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Batch B

<div align="center">

Experiment No 2

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AIM: To design Flutter UI by including common widgets.
Theory:
In summary, Flutter widgets are fundamental components in constructing the user interface of a Flutter application.They can be broadly categorized into two types: `StatelessWidget` representing immutable parts of the UI and `StatefulWidget` representing mutable components that can change over time.
Some key Flutter widgets include:
1. Scaffold: The basic structure for a Flutter app, providing layout elements such as AppBar, BottomNavigationBar, and a body for main content.
2. Container: A versatile box model used for layout, padding, margin, decoration, and constraints, capable of containing other widgets.
3. Row & Column: Widgets for arranging child widgets horizontally (Row) or vertically (Column), essential for creating flexible and responsive layouts.
4. Text: Used for displaying text on the screen with support for various styling options like font size, color, and alignment.
5. TextField: Captures user input, such as text, numbers, or passwords, with the `onChanged` property for dynamic updates based on user input.
6. Buttons: Various button widgets like `ElevatedButton` or `TextButton` trigger actions when pressed, providing a means for user interaction.
7. Forms: The `Form` widget manages a group of `TextFormField` widgets, facilitating input validation and submission.
8. Icons: The `Icon` widget displays icons from libraries, enhancing visual elements and conveying meaning through symbols.
Key Design Principles highlighted include:
  ● Consistency: Common widget usage fosters a consistent design language throughout the app.
  ● Responsive Layouts: Widgets like `Row` and `Column` aid in creating responsive and flexible layouts, adapting to different screen sizes.
  ● User Input Handling: `TextField` and `Form` widgets facilitate proper handling, ensuring data integrity and validation.
  ● Interactive Elements: Buttons and icons contribute to interactivity and user engagement within the app.
  ● Visual Styling: The `Container` widget and styling properties of other widgets allow for visual customization and theming.
Hero Card: A hero card typically refers to a prominent or featured card within a user interface, often used in web design or mobile app design. A hero card is usually larger in size compared to other cards and is placed prominently on a page or screen to draw

attention to a specific piece of content, product, or feature. It may contain a title, description, image, and call-to-action button, among other elements.

Card One: "Cardone" could potentially refer to a variety of things depending on the context. In software development or user interface design, it might refer to the first card in a series of cards, or it could be a specific component or module named "CardOne" within a codebase or design system.

