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MPL Experiment 2

Experiment No 2

Aim: To design flutter UI by including common widgets.

Theory: In Flutter, widgets are the building blocks of the user interface, and several common widgets play crucial roles in creating engaging and interactive applications. Here's a brief overview of some fundamental Flutter widgets:

1. Container: The most basic building block, a container is a box model that can contain other widgets, allowing you to customize its dimensions, padding, and decoration.

2. Row and Column: These widgets help organize children widgets horizontally (Row) or vertically (Column), facilitating the creation of flexible and responsive layouts.

3. AppBar: AppBar is a material design widget providing a top app bar that typically includes the app's title, leading and trailing icons, and actions.

4. ListView: Used to create scrollable lists of widgets, ListView is versatile for displaying a large number of items efficiently.

5. TextField: Enables users to input text, providing a text editing interface with options for validation, styling, and interaction.

6. RaisedButton and FlatButton: These button widgets create interactive elements for users to trigger actions, with RaisedButton offering a raised appearance and FlatButton a flat design.

7. Image: The Image widget displays images from various sources, supporting both local and network images.

8. Scaffold: A top-level container for an app's visual elements, Scaffold provides a structure that includes an AppBar, body, and other optional features like drawers and bottom navigation.

9. Card: Representing a material design card, this widget displays information in a compact and visually appealing format, often used for grouping related content.

10. GestureDetector: Allows detection of various gestures like taps, drags, and long presses, enabling interactive responses to user input.

11. Stack: A widget that allows children widgets to be overlaid, facilitating complex UI designs by layering widgets on top of each other.

12. FutureBuilder: Ideal for handling asynchronous operations, FutureBuilder simplifies the management of UI updates based on the completion of a Future, making it valuable for fetching and displaying data.

These are just a few of the many widgets available in Flutter, each serving a unique purpose in crafting dynamic and user-friendly interfaces.

Code:

```dart
class MyApp extends StatelessWidget {
  const MyApp({Key? key}) : super(key: key);

  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Kick Bazaar',
      debugShowCheckedModeBanner: false,
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ), // ThemeData
      initialRoute: "login",
      routes: {
        "login": (context) => const MyLogin(),
        '/sneaker': (context) => SneakerPage(
              index: 0, // Provide the required parameters here
              brand: 'Nike',
              model: 'Air Jordan',
              description: 'A description of the sneaker',
              price: 100,
              imageURL: 'assets/sneaker_image.jpg',
              sneakerList: [],
            ), // SneakerPage
      },
      home: const NavigationPage(),
    ); // MaterialApp
  }
```

