MPL Experiment 2

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Aim: To design Flutter UI by including common widgets.

Theory:

Designing a Flutter UI involves using common widgets effectively to create a structured and interactive interface. Layout widgets like `Container`, `Column`, `Row`, and `GridView` help organize elements, while interactive widgets like `GestureDetector`, `InkWell`, and `TextField` enhance user engagement.

For displaying content, widgets like `Text`, `Image`, `Card`, and `ListView` are essential. Navigation widgets such as `BottomNavigationBar`, `Drawer`, and `Navigator` enable seamless movement between screens. Managing state using `setState`, `Provider`, or advanced solutions like `Riverpod` ensures smooth UI updates.

For a **Dmart-like home screen**, a combination of the following widgets can be used:

- `ListView` with a `CarouselSlider` for displaying promotional banners.
- `GridView` for categorizing products.
- `Card` widget to showcase trending items.
- `BottomNavigationBar` for consistent navigation between screens.

Steps:

Step 1: Create a new Flutter project or open an existing one.

Step 2: Design the layout using `Scaffold`, incorporating `AppBar` and `BottomNavigationBar`.

Step 3: Use `CarouselSlider` inside a `ListView` for banners.

Step 4: Implement `GridView` to display product categories.

Step 5: Use `Card` widgets inside a `ListView` to show trending items.

Step 6: Ensure navigation using `BottomNavigationBar` and `Navigator`.

Step 7: Apply `setState` or `Provider` for state management.

Code:

```dart
//home_page.dart
import 'package:flutter/material.dart';
import 'package:firebase_auth/firebase_auth.dart';
import 'package:shared_preferences/shared_preferences.dart';
import 'package:dmart/screens/login/login_page.dart';
import 'package:carousel_slider/carousel_slider.dart';
import 'package:dmart/common_components/header.dart';

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

  Future<void> _logout(BuildContext context) async {
    await FirebaseAuth.instance.signOut();

    // Clear login state from shared preferences
    SharedPreferences prefs = await SharedPreferences.getInstance();
    await prefs.setBool('isLoggedIn', false);

    Navigator.pushReplacement(
      context,
      MaterialPageRoute(builder: (context) => const LoginPage()),
    );
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: const Header(),
      body: SingleChildScrollView(
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            // Parade of Deals Banner
            Container(
              width: double.infinity,
              height: 150,
              padding: const EdgeInsets.all(16.0),
```

```dart
            alignment: Alignment.center,
            color: Colors.blueAccent,
            child: const Text(
              'Parade of Deals',
              style: TextStyle(fontSize: 24, fontWeight:
FontWeight.bold, color: Colors.white),
              textAlign: TextAlign.center,
            ),
          ),

          // Dmart Exclusive
          const Padding(
            padding: EdgeInsets.all(16.0),
            child: Text(
              'Dmart Exclusive',
              style: TextStyle(fontSize: 20, fontWeight:
FontWeight.bold),
            ),
          ),
          CarouselSlider(
            options: CarouselOptions(enableInfiniteScroll: false),
            items: List.generate(5, (index) {
              return Card(
                margin: const EdgeInsets.symmetric(horizontal: 8),
                child: Container(
                  height: 150,
                  width: double.infinity,
                  alignment: Alignment.center,
                  child: Text('Exclusive Item ${index + 1}'),
                ),
              );
            }),
          ),

          // Best Offer
          const Padding(
            padding: EdgeInsets.all(16.0),
            child: Text(
```

```dart
                  'Best Offer',
                  style: TextStyle(fontSize: 20, fontWeight:
FontWeight.bold),
                ),
              ),
            CarouselSlider(
              options: CarouselOptions(enableInfiniteScroll: false),
              items: List.generate(5, (index) {
                return Card(
                  margin: const EdgeInsets.symmetric(horizontal: 8),
                  child: Container(
                    height: 150,
                    width: double.infinity,
                    alignment: Alignment.center,
                    child: Text('Best Offer Item ${index + 1}'),
                  ),
                );
              }),
            ),
          ],
        ),
      ),
    );
  }
}




//account_page.dart
import 'package:flutter/material.dart';
import 'package:firebase_auth/firebase_auth.dart';
import 'package:shared_preferences/shared_preferences.dart';
import 'package:dmart/screens/login/login_page.dart';
```

```dart
import 'package:dmart/common_components/header.dart';

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

  Future<void> _logout(BuildContext context) async {
    await FirebaseAuth.instance.signOut();

    // Clear login state from shared preferences
    SharedPreferences prefs = await SharedPreferences.getInstance();
    await prefs.setBool('isLoggedIn', false);

    // Navigate back to login screen
    Navigator.pushAndRemoveUntil(
      context,
      MaterialPageRoute(builder: (context) => const LoginPage()),
        (Route<dynamic> route) => false, // Remove all previous
routes
    );
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: const Header(),
      body: Column(
        children: [
          Expanded(
            child: ListView(
              children: [
                _buildAccountOption(Icons.person, "My Profile"),
                _buildAccountOption(Icons.help, "Help @ DMart Ready"),
                _buildAccountOption(Icons.logout, "Sign Out",
isLogout: true, onTap: () => _logout(context)),
                const SizedBox(height: 10),
                _buildPromoBanner(),
              ],
            ),
```

