EXPERIMENT NO: - 04

Aim: To create an interactive Form using form widget.

Theory

Forms in Flutter

Forms in Flutter are essential components used to collect and manage user input efficiently. They are widely used in login screens, registration pages, and feedback forms. Flutter provides a Form widget that works alongside TextFormField and other input elements, offering features such as validation, error handling, and state management to improve user experience.

Key Components of a Form in Flutter

1. Form Widget

The Form widget acts as a container that groups multiple input fields and manages their validation.

- Requires a GlobalKey<FormState> to uniquely identify the form and interact with it.
- Helps in structuring form fields and handling user input efficiently.

2. Form Fields (TextFormField)

The TextFormField widget is used for user input, such as entering names, emails, or phone numbers.

- It supports input validation using the validator property.
- Allows customization with InputDecoration (e.g., labels, icons, borders, hint text).
- Different TextInputType options can be set for appropriate keyboard input (e.g., TextInputType.emailAddress for emails).

3. Validation in Forms

Ensuring valid user input is crucial. The validator property in TextFormField helps check whether the entered data meets specified criteria before submission.

- Validation can be triggered manually using formKey.currentState!.validate().
- The autovalidateMode property can enable automatic validation during user input.

4. State Management in Forms

To ensure data persistence and processing, proper state management is required.

- The FormState class provides methods like validate(), save(), and reset() to manage form behavior.
- The save() method stores user input when validation is successful.
- The reset() method clears the form fields and restores the initial state.

5. Submit Button

A submit button is necessary to trigger form validation and submit user data.

- When pressed, it checks validation using formKey.currentState!.validate().
- If validation succeeds, the form data is saved and processed accordingly.

Important Properties & Methods of Form Widget

Properties

- key → A GlobalKey<FormState> that uniquely identifies the form.
- child → Contains form fields, typically wrapped in a Column or ListView.
- autovalidateMode → Defines when the form should auto-validate.

Methods

- validate() → Checks if all form fields are valid and returns true or false.
- save() → Stores the current values of form fields after successful validation.
- reset() → Clears user input and resets the form to its initial state.
- currentState → Provides access to the form's state for validation, saving, or resetting.

Code:

1. Sign_in_page.dart

```
import 'package:flutter/material.dart';
                                                             SizedBox(height: 50),
class SignInPage extends StatefulWidget {
                                                                      Text(
 const SignInPage({super.key});
                                                                       "Sign in",
                                                                       style: TextStyle(fontSize: 24,
 @override
                                                             fontWeight: FontWeight.bold),
  _SignInPageState createState() =>
_SignInPageState();
                                                                      SizedBox(height: 40),
class _SignInPageState extends
                                                                      TextField(
State<SignInPage> {
                                                                       decoration: InputDecoration(
 bool obscurePassword = true;
                                                                        labelText: "Email",
                                                                        prefixIcon: Icon(Icons.email,
 @override
                                                             color: Colors.blue),
 Widget build(BuildContext context) {
                                                                        border:
  return Scaffold(
                                                             OutlineInputBorder(borderRadius:
   body: SingleChildScrollView(
                                                             BorderRadius.circular(10)),
     child: Padding(
                                                                      ),
      padding: const
                                                                     ),
EdgeInsets.symmetric(horizontal: 24.0,
vertical: 50),
                                                                      SizedBox(height: 15),
      child: Column(
       crossAxisAlignment:
                                                                      TextField(
CrossAxisAlignment.center,
                                                                       obscureText: _obscurePassword,
       children: [
                                                                       decoration: InputDecoration(
        SizedBox(height: 100),
                                                                        labelText: "Password",
                                                                        prefixIcon: Icon(Icons.lock, color:
        // LinkedIn Logo
                                                             Colors.blue),
        Row(
                                                                        suffixIcon: IconButton(
          mainAxisAlignment:
                                                                         icon: Icon(
MainAxisAlignment.center,
                                                                           _obscurePassword?
                                                             lcons.visibility_off : lcons.visibility,
         children: [
                                                                          color: Colors.grey,
           Text(
            "Linked",
            style: TextStyle(fontSize: 32,
                                                                         onPressed: () {
fontWeight: FontWeight.bold, color:
                                                                           setState(() {
                                                                            _obscurePassword =
Colors.blue),
                                                             ! obscurePassword;
           Container(
                                                                          });
            color: Colors.blue,
                                                                         },
            padding:
EdgeInsets.symmetric(horizontal: 4, vertical:
                                                                        border:
                                                             OutlineInputBorder(borderRadius:
2),
            child: Text(
                                                             BorderRadius.circular(10)),
             "in",
                                                                      ),
             style: TextStyle(fontSize: 32,
fontWeight: FontWeight.bold, color:
Colors.white),
                                                                      SizedBox(height: 10),
```