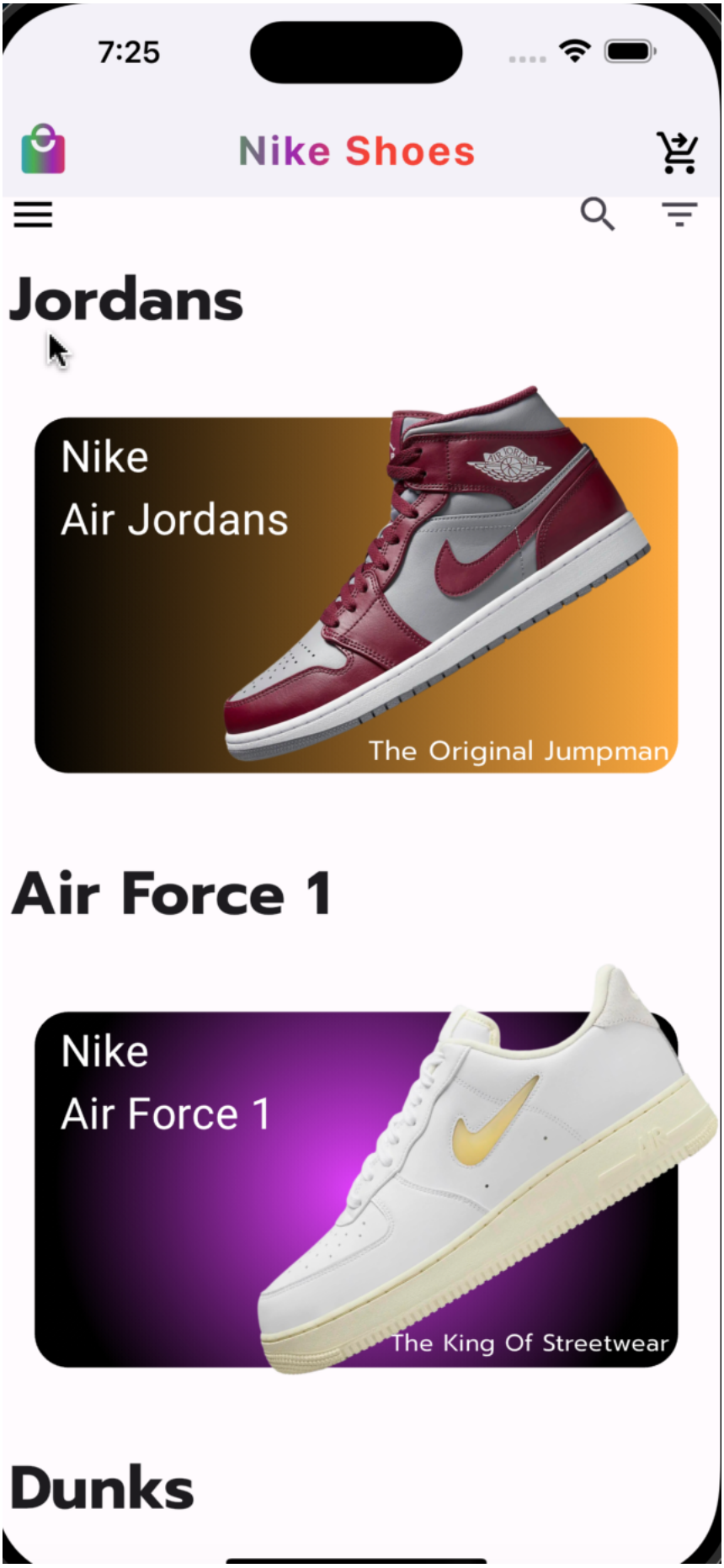
```dart
class _NavigationPageState extends State<NavigationPage> {
  Widget build(BuildContext context) {
                    onPressed: () {
                      Navigator.push(
                        context,
                        MaterialPageRoute(
                            builder: (context) => const CheckoutPage()), /
                      );
                    },
                    icon: const Icon(
                      Icons.shopping_cart_checkout_rounded,
                      color: Colors.black,
                      size: 30,
                    )), // Icon // IconButton
                ), // Padding
                if (basket.isNotEmpty)
                  Padding(
                    padding: const EdgeInsets.only(right: 6),
                    child: CircleAvatar(
                      backgroundColor: Colors.red,
                      radius: 8.2,
                      child: Text(
                        basket.length.toString(),
                        style: const TextStyle(fontSize: 10),
                      ), // Text
                    ), // CircleAvatar
                  ) // Padding
                else
                  const Center()
```

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

  @override
  State<NavigationPage> createState() => _NavigationPageState();
}

class _NavigationPageState extends State<NavigationPage> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        backgroundColor: Colors.white,
        title: Text(
          "Nike Shoes",
          style: TextStyle(
            foreground: Paint()
              ..shader = const LinearGradient(
                colors: [
                  Colors.blue,
                  Colors.green,
                  Colors.purple,
                  Colors.red,
                ], // Replace with your gradient colors
              ).createShader(const Rect.fromLTWH( // LinearGradient
                  90.0, 100.0, 130.0, 50.0)), // Adjust the Rect size as needed
            fontWeight: FontWeight.bold,
            letterSpacing: 2,
            fontSize: 24,
```

Output:


7:25
Nike Shoes
Jordans
Nike
Air Jordans
The Original Jumpman
Air Force 1
Nike
Air Force 1
The King Of Streetwear
Dunks