Code:
Home_screen.dart

```dart
import 'package:firebase_auth/firebase_auth.dart';
import 'package:flutter/foundation.dart';
import 'package:flutter/material.dart';
import 'package:flutter/widgets.dart';
import 'package:my_project/screens/login_screen.dart';
import 'package:my_project/widgets/add_transaction_form.dart';
import 'package:my_project/widgets/hero_card.dart';
import 'package:my_project/widgets/transactions_cards.dart';

// ignore_for_file:prefer_const_constructors
// ignore_for_file:prefer_const_literals_to_create_immutables
class HomeScreen extends StatefulWidget {
  const HomeScreen({super.key});

  @override
  State<HomeScreen> createState() => _HomeScreenState();
}

class _HomeScreenState extends State<HomeScreen> {
  var isLogoutLoading = false;
  logOut() async {
    setState(() {
      isLogoutLoading = true;
    });
    await FirebaseAuth.instance.signOut();
    Navigator.of(context)
        .pushReplacement(MaterialPageRoute(builder: (context) => LoginView()));

    setState(() {
      isLogoutLoading = false;
    });
```

```dart
  }

  _dialoBuilder(BuildContext context) {
    return showDialog(
        context: context,
        builder: (context) {
          return AlertDialog(
            content: AddTransactionForm(),
          );
        });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      floatingActionButton: FloatingActionButton(
        backgroundColor: Colors.blue.shade900,
        onPressed: (() {
          _dialoBuilder(context);
        }),
        child: Icon(
          Icons.add,
          color: Colors.white,
        ),
      ),
      appBar: AppBar(
        backgroundColor: Colors.blue.shade900,
        title: Text(
          "Hello",
          style: TextStyle(color: Colors.white),
        ),
        actions: [
          IconButton(
            onPressed: () {
              logOut();
            },
            icon: isLogoutLoading
                ? CircularProgressIndicator()
                : Icon(
                    Icons.exit_to_app,
                    color: Colors.white,
```

```
                ))
          ],
        ),
      body: Column(
        children: [
          HeroCard(),
          TransactionsCard(),

        ],
      ),
    );
  }
}


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

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

  @override
  Widget build(BuildContext context) {
    return Container(
      color: Colors.blue.shade900,
      child: Column(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: [
          Padding(
            padding: const EdgeInsets.all(15),
            child: Column(
              crossAxisAlignment: CrossAxisAlignment.start,
              children: [
                Text(
                  "Total Balance",
                  style: TextStyle(
                      fontSize: 18,
                      color: Colors.white,
                      height: 1.2,
                      fontWeight: FontWeight.w600),
```

```dart
          ),
          Text(
            "₹ 582000",
            style: TextStyle(
                fontSize: 50,
                color: Colors.white,
                height: 1.2,
                fontWeight: FontWeight.w600),
          )
        ],
      ),
    ),
    Container(
      padding: EdgeInsets.only(top: 30, bottom: 10, left: 10, right: 10),
      decoration: BoxDecoration(
        borderRadius: BorderRadius.only(
            topLeft: Radius.circular(30), topRight: Radius.circular(30)),
        color: Colors.white,
      ),
      // color: Colors.white,
      child: Row(
        children: [
          CardOne(
            color: Colors.green,
          ),
          SizedBox(
            width: 8,
          ),
          CardOne(
            color: Colors.red,
          ),
        ],
      ),
    )
    ],
   ),
  );
 }
}

class CardOne extends StatelessWidget {
```

```dart
const CardOne({
 super.key,
 required this.color,
});
final Color color;
@override
Widget build(BuildContext context) {
 return Expanded(
  child: Container(
   decoration: BoxDecoration(
     color: color.withOpacity(0.1),
     borderRadius: BorderRadius.circular(10)),
   // color: color.withOpacity(0.1),
   child: Padding(
    padding: const EdgeInsets.all(8.0),
    child: Row(
     children: [
      Column(
       crossAxisAlignment: CrossAxisAlignment.start,
       children: [
        Text(
         "Credit",
         style: TextStyle(color: color, fontSize: 20),
        ),
        Text(
         "₹ 58000",
         style: TextStyle(
           color: color,
           fontSize: 25,
           fontWeight: FontWeight.w600),
        )
       ],
      ),
      Spacer(),
      Padding(
       padding: const EdgeInsets.all(8.0),
       child: Icon(
        Icons.arrow_upward_outlined,
        color: color,
       ),
      )
```

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

Transaction Card.dart
import 'package:flutter/material.dart';
import 'package:font_awesome_flutter/font_awesome_flutter.dart';
import 'package:my_project/utils/icons_list.dart';

class TransactionsCard extends StatelessWidget {
  TransactionsCard({super.key});

// ignore_for_file:prefer_const_literals_to_create_immutables
  var appIcons = AppIcons();
  @override
  Widget build(BuildContext context) {
    return Padding(
      padding: const EdgeInsets.all(15),
      child: Column(
        children: [
          // Padding(
          //    padding: const EdgeInsets.all(15),
          Row(
            children: [
              Text(
                "Recent Transactions",
                style: TextStyle(fontSize: 15, fontWeight: FontWeight.w600),
              )
            ],
          ),
          ListView.builder(
            shrinkWrap: true,
            itemCount: 4,
            physics: NeverScrollableScrollPhysics(),
            itemBuilder: (context, indes) {
              return Padding(
                padding: const EdgeInsets.symmetric(vertical: 4),
```

```dart
child: Container(
  decoration: BoxDecoration(
    color: Colors.white,
    borderRadius: BorderRadius.circular(20),
    boxShadow: [
      BoxShadow(
        offset: Offset(0, 10),
        color: Colors.grey.withOpacity(0.09),
        blurRadius: 10.0,
        spreadRadius: 4.0)
    ]),
  child: ListTile(
    minVerticalPadding: 10,
    contentPadding:
      EdgeInsets.symmetric(horizontal: 10, vertical: 0),
    leading: Container(
      width: 70,
      height: 100,
      child: Container(
        width: 30,
        height: 30,
        decoration: BoxDecoration(
          borderRadius: BorderRadius.circular(15),
          color: Colors.green.withOpacity(0.2)),
        child: Center(
          child: FaIcon(
            appIcons.getExpenseCategoryIcons('home'))),
      ),
    ),
    title: Row(
      children: [
        Expanded(child: Text("Car Rent Oct 2023")),
        Text(
          "₹ 8000",
          style: TextStyle(color: Colors.green),
        )
      ],
    ),
    subtitle: Column(
      mainAxisAlignment: MainAxisAlignment.start,
      crossAxisAlignment: CrossAxisAlignment.start,
```

