



Vivekanand Education Society's Institute of Technology

(Affiliated to University of Mumbai, Approved by AICTE & Recognized by Govt. of Maharashtra)

Department of Information Technology

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MAD & PWA Lab Journal

Experiment No.	05
Experiment Title.	To apply navigation, routing and gestures in Flutter App
Roll No.	70
Name	MAYURI SHRIDATTA YERANDE
Class	D15B
Subject	MAD & PWA Lab
Lab Outcome	LO2: Design and Develop interactive Flutter App by using widgets, layouts, gestures and animation
Grade:	

EXPERIMENT - 06

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

THEORY:

- To switch to new route, use the Navigator.push() method. The push() method adds a Route to stack of routes managed by navigator.

```
⇒ onPressed: () {
    Navigator.push(
      context,
      MaterialPageRoute(builder: (context) => const Route())
    );
  }
```

- To return back to previous route, we use the navigator.pop

```
⇒ onPressed: () {
    navigator.pop(context);
  }
```

- If there is a need to navigate to same screen in many parts of the app, this approach is not beneficial because it results in code duplication.
- Thus we can remove this problem by defining named routes and can use named routes for navigation.
- For that we use Navigator.pushNamed() function.

- Gestures are interesting features in Flutter that allows us to interact with our app. Generally, gestures are physical action or movement of user in intention of specific control of our device.

- ⇒ when mobile screen is locked, you slide fingers to unlock.
- ⇒ tapping a button on your screen
- ⇒ dragging your icons by holding them.

CONCLUSION: In this practical, we did navigation of pages, along with routing. we navigated from sign up page to user info page to login screen. we routed from Profile screen to ride section. we added a gesture wherein when we rate our driver, a message is flashed. Thus we successfully implemented all the required features that are navigation, routing and gestures.

EXPERIMENT - 05

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

IMPLEMENTATION:

NAVIGATION:-

CODE:

SIGN_UP_SCREEN

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

class SignUpScreen extends StatefulWidget {
  const SignUpScreen({Key? key}) : super(key: key);

  @override
  State<SignUpScreen> createState() => _SignUpScreenState();
}

class _SignUpScreenState extends State<SignUpScreen> {
  TextEditingController nameTextEditingController =
    TextEditingController();
  TextEditingController emailTextEditingController =
    TextEditingController();
  TextEditingController phoneTextEditingController =
    TextEditingController();
  TextEditingController passwordTextEditingController =
    TextEditingController();

  final _formKey = GlobalKey<FormState>();

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.white,
      body: Padding(
        padding: const EdgeInsets.all(25.0),
        child: Form(
          key: _formKey,
          child: Column(
```

```

children: [
  const SizedBox(height: 10,),

  Padding(
    padding: const EdgeInsets.all(10.0),
    child: Image.asset("images/ola.png"),
  ),

  const SizedBox(height: 10,),

  const Text(
    "Register as a driver",
    style: TextStyle(
      fontSize: 24,
      color: Colors.black,
      fontWeight: FontWeight.bold,
    ),
  ),
  const SizedBox(height: 20,),

  TextField(
    controller: nameTextEditingController,
    style: const TextStyle(
      color: Colors.black,
    ),
    decoration: const InputDecoration(
      labelText: "Name",
      hintText: "Enter your Name",
      enabledBorder: UnderlineInputBorder(
        borderSide: BorderSide(color: Colors.black)
      ),
      focusedBorder: UnderlineInputBorder(
        borderSide: BorderSide(color: Colors.black)
      ),
      hintStyle: TextStyle(
        color: Colors.black,
        fontSize: 10,
      ),
      labelStyle: TextStyle(
        color: Colors.black,
        fontSize: 14,
      ),
    ),
  ),

```

```

        // validator: (value){
        //     if(value!.isEmpty){
        //         return "Please enter some text";
        //     }else{
        //         return null;
        //     }
        // },

    ),

    TextField(
        controller: emailTextEditingController,
        keyboardType: TextInputType.emailAddress,
        style: const TextStyle(
            color: Colors.black,
        ),
        decoration: const InputDecoration(
            labelText: "Email",
            hintText: "Enter your Email",
            enabledBorder: UnderlineInputBorder(
                borderSide: BorderSide(color: Colors.black)
            ),
            focusedBorder: UnderlineInputBorder(
                borderSide: BorderSide(color: Colors.black)
            ),
            hintStyle: TextStyle(
                color: Colors.black,
                fontSize: 10,
            ),
            labelStyle: TextStyle(
                color: Colors.black,
                fontSize: 14,
            ),
        ),

