Project Title: Stack Overflow RollNo. 50

MAD & PWA Lab Journal

Experiment No.	05
Experiment Title.	To apply navigation, routing and gestures in Flutter App
Roll No.	50
Name	Siddhant Sathe
Class	D15A
Subject	MAD & PWA Lab
Lab Outcome	LO1: Understand cross platform mobile application development using Flutter framework
Grade:	

Code: home_page.dart

```
import 'package:flutter/material.dart';
                                                               stream:
import 'ask guestion.dart';
                                                       FirebaseFirestore.instance.collection('questio
import 'profile_page.dart';
                                                       n answers').snapshots(),
import 'answer_page.dart';
                                                               builder: (context, snapshot) {
                                                               if (snapshot.connectionState ==
'package:firebase database/firebase databas
                                                       ConnectionState.waiting) {
e.dart';
                                                               return const Center(child:
import
                                                       CircularProgressIndicator());
'package:cloud firestore/cloud firestore.dart';
class HomePage extends StatefulWidget {
                                                               if (!snapshot.hasData ||
 @override
                                                       snapshot.data!.docs.isEmpty) {
 State<HomePage> createState() =>
                                                               return const Center(child: Text("No
_HomePageState();
                                                       questions asked yet"));
                                                               }
                                                               final questions = snapshot.data!.docs;
class HomePageState extends
State<HomePage> {
int selectedIndex = 0;
                                                               return ListView.builder(
 final List<String> _appBarTitles =
                                                               itemCount: questions.length,
["Questions", "My Profile", "Settings"];
                                                               itemBuilder: (context, index) {
                                                               final question =
// Firebase reference
                                                       questions[index].data() as Map<String,
 final DatabaseReference database =
                                                       dynamic>;
FirebaseDatabase.instance.ref('question ans
                                                               return Padding(
wers');
                                                                      padding: const
                                                       EdgeInsets.symmetric(vertical: 8.0, horizontal:
 void onItemTapped(int index) {
                                                       16.0),
       setState(() {
                                                                       child: ElevatedButton(
        selectedIndex = index;
                                                                       onPressed: () {
       });
                                                                       Navigator.push(
 }
                                                                       context.
                                                                       MaterialPageRoute(
 void addQuestion(String title, String details) {
                                                                       builder: (context) =>
                                                       QuestionDetailPage(
        _database.push().set({
        'title': title.
                                                                       title: question['title'] ?? 'No
       'details': details,
                                                       title',
       'timestamp':
                                                                       details: question['details'] ??
DateTime.now().toIso8601String(),
                                                       'No details',
       });
                                                                      timestamp:
                                                       (question['timestamp'] as
 }
                                                       Timestamp).toDate().toString(),
 List<Widget> get _pages => [
                                                                      ),
        StreamBuilder<QuerySnapshot>(
                                                                      ),
```

```
);
               },
                                                               },
               child: Column(
                                                               );
               crossAxisAlignment:
CrossAxisAlignment.start,
               children: [
                                                               ProfilePage(),
               Align(
                                                               const Center(
               alignment:
                                                               child: Text("Settings Page", style:
Alignment.centerLeft,
                                                       TextStyle(fontSize: 20, fontWeight:
                                                       FontWeight.bold)),
               child: Text(
               question['title'] ?? 'No title',
                                                               ),
               style: const TextStyle(
                                                               ];
                       fontSize: 18,
                       fontWeight:
                                                        @override
FontWeight.bold,
                                                        Widget build(BuildContext context) {
                                                               return Scaffold(
                                                               backgroundColor:
               ),
