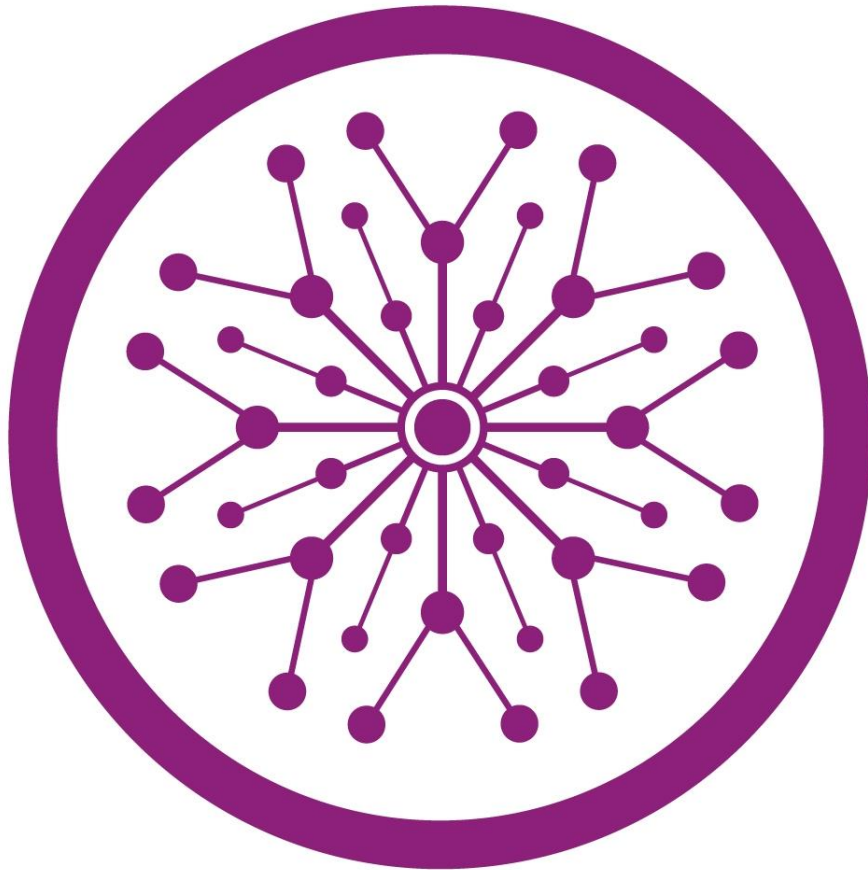# Assignment 1

Mobile Application Development (Theory)

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Section: SE‑6B

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DEPARTMENT OF SOFTWARE ENGINEERING
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GitHub Repository for Assignment 1

