

PARSHVANATH CHARITABLE TRUST'S

A. P. SHAH INSTITUTE OF TECHNOLOGY

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Department of Information Technology

Academic Year: 2024-25

Semester: VI

Class / Branch / Div: TE- IT B

Subject: MAD & PWA Lab

Name of Instructor: Prof. Manjusha Kashilkar

Name of Student: Chirag Malde

Student ID: 22104186

Roll No. 17

Date of Submission: 10/02/25

Experiment No.:5

Aim: To apply navigation and routing in Flutter App.

Prerequisites: Android studio, flutter SDK_.

Problem Statement: To develop a flutter app with two screens, screen-1 should navigate to screen-2.

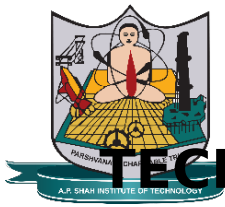
Software: Android studio, flutter SDK_.

Code:

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

```
void main() => runApp(MyApp());
```

```
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      title: 'Country List',  
      theme: ThemeData(  
        primarySwatch: Colors.blue,  
      ),  
      home: MyHomePage(title: 'Country List'),  
      routes: {  
        '/germany': (context) => GermanyPage(),  
        '/india': (context) => IndiaPage(),  
        '/france': (context) => FrancePage(),  
      },  
    );  
  }  
}
```



```
'/belgium': (context) => BelgiumPage(),
```

```
'/canada': (context) => CanadaPage(),
```

```
},
```

```
);
```

```
}
```

```
}
```

```
class MyHomePage extends StatelessWidget {
```

```
  MyHomePage({Key? key, required this.title}) : super(key: key);
```

```
  final String title;
```

```
  @override
```

```
  Widget build(BuildContext context) {
```

```
    return Scaffold(
```

```
      backgroundColor: Colors.teal,
```

```
      appBar: AppBar(
```

```
        title: Text("Country List"),
```

```
        backgroundColor: Colors.black,
```

```
        foregroundColor: Colors.white,
```

```
      ),
```

```
      body: ListView(
```

```
        padding: const EdgeInsets.all(12.0),
```

```
        children: <Widget>[
```

```
          CountryCard(
```

```
            name: "Germany",
```

```
            description:
```

```
            "Germany is famous for its rich history, innovative engineering, beer culture, Oktoberfest, classical music, and landmarks like the Brandenburg Gate.",
```

```
            currency: "Euro (EUR)",
```

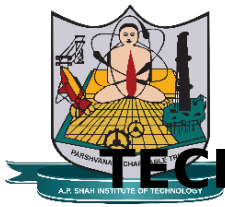


image: "assets/images/Germany.png",

routeName: '/germany',

),

CountryCard(

name: "India",

description:

"India is famous for its diverse culture, rich history, iconic landmarks like the Taj Mahal, vibrant festivals, Bollywood, spices, and its delicious cuisine.",

currency: "Indian Rupee (INR)",

image: "assets/images/India.png",

routeName: '/india',

),

CountryCard(

name: "France",

description:

"France is famous for its rich history, iconic landmarks like the Eiffel Tower, world-class cuisine, fine wine, fashion, art, and its romantic culture.",

currency: "Euro (EUR)",

image: "assets/images/France.png",

routeName: '/france',

),

CountryCard(

name: "Belgium",

description:

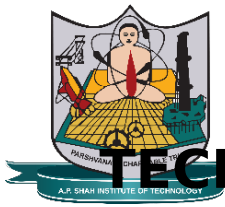
"Belgium is famous for its delicious chocolates, beer, waffles, medieval architecture, and being the headquarters of the European Union and NATO.",

currency: "Euro (EUR)",

image: "assets/images/Belgium.jpeg",

routeName: '/belgium',

),



CountryCard(

name: "Canada",

description:

"Canada is famous for its stunning natural landscapes, multiculturalism, maple syrup, ice hockey, and iconic landmarks like Niagara Falls and the CN Tower.",

currency: "Canadian Dollar (CAD)",

image: "assets/images/Canada.png",

routeName: '/canada',

),

],

),

);