    ),

    TextField(
        controller: phoneTextEditingController,
        keyboardType: TextInputType.phone,
        style: const TextStyle(
            color: Colors.black,
        ),
        decoration: const InputDecoration(

```

```

        labelText: "Phone Number",
        hintText: "Enter your phone number",
        enabledBorder: UnderlineInputBorder(
            borderSide: BorderSide(color: Colors.black)
        ),
        focusedBorder: UnderlineInputBorder(
            borderSide: BorderSide(color: Colors.black)
        ),
        hintStyle: TextStyle(
            color: Colors.black,
            fontSize: 10,
        ),
        labelStyle: TextStyle(
            color: Colors.black,
            fontSize: 14,
        ),
    ),
),

TextField(
    controller: passwordTextEditingController,
    keyboardType: TextInputType.text,
    obscureText: true,
    style: const TextStyle(
        color: Colors.black,
    ),
    decoration: const InputDecoration(
        labelText: "Password",
        hintText: "Enter your password",
        enabledBorder: UnderlineInputBorder(
            borderSide: BorderSide(color: Colors.black)
        ),
        focusedBorder: UnderlineInputBorder(
            borderSide: BorderSide(color: Colors.black)
        ),
        hintStyle: TextStyle(
            color: Colors.black,
            fontSize: 10,
        ),
        labelStyle: TextStyle(
            color: Colors.black,
            fontSize: 14,
        ),
    ),
),

```

```

        ),
    ),
    const SizedBox(height: 25,),
    ElevatedButton(
      onPressed: (){
        Navigator.push(context, MaterialPageRoute(builder:
(c)=> const CarInfoScreen()));
      },
      style: ElevatedButton.styleFrom(
        backgroundColor: Colors.lime,
      ),
      child: const Text("Create Account",
        style: TextStyle(
          color: Colors.black,
          fontSize: 16,
        ),
      ),
    ),
    const SizedBox(height: 10,),
    TextButton(
      child: const Text(
        "Already have an account? Click here",
        style: TextStyle(color: Colors.black),
      ),
      onPressed: ()
        Navigator.push(context, MaterialPageRoute(builder:
(c)=> const LoginScreen()));
    ),
  ],
),
),
),
),

```



```

    );
  }
}

```

CAR_INFO_SCREEN

```

import 'package:flutter/material.dart';

import 'login_screen.dart';

class CarInfoScreen extends StatefulWidget {
  const CarInfoScreen({Key? key}) : super(key: key);

  @override
  State<CarInfoScreen> createState() => _CarInfoScreenState();
}

class _CarInfoScreenState extends State<CarInfoScreen> {

  TextEditingController carModelTextEditingController =
  TextEditingController();
  TextEditingController carNumberTextEditingController =
  TextEditingController();
  TextEditingController carColorTextEditingController =
  TextEditingController();

  List<String> carTypesList = ["Mini", "Prime Sedan", "Auto"];
  String? selectedCarType;

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.white,

      body: SingleChildScrollView(
        child: Padding(
          padding: const EdgeInsets.all(25.0),
          child: Column(

            children: [
              const SizedBox(height: 2,),
              Padding(
                padding: const EdgeInsets.all(10.0),

```

```
      child: Image.asset("images/car_info.png"),  
    ),  
  ),
```

```
const Text(  
  "Enter Car Details",  
  style: TextStyle(  
    fontSize: 24,  
    color: Colors.black,  
    fontWeight: FontWeight.bold,  
  ),  
) ,  
const SizedBox(height: 10, ),
```

```
TextField(  
  controller: carModelTextEditingController,  
  style: const TextStyle(  
    color: Colors.black,  
  ),  
  decoration: const InputDecoration(  
    labelText: "Car Model",  
    hintText: "Enter Car Model",  
    enabledBorder: UnderlineInputBorder(  
      borderSide: BorderSide(color: Colors.black)  
    ),  
    focusedBorder: UnderlineInputBorder(  
      borderSide: BorderSide(color: Colors.black)  
    ),  
    hintStyle: TextStyle(  
      color: Colors.black,  
      fontSize: 10,  
    ),  
    labelStyle: TextStyle(  
      color: Colors.black,  
      fontSize: 14,  
    ),  
  ),  
) ,  
) ,
```