                                                       Colors.purple.shade50,
               const SizedBox(height: 8),
                                                               appBar: AppBar(
                                                               backgroundColor: Colors.white,
               Align(
               alignment:
                                                               elevation: 1,
                                                               title: Text(
Alignment.centerLeft,
                                                               appBarTitles[ selectedIndex],
               child: Text(
               question['details'] ?? 'No
                                                               style: const TextStyle(color:
details',
                                                       Colors.black, fontSize: 18, fontWeight:
                                                       FontWeight.bold),
               style: const TextStyle(fontSize:
14),
                                                               actions: selectedIndex == 0
               ),
                                                               ? [
               ),
                                                               TextButton(
               ],
                                                                       onPressed: () {
               style:
                                                                       Navigator.push(
ElevatedButton.styleFrom(
                                                                       context,
                                                                       MaterialPageRoute(
               backgroundColor:
Colors.white,
                                                                       builder: (context) =>
               foregroundColor: Colors.black,
                                                       AskQuestionPage(onSubmit: addQuestion),
               elevation: 4,
                                                                       ),
               padding: const
                                                                       );
EdgeInsets.all(16),
               shape:
                                                                       child: const Text(
RoundedRectangleBorder(
                                                                       "Ask Question",
               borderRadius:
                                                                       style: TextStyle(color:
                                                       Colors.purple, fontWeight: FontWeight.bold),
BorderRadius.circular(8),
               ),
               ),
                                                               ),
               ),
                                                               const SizedBox(width: 10),
```

	1711 0 1
]	child: Column(
; □,	crossAxisAlignment:
),	CrossAxisAlignment.start,
body: _pages[_selectedIndex],	children: [
bottomNavigationBar:	Text(
BottomNavigationBar(title,
backgroundColor: Colors.white,	style: const TextStyle(fontSize: 24,
selectedItemColor: Colors.orange,	fontWeight: FontWeight.bold),
unselectedItemColor: Colors.grey,),
currentIndex: _selectedIndex,	const SizedBox(height: 16),
onTap: _onItemTapped,	Text(
showUnselectedLabels: true,	details,
items: const [style: const TextStyle(fontSize: 18),
BottomNavigationBarItem(icon:),
Icon(Icons.home), label: "Home"),	const SizedBox(height: 16),
BottomNavigationBarItem(icon:	Text(
Icon(Icons.person), label: "Profile"),	"Posted on:
BottomNavigationBarItem(icon:	\${DateTime.parse(timestamp).toString()}",
Icon(Icons.settings), label: "Settings"),	style: const TextStyle(fontSize: 14,
],	color: Colors.grey),
),),
);	const SizedBox(height: 16),
}	ElevatedButton(
}	onPressed: () {
•	Navigator.push(
class QuestionDetailPage extends	context,
StatelessWidget {	MaterialPageRoute(
final String title;	builder: (context) =>
final String details;	AnswerQuestionPage(title: title),
final String timestamp;),
mar caming annocaming,);
const QuestionDetailPage({), }
Key? key,	child: const Text("Answer Question"),
required this.title,),
required this.details,	const SizedBox(height: 16),
required this.timestamp,	const Text(
}) : super(key: key);	"Answers:",
j) : duper(key: key),	style: TextStyle(fontSize: 18,
@override	fontWeight: FontWeight.bold),
Widget build(BuildContext context) {	,
return Scaffold(), const SizedBox(height: 8),
appBar: AppBar(Expanded(
	child:
title: const Text("Question Details"),	
), body: Badding/	StreamBuilder <querysnapshot>(</querysnapshot>
body: Padding(stream: FirebaseFirestore.instance
padding: const EdgeInsets.all(16.0),	.collection('question_answers')

```
.doc(title)
                                                                               spreadRadius: 1,
                .collection('answers')
                                                                               blurRadius: 4,
                .orderBy('timestamp',
                                                                               offset: const Offset(0,
descending: true)
                                                       2),
                .snapshots(),
                                                                               ),
       builder: (context, snapshot) {
                                                                       ],
               if (snapshot.connectionState
                                                                       ),
== ConnectionState.waiting) {
                                                                       child: Column(
               return const Center(child:
                                                                       crossAxisAlignment:
CircularProgressIndicator());
                                                       CrossAxisAlignment.start,
               }
                                                                       children: [
                                                                               Text(
                                                                               answer['answer'] ??