Question 1
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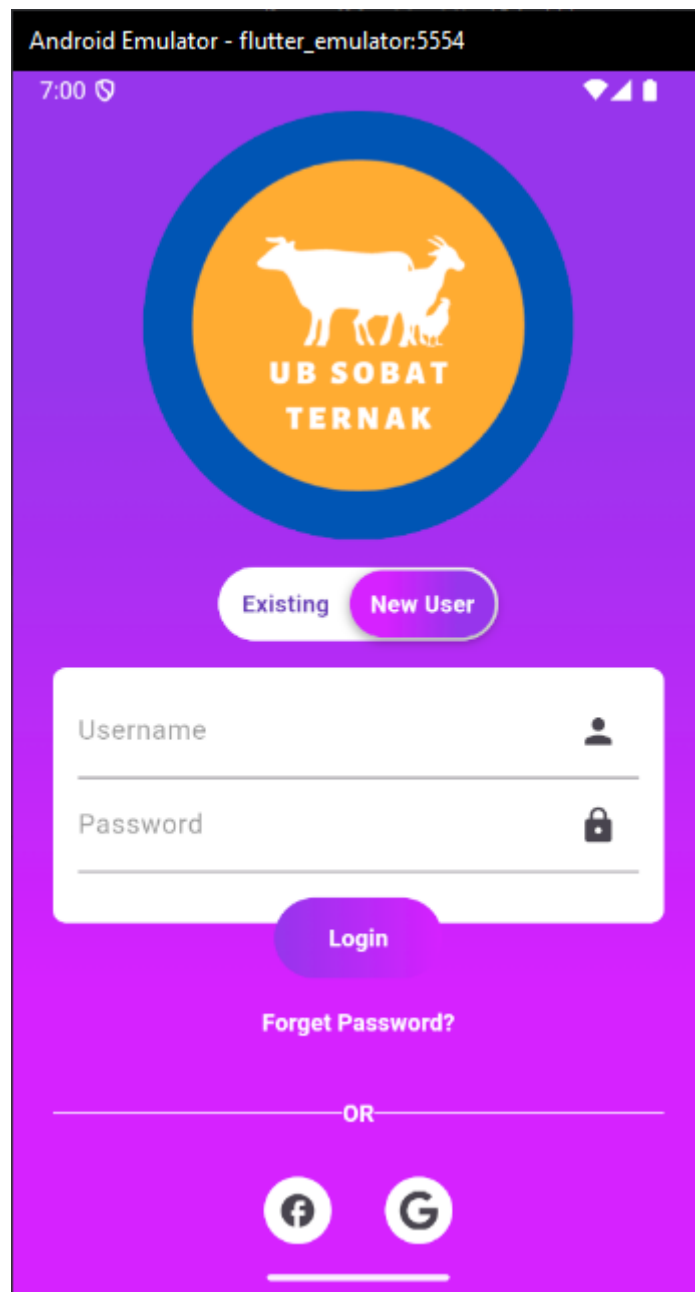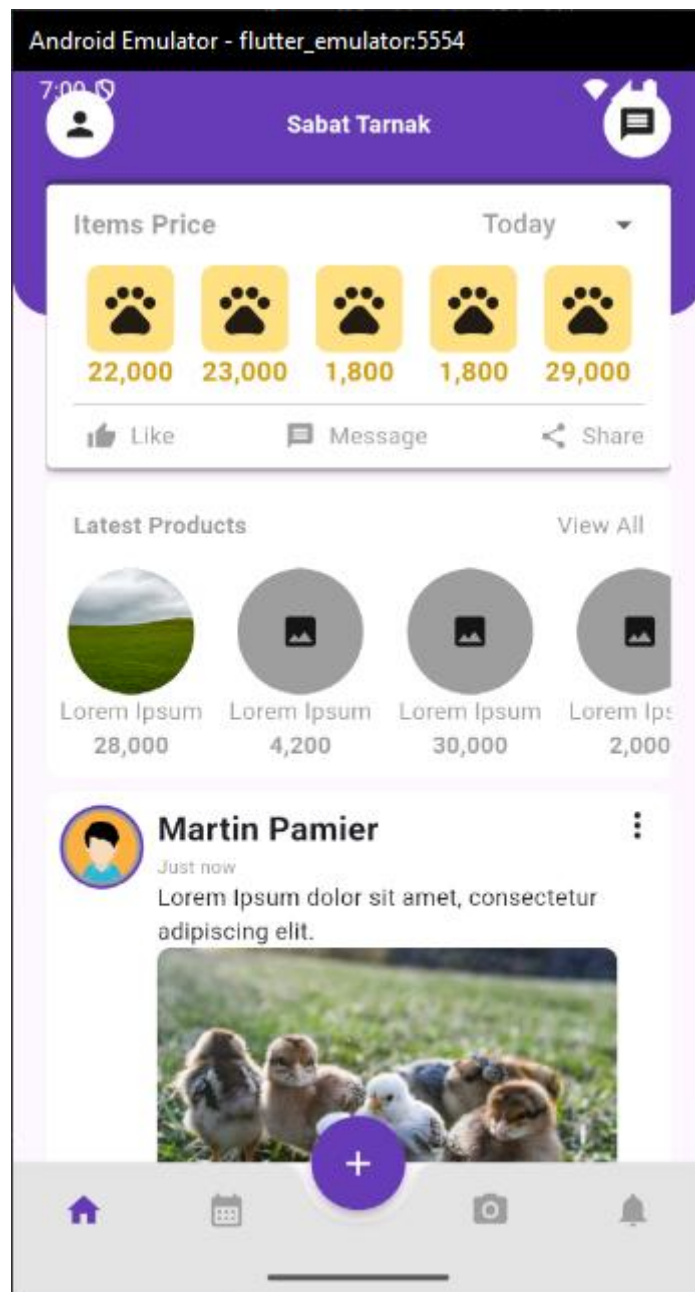
Code

```
// main.dart
import 'package:assignment_1_q_1/pages/login_page.dart';
import 'package:flutter/material.dart';

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

class MyApp extends StatelessWidget {
  const MyApp({super.key});
```

```dart
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: "Assignment 1 - Question 1",
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: const LoginPage(),
    );
  }
}

// main_page.dart
import 'package:flutter/material.dart';
import
'package:animated_bottom_navigation_bar/animated_bottom_navigation_bar.dart';
import 'package:assignment_1_q_1/pages/placeholder_page.dart';

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key});

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
  final _pageController = PageController(initialPage: 0);
  int pageIndex = 0;

  @override
  void dispose() {
    _pageController.dispose();

    super.dispose();
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: PageView(
        physics: const NeverScrollableScrollPhysics(),
        controller: _pageController,
        children: const [
          MainPage(),
          PlaceholderPage(),
          PlaceholderPage(),
          PlaceholderPage(),
        ],
```

```dart
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: () {
          Navigator.pop(context);
        },
        shape: CircleBorder(),
        backgroundColor: Colors.deepPurple,
        foregroundColor: Colors.white,
        child: Icon(Icons.add),
      ),
      floatingActionButtonLocation: FloatingActionButtonLocation.centerDocked,
      bottomNavigationBar: AnimatedBottomNavigationBar(
        icons: [
          Icons.home,
          Icons.calendar_month,
          Icons.camera_alt,
          Icons.notifications,
        ],
        activeColor: Colors.deepPurple,
        inactiveColor: Colors.grey,
        backgroundColor: Color(0xFFE4E4E4),
        activeIndex: pageIndex,
        gapLocation: GapLocation.center,
        onTap: (index) {
          setState(() {
            pageIndex = index;
          });
          _pageController.animateToPage(
            index,
            duration: const Duration(milliseconds: 300),
            curve: Curves.ease,
          );
        },
      ),
    );
  }
}

class MainPage extends StatelessWidget {
  const MainPage({super.key});

  @override
  Widget build(BuildContext context) {
    return Stack(
      children: [
        Container(
          height: MediaQuery.of(context).size.height / 10 * 2,
          decoration: BoxDecoration(
```

```dart
          color: Colors.deepPurple,
          borderRadius: BorderRadius.vertical(bottom: Radius.circular(24)),
        ),
      ),
      Padding(
        padding: EdgeInsets.only(
          // top: MediaQuery.of(context).size.height / 10,
          left: 20,
          right: 20,
        ),
      child: SingleChildScrollView(
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.center,
          children: [
            Padding(
              padding: const EdgeInsets.only(
                top: 12,
                bottom: 16,
              ),
              child: Row(
                mainAxisAlignment: MainAxisAlignment.spaceBetween,
                crossAxisAlignment: CrossAxisAlignment.center,
                children: [
                  Container(
                    padding: EdgeInsets.all(8),
                    decoration: BoxDecoration(
                      color: Colors.white,
                      borderRadius: BorderRadius.circular(100),
                    ),
                    child: Icon(Icons.person),
                  ),
                  Text(
                    "Sabat Tarnak",
                    style: TextStyle(
                      color: Colors.white,
                      fontWeight: FontWeight.bold,
                    ),
                  ),
                  Container(
                    padding: EdgeInsets.all(8),
                    decoration: BoxDecoration(
                      color: Colors.white,
                      borderRadius: BorderRadius.circular(100),
                    ),
                    child: Icon(Icons.message),
                  ),
                ],
              ),
```

```dart
                    ),
                    ItemPriceWidget(),
                    Padding(
                      padding: const EdgeInsets.symmetric(vertical: 8.0),
                      child: Container(
                        decoration: BoxDecoration(
                          color: Colors.white,
                          borderRadius: BorderRadius.circular(8),
                        ),
                        child: Column(
                          children: [
                            Padding(
                              padding: const EdgeInsets.all(16),
                              child: Row(
                                mainAxisAlignment: MainAxisAlignment.spaceBetween,
                                children: [
                                  Text(
                                    "Latest Products",
                                    style: TextStyle(
                                      fontWeight: FontWeight.bold,
                                      fontSize: 14,
                                      color: Colors.grey,
                                    ),
                                  ),
                                  Text(
                                    "View All",
                                    style: TextStyle(
                                      color: Colors.grey,
                                    ),
                                  ),
                                ],
                              ),
                            ),
                            SizedBox(
                              height: 125,
                              child: ListView(
                                scrollDirection: Axis.horizontal,
                                children: [
                                  LatestProductItemWidget(
                                    name: "Lorem Ipsum",
                                    price: "28,000",
                                    imageURL:
                                        "https://images.unsplash.com/photo-1584623572201-d0385667e46d?fm=jpg&q=60&w=3000&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxzZWFyY2h8Mnx8Z3Jhc3MlMjBmaWVsZHxlbnwwfHwwfHx8MA%3D%3D",
                                  ),
                                  LatestProductItemWidget(
```

```dart
                              name: "Lorem Ipsum",
                              price: "4,200",
                            ),
                            LatestProductItemWidget(
                              name: "Lorem Ipsum",
                              price: "30,000",
                            ),
                            LatestProductItemWidget(
                              name: "Lorem Ipsum",
                              price: "2,000",
                            ),
                          ],
                        ),
                      ),
                    ],
                  ),
                ),
              ),
            ),
            PostWidget(
              imageURL:
                  "https://cdn-icons-
png.flaticon.com/512/6858/6858485.png",
            ),
          ],
        ),
      ),
    ),
  ],
);
  }
}

class PostWidget extends StatelessWidget {
  final String? imageURL;
  const PostWidget({
    super.key,
    this.imageURL,
  });

  @override
  Widget build(BuildContext context) {
    return Container(
      padding: EdgeInsets.all(8),
      decoration: BoxDecoration(
        color: Colors.white,
        borderRadius: BorderRadius.circular(8),
      ),
      child: Row(
```

```dart
    crossAxisAlignment: CrossAxisAlignment.start,
    mainAxisAlignment: MainAxisAlignment.spaceBetween,
    mainAxisSize: MainAxisSize.max,
    children: [
      Padding(
        padding: const EdgeInsets.only(right: 8.0),
        child: Container(
          height: 50,
          decoration: BoxDecoration(
            borderRadius: BorderRadius.circular(100),
            border: Border.all(
              color: Colors.deepPurple,
              width: 2,
            ),
            color: Colors.grey,
          ),
          child: imageURL != null
              ? Image.network(
                  imageURL!,
                  fit: BoxFit.fitHeight,
                )
              : Icon(
                  Icons.person,
                  size: 50,
                ),
        ),
      ),
      Flexible(
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Text(
              "Martin Pamier",
              style: TextStyle(
                fontWeight: FontWeight.bold,
                fontSize: 20,
              ),
            ),
            Text(
              "Just now",
              style: TextStyle(
                color: Colors.grey,
                fontSize: 11,
              ),
            ),
            Text(
                "Lorem Ipsum dolor sit amet, consectetur adipiscing
elit."),
```

```dart
              Container(
                clipBehavior: Clip.antiAlias,
                decoration: BoxDecoration(
                  borderRadius: BorderRadius.circular(8),
                ),
                child: Image.network(
                  "https://marialouisedesign.com/wp-
content/uploads/2022/03/Baby-Chicks-15.jpg",
                ),
              ),
            ],
          ),
        ),
        Icon(Icons.more_vert),
      ],
    ),
  );
}
}

class LatestProductItemWidget extends StatelessWidget {
  final String name;
  final String price;
  final String? imageURL;

  const LatestProductItemWidget({
    super.key,
    required this.name,
    required this.price,
    this.imageURL,
  });

  @override
  Widget build(BuildContext context) {
    return Padding(
      padding: const EdgeInsets.symmetric(horizontal: 8),
      child: Column(
        children: [
          Container(
            width: 75,
            height: 75,
            clipBehavior: Clip.antiAlias,
            decoration: BoxDecoration(
              borderRadius: BorderRadius.circular(120),
              color: Colors.grey,
            ),
            child: imageURL != null
                ? Image.network(
```

