EXPERIMENT NO: - 04

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<u>AIM: -</u> To create an interactive Form using form widget.

Theory: -

A form in Flutter is a structured container that collects user input through various fields like text fields, dropdowns, checkboxes, and buttons. It plays a crucial role in applications that require user data entry, such as login pages, registration forms, and feedback submissions. Flutter provides the Form widget, which works alongside TextFormField and other input elements to manage validation, state handling, and error messages efficiently. By using form validation techniques, developers can ensure data accuracy and enhance user experience.

When you create a form, it is necessary to provide the GlobalKey. This key uniquely identifies the form and allows you to do any validation in the form fields. The form widget uses child widget TextFormField to provide the users to enter the text field. This widget renders a material design text field and also allows us to display validation errors when they occur.

Creation of a Form

- ➤ While creating a form in Flutter, the **Form widget** is essential as it acts as a container for grouping multiple form fields and managing validation.
- ➤ A **GlobalKey**<**FormState**> is required to uniquely identify the form and enable validation or data retrieval from the form fields.
- ➤ The **TextFormField widget** is used to provide input fields where users can enter data such as names, phone numbers, or email addresses.
- ➤ To enhance the appearance and usability of input fields, **InputDecoration** is used, allowing customization of labels, icons, borders, and hint text.
- ➤ Validation plays a crucial role in forms, and the **validator property** within **TextFormField** ensures user input meets specific criteria before submission.

- ➤ Different types of input require appropriate **keyboard types**, such as TextInputType.number for numeric fields or TextInputType.emailAddress for email fields.
- ➤ Proper **state management** is needed to store and retrieve user input, ensuring the form data is processed correctly.
- ➤ A **submit button** is necessary to trigger form validation and submit the collected data for further processing.

Some Properties of Form Widget

- **key:** A GlobalKey that uniquely identifies the Form. You can use this key to interact with the form, such as validating, resetting, or saving its state.
- **child:** The child widget that contains the form fields. Typically, this is a Column, ListView, or another widget that allows you to arrange the form fields vertically.
- **autovalidateMode:** An enum that specifies when the form should automatically validate its fields.

Some Methods of Form Widget

- validate(): This method is used to trigger the validation of all the form fields within the Form. It returns true if all fields are valid, otherwise false. You can use it to check the overall validity of the form before submitting it.
- save(): This method is used to save the current values of all form fields. It invokes the onSaved callback for each field. Typically, this method is called after validation succeeds.
- **reset():** Resets the form to its initial state, clearing any user-entered data.
- **currentState:** A getter that returns the current FormState associated with the Form.

