MPL EXPERIMENT 4

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AIM:To create an interactive Form using form widget.

Theory:

1.Introduction

Forms are a crucial component in mobile applications for collecting user input. Flutter provides the **Form** widget, which helps manage multiple input fields efficiently and allows validation before submission.

The Form widget works in combination with **TextFormField** and a **GlobalKey<FormState>** to track the form state, validate inputs, and process the collected data.

2.Form Widget Overview

The **Form** widget in Flutter acts as a container for form fields and manages their state. It provides built-in validation and submission handling.

Key Components of a Form:

1. Form Widget:

- Wraps multiple input fields (TextFormFields) together.
- Requires a *GlobalKey*<*FormState*> to track and validate form fields.

2. TextFormField Widget:

- o A special type of text field used in forms.
- o Supports validation and user input.

3. Validator Function:

- Ensures correct user input and prevents invalid data.
- o Example: Ensuring an email field contains a valid email format.

4. Submit Button:

• Triggers form validation and submission.

3. Working Principle of Form widget

The **Form** widget allows developers to:

- Group multiple **TextFormField** widgets together.
- Validate input before proceeding.
- Save user input after validation.

The GlobalKey<FormState> is used to control the form, providing methods like:

- $formKey.currentState!.validate() \rightarrow Checks all validators in the form fields.$
- $formKey.currentState!.save() \rightarrow Saves the form input values.$
- $formKey.currentState!.reset() \rightarrow Clears the form fields.$

CODE:

```
Register_signup page
                                         body: SafeArea(
import 'package:flutter/material.dart';
                                              child: Column(
                                               children: [
import
'package:spotify clone/features/auth/sc
                                                 Padding(
reens/sign in screen.dart';
                                                  padding: const
                                         EdgeInsets.all(16.0),
import
'package:spotify clone/features/auth/sc
                                                  child: Row(
reens/register.dart';
                                                   children: [
                                                    IconButton(
                                                     icon: const
class RegisterScreen extends
                                         Icon(Icons.arrow back, color:
StatelessWidget {
                                         Colors.white),
 const RegisterScreen({Key? key}):
                                                     onPressed: () =>
super(key: key);
                                         Navigator.pop(context),
 @override
 Widget build(BuildContext context) {
  return Scaffold(
                                                  ),
   backgroundColor: const
Color(0xFF1C1B1B),
                                                 Expanded(
```

child: SingleChildScrollView(),		
child: Padding(),		
padding: const	const SizedBox(height:		
EdgeInsets.symmetric(horizontal:	32),		
24.0),	SizedBox(
child: Column(width: double.infinity,		
crossAxisAlignment:	height: 56,		
•	•		
CrossAxisAlignment.center,	child: ElevatedButton(
children: [onPressed: () {		
Image.asset(Navigator.push(
	context,		
'assets/images/spotify_logo.png',	MaterialPageRoute(
width: //235	builder: (context)		
500,	=>		
height: 150,	Register()), //		
),	Navigate to ThirdScreen		
const SizedBox(height:);		
32),	// Handle register		
const Text(},		
'Enjoy Listening To	style:		
Music',	ElevatedButton.styleFrom(
•	backgroundColor:		
style: TextStyle(
color: Colors.white,	const Color(0xFF42C83C),		
fontSize: 24,	shape:		
fontWeight:	RoundedRectangleBorder(
FontWeight.bold,	borderRadius:		
),	BorderRadius.circular(30),		
),),		
const SizedBox(height:),		
16),	child: const Text(
const Text('Register',		
'Spotify is a proprietary	style: TextStyle(
Swedish audio\nstreaming and media	color: Colors.white,		
services provider',	fontSize: 16,		
textAlign:	fontWeight:		
TextAlign.center,	FontWeight.bold,		
style: TextStyle()		
• • • • • • • • • • • • • • • • • • • •),		
color: Colors.grey,	<i>)</i> ,		
fontSize: 16,),		

