<center>MPL Experiment 5</center>

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Aim: To apply navigation, routing and gestures in Flutter App.

Theory:

Navigation & Routing:
Flutter provides multiple ways to navigate between screens (pages):

1. **Using Navigator.push() and Navigator.pop()**
   Push a new screen onto the stack and pop it to return to the previous one.

2. **Named Routes**
   Define routes in MaterialApp and navigate using Navigator.pushNamed().

3. **GoRouter Package**
   A declarative approach to handle navigation more efficiently.

Gestures:
Flutter's GestureDetector and InkWell widgets help in detecting user interactions like taps, swipes, and long presses. Some common gestures include:

- **onTap:** Detects a tap event.
- **onDoubleTap:** Recognizes double taps.
- **onLongPress:** Detects a long press on a widget.
- **onHorizontalDrag & onVerticalDrag:** Detects drag/swipe motions.

Steps:
Step 1: Create a Flutter project and define multiple screens.
Step 2: Set up named routes in `MaterialApp`.
Step 3: Implement navigation using `Navigator.push()` and `Navigator.pushNamed()`.
Step 4: Use `GestureDetector` to detect taps, swipes, and long presses.
Step 5: Add buttons or swipes to navigate between screens.

Code:

main.dart:

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

import 'package:firebase_core/firebase_core.dart';

import 'screens/login.dart';



void main() async {
```

```dart
  WidgetsFlutterBinding.ensureInitialized();

  await Firebase.initializeApp();

  runApp(MyApp()); // Use MyApp instead of directly calling MaterialApp

}


class MyApp extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

    return MaterialApp(

      debugShowCheckedModeBanner: false, // Removes the debug banner

      home: LoginPage(), // Set LoginPage as the initial screen

    );

  }

}
```

bottom navbar:

```dart
void _onItemTapped(int index) {

    if (index == 1) {

      // Navigate to Wishlist when Wishlist icon is tapped

      Navigator.pushReplacement(

        context,

        MaterialPageRoute(builder: (context) => WishListPage()),

      );

    } else if (index == 0) {

      // Navigate to Home when Home icon is tapped

      Navigator.pushReplacement(

        context,

        MaterialPageRoute(builder: (context) => HomePage()),

      );

    } else if (index == 2) {

      // Navigate to Categories when Categories icon is tapped

      Navigator.pushReplacement(

        context,
```

```
          MaterialPageRoute(builder: (context) => CategoriesPage()),
      );
    } else if (index == 4) {
      // Navigate to Profile when Profile icon is tapped
      Navigator.pushReplacement(
        context,
        MaterialPageRoute(builder: (context) => ProfilePage()),
      );
    } else {
      setState(() {
        _selectedIndex = index;
      });
    }
}
```
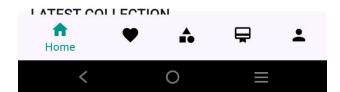
Output:

MEN   WOMEN   KIDS

Topwear

Bottomwear

Footwear

Bestsellers

Accessories

Relaxed Shirt
₹899

Marvel T-shirt
₹999

Cotton Washed
Denim Jacket
₹1699

Batman T-shirt
₹899

Categories

EESHA CHAVAN
(MEMBER)

Profile	›
My Orders	›
Address Book	›
Gift Voucher	›
TSS Points (Active TSS Points: 0)	›
TSS Money (Available : ₹ 0)	›
My Membership	›
Delete My Account	›

LOG OUT