Code: -),
),
login_screen.dart),
import 'package:flutter/material.dart';	Positioned(
import 'register_screen.dart';	bottom: -50,
import 'otp_verification_screen.dart';	left: -50,
	child: Container(
class LoginScreen extends StatefulWidget {	width: 150,
<pre>const LoginScreen({super.key});</pre>	height: 150,
	decoration: BoxDecoration(
@override	shape: BoxShape.circle,
State <loginscreen> createState() =></loginscreen>	color: Colors.white.withOpacity(0.1),
_LoginScreenState();),
}),
),
class _LoginScreenState extends	SingleChildScrollView(
State <loginscreen> {</loginscreen>	child: Padding(
<pre>final _formKey = GlobalKey<formstate>();</formstate></pre>	padding: const EdgeInsets.all(20.0),
final _emailController =	child: Form(
<pre>TextEditingController();</pre>	key: _formKey,
final _passwordController =	child: Column(
TextEditingController();	mainAxisAlignment:
bool _isPasswordVisible = false;	MainAxisAlignment.center,
	children: [
@override	const SizedBox(height: 80),
Widget build(BuildContext context) {	Container(
return Scaffold(padding: const EdgeInsets.all(20),
body: Container(decoration: BoxDecoration(
decoration: const BoxDecoration(borderRadius:
gradient: LinearGradient(BorderRadius.circular(30),
begin: Alignment.topCenter,	boxShadow: [
end: Alignment.bottomCenter,	BoxShadow(
colors: [color:
Color(0xFF1A237E),	Colors.blue.withOpacity(0.2),
Color(0xFF0D47A1),	blurRadius: 20,
Color(0xFF01579B),	spreadRadius: 5,
])
),	,, 1
),),
child: Stack(child: Column(
children: [children:
Positioned(Container(
top: -100,	`
-	padding: const EdgeInsets.all(16),
right: -100,	decoration: BoxDecoration(
child: Container(•
width: 200,	color: Colors.white,
height: 200,	shape: BoxShape.circle,
decoration: BoxDecoration(boxShadow: [
shape: BoxShape.circle,	BoxShadow(
color: Colors.white.withOpacity(0.1),	color:
	Colors.blue.withOpacity(0.5), blurRadius: 20,
	Diurkadius, ZV,

```
spreadRadius: 5,
                                                                                             labelStyle: const
                                                            TextStyle(color: Colors.white70),
                     ),
                                                                              border: OutlineInputBorder(
                    ],
                                                                                                borderRadius:
                                                            BorderRadius.circular(15),
                   child: const Icon(
                                                                               borderSide: BorderSide.none,
                    Icons.shield.
                                                                              ),
                    size: 80,
                                                                                            prefixIcon: const
                    color: Colors.blue,
                                                            Icon(Icons.email, color: Colors.white70),
                   ),
                 ),
                                                                             validator: (value) {
                 const SizedBox(height: 20),
                                                                              if (value?.isEmpty??true) {
                 ShaderMask(
                                                                               return 'Please enter email';
                    shaderCallback: (bounds) =>
const LinearGradient(
                                                                              return null;
                            colors: [Colors.white,
Colors.lightBlueAccent],
                                                                             },
                   ).createShader(bounds),
                                                                           ),
                   child: const Text(
                                                                          const SizedBox(height: 20),
                   'SecureShield VPN',
                                                                          Container(
                   style: TextStyle(
                                                                            decoration: BoxDecoration(
                     fontSize: 32,
                                      fontWeight:
                                                                             color: Colors.white10,
FontWeight.bold,
                                                                                                borderRadius:
                                                            BorderRadius.circular(15),
                     color: Colors.white,
                                                                                     border: Border.all(color:
                                                             Colors.white24),
                                                                            child: TextFormField(
                 const Text(
                                                                             controller: _passwordController,
                   'Secure • Fast • Reliable'.
                                                                                  style: const TextStyle(color:
                   style: TextStyle(
                                                            Colors.white),
                    color: Colors.white70,
                                                                                                 obscureText:
                    fontSize: 16,
                                                            !_isPasswordVisible,
                   ),
                                                                             decoration: InputDecoration(
                                                                              labelText: 'Password',
                                                                                             labelStyle: const
                                                            TextStyle(color: Colors.white70),
                                                                              border: OutlineInputBorder(
              const SizedBox(height: 40),
                                                                                                borderRadius:
              Container(
                                                            BorderRadius.circular(15),
               decoration: BoxDecoration(
                                                                               borderSide: BorderSide.none,
                color: Colors.white10,
                                   borderRadius:
                                                                                             prefixIcon: const
BorderRadius.circular(15),
                                                            Icon(Icons.lock, color: Colors.white70),
                         border: Border.all(color:
                                                                              suffixIcon: IconButton(
Colors.white24),
                                                                               icon: Icon(
                                                                                 _isPasswordVisible
               child: TextFormField(
                                                                                    ? Icons.visibility
                controller: _emailController,
                                                                                   : Icons.visibility_off,
                     style: const TextStyle(color:
                                                                                 color: Colors.white70,
Colors.white),
                decoration: InputDecoration(
                                                                               onPressed: () {
                 labelText: 'Email',
```

```
setState(() {
                                                            (_formKey.currentState?.validate() ?? false) {
                            isPasswordVisible =
                                                                               Navigator.push(
!_isPasswordVisible;
                                                                                context,
                                                                                MaterialPageRoute(
                    });