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```dart
                    imageURL!,
                    fit: BoxFit.fitHeight,
                  )
                : Icon(Icons.photo),
          ),
          Text(
            name,
            style: TextStyle(
              color: Colors.grey,
            ),
          ),
          Text(
            price,
            style: TextStyle(
              fontWeight: FontWeight.bold,
              fontSize: 14,
              color: Colors.grey,
            ),
          ),
        ],
      ),
    );
  }
}

class DropDownWidget extends StatefulWidget {
  const DropDownWidget({
    super.key,
  });

  @override
  State<DropDownWidget> createState() => _DropDownWidgetState();
}

class _DropDownWidgetState extends State<DropDownWidget> {
  String value = "Today";
  @override
  Widget build(BuildContext context) {
    return DropdownButton(
      borderRadius: BorderRadius.circular(8),
      underline: Container(),
      value: value,
      items: [
        DropdownMenuItem(
          value: "Today",
          child: Text(
            "Today",
            style: TextStyle(
```

```dart
                color: Colors.grey,
              ),
            ),
          ),
          DropdownMenuItem(
            value: "Yesterday",
            child: Text(
              "Yesterday",
              style: TextStyle(
                color: Colors.grey,
              ),
            ),
          ),
        ],
        onChanged: (String? newValue) {
          setState(() => value = newValue ?? "Today");
        },
      );
    }
  }

  class ItemPriceWidget extends StatelessWidget {
    const ItemPriceWidget({super.key});

    @override
    Widget build(BuildContext context) {
      return Container(
        padding: EdgeInsets.symmetric(
          horizontal: 16,
        ),
        decoration: BoxDecoration(
          color: Colors.white,
          borderRadius: BorderRadius.circular(4),
          boxShadow: [BoxShadow(blurRadius: 4)],
        ),
        child: Column(
          mainAxisSize: MainAxisSize.min,
          children: [
            Row(
              mainAxisSize: MainAxisSize.max,
              mainAxisAlignment: MainAxisAlignment.spaceBetween,
              children: [
                Text(
                  "Items Price",
                  style: TextStyle(
                    color: Colors.grey,
                    fontSize: 16,
                    fontWeight: FontWeight.bold,
```

```dart
            ),
          ),
          const DropDownWidget(),
        ],
      ),
    ),
    SingleChildScrollView(
      scrollDirection: Axis.horizontal,
      child: Row(
        mainAxisSize: MainAxisSize.max,
        mainAxisAlignment: MainAxisAlignment.spaceBetween,
        children: [
          PriceBoxItem(
            price: "22,000",
            icon: Icons.pets,
          ),
          PriceBoxItem(
            price: "23,000",
            icon: Icons.pets,
          ),
          PriceBoxItem(
            price: "1,800",
            icon: Icons.pets,
          ),
          PriceBoxItem(
            price: "1,800",
            icon: Icons.pets,
          ),
          PriceBoxItem(
            price: "29,000",
            icon: Icons.pets,
          ),
        ],
      ),
    ),
    Divider(),
    Padding(
      padding: const EdgeInsets.only(bottom: 8.0),
      child: Row(
        mainAxisSize: MainAxisSize.max,
        mainAxisAlignment: MainAxisAlignment.spaceBetween,
        children: [
          InteractionButton(
            icon: Icons.thumb_up,
            text: "Like",
          ),
          InteractionButton(
            icon: Icons.message_rounded,
            text: "Message",
```

```dart
                      ),
                      InteractionButton(
                        icon: Icons.share,
                        text: "Share",
                      ),
                    ],
                  ),
                ),
              ],
            ),
          );
  }
}

class InteractionButton extends StatelessWidget {
  const InteractionButton({
    super.key,
    required this.icon,
    required this.text,
  });

  final IconData icon;
  final String text;

  @override
  Widget build(BuildContext context) {
    return Row(
      children: [
        Padding(
          padding: const EdgeInsets.symmetric(
            horizontal: 8,
            vertical: 2,
          ),
          child: Icon(
            icon,
            size: 18,
            color: Colors.grey,
          ),
        ),
        Text(
          text,
          style: TextStyle(
            color: Colors.grey,
            fontSize: 14,
          ),
        ),
      ],
    );
```

```dart
  }
}

class PriceBoxItem extends StatelessWidget {
  const PriceBoxItem({
    super.key,
    required this.icon,
    required this.price,
  });

  final IconData icon;
  final String price;

  @override
  Widget build(BuildContext context) {
    return Padding(
      padding: const EdgeInsets.symmetric(horizontal: 8.0),
      child: Column(
        children: [
          Container(
            decoration: BoxDecoration(
              color: const Color.fromRGBO(255, 193, 7, 0.5),
              borderRadius: BorderRadius.circular(8),
            ),
            child: Padding(
              padding: const EdgeInsets.all(8.0),
              child: Icon(
                icon,
                size: 36,
              ),
            ),
          ),
          Text(
            price,
            style: TextStyle(
              color: const Color.fromARGB(255, 209, 157, 0),
              fontWeight: FontWeight.bold,
              fontSize: 16,
            ),
          ),
        ],
      ),
    );
  }
}

// login_page.dart
import 'package:assignment_1_q_1/pages/main_page.dart';
```

```dart
import 'package:assignment_1_q_1/widget/get_size.dart';
import 'package:font_awesome_flutter/font_awesome_flutter.dart';
import
'package:custom_sliding_segmented_control/custom_sliding_segmented_control.dar
t';
import 'package:flutter/material.dart';

class LoginPage extends StatefulWidget {
  const LoginPage({super.key});

  @override
  State<LoginPage> createState() => _LoginPageState();
}

class _LoginPageState extends State<LoginPage> {
  int pageNo = 0;
  final PageController pageController = PageController();
  Size formSize = Size.zero;

