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SAP: 49098
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[Q.1]

```dart
import 'package:flutter/material.dart';
void main() {

  runApp(MyApp());

}
 class MyApp extends StatelessWidget {

  @override

  Widget build(BuildContext context) {

   return MaterialApp(

     title: 'Flutter Demo Features',

     theme: ThemeData(primarySwatch: Colors.blue),

     home: MainPage(),

   );

  }

}


class MainPage extends StatefulWidget {

  @override

  _MainPageState createState() => _MainPageState();
```

```dart
}

class _MainPageState extends State<MainPage> with SingleTickerProviderStateMixin {
  int _selectedIndex = 0;
  late TabController _tabController;

  @override
  void initState() {
    super.initState();
    _tabController = TabController(length: 2, vsync: this);
  }

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

  static List<Widget> _bottomPages = <Widget>[
    TabPage(),
    ListViewPage(),
  ];

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Flutter UI Features'),
```

```dart
      bottom: TabBar(
        controller: _tabController,
        tabs: [
          Tab(icon: Icon(Icons.explore), text: 'Tab 1'),
          Tab(icon: Icon(Icons.star), text: 'Tab 2'),
        ],
      ),
    ),
    drawer: Drawer(
      child: ListView(
      children: [
          DrawerHeader(child: Text('Menu Header')),
          ListTile(title: Text('Go to Hero Page'), onTap: () {
            Navigator.push(context, MaterialPageRoute(builder: (_) => HeroStartPage()));
          }),
          ListTile(title: Text('Go to ListView Page'), onTap: () {
            Navigator.push(context, MaterialPageRoute(builder: (_) => ListViewPage()));
          }),
        ],
      ),
    ),
    body: TabBarView(
      controller: _tabController,
      children: [
        _bottomPages[_selectedIndex],
        Center(child: Text('Tab 2 Content')),
      ],
    ),
    bottomNavigationBar: BottomAppBar(
```

```dart
      shape: CircularNotchedRectangle(),

      notchMargin: 6.0,

      child: BottomNavigationBar(

        currentIndex: _selectedIndex,

        onTap: _onItemTapped,

        items: [

          BottomNavigationBarItem(icon: Icon(Icons.home), label: 'Home'),

          BottomNavigationBarItem(icon: Icon(Icons.list), label: 'List'),

        ],

      ),

    ),

    floatingActionButton: FloatingActionButton(

      onPressed: () {},

      child: Icon(Icons.add),

    ),

    floatingActionButtonLocation:  FloatingActionButtonLocation.centerDocked,

  );

 }

}


class HeroStartPage extends StatelessWidget {

 @override

 Widget build(BuildContext context) {

  return Scaffold(

    appBar: AppBar(title: Text('Hero Start Page')),

    body: Center(

      child: GestureDetector(

        child: Hero(
```

```dart
          tag: 'demo-hero',

          child: Image.asset('assets/hero_image.png', width: 100),

        ),

        onTap: () {

          Navigator.push(context, MaterialPageRoute(builder: (_) => HeroEndPage()));

        },

      ),

    ),

  );

 }

}


class HeroEndPage extends StatelessWidget {

 @override

 Widget build(BuildContext context) {

  return Scaffold(

    appBar: AppBar(title: Text('Hero End Page')),

    body: Center(

      child: Hero(

        tag: 'demo-hero',

        child: Image.asset('assets/hero_image.png',  width: 300),

      ),

    ),

  );

 }

}


// Short ListView Example
```

```dart
class ListViewPage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: Text('Simple List')),
      body: ListView(
        children: [
          ListTile(title: Text("Item 1")),
          ListTile(title: Text("Item 2")),
          ListTile(title: Text("Item 3")),
        ],
      ),
    );
  }
}


class TabPage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Center(
      child: Text('Tab 1 Content'),
    );
  }
}
```

SCREENSHOT:

Tab 1

Tab 2

Tab 1 Content

+

Home

BOTTOM OVERFLOWED BY 2.0 PIXELS

BOTTOM OVERFLOWED BY 2.0 PIXELS