                                                                                        builder: (context) =>
                   },
                                                            OTPVerificationScreen(
                                                                                                       email:
                validator: (value) {
                                                             _emailController.text,
                 if (value?.isEmpty ?? true) {
                   return 'Please enter password';
                                                                                ),
                 return null;
                },
                                                                            style: ElevatedButton.styleFrom(
               ),
                                                                                           backgroundColor:
                                                            Colors.transparent,
             const SizedBox(height: 10),
                                                                                                shadowColor:
             Align(
                                                            Colors.transparent,
                                       alignment:
                                                                                         minimumSize: const
Alignment.centerRight,
                                                            Size.fromHeight(55),
               child: TextButton(
                                                                                                       shape:
                onPressed: () {
                                                            RoundedRectangleBorder(
                         // Add forgot password
                                                                                               borderRadius:
functionality
                                                            BorderRadius.circular(15),
                },
                child: const Text(
                                                                            ),
                 'Forgot Password?',
                                                                            child: const Text(
                           style: TextStyle(color:
                                                                              'Login',
Colors.white70),
                                                                              style: TextStyle(
                                                                               fontSize: 18,
               ),
                                                                               fontWeight: FontWeight.bold,
                                                                               color: Colors.white,
             const SizedBox(height: 20),
                                                                              ),
             Container(
                                                                            ),
               decoration: BoxDecoration(
                gradient: const LinearGradient(
                            colors: [Colors.blue,
                                                                          const SizedBox(height: 20),
Colors.lightBlue],
                                                                          Row(
                ),
                                                                                         mainAxisAlignment:
                                   borderRadius:
                                                            MainAxisAlignment.center,
BorderRadius.circular(15),
                                                                           children: [
                boxShadow: [
                                                                            Container(
                 BoxShadow(
                                                                            height: 1,
                                           color:
Colors.blue.withOpacity(0.3),
                                                                              width: 50.
                  blurRadius: 10,
                                                                              color: Colors.white24,
                   spreadRadius: 2,
                                                                            ),
                                                                            const Padding(
                 ),
                                                                                                     padding:
                ],
                                                            EdgeInsets.symmetric(horizontal: 10),
               ),
                                                                              child: Text(
               child: ElevatedButton(
                                                                               'Or continue with',
                onPressed: () {
                                                                                       style: TextStyle(color:
                                                if
```

```
Colors.white70),
                                                                             child: const Text(
                 ),
                                                                               'Sign Up',
                                                                               style: TextStyle(
                ),
                                                                                color: Colors.white,
                Container(
                 height: 1,
                                                                                                  fontWeight:
                                                            FontWeight.bold,
                 width: 50,
                 color: Colors.white24,
                                                                               ),
                ),
               ],
             const SizedBox(height: 20),
             Row(
                            mainAxisAlignment:
MainAxisAlignment.center,
               children: [
                _buildSocialButton(
                 icon: Icons.phone,
                 onPressed: () {
                             // Add phone login
functionality
                 },
                const SizedBox(width: 20),
                                                             Widget_buildSocialButton({
                _buildSocialButton(
                                                              required IconData icon,
                 icon: Icons.g_mobiledata,
                                                              required VoidCallback onPressed,
                 onPressed: () {
                                                             }) {
                            // Add Google login
                                                              return Container(
functionality
                                                                decoration: BoxDecoration(
                 },
                                                                 color: Colors.white10,
                                                                 borderRadius: BorderRadius.circular(15),
               ],
                                                                 border: Border.all(color: Colors.white24),
                                                                ),
             const SizedBox(height: 20),
                                                                child: IconButton(
             Row(
                                                                 icon: Icon(icon, color: Colors.white),
                            mainAxisAlignment:
                                                                 onPressed: onPressed,
MainAxisAlignment.center,
                                                               ),
               children: [
                                                              );
                const Text(
                 "Don't have an account? ",
                           style: TextStyle(color:
Colors.white70),
                TextButton(
                 onPressed: () {
                 Navigator.push(
                    context,
                    MaterialPageRoute(
                      builder: (context) => const
RegisterScreen(),
                    ),
                  );
```