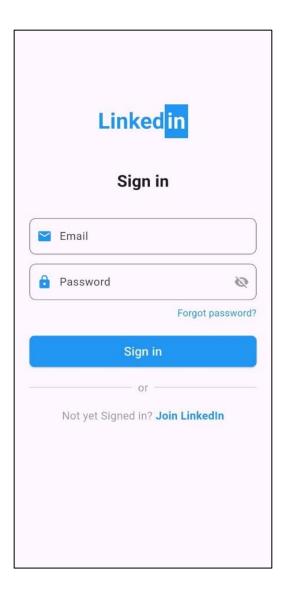
```
Align(
                                                             Divider(thickness: 1)),
          alignment: Alignment.centerRight,
                                                                         Padding(
          child: InkWell(
                                                                          padding:
           onTap: () {},
                                                              EdgeInsets.symmetric(horizontal: 10),
           child: Text(
                                                                          child: Text("or", style:
                                                             TextStyle(fontSize: 16, color: Colors.grey)),
            "Forgot password?",
            style: TextStyle(color:
                                                                         Expanded(child:
Colors.blue, fontSize: 14),
                                                              Divider(thickness: 1)),
        SizedBox(height: 25),
                                                                      SizedBox(height: 20),
        SizedBox(
                                                                      Row(
          width: double.infinity,
                                                                       mainAxisAlignment:
          height: 50,
                                                             MainAxisAlignment.center,
          child: ElevatedButton(
                                                                       children: [
           style: ElevatedButton.styleFrom(
                                                                         Text("Not yet Signed in?", style:
                                                             TextStyle(fontSize: 16, color: Colors.grey)),
            backgroundColor: Colors.blue,
            shape:
                                                                         SizedBox(width: 5),
RoundedRectangleBorder(borderRadius:
                                                                         InkWell(
                                                                          onTap: () {
BorderRadius.circular(8)),
           ),
           onPressed: () {
                                                             Navigator.of(context).pushNamed('/signup');
Navigator. of (context).pushReplacementNam
                                                                          child: Text("Join LinkedIn",
ed('/home');
                                                             style: TextStyle(fontSize: 16, color:
                                                             Colors.blue, fontWeight: FontWeight.bold)),
           child: Text("Sign in", style:
                                                                        ),
TextStyle(fontSize: 18, color: Colors.white)),
        SizedBox(height: 20),
        Row(
         children: [
           Expanded(child:
```

