

Faculty of Technology and Engineering

Chandubhai S. Patel Institute of Technology

Department of Computer Science & Engineering

Date: / /

Laboratory Manual Performa

Academic Year	:	2024-25	Semester	:	5 TH
Course code	:	CSE309	Course name	:	Mobile Application and Development

Practical - 1

Create UI of Signup Screen and Login Screen with Appropriate validation.

- Fields: Name, Email, Mobile, Password and Confirm Password for Signup.
- Email and Password for Login.

Introduction of relevant concepts used:

Code (Screenshot)

Main.dart

```
lib > main.dart > ...
1  import 'package:flutter/material.dart';
2  import 'login_screen.dart';
3  import 'signup_screen.dart';
4
5  void main() {
6    runApp(const MyApp());
7  }
8
9  class MyApp extends StatelessWidget {
10   const MyApp({Key? key}) : super(key: key);
11
12   @override
13   Widget build(BuildContext context) {
14     return MaterialApp(
15       title: 'Flutter Auth UI',
16       theme: ThemeData(
17         primarySwatch: Colors.blue,
18       ), // ThemeData
19       home: const LoginScreen(),
20     ); // MaterialApp
21   }
22 }
23
```

Login_screen.dart

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

class LoginScreen extends StatefulWidget {
```

```

const LoginScreen({Key? key}) : super(key: key);

@override
LoginScreenState createState() => _LoginScreenState();
}

class _LoginScreenState extends State<LoginScreen> {
  final _formKey = GlobalKey<FormState>();
  final _emailController = TextEditingController();
  final _passwordController = TextEditingController();

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: const Text("Login")),
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: Form(
          key: _formKey,
          child: Column(
            children: [
              TextFormField(
                controller: _emailController,
                decoration: const InputDecoration(labelText: 'Email'),
                validator: (value) {
                  if (value == null || value.isEmpty) {
                    return 'Please enter email';
                  }
                  if (!RegExp(r'^@[^@]+\.[^@]+\.[^@]+').hasMatch(value)) {
                    return 'Enter a valid email';
                  }
                  return null;
                },
              ),
              // TextFormField
              TextFormField(
                controller: _passwordController,
                obscureText: true,
                decoration: const InputDecoration(labelText: 'Password'),
                validator: (value) {
                  if (value == null || value.isEmpty) {
                    return 'Please enter password';
                  }
                  return null;
                },
              ),
              // TextFormField
              const SizedBox(height: 20),
              ElevatedButton(
                onPressed: () {
                  if (_formKey.currentState?.validate() ?? false) {
                    // Perform login
                  }
                },
                child: const Text('Login'),
              ),
              // ElevatedButton
              TextButton(
                onPressed: () {
                  Navigator.push(
                    context,
                    MaterialPageRoute(builder: (context) => const SignupScreen()),
                  );
                },
                child: const Text('Don\'t have an account? Sign up'),
              ),
              // TextButton
            ],
          ),
        ), // Column
      ), // Form
    ), // Padding
  ); // Scaffold
}

```

Signup_screen.dart

```
lib > signup_screen.dart > ...
1  import 'package:flutter/material.dart';
2
3  class SignupScreen extends StatefulWidget {
4    const SignupScreen({Key? key}) : super(key: key);
5
6    @override
7    _SignupScreenState createState() => _SignupScreenState();
8  }
9
10 class _SignupScreenState extends State<SignupScreen> {
11   final _formKey = GlobalKey<FormState>();
12   final _nameController = TextEditingController();
13   final _emailController = TextEditingController();
14   final _mobileController = TextEditingController();
15   final _passwordController = TextEditingController();
16   final _confirmPasswordController = TextEditingController();
17
18   @override
19   Widget build(BuildContext context) {
20     return Scaffold(
21       appBar: AppBar(title: const Text("Signup")),
22       body: Padding(
23         padding: const EdgeInsets.all(16.0),
24         child: Form(
25           key: _formKey,
26           child: Column(
27             children: [
28               TextFormField(
29                 controller: _nameController,
30                 decoration: const InputDecoration(labelText: 'Name'),
31                 validator: (value) {
32                   if (value == null || value.isEmpty) {
33                     return 'Please enter your name';
34                   }
35                   return null;
36                 },
37               ), // TextFormField
38               TextFormField(
39                 controller: _emailController,
40                 decoration: const InputDecoration(labelText: 'Email'),
41                 validator: (value) {
42                   if (value == null || value.isEmpty) {
43                     return 'Please enter email';
44                   }
45                   if (!RegExp(r'^^[^@]+@[^@]+\.[^@]+$').hasMatch(value)) {
46                     return 'Enter a valid email';
47                   }
48                   return null;
49                 },
50               ), // TextFormField
51               TextFormField(
52                 controller: _mobileController,
53                 decoration: const InputDecoration(labelText: 'Mobile'),
54                 keyboardType: TextInputType.phone,
55                 validator: (value) {
56                   if (value == null || value.isEmpty) {
57                     return 'Please enter mobile number';
58                   }
59                   if (!RegExp(r'^[0-9]{10}$').hasMatch(value)) {
60                     return 'Enter a valid 10-digit mobile number';
61                   }
62                   return null;
63                 },
64               ), // TextFormField
65               TextFormField(
66                 controller: _passwordController,
67                 obscureText: true,
68                 decoration: const InputDecoration(labelText: 'Password'),
69                 validator: (value) {
70                   if (value == null || value.isEmpty) {
71                     return 'Please enter password';
72                   }
73                   if (value.length < 6) {
74                     return 'Password must be at least 6 characters';
75                   }
76                   return null;
77                 },
78               ), // TextFormField
79               TextFormField(
80                 controller: _confirmPasswordController,
81                 obscureText: true,
82                 decoration: const InputDecoration(labelText: 'Confirm Password'),
```

```

83     validator: (value) {
84       if (value == null || value.isEmpty) {
85         return 'Please confirm your password';
86       }
87       if (value != _passwordController.text) {
88         return 'Passwords do not match';
89       }
90       return null;
91     },
92   ), // TextFormField
93   const SizedBox(height: 20),
94   ElevatedButton(
95     onPressed: () {
96       if (_formKey.currentState?.validate() ?? false) {
97         // Perform signup
98       }
99     },
100    child: const Text('Signup'),
101  ), // ElevatedButton
102  TextButton(
103    onPressed: () {
104      Navigator.pop(context);
105    },
106    child: const Text('Already have an account? Login'),
107  ), // TextButton
108 ],
109 ), // Column
110 ), // Form
111 ), // Padding
112 ); // Scaffold
113 }
114 }

```

Output (Screenshot)

Grade/Marks
(____ / 10)

Sign of Lab Teacher with Date