               if (!snapshot.hasData ||
snapshot.data!.docs.isEmpty) {
                                                       'No answer',
               return const Center(child:
                                                                               style: const
                                                       TextStyle(fontSize: 16),
Text("No answers yet"));
               }
                                                                               const SizedBox(height:
               final answers =
                                                       8),
snapshot.data!.docs;
                                                                               Text(
                                                                               "Answered on:
                                                       ${DateTime.parse(answer['timestamp']).toStri
               return ListView.builder(
               itemCount: answers.length,
                                                       ng()}",
               itemBuilder: (context, index) {
                                                                               style: const
               final answer =
                                                       TextStyle(fontSize: 12, color: Colors.grey),
answers[index].data() as Map<String,
                                                                               ),
dynamic>;
                                                                       ],
               return Padding(
                                                                       ),
               padding: const
                                                                       ),
EdgeInsets.symmetric(vertical: 8.0, horizontal:
                                                                       );
16.0),
                                                                       },
               child: Container(
                                                                       );
                padding: const
                                                               },
EdgeInsets.all(16),
                                                               ),
               decoration: BoxDecoration(
                                                               ),
               color: Colors.white,
                                                               ],
               borderRadius:
                                                               ),
BorderRadius.circular(8),
                                                               ),
               boxShadow: [
                                                               );
                       BoxShadow(
                                                        }
                       color:
Colors.grey.withOpacity(0.2),
```

Code: ask_question.dart

```
import 'package:flutter/material.dart';
                                                              widget.onSubmit( titleController.text,
'package:cloud_firestore/cloud_firestore.dart';
                                                      _detailsController.text);
                                                              Navigator.pop(context);
class AskQuestionPage extends
                                                              } catch (e) {
StatefulWidget {
 final Function(String, String) onSubmit;
                                                      ScaffoldMessenger.of(context).showSnackBar
 AskQuestionPage({required this.onSubmit});
                                                              SnackBar(content: Text('Failed to
                                                      submit question: $e')),
 @override
                                                              );
 AskQuestionPageState createState() =>
                                                              }
_AskQuestionPageState();
                                                              }
                                                       }
class AskQuestionPageState extends
                                                        @override
State<AskQuestionPage> {
                                                       Widget build(BuildContext context) {
 final _formKey = GlobalKey<FormState>();
                                                              return Scaffold(
 final _titleController = TextEditingController();
                                                              backgroundColor: const
 final detailsController =
                                                      Color(0xFFF7EBFB),
TextEditingController();
                                                              appBar: AppBar(
                                                              title: const Text("Ask Question"),
                                                              backgroundColor: Colors.white,
 Future<void> submitQuestion() async {
       if (_formKey.currentState!.validate()) {
                                                              ),
       try {
                                                              body: Padding(
       await
                                                              padding: const EdgeInsets.all(16.0),
FirebaseFirestore.instance.collection('questio
                                                              child: Form(
                                                              key: _formKey,
n_answers').add({
       'title': titleController.text,
                                                              child: Column(
       'details': _detailsController.text,
                                                              children: [
       'timestamp':
                                                              TextFormField(
FieldValue.serverTimestamp(),
                                                              controller: _titleController,
                                                              decoration: const
       });
                                                      InputDecoration(labelText: 'Title'),
                                                              validator: (value) => value!.isEmpty?
                                                      'Enter a title' : null,
ScaffoldMessenger.of(context).showSnackBar
                                                              const SizedBox(height: 16),
       const SnackBar(content:
Text('Question submitted successfully!')),
                                                              TextFormField(
```

```
controller: detailsController,
                                                               child: const Text("Review Your
        maxLines: 5,
                                                       Question"),
       decoration: const
                                                               ),
InputDecoration(labelText: 'Details'),
                                                               ],
       validator: (value) => value!.isEmpty ?
                                                               ),
'Enter details' : null,
                                                               ),
       ),
                                                               ),
       const SizedBox(height: 24),
                                                               );
        ElevatedButton(
                                                        }
       onPressed: _submitQuestion,
Code:profile page.dart
import 'package:flutter/material.dart';
                                                                       fontSize: 20,
import 'package:flutter_svg/flutter_svg.dart';
                                                                       fontWeight: FontWeight.bold,
                                                                       ),
class ProfilePage extends StatelessWidget {
                                                                       ),
 @override
                                                                       SizedBox(height: 4),
 Widget build(BuildContext context) {
        return Scaffold(
                                                                       '17 Member since 1st Feb
       backgroundColor:
                                                       2025'.