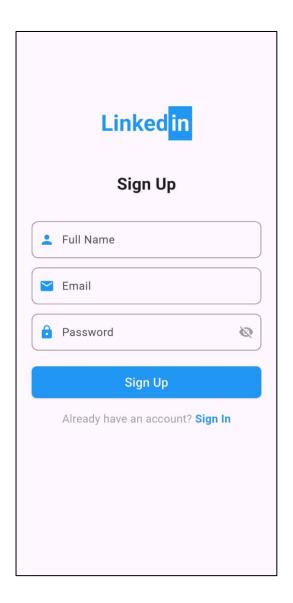
2. Sign_up_page.dart

```
SizedBox(height: 50),
import 'package:flutter/material.dart';
                                                                   Text(
                                                                     "Sign Up",
class SignUpPage extends StatefulWidget {
 const SignUpPage({super.key});
                                                                     style: TextStyle(fontSize: 24,
                                                           fontWeight: FontWeight.bold),
 @override
  _SignUpPageState createState() =>
_SignUpPageState();
                                                                    SizedBox(height: 40),
                                                                   TextField(
                                                                     decoration: InputDecoration(
class _SignUpPageState extends
State<SignUpPage> {
                                                                      labelText: "Full Name",
                                                                      prefixIcon: Icon(Icons.person,
 bool obscurePassword = true;
                                                           color: Colors.blue),
 @override
                                                                      border:
 Widget build(BuildContext context) {
                                                           OutlineInputBorder(borderRadius:
  return Scaffold(
                                                           BorderRadius.circular(10)),
   body: SingleChildScrollView(
                                                                    ),
     child: Padding(
                                                                   ),
      padding: const
EdgeInsets.symmetric(horizontal: 24.0,
                                                                    SizedBox(height: 15),
vertical: 50),
      child: Column(
                                                                   TextField(
       crossAxisAlignment:
                                                                     decoration: InputDecoration(
                                                                      labelText: "Email",
CrossAxisAlignment.center,
                                                                      prefixIcon: Icon(Icons.email, color:
       children: [
        SizedBox(height: 100),
                                                           Colors.blue),
                                                                      border:
                                                           OutlineInputBorder(borderRadius:
        // LinkedIn Logo
        Row(
                                                           BorderRadius.circular(10)),
          mainAxisAlignment:
                                                                    ),
MainAxisAlignment.center,
                                                                   ),
          children: [
           Text(
                                                                    SizedBox(height: 15),
            "Linked".
            style: TextStyle(fontSize: 32,
                                                                    TextField(
fontWeight: FontWeight.bold, color:
                                                                     obscureText: obscurePassword,
Colors.blue),
                                                                     decoration: InputDecoration(
                                                                      labelText: "Password",
           Container(
                                                                      prefixIcon: Icon(Icons.lock, color:
            color: Colors.blue,
                                                           Colors.blue),
                                                                      suffixIcon: IconButton(
            padding:
EdgeInsets.symmetric(horizontal: 4, vertical:
                                                                       icon: Icon(
                                                                         _obscurePassword?
2),
                                                           Icons. visibility off: Icons. visibility,
            child: Text(
             "in".
                                                                        color: Colors.grey,
             style: TextStyle(fontSize: 32,
fontWeight: FontWeight.bold, color:
                                                                       onPressed: () {
Colors.white),
                                                                        setState(() {
                                                                          _obscurePassword =
                                                           ! obscurePassword:
                                                                        });
                                                                       },
                                                                      border:
```

```
OutlineInputBorder(borderRadius:
BorderRadius.circular(10)),
                                                          Navigator. of (context).pushReplacementNam
                                                          ed('/home');
         ),
        ),
                                                                     child: Text("Sign Up", style:
                                                          TextStyle(fontSize: 18, color: Colors.white)),
        SizedBox(height: 25),
        SizedBox(
                                                                   ),
         width: double.infinity,
         height: 50,
                                                                   SizedBox(height: 20),
         child: ElevatedButton(
           style: ElevatedButton.styleFrom(
                                                                   Row(
            backgroundColor: Colors.blue,
                                                                    mainAxisAlignment:
            shape:
                                                          MainAxisAlignment.center,
RoundedRectangleBorder(borderRadius:
                                                                    children: [
                                                                     Text("Already have an account?",
BorderRadius.circular(8)),
                                                          style: TextStyle(fontSize: 16, color: Colors
           ),
           onPressed: () {
grey)),
           SizedBox(width: 5),
           InkWell(
            onTap: () {
Navigator. of(context).pushNamed('/');
            child: Text("Sign In", style:
TextStyle(fontSize: 16, color: Colors.blue,
fontWeight: FontWeight.bold)),
```

Output:





SignIn page SignUp page