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Container(
        decoration: BoxDecoration(
          gradient: LinearGradient(
            colors: [Color(0xff9735ec), Color(0xffd620ff)],
            stops: [0.25, 0.75],
            begin: Alignment.topCenter,
            end: Alignment.bottomCenter,
          ),
        ),
        child: Padding(
          padding: const EdgeInsets.all(24),
          child: Column(
            mainAxisSize: MainAxisSize.min,
            mainAxisAlignment: MainAxisAlignment.spaceBetween,
            children: [
              SizedBox(
                width: 256,
                height: 256,
                child: Image.network(
                    "https://play-
lh.googleusercontent.com/LyyerN01SOlgfaRZTFa2N6lc2wJeFkp4rPtoXDEPvHGjwZI58n2vS
Wezlgpf_eF82A"),
              ),
              Padding(
                padding: const EdgeInsets.symmetric(vertical: 16),
                child: CustomSlidingSegmentedControl<int>(
```

```
initialValue: pageNo,
children: {
  0: Text(
    "Existing",
    style: TextStyle(
      fontWeight: FontWeight.bold,
      color: pageNo == 0 ? Colors.white : Colors.deepPurple,
    ),
  ),
  1: Text(
    "New User",
    style: TextStyle(
      fontWeight: FontWeight.bold,
      color: pageNo == 1 ? Colors.white : Colors.deepPurple,
    ),
  ),
},
decoration: BoxDecoration(
  color: Colors.white,
  borderRadius: BorderRadius.circular(24),
),
thumbDecoration: BoxDecoration(
  gradient: LinearGradient(
    colors: [Color(0xff9735ec), Color(0xffd620ff)],
    stops: [0.25, 0.75],
    begin: Alignment.centerRight,
    end: Alignment.centerLeft,
  ),
  borderRadius: BorderRadius.circular(24),
  boxShadow: [
    BoxShadow(
      color: Colors.black.withValues(alpha: .3),
      blurRadius: 4.0,
      spreadRadius: 1.0,
      offset: Offset(
        0.0,
        2.0,
      ),
    ),
  ],
),
duration: Duration(milliseconds: 250),
curve: Curves.easeInOut,
onValueChanged: (v) {
  setState(() {
    pageNo = v;
    pageController.animateToPage(
      pageNo,
```

```
            duration: Durations.medium1,
            curve: Curves.easeInOut,
          );
        });
      },
    ),
  ),
Expanded(
  child: PageView(
    physics: NeverScrollableScrollPhysics(),
    controller: pageController,
    children: [
      Stack(
        children: [
          GetSize(
            onChildSize: (size) {
              setState(() {
                formSize = size;
              });
            },
            child: Container(
              width: double.infinity,
              decoration: BoxDecoration(
                borderRadius: BorderRadius.circular(8),
                color: Colors.white,
              ),
              child: Padding(
                padding: const EdgeInsets.only(
                  bottom: 30,
                  left: 15,
                  right: 15,
                  top: 10,
                ),
                child: Column(
                  mainAxisSize: MainAxisSize.min,
                  children: [
                    _makeInputField(
                      Icons.person,
                      "Username",
                    ),
                    _makeInputField(
                      Icons.email,
                      "Email",
                    ),
                    _makeInputField(
                      Icons.lock,
                      "Password",
                      obscureText: true,
```

```dart
                ),
                _makeInputField(
                  Icons.lock,
                  "Confirm Password",
                  obscureText: true,
                ),
              ],
            ),
          ),
        ),
      ),
      _makeHangingGradientButton("Sign Up"),
    ],
  ),
),
Stack(
  children: [
    GetSize(
      onChildSize: (size) {
        setState(() {
          formSize = size;
        });
      },
      child: Container(
        width: double.infinity,
        decoration: BoxDecoration(
          borderRadius: BorderRadius.circular(8),
          color: Colors.white,
        ),
        child: Padding(
          padding: const EdgeInsets.only(
            bottom: 30,
            left: 15,
            right: 15,
            top: 10,
          ),
          child: Column(
            mainAxisSize: MainAxisSize.min,
            children: [
              _makeInputField(
                Icons.person,
                "Username",
              ),
              _makeInputField(
                Icons.lock,
                "Password",
                obscureText: true,
              ),
            ],
```

```dart
              ),
            ),
          ),
        ),
        _makeHangingGradientButton("Login"),
        Positioned(
          left: 0,
          right: 0,
          bottom: 0,
          child: Column(
            children: [
              TextButton(
                style: ElevatedButton.styleFrom(
                  backgroundColor: Colors.transparent,
                  shadowColor: Colors.transparent,
                ),
                onPressed: () {
                  Navigator.push(
                    context,
                    MaterialPageRoute(
                      builder: (buildContext) => MyHomePage(),
                    ),
                  );
                },
                child: Text(
                  "Forget Password?",
                  style: TextStyle(
                    color: Colors.white,
                    fontWeight: FontWeight.bold,
                  ),
                ),
              ),
              SizedBox(height: 20),
              Stack(
                alignment: Alignment.center,
                children: [
                  Divider(
                    color: Colors.white,
                  ),
                  Text(
                    "OR",
                    style: TextStyle(
                      color: Colors.white,
                      backgroundColor: Color(0xffd620ff),
                      fontWeight: FontWeight.bold,
                    ),
                  ),
                ],
```

```dart
                                        ),
                                        SizedBox(height: 20),
                                        Row(
                                          mainAxisSize: MainAxisSize.min,
                                          children: [
                                            IconButton(
                                              onPressed: () {},
                                              icon: Container(
                                                padding: EdgeInsets.all(8),
                                                decoration: BoxDecoration(
                                                  color: Colors.white,
                                                  borderRadius:
                                                      BorderRadius.circular(100),
                                                ),
                                                child: Icon(Icons.facebook_rounded),
                                              ),
                                            ),
                                            SizedBox(width: 16),
                                            IconButton(
                                              onPressed: () {},
                                              icon: Container(
                                                padding: EdgeInsets.all(8),
                                                decoration: BoxDecoration(
                                                  color: Colors.white,
                                                  borderRadius:
                                                      BorderRadius.circular(100),
                                                ),
                                                child: Icon(FontAwesomeIcons.google),
                                              ),
                                            ),
                                          ],
                                        ),
                                      ],
                                    ),
                                  ),
                                ],
                              ),
                            ),
                          ],
                        ),
                      ),
                    ),
                  ],
                ),
              ),
            ),
          ),
        );
      }


      TextFormField _makeInputField(IconData icon, String label,
```

```dart
        {bool obscureText = false}) {
      return TextFormField(
        obscureText: obscureText,
        decoration: InputDecoration(
          suffixIcon: Icon(icon),
          label: Text(
            label,
            style: TextStyle(
              color: Colors.grey,
            ),
          ),
        ),
      );
    }

    Positioned _makeHangingGradientButton(String buttonText) {
      return Positioned(
        top: formSize.height - 15,
        left: formSize.width / 2 - 50,
        right: formSize.width / 2 - 50,
        child: DecoratedBox(
          decoration: BoxDecoration(
            borderRadius: BorderRadius.circular(24),
            gradient: LinearGradient(
              colors: [
                Color(0xff9735ec),
                Color(0xffd620ff),
              ],
            ),
          ),
          child: TextButton(
            onPressed: () {
              Navigator.push(
                context,
                MaterialPageRoute(
                  builder: (buildContext) => MyHomePage(),
                ),
              );
            },
            style: TextButton.styleFrom(
              backgroundColor: Colors.transparent,
              foregroundColor: Colors.white,
            ),
            child: Text(
              buttonText,
              style: TextStyle(
                fontWeight: FontWeight.bold,
              ),
```