},

register_screen.dart

```
import 'package:flutter/material.dart';
                                                                fontWeight: FontWeight.bold,
import 'otp_verification_screen.dart';
                                                                color: Colors.white,
class RegisterScreen extends StatefulWidget {
                                                                ),
const RegisterScreen({super.key});
                                                                const SizedBox(height: 10),
@override
                                                                 'Join SecureShield VPN',
State<RegisterScreen> createState() =>
                                                                style: TextStyle(
RegisterScreenState();
                                                                color: Colors.white.withOpacity(0.7),
                                                                fontSize: 16.
                                                                ),
class _RegisterScreenState extends
                                                                ),
State<RegisterScreen> {
                                                                const SizedBox(height: 40),
final _formKey = GlobalKey<FormState>();
                                                                // Name Field
final _nameController = TextEditingController();
                                                                Container(
final emailController = TextEditingController();
                                                                decoration: BoxDecoration(
final passwordController = TextEditingController();
                                                                color: Colors.white10,
bool _isPasswordVisible = false;
                                                                borderRadius: BorderRadius.circular(15),
                                                                border: Border.all(color: Colors.white24),
@override
                                                                ),
Widget build(BuildContext context) {
                                                                child: TextFormField(
return Scaffold(
                                                                controller: _nameController,
body: Container(
                                                                style: const TextStyle(color: Colors.white),
decoration: const BoxDecoration(
                                                                decoration: InputDecoration(
gradient: LinearGradient(
                                                                labelText: 'Full Name'.
                                                                labelStyle: const TextStyle(color: Colors.white70),
begin: Alignment.topCenter,
end: Alignment.bottomCenter,
                                                                border: OutlineInputBorder(
colors: [
                                                                borderRadius: BorderRadius.circular(15),
Color(0xFF1A237E),
                                                                borderSide: BorderSide.none,
Color(0xFF0D47A1),
Color(0xFF01579B),
                                                                prefixIcon: const Icon(Icons.person, color:
                                                                Colors.white70),
),
                                                                ),
),
                                                                validator: (value) {
child: SafeArea(
                                                                if (value?.isEmpty ?? true) {
child: SingleChildScrollView(
                                                                return 'Please enter your name';
child: Padding(
padding: const EdgeInsets.all(20.0),
                                                                return null;
child: Form(
                                                                 },
key: formKey,
                                                                ).
child: Column(
crossAxisAlignment: CrossAxisAlignment.start,
                                                                const SizedBox(height: 20),
children: [
                                                                // Email Field
IconButton(
                                                                Container(
                                                                decoration: BoxDecoration(
icon: const Icon(Icons.arrow_back_ios, color:
Colors.white),
                                                                color: Colors.white10,
onPressed: () => Navigator.pop(context),
                                                                borderRadius: BorderRadius.circular(15),
                                                                border: Border.all(color: Colors.white24),
const SizedBox(height: 20),
const Text(
                                                                child: TextFormField(
                                                                controller: _emailController,
'Create Account',
style: TextStyle(
                                                                style: const TextStyle(color: Colors.white),
fontSize: 32.
                                                                 decoration: InputDecoration(
```

```
labelText: 'Email'.
                                                                  if (value?.isEmpty ?? true) {
                                                                  return 'Please enter password';
labelStyle: const TextStyle(color: Colors.white70),
border: OutlineInputBorder(
borderRadius: BorderRadius.circular(15),
                                                                  if (value!.length < 6) {
                                                                  return 'Password must be at least 6 characters';
borderSide: BorderSide.none,
prefixIcon: const Icon(Icons.email, color:
                                                                  return null;
Colors.white70).
                                                                  },
                                                                  ),
validator: (value) {
if (value?.isEmpty ?? true) {
                                                                 const SizedBox(height: 40),
return 'Please enter email';
                                                                 // Register Button
                                                                 Container(
                                                                  width: double.infinity,
if (!value!.contains('@')) {
return 'Please enter valid email';
                                                                  decoration: BoxDecoration(
                                                                  gradient: const LinearGradient(
}
return null;
                                                                 colors: [Colors.blue, Colors.lightBlue],
},
                                                                  borderRadius: BorderRadius.circular(15),
),
),
                                                                  boxShadow: [
const SizedBox(height: 20),
                                                                  BoxShadow(
// Password Field
                                                                  color: Colors.blue.withOpacity(0.3),
Container(
                                                                  blurRadius: 10,
decoration: BoxDecoration(
                                                                  spreadRadius: 2,
color: Colors.white10,
                                                                 ),
borderRadius: BorderRadius.circular(15),
                                                                  ],
border: Border.all(color: Colors.white24),
                                                                  child: ElevatedButton(
child: TextFormField(
                                                                  onPressed: () {
controller: _passwordController,
                                                                 if (_formKey.currentState?.validate() ?? false) {
style: const TextStyle(color: Colors.white),
                                                                  Navigator.push(
obscureText: !_isPasswordVisible,
                                                                  context,
decoration: InputDecoration(
                                                                  MaterialPageRoute(
labelText: 'Password',
                                                                  builder: (context) => OTPVerificationScreen(
                                                                  email: emailController.text,
labelStyle: const TextStyle(color: Colors.white70),
border: OutlineInputBorder(
borderRadius: BorderRadius.circular(15),
                                                                  ),
borderSide: BorderSide.none.
                                                                  );
prefixIcon: const Icon(Icons.lock, color:
Colors.white70),
                                                                  style: ElevatedButton.styleFrom(
                                                                  backgroundColor: Colors.transparent,
suffixIcon: IconButton(
                                                                  shadowColor: Colors.transparent,
icon: Icon(
                                                                  padding: const EdgeInsets.symmetric(vertical: 15),
isPasswordVisible
                                                                  shape: RoundedRectangleBorder(
? Icons.visibility
                                                                  borderRadius: BorderRadius.circular(15),
  : Icons.visibility_off,
color: Colors.white70,
onPressed: () {
                                                                  child: const Text(
                                                                  'Create Account',
setState(() {
isPasswordVisible = ! isPasswordVisible;
                                                                  style: TextStyle(
});
                                                                  fontSize: 18,
                                                                  fontWeight: FontWeight.bold,
},
),
),
                                                                  ),
validator: (value) {
```

const SizedBox(height: 20), // Login Option Row(mainAxisAlignment: MainAxisAlignment.center, children: [const Text('Already have an account?', style: TextStyle(color: Colors.white70), TextButton(onPressed: () => Navigator.pop(context), child: const Text('Login', style: TextStyle(color: Colors.white, fontWeight: FontWeight.bold,),),],);

```
otp_verification_screen.dart
                                                                  final List<FocusNode> _focusNodes = List.generate(
                                                                   4,
import 'package:flutter/material.dart';
                                                                      (index) => FocusNode(),
import 'dart:async';
                                                                  );
class OTPVerificationScreen extends StatefulWidget {
                                                                  Timer? _timer;
 final String? email;
                                                                  int _timeLeft = 30;
 final String? phoneNumber;
                                                                  @override
 const OTPVerificationScreen({
                                                                  void initState() {
  super.key,
                                                                   super.initState();
  this.email,
                                                                   startTimer();
  this.phoneNumber,
                                                                  }
 }) : assert(email != null || phoneNumber != null);
                                                                  void startTimer() {
 @override
                                                                   _timer = Timer.periodic(const Duration(seconds: 1),
 State<OTPVerificationScreen> createState() =>
_OTPVerificationScreenState();
                                                                 (timer) {
                                                                    if (_timeLeft > 0) {
}
                                                                      setState(() {
                                                                       _timeLeft--;
class _OTPVerificationScreenState extends
State<OTPVerificationScreen> {
                                                                      });
                                                                     } else {
 final List<TextEditingController> _controllers =
List.generate(
                                                                      _timer?.cancel();
  4,
     (index) => TextEditingController(),
                                                                   });
```

```
decoration: const BoxDecoration(
 @override
                                                                       gradient: LinearGradient(
 void dispose() {
                                                                        begin: Alignment.topCenter,
                                                                        end: Alignment.bottomCenter,
  _timer?.cancel();
  for (var controller in _controllers) {
                                                                        colors: [
   controller.dispose();
                                                                         Color(0xFF1A237E),
                                                                         Color(0xFF0D47A1),
  for (var node in _focusNodes) {
                                                                         Color(0xFF01579B),
   node.dispose();
                                                                        ],
                                                                       ),
  super.dispose();
                                                                     ),
                                                                     child: SafeArea(
                                                                       child: Padding(
 void verifyOTP() {
                                                                        padding: const EdgeInsets.all(20.0),
  String otp = _controllers.map((e) => e.text).join();
                                                                        child: Column(
  if (otp.length == 4) {
                                                                        crossAxisAlignment:
   // Here you would typically verify the OTP with your
                                                                CrossAxisAlignment.start,
backend
                                                                         children: [
   Navigator.pushReplacementNamed(context, '/main');
                                                                         IconButton(
                                                                            icon: const Icon(Icons.arrow_back_ios,
                                                                color: Colors.white),
                                                                            onPressed: () => Navigator.pop(context),
 @override
                                                                          ),
                                                                          const SizedBox(height: 30),
 Widget build(BuildContext context) {
                                                                          const Text(
  return Scaffold(
   body: Container(
                                                                            'Verification Code',
```

```
style: TextStyle(
                                                                                borderRadius:
            fontSize: 32,
                                                                BorderRadius.circular(15),
            fontWeight: FontWeight.bold,
                                                                                border: Border.all(color:
            color: Colors.white,
                                                                Colors.white24),
          ),
                                                                               ),
                                                                               child: TextField(
         ),
         const SizedBox(height: 10),
                                                                                controller: _controllers[index],
         Text(
                                                                                focusNode: _focusNodes[index],
           'We have sent the verification code
                                                                                textAlign: TextAlign.center,
to\n${widget.email??widget.phoneNumber}',
                                                                                style: const TextStyle(
           style: TextStyle(
                                                                                 color: Colors.white,
            color: Colors.white.withOpacity(0.7),
                                                                                 fontSize: 24,
            fontSize: 16,
                                                                                 fontWeight: FontWeight.bold,
          ),
                                                                                ),
         ),
                                                                                keyboardType: TextInputType.number,
         const SizedBox(height: 50),
                                                                                maxLength: 1,
         Row(
                                                                                 decoration: InputDecoration(
           mainAxisAlignment:
                                                                                 counterText: ",
MainAxisAlignment.spaceEvenly,
                                                                                 filled: true,
           children: List.generate(
                                                                                 fillColor: Colors.transparent,
            4,
                                                                                 border: OutlineInputBorder(
              (index) => SizedBox(
                                                                                 borderRadius:
             width: 60,
                                                                BorderRadius.circular(15),
             child: Container(
                                                                                   borderSide: BorderSide.none,
              decoration: BoxDecoration(
                                                                                 ),
                color: Colors.white.withOpacity(0.1),
                                                                                ),
```

```
onChanged: (value) {
                                                                               ),
                  if (value.isNotEmpty && index < 3) {
                                                                              ),
                   _focusNodes[index +
                                                                            ),
1].requestFocus();
                                                                            const SizedBox(height: 20),
                  }
                                                                            if (_timeLeft == 0)
                 if (value.isEmpty && index > 0) {
                                                                              Center(
                   _focusNodes[index -
                                                                               child: TextButton(
1].requestFocus();
                                                                                onPressed: () {
                                                                                  setState(() {
                  if (index == 3 && value.isNotEmpty)
                                                                                   _{\text{timeLeft}} = 30;
                                                                                  });
{
                   verifyOTP();
                                                                                  startTimer();
                                                                                  // Here you would typically resend the
                                                                   OTP
                },
               ),
                                                                                 },
                                                                                child: const Text(
              ),
                                                                                  'Resend Code',
            ),
                                                                                  style: TextStyle(
           ),
                                                                                   color: Colors.white,
          const SizedBox(height: 40),
                                                                                   fontSize: 16,
          Center(
                                                                                  ),
           child: Text(
            'Time remaining: $_timeLeft seconds',
                                                                               ),
            style: const TextStyle(
                                                                              ),
              color: Colors.white70,
                                                                             const Spacer(),
              fontSize: 16,
                                                                             Container(
```

```
'Verify',
           width: double.infinity,
           decoration: BoxDecoration(
                                                                              style: TextStyle(
           gradient: const LinearGradient(
                                                                               fontSize: 18,
             colors: [Colors.blue, Colors.lightBlue],
                                                                               fontWeight: FontWeight.bold,
            ),
                                                                              ),
            borderRadius: BorderRadius.circular(15),
                                                                            ),
            boxShadow: [
             BoxShadow(
                                                                          ),
              color: Colors.blue.withOpacity(0.3),
                                                                         ],
              blurRadius: 10,
              spreadRadius: 2,
                                                                      ),
             ),
                                                                     ),
            ],
                                                                    ),
           ),
                                                                  );
           child: ElevatedButton(
            onPressed: verifyOTP,
            style: ElevatedButton.styleFrom(
             backgroundColor: Colors.transparent,
             shadowColor: Colors.transparent,
             padding: const
EdgeInsets.symmetric(vertical: 15),
             shape: RoundedRectangleBorder(
              borderRadius: BorderRadius.circular(15),
             ),
            ),
            child: const Text(
```

```
profile_screen.dart
        import 'package:flutter/material.dart';
        import 'dart:math';
        import 'dart:async';
                                                                     Widget _buildPremiumButton() {
        class ProfileScreen extends StatelessWidget {
                                                                      return Container(
         const ProfileScreen({super.key});
                                                                       decoration: BoxDecoration(
                                                                        gradient: LinearGradient(
         @override
                                                                          colors: [Colors.amber.shade400,
         Widget build(BuildContext context) {
                                                                   Colors.orange.shade400],
          return Scaffold(
                                                                        ),
           backgroundColor: Colors.transparent,
                                                                        borderRadius: BorderRadius.circular(15),
           body: SingleChildScrollView(
                                                                        boxShadow: [
            child: Column(
                                                                          BoxShadow(
              children: [
                                                                           color: Colors.amber.withOpacity(0.3),
               buildProfileHeader(),
                                                                           blurRadius: 10,
               _buildProfileOptions(),
                                                                           spreadRadius: 2,
                                                                         ),
                                                                        ],
                                                                       child: ElevatedButton(
                                                                        onPressed: () {},
                                                                        style: ElevatedButton.styleFrom(
         Widget _buildProfileHeader() {
                                                                         backgroundColor: Colors.transparent,
          return Container(
                                                                          shadowColor: Colors.transparent,
           padding: const EdgeInsets.all(32),
                                                                          padding: const
           decoration: BoxDecoration(
                                                                   EdgeInsets.symmetric(horizontal: 32, vertical: 12),
           gradient: LinearGradient(
                                                                         shape:
              colors: [Colors.blue.shade900,
                                                                   Rounded Rectangle Border (border Radius:\\
        Colors.purple.shade900],
                                                                   BorderRadius.circular(15)),
            ),
                                                                        ),
             borderRadius: const
                                                                        child: const Row(
        BorderRadius.vertical(bottom:
                                                                          mainAxisSize: MainAxisSize.min.
        Radius.circular(30)),
                                                                          children: [
                                                                           Icon(Icons.star, color: Colors.white),
           child: SafeArea(
                                                                           SizedBox(width: 8),
            child: Column(
                                                                           Text('Upgrade to Premium',
            children: [
                                                                            style: TextStyle(color: Colors.white,
               const CircleAvatar(
                                                                   fontWeight: FontWeight.bold),
                radius: 50,
                                                                           ),
                backgroundColor: Colors.white,
                                                                          ],
                child: Icon(Icons.person, size: 50, color:
                                                                        ),
        Colors.blue),
               const SizedBox(height: 16),
               const Text('Free User',
               style: TextStyle(
                                                                     Widget _buildProfileOptions() {
                  color: Colors.white.
                                                                      return Padding(
                  fontSize: 24,
                                                                       padding: const EdgeInsets.all(16),
                  fontWeight: FontWeight.bold,
                                                                       child: Column(
                ),
                                                                        children: [
                                                                          _buildOptionTile('Connection History',
               const SizedBox(height: 16),
                                                                   Icons.history).
                _buildPremiumButton(),
```

buildOptionTile('Support'.

```
Widget _buildTextField({
Icons.support agent),
      _buildOptionTile('About', Icons.info),
                                                               required String label,
     _buildOptionTile('Logout', Icons.logout,
                                                               required
                                                                                  String
isLogout: true),
                                                               initialValue,
                                                               required Function(String?) onSaved,
   ),
                                                             }) {
  );
                                                               return
                                                                          TextFormField(
                                                                initialValue: initialValue,
                                                                decoration:
 Widget_buildOptionTile(String title, IconData
                                                                InputDecoration(
icon, {bool isLogout = false}) {
                                                                labelText: label,
  return Container(
                                                                 border: OutlineInputBorder(),
   margin: const EdgeInsets.only(bottom: 12),
   decoration: BoxDecoration(
    color: Colors.white.withOpacity(0.1),
                                                                onSaved: onSaved,
    borderRadius: BorderRadius.circular(15),
    border: Border.all(color: Colors.white24),
                                                               );
   ),
   child: ListTile(
    leading: Container(
      padding: const EdgeInsets.all(8),
      decoration: BoxDecoration(
      color: (isLogout? Colors.red:
Colors.blue).withOpacity(0.2),
       borderRadius: BorderRadius.circular(10),
      ),
      child: Icon(icon,
       color: isLogout? Colors.red: Colors.blue,
      ),
    ),
    title: Text(title,
      style: TextStyle(
       color: isLogout? Colors.red:
Colors.white,
       fontWeight: FontWeight.bold,
      ),
    ),
    trailing: const
Icon(Icons.arrow_forward_ios,
      color: Colors.white70,
      size: 16,
    ),
TextStyle(fontSize:
      18)), Column(
                     myCrops.map((crop)
       children:
                                               => Text(crop)).toList(),
      ),
    ],
```

OUTPUT: -