}

}

```
class CountryCard extends StatelessWidget {
```

```
  final String name;
```

```
  final String description;
```

```
  final String currency;
```

```
  final String image;
```

```
  final String routeName;
```

```
  CountryCard({
```

```
    required this.name,
```

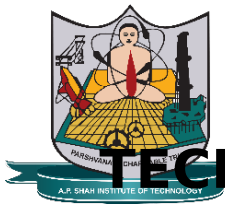
```
    required this.description,
```

```
    required this.currency,
```

```
    required this.image,
```

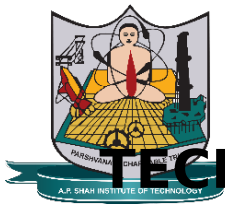
```
    required this.routeName,
```

```
  });
```



@override

```
Widget build(BuildContext context) {  
  return GestureDetector(  
    onTap: () {  
      Navigator.pushNamed(context, routeName);  
    },  
    child: Container(  
      padding: EdgeInsets.all(5),  
      height: 180,  
      child: Card(  
        color: Colors.blueGrey,  
        child: Row(  
          mainAxisAlignment: MainAxisAlignment.spaceEvenly,  
          children: <Widget>[  
            Image.asset(  
              image,  
              height: 80,  
              width: 80,  
              fit: BoxFit.contain,  
            ),  
            Expanded(  
              child: Container(  
                padding: EdgeInsets.all(5),  
                child: Column(  
                  mainAxisAlignment: MainAxisAlignment.spaceEvenly,  
                  children: <Widget>[  
                    Text(  
                      name,
```



```
style: TextStyle(fontWeight: FontWeight.bold),
```

```
),
```

```
Text(description),
```

```
Text("Currency: " + currency),
```

```
],
```

```
),
```

```
),
```

```
),
```

```
],
```

```
),
```

```
),
```

```
),
```

```
);
```

```
}
```

```
}
```

```
// Country Detail Pages with "Home Page" button added
```

```
class GermanyPage extends StatelessWidget {
```

```
@override
```

```
Widget build(BuildContext context) {
```

```
return Scaffold(
```

```
  appBar: AppBar(title: Text("Germany")),
```

```
  body: CountryDetailContent(
```

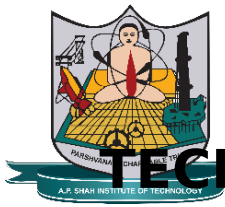
```
    name: "Germany",
```

```
    description:
```

```
    "Germany is famous for its rich history, innovative engineering, beer culture,  
    Oktoberfest, and landmarks like the Brandenburg Gate.",
```

```
    currency: "Euro (EUR)",
```

```
    image: "assets/images/Germany.png",
```



),

);

}

}

```
class IndiaPage extends StatelessWidget {
```

```
@override
```

```
Widget build(BuildContext context) {
```

```
  return Scaffold(
```

```
    appBar: AppBar(title: Text("India")),
```

```
    body: CountryDetailContent(
```

```
      name: "India",
```

```
      description:
```

```
      "India is famous for its diverse culture, rich history, iconic landmarks like the Taj Mahal, vibrant festivals, Bollywood, spices, and its delicious cuisine.",
```

```
      currency: "Indian Rupee (INR)",
```

```
      image: "assets/images/India.png",
```

```
    ),
```

```
  );
```

```
}
```

```
}
```

```
class FrancePage extends StatelessWidget {
```

```
@override
```

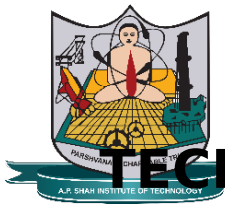
```
Widget build(BuildContext context) {
```

```
  return Scaffold(
```

```
    appBar: AppBar(title: Text("France")),
```

```
    body: CountryDetailContent(
```

```
      name: "France",
```



description:

"France is famous for its rich history, iconic landmarks like the Eiffel Tower, world-class cuisine, fine wine, fashion, art, and its romantic culture.",

currency: "Euro (EUR)",

image: "assets/images/France.png",

),

);