```dart
          ),
        ),
      ),
    );
  }
}

// placeholder_page.dart
import 'package:assignment_1_q_1/pages/login_page.dart';
import 'package:flutter/material.dart';

class PlaceholderPage extends StatelessWidget {
  const PlaceholderPage({super.key});

  @override
  Widget build(BuildContext context) {
    return Container(
      color: Colors.yellow,
      child: Center(
        child: TextButton(
          onPressed: () {
            Navigator.push(
              context,
              MaterialPageRoute(
                builder: (context) {
                  return LoginPage();
                },
              ),
            );
          },
          child: Text("Placeholder"),
        ),
      ),
    );
  }
}

// get_size.dart
import 'package:flutter/material.dart';
import 'package:flutter/rendering.dart';

class GetSize extends StatefulWidget {
  final Widget child;
  final ValueChanged<Size> onChildSize;

  const GetSize({
    super.key,
    required this.child,
```

```dart
      required this.onChildSize,
    });

    @override
    State<GetSize> createState() => _GetSizeState();
}

class _GetSizeState extends State<GetSize> {
    @override
    Widget build(BuildContext context) {
      return _SizeTracker(
        onSizeChanged: widget.onChildSize,
        child: widget.child,
      );
    }
}

class _SizeTracker extends SingleChildRenderObjectWidget {
    const _SizeTracker({
      required this.onSizeChanged,
      required Widget super.child,
    });

    final ValueChanged<Size> onSizeChanged;

    @override
    RenderObject createRenderObject(BuildContext context) {
      return _SizeTrackingRenderObject(onSizeChanged);
    }

    @override
    void updateRenderObject(
        BuildContext context, covariant _SizeTrackingRenderObject renderObject)
{
      renderObject.onSizeChanged = onSizeChanged;
    }
}

class _SizeTrackingRenderObject extends RenderProxyBox {
    _SizeTrackingRenderObject(this.onSizeChanged);

    ValueChanged<Size> onSizeChanged;
    Size? _previousSize;

    @override
    void performLayout() {
      super.performLayout();
      if (size != _previousSize) {
```
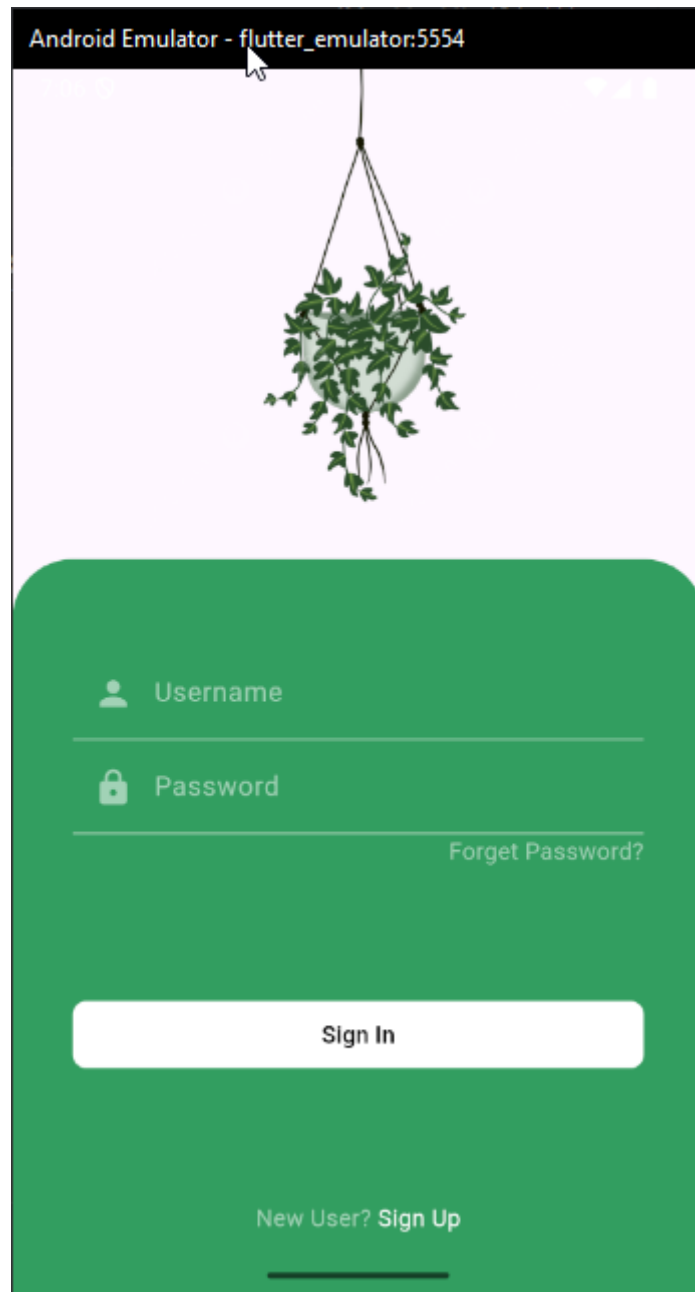
```
      _previousSize = size;
      WidgetsBinding.instance.addPostFrameCallback((_) {
        onSizeChanged(size);
      });
    }
  }
}
```

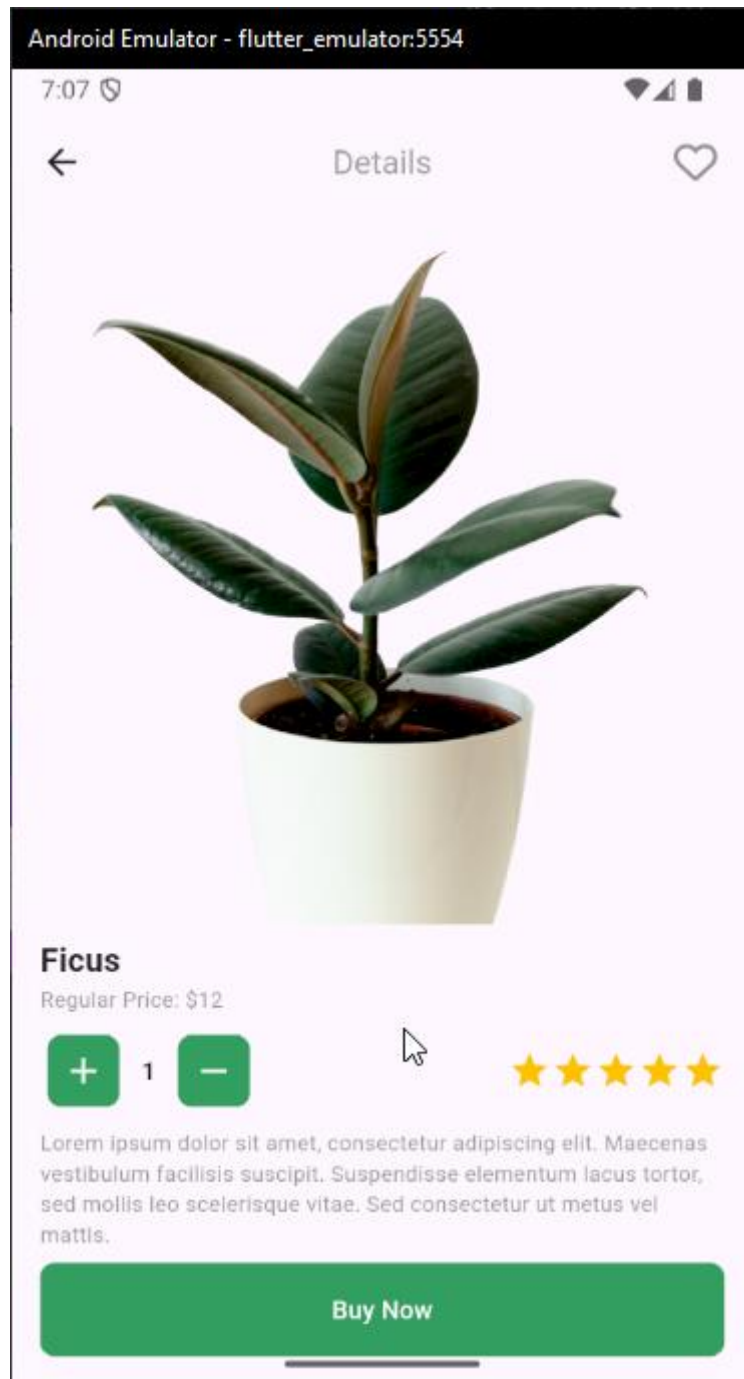# Question 2
Screenshots
S
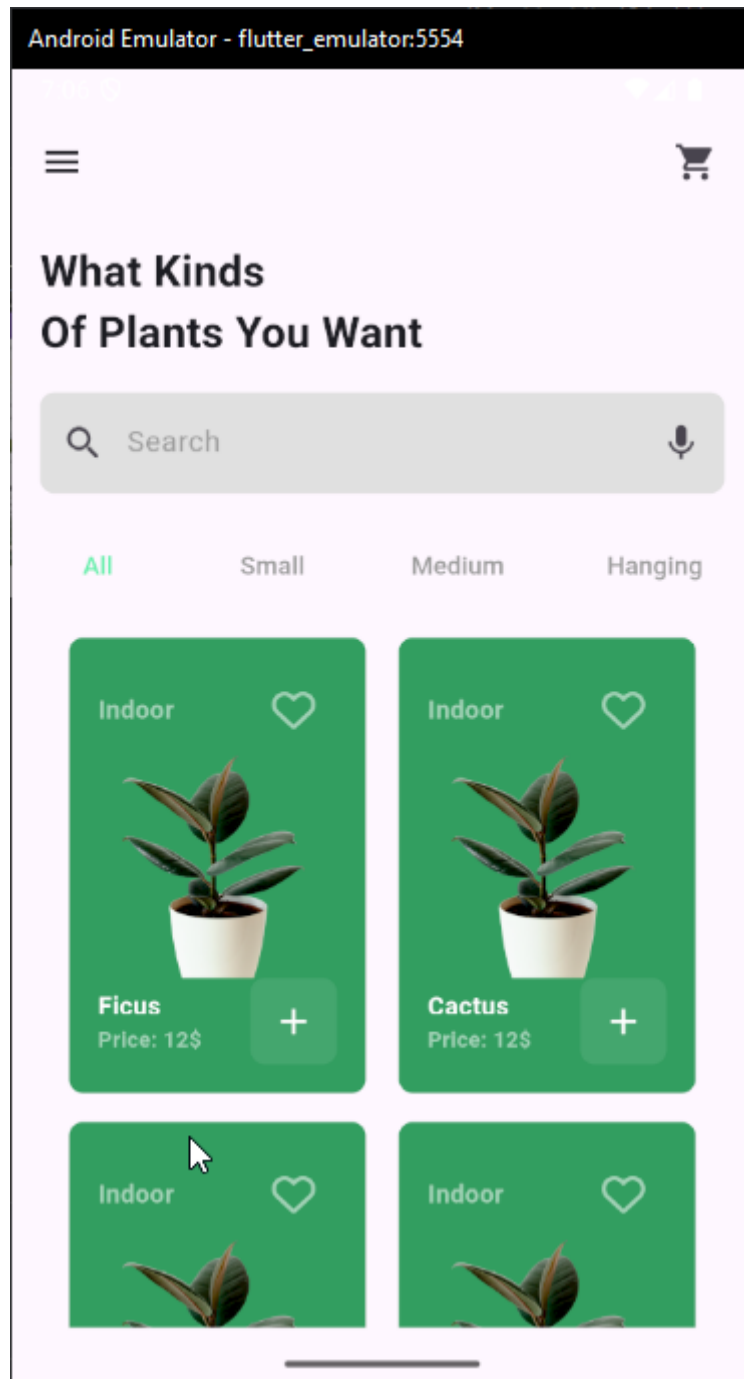
Code