```
TextField(  
  controller: carNumberTextEditingController,  
  style: const TextStyle(  
    color: Colors.black,  
    fontSize: 14,  
  ),  
) ,
```

```

        color: Colors.black,
      ),
      decoration: const InputDecoration(
        labelText: "Car Number",
        hintText: "Enter car number",
        enabledBorder: UnderlineInputBorder(
          borderSide: BorderSide(color: Colors.black)
        ),
        focusedBorder: UnderlineInputBorder(
          borderSide: BorderSide(color: Colors.black)
        ),
        hintStyle: TextStyle(
          color: Colors.black,
          fontSize: 10,
        ),
        labelStyle: TextStyle(
          color: Colors.black,
          fontSize: 14,
        ),
      ),
    ),
  ),
),

```

```

TextField(
  controller: carColorTextEditingController,
  keyboardType: TextInputType.phone,
  style: const TextStyle(
    color: Colors.black,
  ),
  decoration: const InputDecoration(
    labelText: "Car Color",
    hintText: "Enter Car Color",
    enabledBorder: UnderlineInputBorder(
      borderSide: BorderSide(color: Colors.black)
    ),
    focusedBorder: UnderlineInputBorder(
      borderSide: BorderSide(color: Colors.black)
    ),
    hintStyle: TextStyle(
      color: Colors.black,
      fontSize: 10,
    ),
    labelStyle: TextStyle(
      color: Colors.black,
      fontSize: 14,
    ),
  ),
)

```

```

    ),
  ),
  const SizedBox(height: 10,),

  DropdownButton(
    dropdownColor: Colors.white,
    hint: const Text(
      "Please Choose Car Type",
      style: TextStyle(
        fontSize: 14,
        color: Colors.black,
      ),
    ),
  ),
  value: selectedCarType,
  onChanged: (newValue) {
    setState(() {
      selectedCarType = newValue.toString();
    });
  },
  items: carTypesList.map((car) {
    return DropdownMenuItem(
      child: Text(
        car,
        style: const TextStyle(color: Colors.black),
      ),
      value: car,
    );
  }).toList(),

),
const SizedBox(height: 15,),

```

```

ElevatedButton(
  onPressed: () {
    Navigator.push(context, MaterialPageRoute(builder:
(c)=> const LoginScreen()));
  },
  style: ElevatedButton.styleFrom(
    backgroundColor: Colors.lime,
  ),

```

```

        child: const Text("Next",
          style: TextStyle(
            color: Colors.black,
            fontSize: 16,
          ),
        ),
      ),
    ),
  ),

  const SizedBox(height: 15,),

  ElevatedButton(
    onPressed: () {
      Navigator.pop(context);
    },
    style: ElevatedButton.styleFrom(
      backgroundColor: Colors.lime,
    ),
    child: const Text("Go back",
      style: TextStyle(
        color: Colors.black,
        fontSize: 16,
      ),
    ),
  ),

),


],
),
),
),
),
);
}
}

```

OUTPUT:

OLA

localhost:3079/#/



Register as a driver

Name

Email

Phone Number


Password

Create Account

[Already have an account? Click here](#)

OLA

localhost:3079/#/



Enter Car Details

Car Model

Car Number

Car Color

Please Choose Car Type ▼

Next

Go back

ROUTING:-

CODE:-

```
initialRoute: '/',  
  routes: {  
    '/rides': (context) => const YourRidesScreen(),  
    '/logout': (context) => const SignUpScreen(),  
  },
```

PROFILE SCREEN

```
import 'package:drivers_app/authentication/signup_screen.dart';  
import 'package:drivers_app/mainScreens/main_screen.dart';  
import 'package:flutter/material.dart';
```

```
class ProfileTabPage extends StatefulWidget {  
  const ProfileTabPage({Key? key}) : super(key: key);  
  
  @override  
  State<ProfileTabPage> createState() => _ProfileTabPageState();  
}
```

```
class _ProfileTabPageState extends State<ProfileTabPage> {  
  @override  
  Widget build(BuildContext context) {  
  
    return Scaffold(  
  
      backgroundColor: Colors.white,  
      body: Padding(  
        padding: const EdgeInsets.all(25.0),  
        child: Form(  
  
          child: Column(  
  
            children: [  
  
              const SizedBox(height: 10,),
```

```

Padding(
padding: const EdgeInsets.all(10.0),
child: Image.asset("images/profile.png"),
),

const SizedBox(height: 10,),

const Text(
"Welcome to OLA",
style: TextStyle(
fontSize:24,
color: Colors.black,
fontWeight: FontWeight.bold,
),
),
const SizedBox(height: 100,),