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

Widget _buildAccountOption(IconData icon, String title, {bool
isLogout = false, VoidCallback? onTap}) {
    return ListTile(
      leading: Icon(icon, color: isLogout ? Colors.red :
Colors.black54),
      title: Text(title, style: TextStyle(fontSize: 16, fontWeight:
FontWeight.w500)),
      trailing: const Icon(Icons.arrow_forward_ios, size: 16, color:
Colors.black54),
      onTap: onTap ?? () {}, // Provide navigation or functionality
    );
}

Widget _buildPromoBanner() {
  return Padding(
    padding: const EdgeInsets.all(12.0),
    child: Container(
      decoration: BoxDecoration(
        color: Colors.green.shade100,
        borderRadius: BorderRadius.circular(8),
      ),
      padding: const EdgeInsets.all(12),
      child: Row(
        mainAxisAlignment: MainAxisAlignment.spaceBetween,
        children: [
          const Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              Text(
                "You're SAVING a LOT on every order",
                style: TextStyle(fontSize: 14, fontWeight:
FontWeight.bold),
```

```dart
              ),
              SizedBox(height: 5),
              Text(
                "Check My Savings",
                style: TextStyle(fontSize: 14, fontWeight:
FontWeight.bold, color: Colors.green),
              ),
            ],
          )
        ],
      ),
    ),
  );
  }
}




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

class Sidebar extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
```

```dart
    return Drawer(
      child: Column(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: [
          UserAccountsDrawerHeader(
            decoration: BoxDecoration(color: Colors.green),
            accountName: Text(
              "Hi, Anuprita",
              style: TextStyle(fontSize: 18, fontWeight:
FontWeight.bold),
            ),
            accountEmail: Text("400615, Thane (West)"),
            currentAccountPicture: CircleAvatar(
              backgroundColor: Colors.white,
              child: Icon(Icons.person, size: 40, color:
Colors.green),
            ),
          ),
          _buildMenuItem(Icons.category, "Shop by Category", context),
          _buildMenuItem(Icons.help, "Help @ Dmart Ready", context),
          _buildMenuItem(Icons.policy, "Refund, Terms and Policies",
context),
          _buildMenuItem(Icons.question_answer, "Frequently Asked
Questions", context),
          _buildMenuItem(Icons.info, "About Us", context),
          Spacer(),
          Padding(
            padding: const EdgeInsets.all(16.0),
            child: Text("Version 5.1.9", style: TextStyle(color:
Colors.grey)),
          ),
        ],
      ),
    );
  }