```dart
// main.dart
import 'package:assignment_1_q_2/pages/login_page.dart';
import 'package:flutter/material.dart';

void main() {
  runApp(const MainApp());
}

class MainApp extends StatelessWidget {
  const MainApp({super.key});
```

```dart
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      home: LoginPage(),
    );
  }
}

// login_page.dart
import 'package:assignment_1_q_2/pages/home_page.dart';
import 'package:flutter/material.dart';

class LoginPage extends StatelessWidget {
  const LoginPage({
    super.key,
  });

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Column(
        children: [
          Expanded(
            child: Image.asset("assets/images/hanging_plant.png"),
          ),
          Container(
            width: double.infinity,
            height: MediaQuery.sizeOf(context).height / 10 * 6,
            decoration: BoxDecoration(
              color: Color(0xFF329e60),
              borderRadius: BorderRadius.vertical(top: Radius.circular(36)),
            ),
            child: Padding(
              padding: const EdgeInsets.all(36),
              child: Padding(
                padding: const EdgeInsets.only(top: 16),
                child: Column(
                  mainAxisSize: MainAxisSize.max,
                  mainAxisAlignment: MainAxisAlignment.spaceBetween,
                  children: [
                    CustomForm(),
                    FilledButton(
                      style: ElevatedButton.styleFrom(
                        backgroundColor: Colors.white,
                        foregroundColor: Colors.black,
                        shape: RoundedRectangleBorder(
```

```
                borderRadius: BorderRadius.circular(8),
              ),
            ),
            onPressed: () {
              Navigator.push(
                context,
                MaterialPageRoute(builder: (context) => HomePage()),
              );
            },
            child: Padding(
              padding: const EdgeInsets.symmetric(
                vertical: 8,
              ),
              child: SizedBox(
                width: double.infinity,
                child: Center(child: Text("Sign In")),
              ),
            ),
          ),
          Row(
            mainAxisAlignment: MainAxisAlignment.center,
            mainAxisSize: MainAxisSize.max,
            children: [
              Text(
                "New User? ",
                style: TextStyle(
                  color: Colors.white54,
                ),
              ),
              Text(
                "Sign Up",
                style: TextStyle(
                  color: Colors.white,
                ),
              ),
            ],
          )
        ],
      ),
    ),
  ),
  ],
),
);
}
}
```

```dart
class CustomForm extends StatefulWidget {
  const CustomForm({
    super.key,
  });

  @override
  State<CustomForm> createState() => _CustomFormState();
}

class _CustomFormState extends State<CustomForm> {
  final FocusNode _focusNodeUsername = FocusNode();
  final FocusNode _focusNodePassword = FocusNode();

