

EXPERIMENT NO:05

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

Theory:

Navigation, Routing, and Gestures in Flutter App Development

Flutter provides a powerful and flexible way to manage navigation, routing, and user gestures in mobile applications. Understanding these concepts is crucial for creating smooth, user-friendly, and efficient applications. Below is a detailed explanation of each aspect.

Navigation in Flutter

Navigation in Flutter refers to moving from one screen (or page) to another within the application. Flutter uses the concept of a **Navigator** and **Routes** to handle navigation.

Navigator Class

Flutter provides various methods for navigation:

The Navigator class manages a stack of routes (screens) and allows transitioning between them. Flutter uses a stack-based approach where each new screen is pushed onto the stack, and when you go back, it is popped from the stack.

Basic Navigation Methods

- **push()**: Adds a new route to the navigation stack.
- **pop()**: Removes the current route and returns to the previous screen.
- **pushReplacement()**: Replaces the current route with a new route.
- **pushAndRemoveUntil()**: Pushes a new route and removes all previous routes until a condition is met.

\

Code:**Login.dart:**

```
import 'package:flutter/material.dart';
import 'home.dart'; // Import the HomePage file

class LoginPage extends StatelessWidget {
  final TextEditingController emailController = TextEditingController();
  final TextEditingController passwordController = TextEditingController();

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.white,
      appBar: AppBar(
        backgroundColor: Colors.white,
        elevation: 0,
        leading: IconButton(
          icon: Icon(Icons.arrow_back, color: Colors.black),
          onPressed: () {
            Navigator.pop(context);
          },
        ),
      ),
      body: Padding(
        padding: const EdgeInsets.symmetric(horizontal: 20),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            Image.asset('assets/logo.png', width: 120, height: 120),
            SizedBox(height: 20),
            Text(
              "Welcome Back!",
              style: TextStyle(fontSize: 22, fontWeight: FontWeight.bold),
            ),
            SizedBox(height: 10),
            Text(
              "Login to continue",
              style: TextStyle(fontSize: 14, color: Colors.black54),
            ),
            SizedBox(height: 30),
          ],
        ),
      ),
    );
  }
}
```

```
TextField(
  controller: emailController,
  decoration: InputDecoration(
    labelText: "Email",
    border: OutlineInputBorder(),
  ),
),
 SizedBox(height: 15),
 TextField(
  controller: passwordController,
  obscureText: true,
  decoration: InputDecoration(
    labelText: "Password",
    border: OutlineInputBorder(),
  ),
),
 SizedBox(height: 20),
 ElevatedButton(
   onPressed: () {
     String email = emailController.text;
     String password = passwordController.text;

     if (email.isNotEmpty && password.isNotEmpty) {
       Navigator.pushReplacement(
         context,
         MaterialPageRoute(builder: (context) => HomePage()),
       );
     } else {
       ScaffoldMessenger.of(context).showSnackBar(
         SnackBar(content: Text("Please enter email and password")),
       );
     }
   },
   child: Text("Login"),
   style: ElevatedButton.styleFrom(
     backgroundColor: Colors.red,
     foregroundColor: Colors.white,
     minimumSize: Size(double.infinity, 50),
   ),
 ),
```

```

        SizedBox(height: 15),
        TextButton(
          onPressed: () {},
          child: Text(
            "Forgot Password?",
            style: TextStyle(color: Colors.red),
          ),
        ),
        SizedBox(height: 20),
        Text("Or login with"),
        SizedBox(height: 10),
        ElevatedButton.icon(
          onPressed: () {},
          icon: Image.asset('assets/Google.png', width: 24, height: 24),
          label: Text("Login with Google"),
          style: ElevatedButton.styleFrom(
            backgroundColor: Colors.white,
            foregroundColor: Colors.black,
            minimumSize: Size(double.infinity, 50),
            side: BorderSide(color: Colors.black26),
          ),
        ),
      ],
    ),
  ),
);
}
}

```

After clicking on login button , it will navigate to BookMyShow Home Page

Home.dart:

```

import 'package:flutter/material.dart';

class HomePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Welcome Guest!'),