Colors.purple.shade50,
                                                                       style: TextStyle(
       body: SingleChildScrollView(
                                                                       color: Colors.grey,
       child: Padding(
                                                                       fontSize: 14,
       padding: const EdgeInsets.all(20.0),
                                                                       ),
       child: Column(
                                                                       ),
       crossAxisAlignment:
                                                                       ],
CrossAxisAlignment.start,
                                                                       ),
       children: [
                                                               ],
        Row(
       children: [
                                                               const SizedBox(height: 20),
                CircleAvatar(
                                                               Row(
                                                               mainAxisAlignment:
               radius: 40,
                                                       MainAxisAlignment.spaceBetween,
               child:
SvgPicture.asset('project/assets/images/icon.
                                                               children: const [
                                                                       Text(
svg'),
                                                                       'About',
               const SizedBox(width: 16),
                                                                       style: TextStyle(
               Column(
                                                                       fontSize: 18,
               crossAxisAlignment:
                                                                       fontWeight: FontWeight.bold,
CrossAxisAlignment.start,
                                                                       ),
               children: const [
                                                                       ),
                                                                       Text(
               Text(
               'Siddhant Sathe',
                                                                       'Log out',
               style: TextStyle(
                                                                       style: TextStyle(
```

```
color: Colors.blue,
                                                               padding: const EdgeInsets.all(16),
               fontWeight: FontWeight.bold,
                                                               decoration: BoxDecoration(
                                                                       color: Colors.white.
               ),
               ),
                                                                       borderRadius:
                                                        BorderRadius.circular(12),
       ],
        ),
       const SizedBox(height: 10),
                                                               child: const Text(
        Container(
                                                                       'You have not answered any
       width: double.infinity,
                                                        questions.',
        padding: const EdgeInsets.all(16),
                                                                       style: TextStyle(
       decoration: BoxDecoration(
                                                                       color: Colors.grey,
               color: Colors.white,
                                                                       ),
               borderRadius:
                                                               ),
BorderRadius.circular(12),
                                                               ),
                                                               const SizedBox(height: 20),
       child: const Text(
                                                               Row(
               'No about me has been yet',
                                                               mainAxisAlignment:
                                                        MainAxisAlignment.spaceBetween,
               style: TextStyle(
               color: Colors.grey,
                                                               children: const [
                                                                       Text(
               ),
                                                                       'Questions',
        ),
                                                                       style: TextStyle(
        ),
       const SizedBox(height: 20),
                                                                       fontSize: 18,
        Row(
                                                                       fontWeight: FontWeight.bold,
        mainAxisAlignment:
                                                                       ),
MainAxisAlignment.spaceBetween,
                                                                       ),
       children: const [
                                                                       Text(
               Text(
                                                                       'See All',
                                                                       style: TextStyle(
               'Answers',
               style: TextStyle(
                                                                       color: Colors.blue,
                                                                       fontWeight: FontWeight.bold,
               fontSize: 18,
               fontWeight: FontWeight.bold,
                                                                       ),
               ),
                                                                       ),
               ),
                                                               ],
               Text(
               'See All',
                                                               const SizedBox(height: 10),
               style: TextStyle(
                                                               Container(
                                                               width: double.infinity,
               color: Colors.blue,
               fontWeight: FontWeight.bold,
                                                               padding: const EdgeInsets.all(16),
                                                               decoration: BoxDecoration(
               ),
               ),
                                                                       color: Colors.white,
                                                                       borderRadius:
       ],
                                                        BorderRadius.circular(12),
       const SizedBox(height: 10),
        Container(
                                                               child: const Text(
       width: double.infinity,
```

```
'You have not asked any ], questions.', ), style: TextStyle( ), color: Colors.grey, ), ), ); ), }
```

Output:







