Faculty of Technology and Engineering

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Date: / /

Laboratory Manual Performa

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

Practical - 6

Create a login screen and check the static condition if username: admin and password: admin then redirect on home screen and display name

Introduction of relevant concepts used:

- **Form and TextFormField**: Widgets in Flutter used to create and validate user input forms, ensuring data is correctly entered before proceeding with actions like login.
- **Navigator**: A Flutter widget that manages a stack of routes (screens) and allows navigation between them, enabling transitions like moving from a login screen to a home screen upon successful authentication.

main.dart
```dart
import 'package:flutter/material.dart';
import 'screens/login.dart';

void main() {
 runApp(MyApp());
}

class MyApp extends StatelessWidget {
 @override
 Widget build(BuildContext context) {
  return MaterialApp(
   title: 'Login Example',
   theme: ThemeData(
    primarySwatch: Colors.blue,
   ),
   home: LoginScreen(),
  );
 }
}
```

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

```dart
class LoginScreen extends StatefulWidget {
  @override
  _LoginScreenState createState() => _LoginScreenState();
}

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

  void _login() {
    if (_formKey.currentState!.validate()) {
      if (usernameController.text == 'admin' && passwordController.text == 'admin') {
        Navigator.push(
          context,
          MaterialPageRoute(
            builder: (context) => HomeScreen(username: usernameController.text),
          ),
        );
      } else {
        _showErrorDialog('Invalid credentials');
      }
    }
  }

  void _showErrorDialog(String message) {
    showDialog(
      context: context,
      builder: (context) => AlertDialog(
        title: Text('Error'),
        content: Text(message),
        actions: [
          TextButton(
            onPressed: () {
              Navigator.of(context).pop();
            },
            child: Text('OK'),
          ),
        ],
      ),
    );
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Login Screen'),
      ),
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: Form(
          key: _formKey,
```

```dart
      child: Column(
        children: [
          TextFormField(
            controller: usernameController,
            decoration: InputDecoration(labelText: 'Username'),
            validator: (value) {
              if (value == null || value.isEmpty) {
                return 'Please enter your username';
              }
              return null;
            },
          ),
          TextFormField(
            controller: passwordController,
            decoration: InputDecoration(labelText: 'Password'),
            obscureText: true,
            validator: (value) {
              if (value == null || value.isEmpty) {
                return 'Please enter your password';
              }
              return null;
            },
          ),
          SizedBox(height: 20),
          ElevatedButton(
            onPressed: _login,
            child: Text('Login'),
          ),
        ],
      ),
    ),
  ),
);
}
}
```

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

class HomeScreen extends StatelessWidget {
  final String username;

  HomeScreen({required this.username});

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Home Screen'),
      ),
      body: Center(
        child: Text(
          'Welcome, $username!',
```

```
      style: TextStyle(fontSize: 24),
    ),
  ),
 );
 }
}
```

Output (Screenshot)