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Experiment 5
AIM: To apply navigation, routing and gestures in Flutter App

Theory:

In Flutter, applying navigation, routing, and gestures are essential aspects of creating a smooth and intuitive user experience in your app. Let's break down each of these concepts:
Navigation and Routing:

- Navigation in Flutter involves moving between different screens or "routes" within your app.
- Routing is the mechanism by which you define and manage these routes.
- Flutter provides a Navigator class to handle navigation and route management.
- You can use named routes to define the routes in your app, making it easier to navigate between them.
- Navigation and routing are crucial for maintaining a smooth user flow and organizing the content of your app effectively.

Gestures:

- Gestures refer to user interactions such as tapping, swiping, pinching, etc.
- Flutter offers a variety of gesture recognizers to detect and respond to these user actions.
- Common gesture recognizers include GestureDetector, InkWell, DragGestureRecognizer, ScaleGestureRecognizer, etc.
- Gestures play a significant role in making your app interactive and responsive to user input.
- By implementing appropriate gestures, you can enhance the usability and engagement of your app.

Combining Navigation and Gestures:

- Combining navigation and gestures allows you to create interactive user interfaces in your Flutter app.
- For example, you can navigate to a different screen when a specific gesture, such as tapping or swiping, is detected.
- By integrating navigation with gestures, you can create seamless user experiences that are both intuitive and engaging.
- It's essential to consider the context and purpose of each gesture to ensure it aligns with the overall navigation flow of your app.

Code:

Home_admin:

```dart
import 'package:flutter/material.dart';
import 'package:food_panda/admin/add_food.dart';
import 'package:food_panda/widget/widget_support.dart';
// import 'package:sample_flutter/admin/add_food.dart';

// import 'package:sample_flutter/widget/widget_support.dart';

class HomeAdmin extends StatefulWidget {
  const HomeAdmin({super.key});

  @override
  State<HomeAdmin> createState() => _HomeAdminState();
}

class _HomeAdminState extends State<HomeAdmin> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Container(
        margin: EdgeInsets.only(top: 50.0, left: 20.0, right: 20.0),
        child: Column(
          children: [
            Center(
              child: Text(
                "Home Admin",
                style: AppWidget.HeadlineTextFieldStyle(),
              ),
            ),
            SizedBox(
              height: 50.0,
            ),
            GestureDetector(
              onTap: () {
                Navigator.push(context,
                    MaterialPageRoute(builder: (context) => AddFood()));
              },
              child: Material(
                elevation: 10.0,
                borderRadius: BorderRadius.circular(10),
                child: Center(
                  child: Container(
                    padding: EdgeInsets.all(4),
                    decoration: BoxDecoration(
                      color: Colors.black,
                      borderRadius: BorderRadius.circular(10),
                    ),
                    child: Row(
                      children: [
                        Padding(
                          padding: EdgeInsets.all(6.0),
                          child: Image.asset(
                            "images/food.jpg",
```
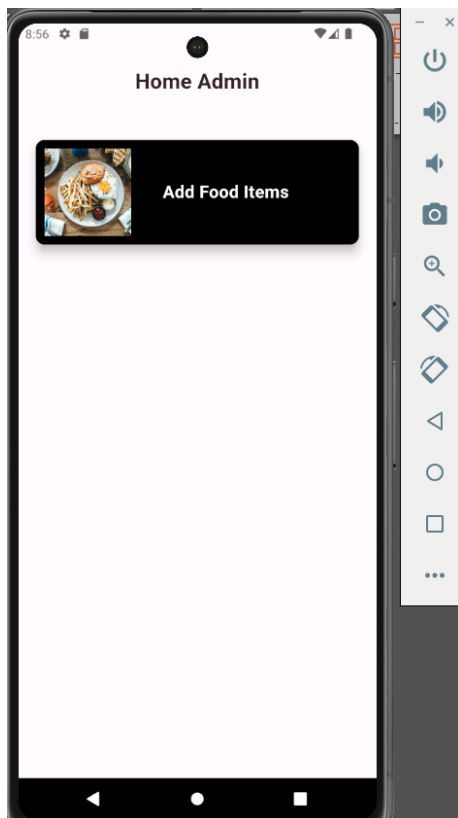
```
              height: 100,
              width: 100,
              fit: BoxFit.cover,
            ),
          ),
          SizedBox(
            width: 30.0,
          ),
          Text(
            "Add Food Items",
            style: TextStyle(
                color: Colors.white,
                fontSize: 20.0,
                fontWeight: FontWeight.bold),
          )
        ],
      ),
    ),
  ),
 ),
)
    ],
  ),
 ),
 );
}
}
```

