

Flutter Tutorial: Creating an App with Bottom Navigation and ViewPager

In this tutorial, we will learn how to create a Flutter app with a bottom navigation bar and a ViewPager to navigate between different screens. This will allow users to easily switch between various sections or features within the app.

Prerequisites

Before we begin, ensure you have Flutter installed on your machine. You can follow the official installation guide [here](#).

Creating a New Flutter Project

Let's start by creating a new Flutter project. Open your terminal or command prompt and execute the following commands:

```
flutter create bottom_navigation_viewpager
cd bottom_navigation_viewpager
```

Adding Dependencies

We'll need to add dependencies for the ViewPager and bottom navigation bar. Open your `pubspec.yaml` file and add the following dependencies:

```
dependencies:
  flutter:
    sdk: flutter
  flutter_swiper: ^1.1.6 # For ViewPager
  cupertino_icons: ^1.0.2
```

Save the file and run `flutter pub get` in your terminal to install the dependencies.

Creating Screens

Create separate Dart files for each screen you want to include in your app. For demonstration purposes, let's create three screens: HomeScreen, ProfileScreen, and SettingsScreen.

Home Screen

Create a file named `home_screen.dart` and add the following code:

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

class HomeScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
```

```
        title: Text('Home'),
      ),
      body: Center(
        child: Text('Home Screen'),
      ),
    );
  }
}
```

Profile Screen

Create a file named `profile_screen.dart` and add the following code:

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

class ProfileScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Profile'),
      ),
      body: Center(
        child: Text('Profile Screen'),
      ),
    );
  }
}
```

Settings Screen

Create a file named `settings_screen.dart` and add the following code:

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

class SettingsScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Settings'),
      ),
      body: Center(
        child: Text('Settings Screen'),
      ),
    );
  }
}
```

Implementing Bottom Navigation Bar

Now, let's implement the bottom navigation bar in the `main.dart` file.

```
import 'package:flutter/material.dart';
import 'package:bottom_navigation_viewpager/home_screen.dart';
import 'package:bottom_navigation_viewpager/profile_screen.dart';
import 'package:bottom_navigation_viewpager/settings_screen.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Bottom Navigation ViewPager',
      theme: ThemeData(
        primarySwatch: Colors.blue,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: BottomNavigation(),
    );
  }
}

class BottomNavigation extends StatefulWidget {
  @override
  _BottomNavigationState createState() => _BottomNavigationState();
}

class _BottomNavigationState extends State<BottomNavigation> {
  int _selectedIndex = 0;

  final List<Widget> _screens = [
    HomeScreen(),
    ProfileScreen(),
    SettingsScreen(),
  ];

  void _onItemTapped(int index) {
    setState(() {
      _selectedIndex = index;
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: _screens[_selectedIndex],
      bottomNavigationBar: BottomNavigationBar(
        currentIndex: _selectedIndex,
```

```

onTap: _onItemTapped,
items: [
  BottomNavigationBarItem(
    icon: Icon(Icons.home),
    label: 'Home',
  ),
  BottomNavigationBarItem(
    icon: Icon(Icons.person),
    label: 'Profile',
  ),
  BottomNavigationBarItem(
    icon: Icon(Icons.settings),
    label: 'Settings',
  ),
],
),
);
}
}

```

Adding ViewPager

We'll use the `flutter_swiper` package to implement ViewPager functionality.

```

import 'package:flutter/material.dart';
import 'package:flutter_swiper/flutter_swiper.dart';
import 'package:bottom_navigation_viewpager/home_screen.dart';
import 'package:bottom_navigation_viewpager/profile_screen.dart';
import 'package:bottom_navigation_viewpager/settings_screen.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Bottom Navigation ViewPager',
      theme: ThemeData(
        primarySwatch: Colors.blue,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: BottomNavigation(),
    );
  }
}

class BottomNavigation extends StatefulWidget {
  @override
  _BottomNavigationState createState() => _BottomNavigationState();
}

```

```

class _BottomNavigationState extends State<BottomNavigation> {
  int _selectedIndex = 0;

  final List<Widget> _screens = [
    HomeScreen(),
    ProfileScreen(),
    SettingsScreen(),
  ];

  void _onItemTapped(int index) {
    setState(() {
      _selectedIndex = index;
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Swiper(
        itemBuilder: (BuildContext context, int index) {
          return _screens[index];
        },
        itemCount: _screens.length,
        loop: false,
        index: _selectedIndex,
        onIndexChanged: _onItemTapped,
      ),
      bottomNavigationBar: BottomNavigationBar(
        currentIndex: _selectedIndex,
        onTap: _onItemTapped,
        items: [
          BottomNavigationBarItem(
            icon: Icon(Icons.home),
            label: 'Home',
          ),
          BottomNavigationBarItem(
            icon: Icon(Icons.person),
            label: 'Profile',
          ),
          BottomNavigationBarItem(
            icon: Icon(Icons.settings),
            label: 'Settings',
          ),
        ],
      ),
    );
  }
}

```

Conclusion

Congratulations! You have successfully created a Flutter app with a bottom navigation bar and a

ViewPager to navigate between different screens. Feel free to customize and extend this app according to your requirements. Happy coding!