  Widget _buildMenuItem(IconData icon, String title, BuildContext
context) {
```
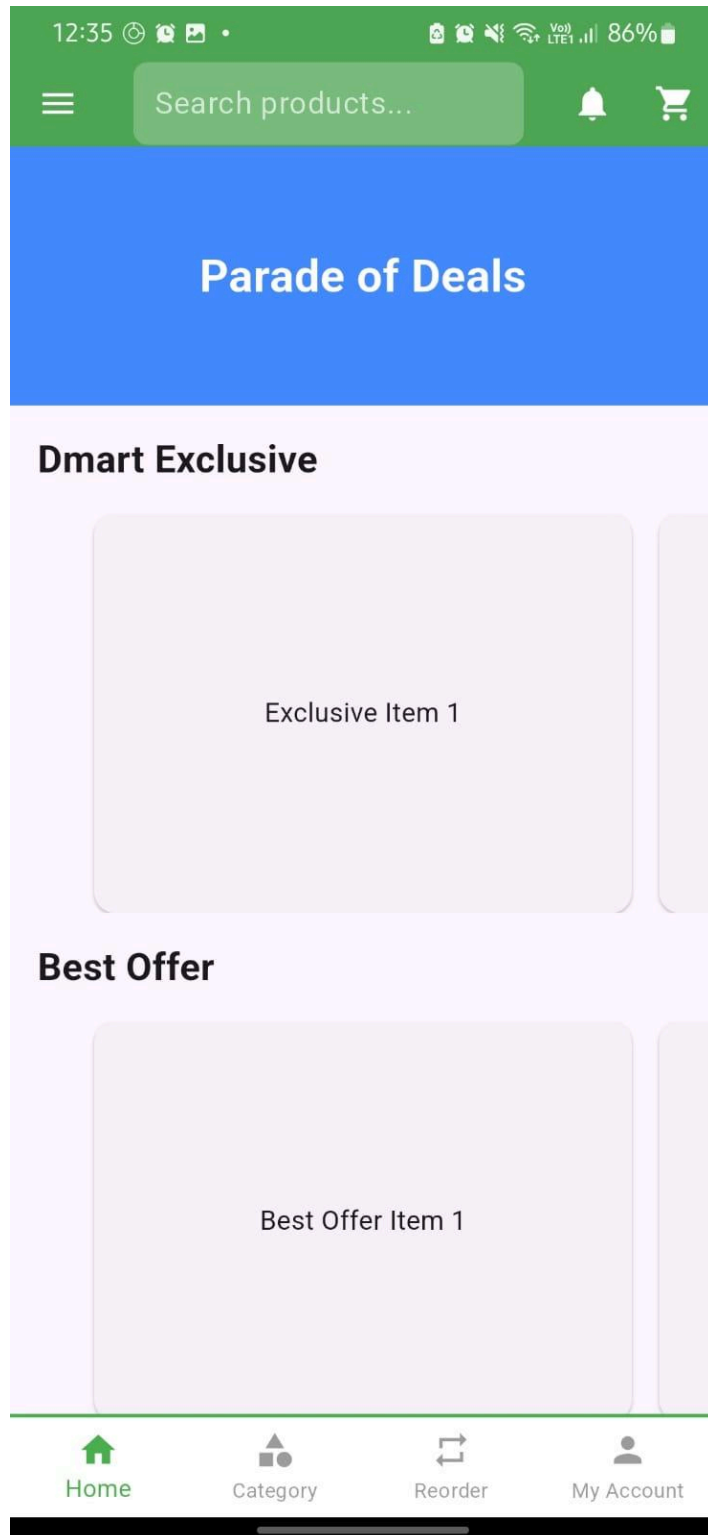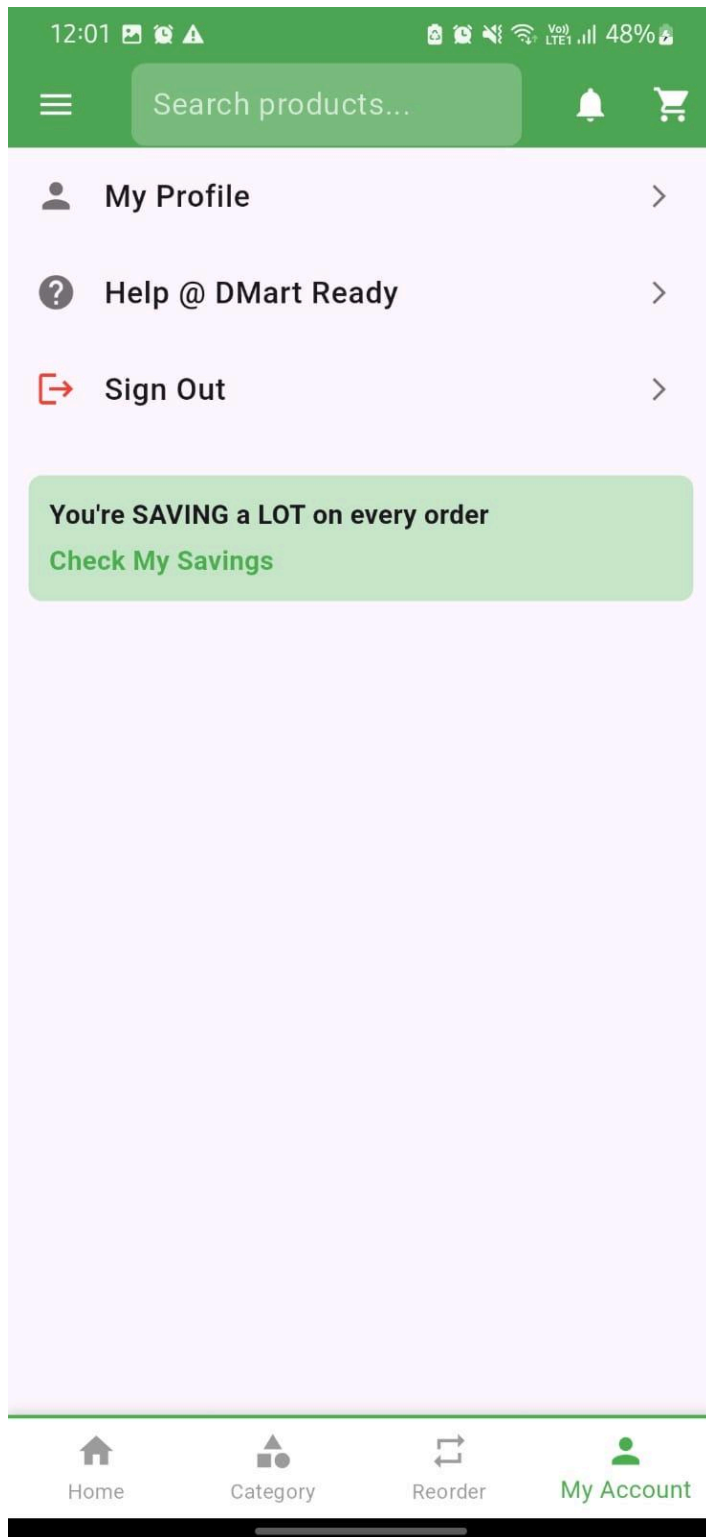
```
    return ListTile(
      leading: Icon(icon, color: Colors.green),
      title: Text(title, style: TextStyle(fontSize: 16)),
      onTap: () {
        Navigator.pop(context); // Close drawer when an item is tapped
      },
    );
  }
}
```

Output:
HomePage:

MyAccount:

Sidebar:

11:49

Hi, Anuprita
400615, Thane (West)

Shop by Category

Help @ Dmart Ready

Refund, Terms and Policies

Frequently Asked Questions

About Us

Version 5.1.9

Home | Category | Reorder | My Account