**Add_food**:
Code:

```dart
import 'dart:io';

import 'package:firebase_storage/firebase_storage.dart';
import 'package:flutter/material.dart';
import 'package:food_panda/service/database.dart';
import 'package:food_panda/widget/widget_support.dart';
import 'package:image_picker/image_picker.dart';
import 'package:random_string/random_string.dart';
// import 'package:sample_flutter/widget/widget_support.dart';

class AddFood extends StatefulWidget {
  const AddFood({super.key});

  @override
  State<AddFood> createState() => _AddFoodState();
}

class _AddFoodState extends State<AddFood> {
  final List<String> fooditems = ['Ice-cream', 'Burger', 'Salad', 'Pizza'];
  String? value;
  TextEditingController namecontroller = new TextEditingController();
  TextEditingController pricecontroller = new TextEditingController();
  TextEditingController detailcontroller = new TextEditingController();
  final ImagePicker _picker = ImagePicker();
  File? selectedImage;

  Future getImage() async {
    var image = await _picker.pickImage(source: ImageSource.gallery);
    selectedImage = File(image!.path);
    setState(() {});
  }

  uploadItem() async {
    if (selectedImage != null &&
        namecontroller.text != "" &&
        pricecontroller.text != "" &&
        detailcontroller.text != "") {
      String addId = randomAlphaNumeric(10);
      Reference firebaseStorageRef =
          FirebaseStorage.instance.ref().child("blogImages").child(addId);
      final UploadTask task = firebaseStorageRef.putFile(selectedImage!);

      var downloadUrl = await (await task).ref.getDownloadURL();

      Map<String, dynamic> addItem = {
        "Image": downloadUrl,
        "Name": namecontroller.text,
        "Price": pricecontroller.text,
        "Detail": detailcontroller.text
      };
      await DatabaseMethods().addFoodItem(addItem, value!).then((value) {
        ScaffoldMessenger.of(context).showSnackBar((SnackBar(
```

```dart
            backgroundColor: Colors.redAccent,
            content: Text(
              "Food item added successfully",
              style: TextStyle(fontSize: 20.0),
            ))));
      });
    }
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        leading: GestureDetector(
          onTap: () {
            Navigator.pop(context);
          },
          child: Icon(
            Icons.arrow_back_ios_new_outlined,
            color: Color(0xFF373866),
          )),
        centerTitle: true,
        title: Text(
          "Add Item",
          style: AppWidget.HeadlineTextFieldStyle(),
        ),
      ),
      body: SingleChildScrollView(
        child: Container(
          margin:
            EdgeInsets.only(left: 20.0, right: 20.0, top: 20.0, bottom: 50.0),
          child: Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              Text(
                "Upload the Item Picture",
                style: AppWidget.semiBoldTextFieldStyle(),
              ),
              SizedBox(
                height: 20.0,
              ),
              selectedImage == null
                  ? GestureDetector(
                      onTap: () {
                        getImage();
                      },
                      child: Center(
                        child: Material(
                          elevation: 4.0,
                          borderRadius: BorderRadius.circular(20),
                          child: Container(
                            width: 150,
                            height: 150,
                            decoration: BoxDecoration(
```

```dart
            border:
                Border.all(color: Colors.black, width: 1.5),
              borderRadius: BorderRadius.circular(20),
            ),
            child: Icon(
              Icons.camera_alt_outlined,
              color: Colors.black,
            ),
          ),
        ),
      ),
    )
    : Center(
      child: Material(
        elevation: 4.0,
        borderRadius: BorderRadius.circular(20),
        child: Container(
          width: 150,
          height: 150,
          decoration: BoxDecoration(