  Color usernameColor = Colors.white54;
  Color passwordColor = Colors.white54;

  void _focusChangeUsername() {
    setState(() {
      usernameColor =
          _focusNodeUsername.hasFocus ? Colors.white : Colors.white54;
    });
  }

  void _focusChangePassword() {
    setState(() {
      passwordColor =
          _focusNodePassword.hasFocus ? Colors.white : Colors.white54;
    });
  }

  @override
  void initState() {
    super.initState();
    _focusNodeUsername.addListener(_focusChangeUsername);
    _focusNodePassword.addListener(_focusChangePassword);
  }

  @override
  void dispose() {
    super.dispose();
    _focusNodeUsername.removeListener(_focusChangeUsername);
    _focusNodePassword.removeListener(_focusChangePassword);
    _focusNodeUsername.dispose();
    _focusNodePassword.dispose();
  }

  @override
  Widget build(BuildContext context) {
```

```dart
    return Column(
      children: [
        TextFormField(
          focusNode: _focusNodeUsername,
          decoration: InputDecoration(
            focusedBorder: UnderlineInputBorder(
              borderSide: BorderSide(color: Colors.white),
            ),
            enabledBorder: UnderlineInputBorder(
              borderSide: BorderSide(color: usernameColor),
            ),
            prefixIcon: Icon(
              Icons.person,
              color: usernameColor,
            ),
            labelText: "Username",
            labelStyle: TextStyle(color: usernameColor),
          ),
        ),
        TextFormField(
          focusNode: _focusNodePassword,
          decoration: InputDecoration(
            focusedBorder: UnderlineInputBorder(
              borderSide: BorderSide(color: Colors.white),
            ),
            enabledBorder: UnderlineInputBorder(
              borderSide: BorderSide(color: passwordColor),
            ),
            prefixIcon: Icon(
              Icons.lock,
              color: passwordColor,
            ),
            labelText: "Password",
            labelStyle: TextStyle(color: passwordColor),
          ),
        ),
        Align(
          alignment: Alignment.centerRight,
          child: Text(
            "Forget Password?",
            style: TextStyle(color: Colors.white54),
          ),
        ),
      ],
    );
  }
}
```

```dart
// home_page.dart
import 'package:assignment_1_q_2/pages/plant_page.dart';
import 'package:assignment_1_q_2/widget/likeable_button.dart';
import 'package:flutter/material.dart';

class HomePage extends StatelessWidget {
  const HomePage({super.key});

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      drawer: Drawer(
        child: Column(
          children: [
            TextButton(
              onPressed: () {
                Navigator.pop(context);
                Navigator.pop(context);
              },
              child: Text("LOL"),
            ),
          ],
        ),
      ),
      appBar: AppBar(
        backgroundColor: Colors.transparent,
        surfaceTintColor: Colors.transparent,
        actions: [
          Padding(
            padding: const EdgeInsets.all(8.0),
            child: IconButton(
              onPressed: () {},
              icon: Icon(Icons.shopping_cart),
            ),
          ),
        ],
      ),
      body: Padding(
        padding: const EdgeInsets.all(16),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Text(
              "What Kinds \nOf Plants You Want",
              style: TextStyle(
                fontWeight: FontWeight.bold,
                fontSize: 24,
              ),
```

```dart
        ),
      Padding(
        padding: const EdgeInsets.symmetric(vertical: 16),
        child: Container(
          clipBehavior: Clip.antiAlias,
          decoration: BoxDecoration(
            borderRadius: BorderRadius.circular(8),
          ),
          child: TextField(
            decoration: InputDecoration(
              focusedBorder: InputBorder.none,
              filled: true,
              fillColor: Colors.grey.shade300,
              enabledBorder: InputBorder.none,
              prefixIcon: Icon(Icons.search),
              suffixIcon: Icon(Icons.mic),
              labelText: "Search",
              labelStyle: TextStyle(color: Colors.grey),
            ),
          ),
        ),
      ),
      SelectableButtonRow(),
      Expanded(
        child: Padding(
          padding: const EdgeInsets.all(16),
          child: SingleChildScrollView(
            child: Column(
              mainAxisSize: MainAxisSize.min,
              children: [
                Row(
                  mainAxisSize: MainAxisSize.max,
                  mainAxisAlignment: MainAxisAlignment.spaceBetween,
                  children: [
                    PlantCardWidget(
                      name: "Ficus",
                      price: "12",
                      imageUrl:
                          "https://figandfreya.com/cdn/shop/products/fic
uselasticaburgundy4figandfreya_ceac6ad8-ef53-4ac4-aff7-
fe77b5e01382.png?v=1629403627&width=1800",
                    ),
                    PlantCardWidget(
                      name: "Cactus",
                      price: "12",
                      imageUrl:
```

```dart
                              "https://figandfreya.com/cdn/shop/products/fic
uselasticaburgundy4figandfreya_ceac6ad8-ef53-4ac4-aff7-
fe77b5e01382.png?v=1629403627&width=1800",
                        ),
                      ],
                    ),
                    SizedBox(height: 16),
                    Row(
                      mainAxisSize: MainAxisSize.max,
                      mainAxisAlignment: MainAxisAlignment.spaceBetween,
                      children: [
                        PlantCardWidget(
                          name: "Samantha",
                          price: "12",
                          imageUrl:
                              "https://figandfreya.com/cdn/shop/products/fic
uselasticaburgundy4figandfreya_ceac6ad8-ef53-4ac4-aff7-
fe77b5e01382.png?v=1629403627&width=1800",
                        ),
                        PlantCardWidget(
                          name: "Alovera",
                          price: "12",
                          imageUrl:
                              "https://figandfreya.com/cdn/shop/products/fic
uselasticaburgundy4figandfreya_ceac6ad8-ef53-4ac4-aff7-
fe77b5e01382.png?v=1629403627&width=1800",
                        ),
                      ],
                    ),
                  ],
                ),
              ),
            ),
          ],
        ),
      ),
    );
  }
}

class PlantCardWidget extends StatelessWidget {
  final String name;
  final String price;
  final String imageUrl;
  final String type;

  const PlantCardWidget({
```

```dart
      super.key,
      required this.name,
      required this.price,
      required this.imageUrl,
      this.type = "Indoor",
  });

  @override
  Widget build(BuildContext context) {
    return Container(
      width: MediaQuery.sizeOf(context).width / 2.5,
      padding: EdgeInsets.all(16),
      decoration: BoxDecoration(
        color: Color(0xFF329e60),
        borderRadius: BorderRadius.circular(8),
      ),
      child: Column(
        children: [
          Row(
            mainAxisSize: MainAxisSize.max,
            mainAxisAlignment: MainAxisAlignment.spaceBetween,
            children: [
              Text(
                type,
                style: TextStyle(
                  color: Colors.white54,
                  fontWeight: FontWeight.bold,
                ),
              ),
              LikeableButton(),
            ],
          ),
          GestureDetector(
            onTap: () {
              Navigator.push(
                context,
                MaterialPageRoute(
                  builder: (context) => PlantPage(
                    name: name,
                    price: price,
                    imageUrl: imageUrl,
                  ),
                ),
              );
            },
            child: SizedBox(
              height: 125,
              child: Image.network(
```

