter:

  # The following line ensures that the Material Icons font is
  # included with your application, so that you can use the icons in
  # the material Icons class.
  uses-material-design: true

  # To add assets to your application, add an assets section, like this:
  # assets:
  #   - images/a_dot_burr.jpeg
  #   - images/a_dot_ham.jpeg

  # An image asset can refer to one or more resolution-specific "variants", see
  # https://flutter.dev/to/resolution-aware-images

  # For details regarding adding assets from package dependencies, see
  # https://flutter.dev/to/asset-from-package

  # To add custom fonts to your application, add a fonts section here,
  # in this "flutter" section. Each entry in this list should have a
  # "family" key with the font family name, and a "fonts" key with a
  # list giving the asset and other descriptors for the font. For
  # example:
  # fonts:
  #   - family: Schyler
  #     fonts:
  #       - asset: fonts/Schyler-Regular.ttf
  #       - asset: fonts/Schyler-Italic.ttf
  #         style: italic
  #   - family: Trajan Pro
  #     fonts:
  #       - asset: fonts/TrajanPro.ttf
  #       - asset: fonts/TrajanPro_Bold.ttf
  #         weight: 700
  #
  # For details regarding fonts from package dependencies,
  # see https://flutter.dev/to/font-from-package
```

e. Output Program :

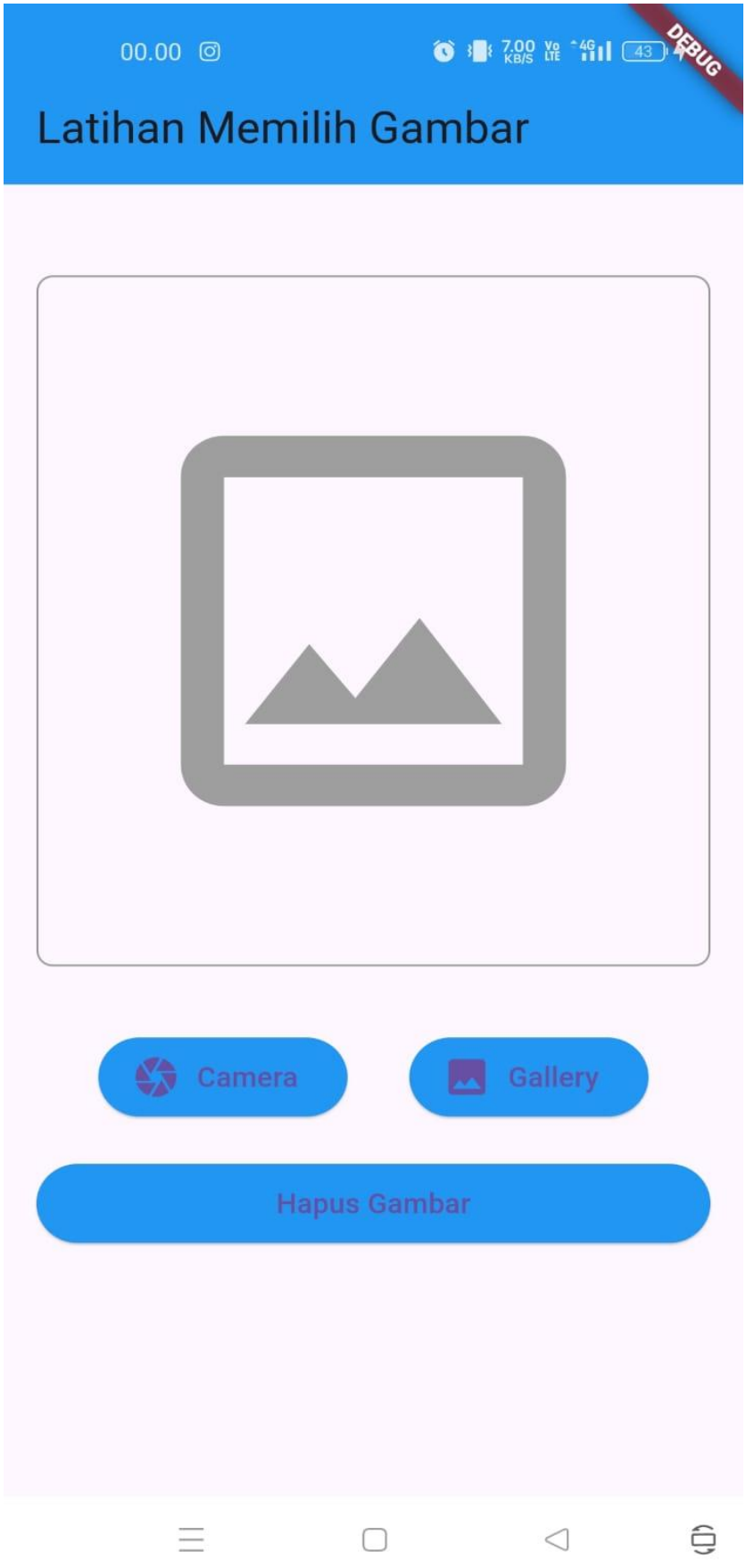
1. Tampilan Utama



2. Photo


00.00
DEBUG
Latihan Memilih Gambar
Camera
Gallery
Hapus Gambar

3. Hapus Gambar



C. Deskripsi Program

Program ini merupakan aplikasi berbasis Flutter untuk latihan memilih gambar dengan tiga fitur utama. Pengguna dapat mengambil gambar menggunakan kamera, memilih gambar dari galeri, atau menghapus gambar yang telah dipilih. Gambar yang dipilih akan ditampilkan di area tampilan utama di tengah aplikasi. Antarmuka sederhana ini mempermudah pengguna dalam melakukan interaksi dengan fitur yang disediakan.