MPL Lab Exp 4

Name: Anurag Gaiwal   Roll No. 17

Div: D15A   Batch: A

Aim:

The aim of this experiment is to create an interactive form using Flutter's form widget. The form will include various form fields such as text fields, dropdown menus, and checkboxes, along with validation logic. Additionally, a button will be added to validate and submit the form data.

Theory:

In Flutter, forms are created using the `Form` widget, which provides a framework for form validation, saving form data, and handling form submission. Here's a brief overview of the key concepts used in this experiment:

Form Widget:

The `Form` widget in Flutter facilitates the creation of interactive user input forms. It manages state, validation, and submission of form data efficiently.

Email Field (TextFormField):

Utilized for email input, `TextFormField` provides validation features ensuring basic email format compliance. The `onSaved` property captures and stores entered email addresses.

Password Field (TextFormField with obscureText):

For secure password input, `TextFormField` with `obscureText` conceals characters. Validation logic ensures password strength, enhancing security and user experience.

By understanding these concepts and implementing them effectively, we can create an interactive form in Flutter that provides a smooth user experience with validation and submission functionality.

Code in main.dart:

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


import 'package:audioplayers/audioplayers.dart';


void main() {
```

```dart
  AudioPlayer player = AudioPlayer(); // Initialize audioplayers
  runApp(MyApp(player: player));
}

class MyApp extends StatelessWidget {
  final AudioPlayer player;
  const MyApp({Key? key, required this.player}) : super(key: key);

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Spotify',
      theme: ThemeData(
        scaffoldBackgroundColor: Colors.black,
        appBarTheme: AppBarTheme(
          backgroundColor: Colors.black,
          titleTextStyle: TextStyle(
            color: Colors.white,
            fontSize: 34.0,
            fontWeight: FontWeight.bold,
          ),
        ),
      ),
      home: SplashScreen(),
    );
  }
}
```

Code in Login_screen.dart

```dart
// import 'package:firebase_auth/firebase_auth.dart';
import 'package:flutter/material.dart';
import 'home_screen.dart'; // Import the HomeScreen
import 'signup_screen.dart'; // Import the SignUpScreen
```

```dart
class LoginScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Login'),
      ),
      body: Container(
        color: Colors.black, // Set the background color to white
        padding: const EdgeInsets.all(16.0),
        child: SingleChildScrollView(
          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
              Image.asset('assets/ytlogo2.png', height: 200, width: 200),
              SizedBox(height: 20),
              TextField(
                style: TextStyle(color: Colors.white),
                decoration: InputDecoration(labelText: 'Email', hintStyle: TextStyle(color:
Colors.white)),
              ),
              SizedBox(height: 10),
              TextField(
                style: TextStyle(color: Colors.white),
                decoration: InputDecoration(labelText: 'Password',  hintStyle: TextStyle(color:
Colors.white)),
                obscureText: true,
              ),
              SizedBox(height: 20),
              ElevatedButton(
                onPressed: () {
                  // Handle login logic
                  // For now, let's navigate to the HomeScreen on login success
                  Navigator.pushReplacement(
```

```dart
            context,
            MaterialPageRoute(builder: (context) => HomeScreen()),
          );
        },
        child: Text('Login'),
      ),
      SizedBox(height: 20),
      GestureDetector(
        onTap: () {
          // Navigate to the sign-up screen
          Navigator.pushReplacement(
            context,
            MaterialPageRoute(builder: (context) => SignUpScreen()),
          );
        },
        child: Text(
          "Don't have an account? Sign Up",
          style: TextStyle(
            color: Colors.blue,
            decoration: TextDecoration.underline,
          ),
        ),
      ),
    ],
  ),
      ),
    ),
  );
}
}
```

Code in signup_screen.dart:

```dart
// import 'package:firebase_auth/firebase_auth.dart';
import 'package:flutter/material.dart';
import 'home_screen.dart'; // Import the HomeScreen
import 'login_screen.dart';

class SignUpScreen extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Sign Up'),
        centerTitle: false,
      ),
      body: Container(
        color: Colors.black, // Set the background color to white
        padding: const EdgeInsets.all(16.0),
        child: SingleChildScrollView(

          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
              Image.asset('assets/ytlogo2.png', height: 200, width: 200),
              SizedBox(height: 20),
              TextField(
                style: TextStyle(color: Colors.white),
                decoration: InputDecoration(labelText: 'Email', hintStyle: TextStyle(color:
Colors.white)),
              ),
              SizedBox(height: 10),
              TextField(
                style: TextStyle(color: Colors.white),
                decoration: InputDecoration(labelText: 'Password', hintStyle: TextStyle(color:
Colors.white)),
```

```dart
          obscureText: true,
        ),
        SizedBox(height: 10),
        TextField(
          style: TextStyle(color: Colors.white),
          decoration: InputDecoration(labelText: 'Confirm Password', hintStyle:
TextStyle(color: Colors.white)),
          obscureText: true,
        ),
        SizedBox(height: 20),
        ElevatedButton(
          onPressed: () {
            // createAccount();
            // Handle sign-up logic
            // For now, let's navigate to the HomeScreen on sign-up success
            Navigator.pushReplacement(
              context,
              MaterialPageRoute(builder: (context) => HomeScreen()),
            );
          },
          child: Text('Sign Up'),
        ),
        SizedBox(height: 20),
        GestureDetector(
          onTap: () {
            // Navigate to the login screen
            Navigator.pushReplacement(
              context,
              MaterialPageRoute(builder: (context) => LoginScreen()),
            );
          },
          child: Text(
            'Already have an account? Login',
            style: TextStyle(
```

```
                color: Colors.blue,
                decoration: TextDecoration.underline,
              ),
            ),
          ),
        ],
      ),
    ),
  ),
);
  }
}
```