```dart
                children: [
                  Row(
                    children: [
                      Text(
                        "Balance",
                        style:
                            TextStyle(color: Colors.grey, fontSize: 13),
                      ),
                      Spacer(),
                      Text(
                        "₹ 525",
                        style:
                            TextStyle(color: Colors.grey, fontSize: 13),
                      )
                    ],
                  ),
                  Text(
                    "25 oct 4:51 PM",
                    style: TextStyle(color: Colors.grey),
                  )
                ],
              ),
            ),
          ),
        );
      })
// ),
    ],
  ),
);
  }
}
```
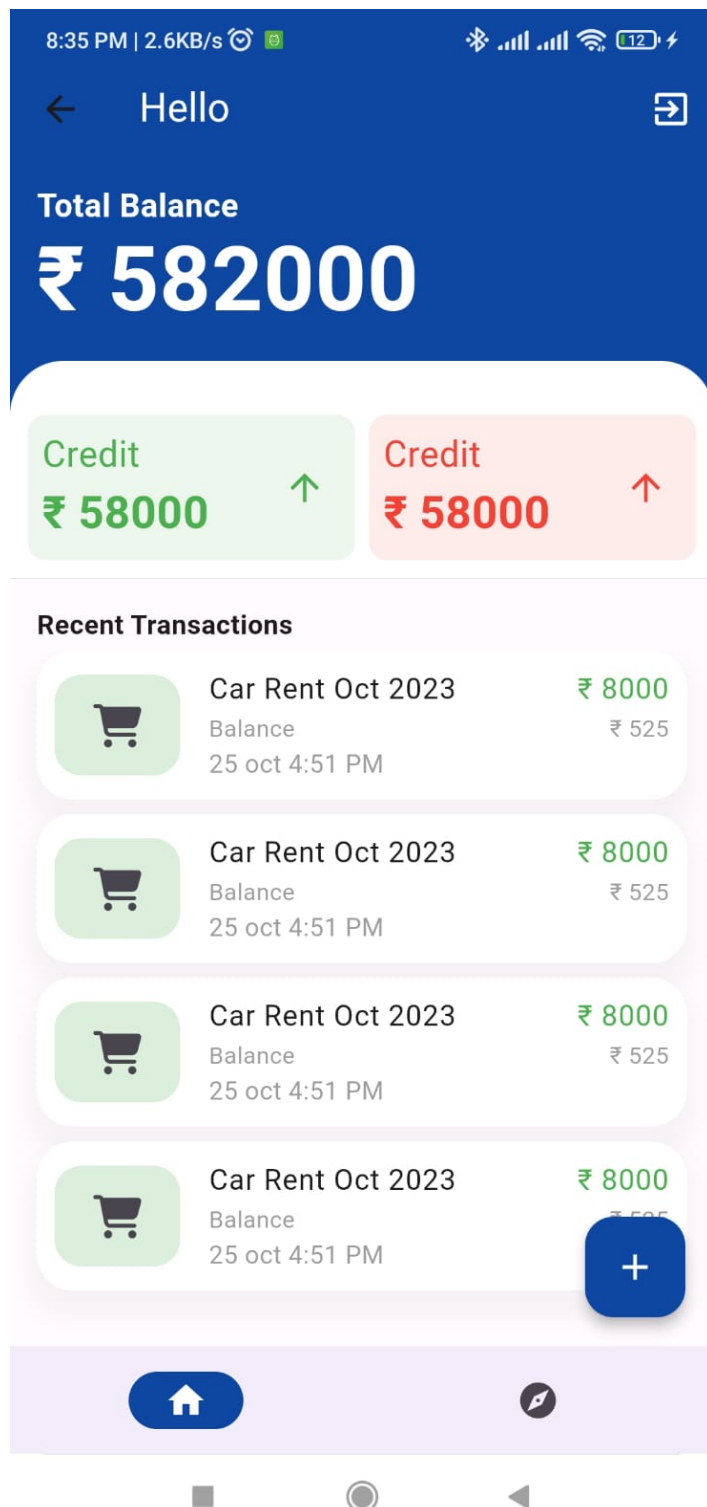
Output:

Conclusion:

implementing common widgets improve user experience, and contribute to the overall success of the application.