```dart
            imageUrl,
            fit: BoxFit.fitHeight,
          ),
        ),
      ),
      Row(
        mainAxisSize: MainAxisSize.max,
        mainAxisAlignment: MainAxisAlignment.spaceBetween,
        children: [
          Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              Text(
                name,
                style: TextStyle(
                  fontWeight: FontWeight.bold,
                  fontSize: 14,
                  color: Colors.white,
                ),
              ),
              Text(
                "Price: $price\$",
                style: TextStyle(
                  fontWeight: FontWeight.bold,
                  fontSize: 12,
                  color: Colors.white54,
                ),
              ),
            ],
          ),
          Container(
            decoration: BoxDecoration(
              color: Color.fromARGB(22, 255, 255, 255),
              borderRadius: BorderRadius.circular(8),
            ),
            child: IconButton(
              onPressed: () {},
              icon: Icon(
                Icons.add,
                color: Colors.white,
              ),
            ),
          )
        ],
      )
    ],
  ),
);
```

```dart
    }
}

class SelectableButtonRow extends StatefulWidget {
  const SelectableButtonRow({
    super.key,
  });

  @override
  State<SelectableButtonRow> createState() => _SelectableButtonRowState();
}

class _SelectableButtonRowState extends State<SelectableButtonRow> {
  int _selectedIndex = 0;
  @override
  Widget build(BuildContext context) {
    return Row(
      mainAxisSize: MainAxisSize.max,
      mainAxisAlignment: MainAxisAlignment.spaceBetween,
      children: [
        TextButton(
          onPressed: () {
            setState(() {
              _selectedIndex = 0;
            });
          },
          child: Text(
            "All",
            style: TextStyle(
              color: _selectedIndex == 0 ? Colors.greenAccent : Colors.grey,
            ),
          ),
        ),
        TextButton(
          onPressed: () {
            setState(() {
              _selectedIndex = 1;
            });
          },
          child: Text(
            "Small",
            style: TextStyle(
              color: _selectedIndex == 1 ? Colors.greenAccent : Colors.grey,
            ),
          ),
        ),
        TextButton(
          onPressed: () {
```

```dart
            setState(() {
              _selectedIndex = 2;
            });
          },
          child: Text(
            "Medium",
            style: TextStyle(
              color: _selectedIndex == 2 ? Colors.greenAccent : Colors.grey,
            ),
          ),
        ),
        TextButton(
          onPressed: () {
            setState(() {
              _selectedIndex = 3;
            });
          },
          child: Text(
            "Hanging",
            style: TextStyle(
              color: _selectedIndex == 3 ? Colors.greenAccent : Colors.grey,
            ),
          ),
        ),
      ],
    );
  }
}

// plant_page.dart
import 'package:assignment_1_q_2/widget/likeable_button.dart';
import 'package:flutter/material.dart';

class PlantPage extends StatelessWidget {
  final String name;
  final String price;
  final String imageUrl;
  const PlantPage({
    super.key,
    required this.name,
    required this.price,
    required this.imageUrl,
  });

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
```

```dart
          centerTitle: true,
          title: Text(
            "Details",
            style: TextStyle(
              color: Colors.grey,
              fontSize: 18,
            ),
          ),
          actions: [
            Padding(
              padding: const EdgeInsets.all(8.0),
              child: LikeableButton(
                color: Color(0x9D504E4E),
              ),
            )
          ],
        ),
        body: Padding(
          padding: const EdgeInsets.all(16),
          child: Column(
            mainAxisSize: MainAxisSize.max,
            mainAxisAlignment: MainAxisAlignment.spaceBetween,
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              Image.network(
                "https://figandfreya.com/cdn/shop/products/ficuselasticaburgundy
4figandfreya_ceac6ad8-ef53-4ac4-aff7-
fe77b5e01382.png?v=1629403627&width=1800",
                fit: BoxFit.fitHeight,
              ),
              Column(
                mainAxisAlignment: MainAxisAlignment.start,
                crossAxisAlignment: CrossAxisAlignment.start,
                children: [
                  Text(
                    name,
                    style: TextStyle(
                      fontSize: 18,
                      fontWeight: FontWeight.bold,
                    ),
                  ),
                  Text(
                    "Regular Price: \$$price",
                    style: TextStyle(
                      fontSize: 12,
                      color: Colors.grey,
                    ),
                  ),
```

```dart
              ],
            ),
            Row(
              mainAxisSize: MainAxisSize.max,
              mainAxisAlignment: MainAxisAlignment.spaceBetween,
              children: [
                CounterWidget(),
                Row(
                  children: List.generate(
                    5,
                    (index) => Icon(
                      Icons.star,
                      color: Colors.amber,
                    ),
                  ),
                ),
              ],
            ),
            Text(
              "Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Maecenas vestibulum facilisis suscipit. Suspendisse elementum lacus tortor,
sed mollis leo scelerisque vitae. Sed consectetur ut metus vel mattis.",
              style: TextStyle(
                fontSize: 12,
                color: Colors.grey,
              ),
            ),
            FilledButton(
              style: ElevatedButton.styleFrom(
                backgroundColor: Color(0xFF329e60),
                foregroundColor: Colors.white,
                shape: RoundedRectangleBorder(
                  borderRadius: BorderRadius.circular(8),
                ),
              ),
              onPressed: () {},
              child: Padding(
                padding: const EdgeInsets.symmetric(
                  vertical: 16,
                ),
                child: SizedBox(
                  width: double.infinity,
                  child: Center(child: Text("Buy Now")),
                ),
              ),
            ),
          ],
        ),
```

```dart
      ),
    );
  }
}

class CounterWidget extends StatefulWidget {
  const CounterWidget({
    super.key,
  });

  @override
  State<CounterWidget> createState() => _CounterWidgetState();
}

class _CounterWidgetState extends State<CounterWidget> {
  int _count = 1;
  @override
  Widget build(BuildContext context) {
    return Row(
      children: [
        IconButton(
          style: ElevatedButton.styleFrom(
            backgroundColor: Color(0xFF329e60),
            foregroundColor: Colors.white,
            shape: RoundedRectangleBorder(
              borderRadius: BorderRadius.circular(8),
            ),
          ),
          onPressed: () {
            setState(() {
              _count++;
            });
          },
          icon: Icon(Icons.add),
        ),
        Padding(
          padding: const EdgeInsets.symmetric(horizontal: 8),
          child: Text(
            _count.toString(),
            style: TextStyle(fontWeight: FontWeight.bold),
          ),
        ),
        IconButton(
          style: ElevatedButton.styleFrom(
            backgroundColor: Color(0xFF329e60),
            foregroundColor: Colors.white,
            shape: RoundedRectangleBorder(
              borderRadius: BorderRadius.circular(8),
```

```dart
          ),
        ),
        onPressed: () {
          setState(() {
            if (_count == 1) return;
            _count--;
          });
        },
        icon: Icon(Icons.remove),
      ),
    ],
  );
 }
}


// likable_button.dart
import 'package:flutter/material.dart';
import 'package:font_awesome_flutter/font_awesome_flutter.dart';

class LikeableButton extends StatefulWidget {
  final Color color;
  const LikeableButton({
    super.key,
    this.color = Colors.white54,
  });

  @override
  State<LikeableButton> createState() => _LikeableButtonState();
}

class _LikeableButtonState extends State<LikeableButton> {
  bool liked = false;
  @override
  Widget build(BuildContext context) {
    return IconButton(
      onPressed: () => setState(() => liked = !liked),
      icon: Icon(
        liked ? FontAwesomeIcons.solidHeart : FontAwesomeIcons.heart,
        color: widget.color,
      ),
    );
  }
}
```