Row(
  children: [
    const SizedBox(width: 110,),
    ElevatedButton(
      onPressed: (){
        Navigator.pushNamed(context, '/rides');
      },
      style: ElevatedButton.styleFrom(
        backgroundColor: Colors.lime,
      ),
      child: const Text("Your rides",
        style: TextStyle(
          color: Colors.black,
          fontSize: 16,
        ),
      ),
    ),
    const SizedBox(width: 50,),
    ElevatedButton(
      onPressed: (){
        Navigator.pushNamed(context, '/logout');
      },
      style: ElevatedButton.styleFrom(
        backgroundColor: Colors.lime,
      ),
    ),
  ],
)

```



```
        child: const Text("Logout",
          style: TextStyle(
            color: Colors.black,
            fontSize: 16,

          ),
        ),

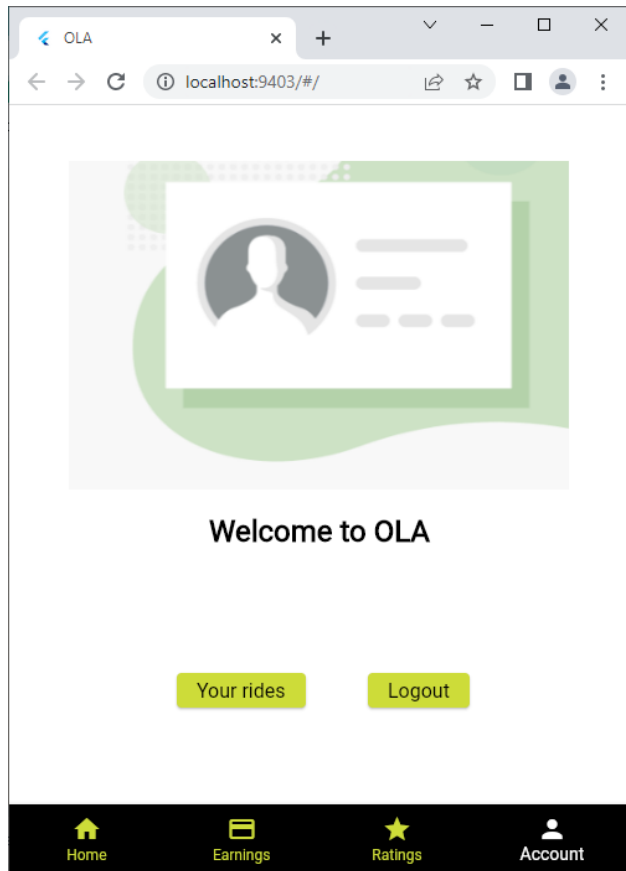
      ),

    ],
  ),

],
),
),

);
}
}
```

OUTPUT:-



A screenshot of a web browser displaying the 'Your Rides' page. The browser's address bar shows 'localhost:60685/#/'. The page title is 'Your Rides'. Below the title is a table with three columns: 'Details', 'PickUp Location', and 'Destination'. The table contains three rows of ride data.

Details	PickUp Location	Destination
Sun, Dec 25, 08:02	Vikas Prabha,Mulund East, Mhada Colony, Mumbai	Rmall,Mulund West,Mumbai
Thu, Dec 22, 03:07	Vikas Prabha,Mulund East, Mhada Colony, Mumbai	Vivekanand College,Chembur