```

```

actions: [
  IconButton(icon: Icon(Icons.search), onPressed: () {}),
  IconButton(icon: Icon(Icons.qr_code), onPressed: () {}),
],
),
body: SingleChildScrollView(
  child: Column(
    crossAxisAlignment: CrossAxisAlignment.start,
    children: [
      // Location Bar
      Padding(
        padding: const EdgeInsets.symmetric(horizontal: 15, vertical: 5),
        child: Text("Navi Mumbai", style: TextStyle(color: Colors.red)),
      ),

      // Location Enable Bar
      Container(
        width: double.infinity,
        color: Colors.blue,
        padding: EdgeInsets.all(10),
        child: Text(
          "Enable location to discover nearby events, movies, and more.",
          style: TextStyle(color: Colors.white),
          textAlign: TextAlign.center,
        ),
      ),

      SizedBox(height: 10),

      // Categories (Movies, Music Shows, etc.)
      SingleChildScrollView(
        scrollDirection: Axis.horizontal,
        padding: EdgeInsets.symmetric(horizontal: 10),
        child: Row(
          children: [
            _categoryIcon(Icons.movie, "Movies"),
            _categoryIcon(Icons.music_note, "Music Shows"),
            _categoryIcon(Icons.theater_comedy, "Comedy Shows"),
            _categoryIcon(Icons.event, "Plays"),
          ],
        ),
      ),
    ],
  ),
),

```

```

    ),
  ),

  SizedBox(height: 20),
  Padding(
    padding: const EdgeInsets.symmetric(horizontal: 10),
    child: Row(
      children: [
        Expanded(child: Image.asset('assets/event1.jpg', fit: BoxFit.cover)),
        SizedBox(width: 10),
        Expanded(child: Image.asset('assets/event2.jpg', fit: BoxFit.cover)),
      ],
    ),
  ),
),

```

```

// Recommended Movies Section
Padding(
  padding: const EdgeInsets.symmetric(horizontal: 15),
  child: Row(
    mainAxisAlignment: MainAxisAlignment.spaceBetween,
    children: [
      Text("Recommended Movies", style: TextStyle(fontSize: 18, fontWeight:
FontWeight.bold)),
      Text("See All >", style: TextStyle(color: Colors.red)),
    ],
  ),
),

```

```

SizedBox(height: 10),
SingleChildScrollView(
  scrollDirection: Axis.horizontal,
  padding: EdgeInsets.symmetric(horizontal: 10),
  child: Row(
    children: [
      _movieCard('assets/movie1.jpg', 'PROMOTED'),
      _movieCard('assets/movie2.jpg', ""),
      _movieCard('assets/movie3.jpg', ""),
    ],
  ),
),

```

```

    ),
  ],
),
),
bottomNavigationBar: BottomNavigationBar(
  selectedItemColor: Colors.red,
  unselectedItemColor: Colors.black54,
  items: [
    BottomNavigationBarItem(icon: Icon(Icons.home), label: "Home"),
    BottomNavigationBarItem(icon: Icon(Icons.movie), label: "Movies"),
    BottomNavigationBarItem(icon: Icon(Icons.event), label: "Live Events"),
    BottomNavigationBarItem(icon: Icon(Icons.person), label: "Profile"),
  ],
),
);
}

```

```

Widget _categoryIcon(IconData icon, String label) {

```

```

  return Column(
    children: [
      Icon(icon, size: 40),
      SizedBox(height: 5),
      Text(label, style: TextStyle(fontSize: 14)),
    ],

```

```

Widget _movieCard(String imagePath, String tag) {

```


```


return Padding(
  padding: const EdgeInsets.only(right: 10),
  child: Column(
    children: [
      Stack(
        children: [
          Image.asset(imagePath, width: 100, height: 150),
          if (tag.isNotEmpty)
            Positioned(
              top: 5,
              left: 5,
              child: Container(
                color: Colors.red,
                padding: EdgeInsets.symmetric(horizontal: 5, vertical: 2),
                child: Text(tag, style: TextStyle(color: Colors.white, fontSize: 10)),

```

```
),  
,  
l,  
,  
l,  
,  
);  
}  
}
```

OUTPUT:






Welcome Back!


Login to continue


Login

[Forgot Password?](#)

Or login with

 Login with Google





Welcome Back!

Login to continue


Email

Password

Login

[Forgot Password?](#)

Or login with

 Login with Google

Click on Login->Home