            border: Border.all(color: Colors.black, width: 1.5),
            borderRadius: BorderRadius.circular(20),
          ),
          child: Image.file(
            selectedImage!,
            fit: BoxFit.cover,
          ),
        ),
      ),
    ),
SizedBox(
  height: 30.0,
),
Text(
  "Item Name",
  style: AppWidget.semiBoldTextFieldStyle(),
),
SizedBox(
  height: 10.0,
),
Container(
  padding: EdgeInsets.symmetric(horizontal: 20.0),
  width: MediaQuery.of(context).size.width,
  decoration: BoxDecoration(
      color: Color(0xFFececf8),
      borderRadius: BorderRadius.circular(10)),
  child: TextField(
    controller: namecontroller,
    decoration: InputDecoration(
        border: InputBorder.none,
        hintText: "Enter Item Name",
        hintStyle: AppWidget.LightTextFieldStyle()),
  ),
),
```

```
SizedBox(
  height: 30.0,
),
Text(
  "Item Price",
  style: AppWidget.semiBoldTextFieldStyle(),
),
SizedBox(
  height: 10.0,
),
Container(
  padding: EdgeInsets.symmetric(horizontal: 20.0),
  width: MediaQuery.of(context).size.width,
  decoration: BoxDecoration(
    color: Color(0xFFececf8),
    borderRadius: BorderRadius.circular(10)),
  child: TextField(
    controller: pricecontroller,
    decoration: InputDecoration(
      border: InputBorder.none,
      hintText: "Enter Item Price",
      hintStyle: AppWidget.LightTextFieldStyle()),
  ),
),
SizedBox(
  height: 30.0,
),
Text(
  "Item Detail",
  style: AppWidget.semiBoldTextFieldStyle(),
),
SizedBox(
  height: 10.0,
),
Container(
  padding: EdgeInsets.symmetric(horizontal: 20.0),
  width: MediaQuery.of(context).size.width,
  decoration: BoxDecoration(
    color: Color(0xFFececf8),
    borderRadius: BorderRadius.circular(10)),
  child: TextField(
    maxLines: 6,
    controller: detailcontroller,
    decoration: InputDecoration(
      border: InputBorder.none,
      hintText: "Enter Item Detail",
      hintStyle: AppWidget.LightTextFieldStyle()),
  ),
),
SizedBox(
  height: 20.0,
),
Text(
  "Select Category",
```

```
          style: AppWidget.semiBoldTextFieldStyle(),
        ),
        SizedBox(
          height: 20.0,
        ),
        Container(
          padding: EdgeInsets.symmetric(horizontal: 10.0),
          width: MediaQuery.of(context).size.width,
          decoration: BoxDecoration(
              color: Color(0xFFececf8),
              borderRadius: BorderRadius.circular(10)),
          child: DropdownButtonHideUnderline(
              child: DropdownButton<String>(
            items: fooditems
                .map((item) => DropdownMenuItem<String>(
                    value: item,
                    child: Text(
                      item,
                      style:
                          TextStyle(fontSize: 18.0, color: Colors.black),
                    )))
                .toList(),
            onChanged: ((value) => setState(() {
                  this.value = value;
                })),
            dropdownColor: Colors.white,
            hint: Text("Select Category"),
            iconSize: 36,
            icon: Icon(
              Icons.arrow_drop_down,
              color: Colors.black,
            ),
            value: value,
          )),
        ),
        SizedBox(
          height: 30.0,
        ),
        GestureDetector(
          onTap: () {
            uploadItem();
          },
          child: Center(
            child: Material(
              elevation: 5.0,
              borderRadius: BorderRadius.circular(10),
              child: Container(
                padding: EdgeInsets.symmetric(vertical: 5.0),
                width: 150,
                decoration: BoxDecoration(
                    color: Colors.black,
                    borderRadius: BorderRadius.circular(10)),
                child: Center(
                  child: Text(
```

```
            "Add",
            style: TextStyle(
                color: Colors.white,
                fontSize: 22.0,
                fontWeight: FontWeight.bold),
        ),
      ),
    ),
  ),
 )
],
),
),
),
);
}
}
```



Conclusion :Thus I learnt to create and use common widgets