), const SizedBox(height:	Register.dart import 'package:flutter/material.dart';
16),	T	import
	TextButton('package:spotify_clone/features/auth/sc
	onPressed: () {	reens/sign_in_screen.dart';
	Navigator.push(context,	import 'package:spotify_clone/main.dart';
	MaterialPageRoute(package.spottry_cronc/main.dart,
	builder: (context)	class Register extends StatefulWidget {
=>	bunder. (context)	const Register({Key? key}):
		super(key: key);
SignInScr	een()), // Navigate to	super(ney, ney),
ThirdScre		@override
);	State <register> createState() =></register>
	// Handle sign in	_RegisterState();
	},	}
	child: const Text(,
	'Sign in',	class RegisterState extends
	style: TextStyle(State <register> {</register>
	color: Colors.white,	<pre>bool _obscurePassword = true;</pre>
	fontSize: 16,	
),	@override
),	Widget build(BuildContext context) {
),	return Scaffold(
],	backgroundColor: const
),	Color(0xFF1C1B1B),
`),	body: SafeArea(
),		child: SingleChildScrollView(
),		child: Padding(
[],		padding: const
),		EdgeInsets.all(24.0),
),		child: Column(
);		crossAxisAlignment:
}		CrossAxisAlignment.start,
}		children: [
		Row(
		children: [
		IconButton(
		icon: const

Icon(Icons.arrow_back, color:),
Colors.white),),
onPressed: () =>],
Navigator.pop(context),),
),	const SizedBox(height: 32),
const SizedBox(width: 10),	TextField(
Image.asset(style: const TextStyle(color:
	Colors.white),
'assets/images/spotify_logo.png',	decoration:
height: 150,	InputDecoration(
),	hintText: 'Full Name',
],	hintStyle: const
),	TextStyle(color: Colors.grey),
const SizedBox(height: 32),	filled: true,
const Text(fillColor:
'Register',	Colors.grey.withOpacity(0.1),
style: TextStyle(border:
color: Colors.white,	OutlineInputBorder(
fontSize: 28,	borderRadius:
fontWeight:	BorderRadius.circular(12),
FontWeight.bold,	borderSide:
),	BorderSide.none,
).),
const SizedBox(height: 8),).
Row().
children: [const SizedBox(height: 16),
const Text(TextField(
'If You Need Any Support	style: const TextStyle(color:
1	Colors.white),
style: TextStyle(color:	decoration:
Colors.grey),	InputDecoration(
)	hintText: 'Enter Email',
TextButton(hintStyle: const
onPressed: () {},	TextStyle(color: Colors.grey),
child: const Text(filled: true,
'Click Here',	fillColor:
style: TextStyle(color:	Colors.grey.withOpacity(0.1),
Colors.green),	border:
borderRadius:	
borderRadius:	OutlineInputBorder(

BorderRadius.circular(12),	}) ;
borderSide:	},
BorderSide.none,),
),),
),),
),	const SizedBox(height: 32),
const SizedBox(height: 16),	SizedBox(
TextField(width: double.infinity,
obscureText:	height: 56,
_obscurePassword,	child: ElevatedButton(
style: const TextStyle(color:	onPressed: () {
Colors.white),	Navigator.push(
decoration:	context,
InputDecoration(MaterialPageRoute(
hintText: 'Password',	builder: (context) =>
hintStyle: const	const MainScreen()),
TextStyle(color: Colors.grey),);
filled: true,	},
fillColor:	style:
Colors.grey.withOpacity(0.1),	ElevatedButton.styleFrom(
border:	backgroundColor: const
OutlineInputBorder(Color(0xFF42C83C),
borderRadius:	shape:
BorderRadius.circular(12),	RoundedRectangleBorder(
borderSide:	borderRadius:
BorderSide.none,	BorderRadius.circular(30),
),),
suffixIcon: IconButton(),
icon: Icon(child: const Text(
_obscurePassword	'Create Account',
? Icons.visibility_off	style: TextStyle(
: Icons.visibility,	fontSize: 16,
color: Colors.grey,	fontWeight:
),	FontWeight.bold,
onPressed: () {),
setState(() {),
_obscurePassword =),
!_obscurePassword;),
Row(const SizedBox(height: 32),