Wed, Dec 21, 07:04	Vikas Prabha,Mulund East, Mhada Colony, Mumbai	Phoenix Mall,Kurla,Mumbai

GESTURES:-

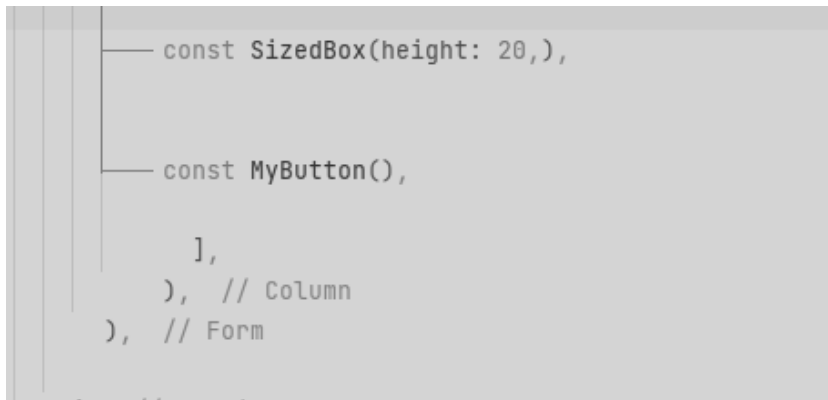
CODE:

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

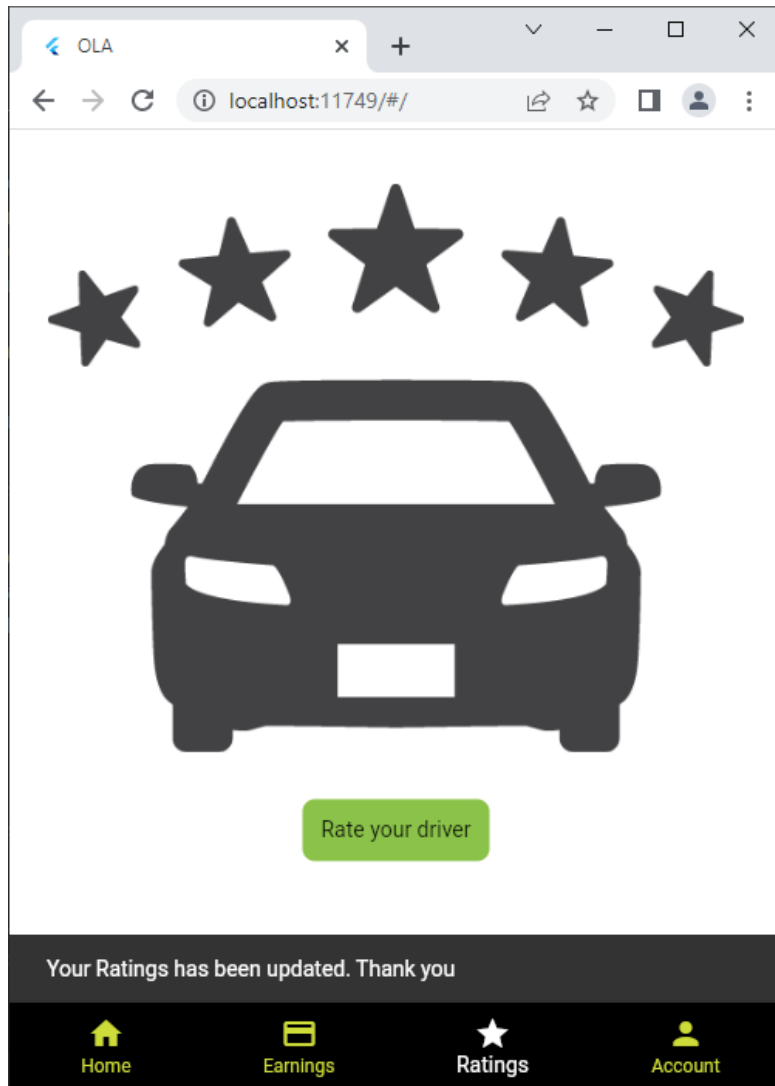
class MyButton extends StatefulWidget {
  const MyButton({Key? key}) : super(key: key);

  @override
  State<MyButton> createState() => _MyButtonState();
}

class _MyButtonState extends State<MyButton> {
  @override
  Widget build(BuildContext context) {
    return GestureDetector(
      onTap: () {
        const snackBar = SnackBar(content: Text("Your Ratings has
been updated. Thank you"));
        ScaffoldMessenger.of(context).showSnackBar(snackBar);
      },
      child: Container(
        padding: const EdgeInsets.all(12.0),
        decoration: BoxDecoration(
          color: Colors.lightGreen,
          borderRadius: BorderRadius.circular(8.0),
        ),
        child: const Text("Rate your driver"),
      ),
    );
  }
}
```



OUTPUT:



CONCLUSION: In this practical, We did navigation of pages, along with routing. We navigated from the Sign up page to the Car Info page to the Login Screen. We routed from Profile screen to rides section. We added a gesture wherein when we rate our driver , a message is flashed. Thus we successfully implemented all the required features that are navigation, routing and gestures.