}

}

```
class BelgiumPage extends StatelessWidget {
```

```
@override
```

```
Widget build(BuildContext context) {
```

```
return Scaffold(
```

```
  appBar: AppBar(title: Text("Belgium")),
```

```
  body: CountryDetailContent(
```

```
    name: "Belgium",
```

```
    description:
```

```
    "Belgium is famous for its delicious chocolates, beer, waffles, medieval  
    architecture, and being the headquarters of the European Union and NATO.",
```

```
    currency: "Euro (EUR)",
```

```
    image: "assets/images/Belgium.jpeg",
```

```
  ),
```

```
);
```

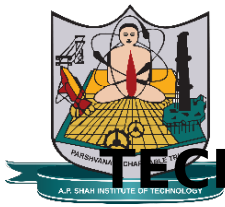
```
}
```

```
}
```

```
class CanadaPage extends StatelessWidget {
```

```
@override
```

```
Widget build(BuildContext context) {
```

```
return Scaffold(  
  appBar: AppBar(title: Text("Canada")),  
  body: CountryDetailContent(  
    name: "Canada",  
    description:  
      "Canada is famous for its stunning natural landscapes, multiculturalism, maple  
      syrup, ice hockey, and iconic landmarks like Niagara Falls and the CN Tower.",  
    currency: "Canadian Dollar (CAD)",  
    image: "assets/images/Canada.png",  
  ),  
);  
}
```

```
// Common widget for displaying country details with "Home Page" button
```

```
class CountryDetailContent extends StatelessWidget {
```

```
  final String name;
```

```
  final String description;
```

```
  final String currency;
```

```
  final String image;
```

```
  CountryDetailContent({
```

```
    required this.name,
```

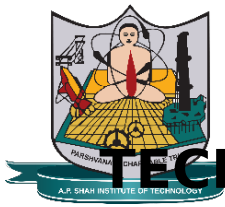
```
    required this.description,
```

```
    required this.currency,
```

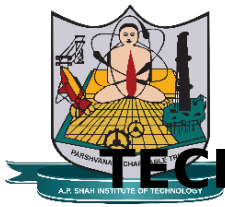
```
    required this.image,
```

```
  });
```

```
@override
```



```
Widget build(BuildContext context) {  
  return SingleChildScrollView(  
    // Wrap Column with SingleChildScrollView  
    child: Padding(  
      padding: const EdgeInsets.all(16.0),  
      child: Column(  
        crossAxisAlignment: CrossAxisAlignment.start,  
        children: <Widget>[  
          Image.asset(  
            image,  
            height: 200,  
            width: double.infinity,  
            fit: BoxFit.cover,  
          ),  
          SizedBox(height: 16),  
          Text(  
            name,  
            style: TextStyle(fontSize: 24, fontWeight: FontWeight.bold),  
          ),  
          SizedBox(height: 8),  
          Text(description, style: TextStyle(fontSize: 16)),  
          SizedBox(height: 8),  
          Text("Currency: " + currency, style: TextStyle(fontSize: 16)),  
          SizedBox(height: 16),  
          Center(  
            child: ElevatedButton(  
              onPressed: () {  
                Navigator.pop(context);  
              },
```