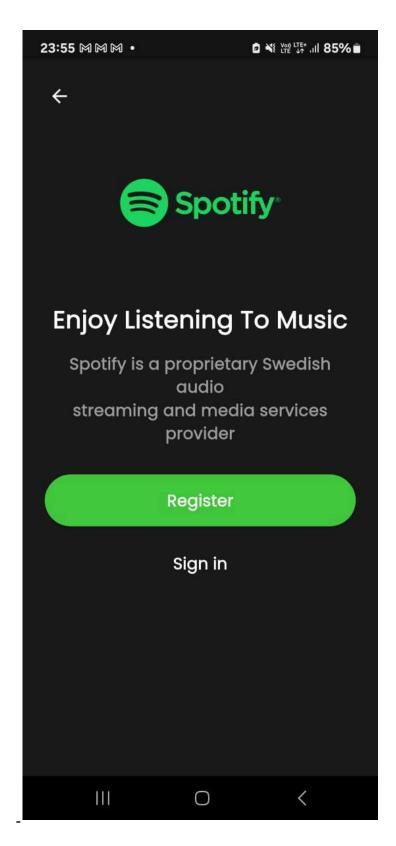
```
mainAxisAlignment:
                                                               ),
MainAxisAlignment.center,
           children: [
Image.asset('assets/images/google logo
.png', height: 40),
            const SizedBox(width: 20),
Image.asset('assets/images/apple logo.
png', height: 40),
           ],
          const SizedBox(height: 32),
          Row(
           mainAxisAlignment:
MainAxisAlignment.center,
           children: [
            const Text(
             'Do You Have An
Account?',
             style: TextStyle(color:
Colors.grey),
            TextButton(
             onPressed: () {
              Navigator.push(
                context,
                MaterialPageRoute(
                  builder: (context) =>
const SignInScreen()),
              );
             child: const Text(
              'Sign In',
              style: TextStyle(color:
Colors.white),
Sign in screen.dart
```

<pre>import 'package:flutter/material.dart'; import 'package:spotify_clone/main.dart'; import 'register.dart'; class SignInScreen extends StatefulWidget {</pre>	<pre>icon: const Icon(Icons.arrow_back, color: Colors.white),</pre>
<pre>const SignInScreen({Key? key}) :</pre>	'assets/images/spotify_logo.png',
super(key: key);	height: 150,
@override), 1
State <signinscreen> createState() =></signinscreen>),
SignInScreenState();	const SizedBox(height: 32),
}	const Text(
	'Sign In',
class _SignInScreenState extends	style: TextStyle(
State <signinscreen> {</signinscreen>	color: Colors.white,
bool _obscurePassword = true;	fontSize: 28,
@override	fontWeight:
<pre>@override Widget build(BuildContext context) {</pre>	FontWeight.bold,
return Scaffold(),
backgroundColor: const	const SizedBox(height: 8),
Color(0xFF1C1B1B),	Row(
body: SafeArea(children: [
child: SingleChildScrollView(const Text(
child: Padding('If You Need Any Support
padding: const	,
EdgeInsets.all(24.0),	style: TextStyle(color:
child: Column(Colors.grey),
crossAxisAlignment:),
CrossAxisAlignment.start,	TextButton(
children: [onPressed: () {},
Row(children: [child: const Text('Click Here',
IconButton(style: TextStyle(color:
Colors.green),	style. Textstyle(color.
),	

