**Experiment No 06**

**Aim**: create application that illustrate explain routing, passing data using navigator and navigation rail

**Code**:

***Routing***

import 'package:flutter/material.dart';

import "dart:math";

class homePage extends StatelessWidget {

const homePage();

@override

Widget build(BuildContext context) {

return Scaffold(

body: Center(

child: ElevatedButton(

child: Text("click on the button to see next page"),

onPressed: () {

Navigator.of(context).pushNamed(RouteGenerator.randompage);

},

),

));

}

}

void main() {

runApp(const RandomApp());

}

class RandomApp extends StatelessWidget {

const RandomApp();

@override

Widget build(BuildContext context) {

return MaterialApp(

onGenerateTitle: (\_) => "Random App",

initialRoute: RouteGenerator.homepage,

onGenerateRoute: RouteGenerator.generateRoute,

);

}

}

class randomPage extends StatelessWidget {

const randomPage();

@override

Widget build(BuildContext context) {

return Scaffold(

body: Center(

child: Text("${Random().nextInt(50)}"),

),

);

}

}

class RouteGenerator {

static const String homepage = '/';

static const String randompage = '/random';

RouteGenerator.\_() {}

static Route<dynamic> generateRoute(RouteSettings settings) {

switch (settings.name) {

case homepage:

{

return MaterialPageRoute(builder: (\_) => const homePage());

}

case randompage:

{

return MaterialPageRoute(builder: (\_) => const randomPage());

}

default:

{

throw FormatException("Route not found");

}

}

}

}

class RouteException implements Exception {

final String message;

const RouteException(this.message);

}

***Passing Data using Navigator***

import 'package:flutter/material.dart';

void main() {

runApp(const Myapp());

}

class Details\_of\_List extends StatelessWidget {

final Todo item;

const Details\_of\_List(this.item);

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(title: Text("Aakash Dhotre")),

body: Center(

child: Text(

"${item.title}\n${item.description}",

textScaleFactor: 4,

)));

;

}

}

class HomePage extends StatelessWidget {

HomePage();

final List<Todo> todolist = [

const Todo("title 1", "this is the title 1"),

const Todo("title 2", "this is the title 2"),

const Todo("title 3", "this is the title 3"),

const Todo("title 4", "this is the title 4")

];

void \_itemPressed(BuildContext context, Todo item) {

Navigator.of(context)

.push(MaterialPageRoute(builder: (\_) => Details\_of\_List(item)));

}

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(title: Text("Aakash Dhotre")),

body: ListView.builder(

itemCount: todolist.length,

itemBuilder: (context, value) {

return ListTile(

title: Text(todolist[value].title, textScaleFactor: 2),

subtitle: Text(todolist[value].description, textScaleFactor: 2),

onTap: () {

\_itemPressed(context,

Todo(todolist[value].title, todolist[value].description));

},

);

},

));

}

}

class Myapp extends StatelessWidget {

const Myapp();

@override

Widget build(BuildContext context) {

return MaterialApp(

onGenerateTitle: (\_) => 'Passing data with Navigator',

initialRoute: RouteGenerator.homepage,

onGenerateRoute: RouteGenerator.generateRoute,

);

}

}

class Todo {

final String title;

final String description;

const Todo(this.title, this.description);

}

class RouteGenerator {

static const String homepage = '/';

static const String details\_of\_list = '/details\_of\_list';

RouteGenerator.\_() {}

static Route<dynamic> generateRoute(RouteSettings settings) {

switch (settings.name) {

case homepage:

{

return MaterialPageRoute(builder: (\_) => HomePage());

}

default:

{

throw FormatException("Route not found");

}

}

}

}

class RouteException implements Exception {

final String message;

const RouteException(this.message);

}

***Navigation Rail***

import 'package:flutter/material.dart';

import 'package:provider/provider.dart';

void main() {

runApp(ChangeNotifierProvider<IndexProvider>(

create: (\_) => IndexProvider(), child: MyApp()));

}

class MyApp extends StatelessWidget {

@override

Widget build(BuildContext context) {

return MaterialApp(

home: Scaffold(

appBar: AppBar(title: Text("BottomNavigation Bar")),

bottomNavigationBar: Buttomnavigation()));

}

}

class Buttomnavigation extends StatelessWidget {

@override

Widget build(BuildContext context) {

return Consumer<IndexProvider>(builder: (context, IP, \_) {

return BottomNavigationBar(

currentIndex: IP.index,

selectedItemColor: Colors.green,

onTap: (int itemnumber) {

IP.set\_index(itemnumber);

},

items: [

BottomNavigationBarItem(

icon: Icon(

Icons.home,

color: Colors.red,

),

label: "Home"),

BottomNavigationBarItem(

icon: Icon(Icons.mail, color: Colors.red), label: "Mail"),

BottomNavigationBarItem(

icon: Icon(Icons.settings, color: Colors.red), label: "Setting"),

BottomNavigationBarItem(

icon: Icon(Icons.contacts, color: Colors.red),

label: "Contact Us"),

],

);

});

}

}

class IndexProvider with ChangeNotifier {

int index = 1;

void set\_index(int value) {

index = value;

notifyListeners();

debugPrint("value is updated $value");

}

int get\_index() {

return index;

}

}

**Output**:

***Routing***

Graphical user interface, text, application, chat or text message

Description automatically generated Chart

Description automatically generated with low confidence

**Passing Data using Navigator**

Graphical user interface, text, application

Description automatically generated Text

Description automatically generated

***Navigation Rail***