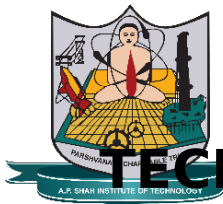
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```
child: Text("Home Page"),
style: ElevatedButton.styleFrom(
padding: EdgeInsets.symmetric(horizontal: 20, vertical: 12),
textStyle: TextStyle(fontSize: 18),
backgroundColor: Colors.blue,
),
),
),
),
),
),
),
),
);
}
```

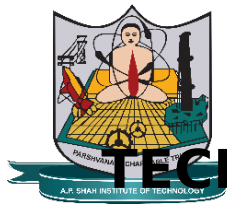


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Output:

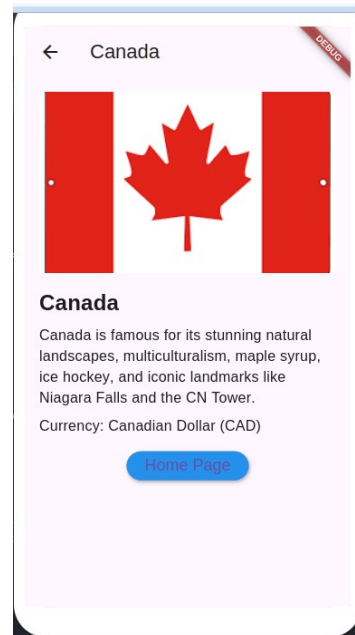
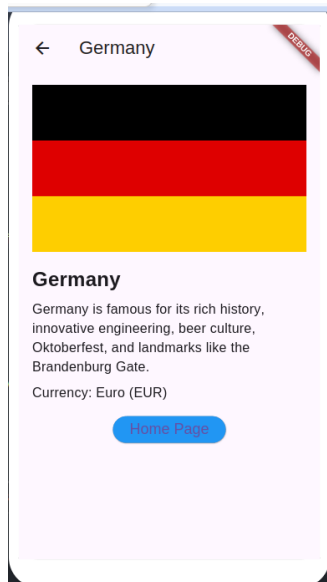
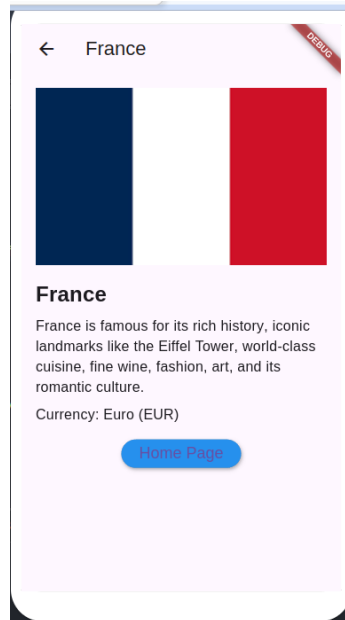
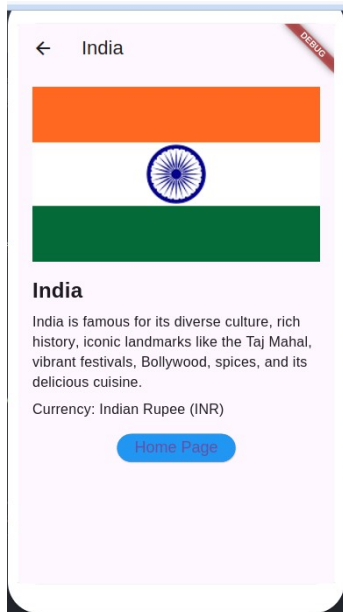


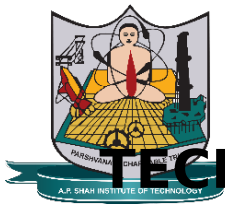


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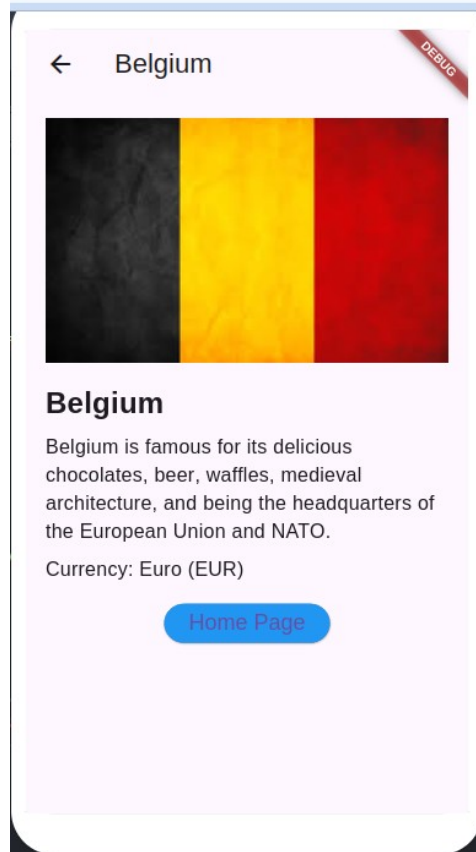




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Conclusion: In this experiment, we learned how to implement navigation and routing between screens in a Flutter app. We explored the use of Navigator.push to navigate from one screen to another.