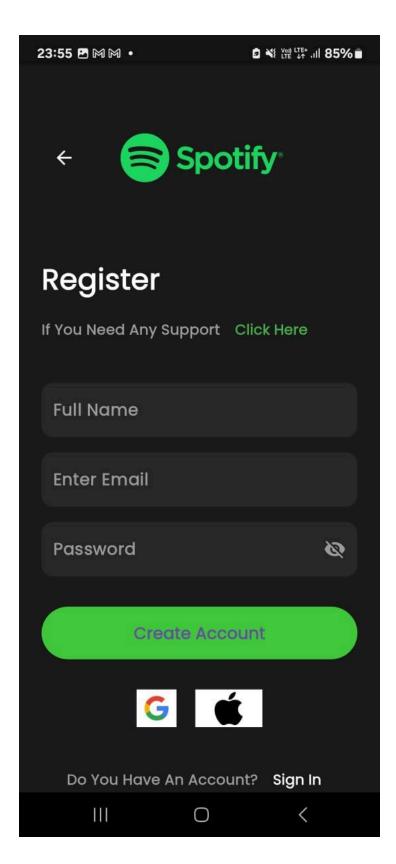
	border:
<i>)</i> , 1	OutlineInputBorder(
)	borderRadius:
const SizedBox(height: 32),	BorderRadius.circular(12),
TextField(borderSide:
style: const TextStyle(color:	BorderSide.none,
Colors.white),)
decoration:	suffixIcon: IconButton(
	icon: Icon(
InputDecoration(hintText: 'Enter Username	`
	_obscurePassword
Or Email',	? Icons.visibility_off
hintStyle: const	: Icons.visibility,
TextStyle(color: Colors.grey),	color: Colors.grey,
filled: true,), P 1 0 (
fillColor:	onPressed: () {
Colors.grey.withOpacity(0.1),	setState(() {
border:	_obscurePassword =
OutlineInputBorder(!_obscurePassword;
borderRadius:	}) ;
BorderRadius.circular(12),	},
borderSide:),
BorderSide.none,),
),),
),	const SizedBox(height: 16),
),	Align(
const SizedBox(height: 16),	alignment:
TextField(Alignment.centerRight,
obscureText:	child: TextButton(
_obscurePassword,	onPressed: () {},
style: const TextStyle(color:	child: const Text(
Colors.white),	'Recovery Password',
decoration:	style: TextStyle(color:
InputDecoration(Colors.grey),
hintText: 'Password',),
hintStyle: const),
TextStyle(color: Colors.grey),),
filled: true,	const SizedBox(height: 32),
SizedBox((- 5 7)
width: double.infinity,),

height: 56,	const SizedBox(height: 16),
child: ElevatedButton(Row(
onPressed: () {	mainAxisAlignment:
Navigator.push(MainAxisAlignment.center,
context,	children: [
MaterialPageRoute(, , , , , , , , , , , , , , , , , , ,
builder: (context) =>	Image.asset('assets/images/google_logo
const MainScreen()),	.png', height: 40),
);	const SizedBox(width: 20),
}.	((((((((((((((((((((
style:	Image.asset('assets/images/apple_logo.
ElevatedButton.styleFrom(png', height: 40),
backgroundColor: const]
Color(0xFF42C83C),)
shape:	const SizedBox(height: 32),
RoundedRectangleBorder(Row(
borderRadius:	mainAxisAlignment:
BorderRadius.circular(30),	MainAxisAlignment.center,
)	children: [
),	const Text(
child: const Text('Not A Member?',
'Sign In',	style: TextStyle(color:
style: TextStyle(Colors.grey),
fontSize: 16,)
fontWeight:	TextButton(
FontWeight.bold,	onPressed: () {
1 ont weight.ook,	Navigator.push(
),	context,
),	MaterialPageRoute(
),	builder: (context) =>
const SizedBox(height: 16),	const Register()),
const Center()·
child: Text(<i>)</i> ,
'Or',	child: const Text(
style: TextStyle(color:	'Register Now',
Colors.grey),	style: TextStyle(color:
)	Colors.blue),
),	001010.0140),
),	
/ 2	

```
),
),
),
),
),
);
}
```



Register page



Sign In Page

