

Experiment 4

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Aim: To create an interactive form using the form widget

Theory:

1. Form Widget:

- The Form widget is a container used to group multiple form fields together.
- It helps manage the state of the form, including validation, submission, and resetting.
- The Form widget maintains a `FormState` object that holds the current state of the form fields.
- Form widgets facilitate form submission, validation, and error handling.

2. FormField Widget:

- A `FormField` widget represents a single form field within a `Form`.
- Flutter provides various subclasses of the `FormField` widget for different types of input fields, such as `TextFormField`, `CheckboxFormField`, `RadioFormField`, `DropdownButtonFormField`, etc.
- Each form field widget encapsulates the logic for validating user input and managing its state.
- Form fields can be customized with properties to specify validation rules, error messages, initial values, input formatting, and more.
- Form fields automatically register themselves with the `Form` widget and handle validation and state management transparently.

3. Validation:

- Flutter's form widgets include built-in support for validation to ensure that user input meets specific criteria.
- Form fields can be configured with validation functions or validators to check the correctness of user input.
- Validators can be synchronous or asynchronous functions that return error messages if the input is invalid.
- Flutter provides a `FormFieldState` class associated with each form field, which exposes methods to validate the field's value and retrieve validation errors if any.

4. Submission:

- The `Form` widget provides a mechanism to submit the form data once it's been filled out by the user.
- Developers can define an `onSaved` callback for each form field to specify how the field's value should be processed when the form is submitted.

- When the form is submitted, the onSaved callbacks for all form fields are invoked, allowing developers to collect, process, and submit the form data to a backend server or perform other actions.

signup_page.dart

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

class SignupPage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: SingleChildScrollView( // Wrap with SingleChildScrollView
        child: Container(
          padding: EdgeInsets.symmetric(horizontal: 20.0, vertical: 100),
          decoration: BoxDecoration(
            gradient: LinearGradient(
              begin: Alignment.topLeft,
              end: Alignment.bottomRight,
              colors: [Colors.black12, Colors.white12],
            ),
          ),
        ),
        child: Center(
          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
              Image.asset(
                'assets/pinterest_logo.png', // Replace with your image file path
                width: 150.0,
                height: 150.0,
              ),
              SizedBox(height: 16.0),
              RichText(
                text: TextSpan(
                  text: 'Welcome to ',
                  style: TextStyle(
                    color: Colors.black,
                    fontSize: 30.0,
                    fontWeight: FontWeight.bold,
                  ),
                ),
                children: [
                  TextSpan(
                    text: 'Pinterest',
                    style: TextStyle(

```

[illegible]

```

border: OutlineInputBorder(
  borderRadius: BorderRadius.circular(12.0),
  borderSide: BorderSide.none,
),
),
style: TextStyle(color: Colors.black54),
),
SizedBox(height: 20.0),
ElevatedButton(
  onPressed: () {
    // Add your login logic here
  },
  child: Text(
    'Continue',
    style: TextStyle(
      color: Colors.white,
      fontSize: 18,
    ),
  ),
),
style: ElevatedButton.styleFrom(
  backgroundColor: Colors.red,
  padding: EdgeInsets.symmetric(horizontal: 80.0),
  shape: RoundedRectangleBorder(
    borderRadius: BorderRadius.circular(20.0),
  ),
),
),
SizedBox(height: 16.0),

TextButton(
  onPressed: () {
    Navigator.push(
      context,
      MaterialPageRoute(builder: (context) => LoginPage()),
    );
  },
  child: RichText(
    text: TextSpan(
      text: 'Already have an account? ',
      style: TextStyle(color: Colors.black54, fontSize: 16),
      children: <TextSpan>[
        TextSpan(
          text: 'Login',
          style: TextStyle(color: Colors.red, fontSize: 16),
        ),
      ],
    ),
  ),
),

```

```

    ),
  ),
),
],
),
),
),
),
),
);
}
}

```

login_page.dart

```

import 'package:flutter/material.dart';
import 'package:pinterest/main_page.dart';
import './signup_page.dart';

class LoginPage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: SingleChildScrollView( // Wrap with SingleChildScrollView
        child: Container(
          padding: EdgeInsets.symmetric(horizontal: 20.0, vertical: 150),
          decoration: BoxDecoration(
            gradient: LinearGradient(
              begin: Alignment.topLeft,
              end: Alignment.bottomRight,
              colors: [Colors.black12, Colors.white12],
            ),
          ),
        ),
        child: Center(
          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
              Image.asset(
                'assets/pinterest_logo.png', // Replace with your image file path
                width: 150.0,
                height: 150.0,
              ),
              SizedBox(height: 16.0),
              RichText(
                text: TextSpan(

```

```
text: 'Welcome to ',  
style: TextStyle(  
color: Colors.black,  
fontSize: 30.0,  
fontWeight: FontWeight.bold,  
),  
children: [  
  TextSpan(  
    text: 'Pinterest',  
    style: TextStyle(  
      color: Colors.red, // Change the color of "Pinterest" to red  
      fontSize: 30.0,  
      fontWeight: FontWeight.bold,  
    ),  
  ),  
],  
),  
),  
SizedBox(height: 16.0),  
TextField(  
decoration: InputDecoration(  
prefixIcon: Icon(Icons.email, color: Colors.black54),  
hintText: 'Email',  
hintStyle: TextStyle(color: Colors.black54),  
filled: true,  
fillColor: Colors.white.withOpacity(0.8),  
border: OutlineInputBorder(  
borderRadius: BorderRadius.circular(12.0),  
borderSide: BorderSide.none,  
),  
),  
style: TextStyle(color: Colors.black54),  
),  
SizedBox(height: 12.0),  
TextField(  
obscureText: true,  
decoration: InputDecoration(  
prefixIcon: Icon(Icons.lock, color: Colors.black54),  
hintText: 'Password',  
hintStyle: TextStyle(color: Colors.black54),  
filled: true,  
fillColor: Colors.white.withOpacity(0.8),  
border: OutlineInputBorder(  
borderRadius: BorderRadius.circular(12.0),  
borderSide: BorderSide.none,
```

```

    ),
    style: TextStyle(color: Colors.black54),
  ),
  SizedBox(height: 20.0),
  ElevatedButton(
    onPressed: () {
      Navigator.push(
        context,
        MaterialPageRoute(builder: (context) => MainPage()),
      );
    },
    child: Text(
      'Continue',
      style: TextStyle(
        color: Colors.white,
        fontSize: 18,
      ),
    ),
  ),
  style: ElevatedButton.styleFrom(
    backgroundColor: Colors.red,
    padding: EdgeInsets.symmetric(horizontal: 80.0),
    shape: RoundedRectangleBorder(
      borderRadius: BorderRadius.circular(20.0),
    ),
  ),
),
SizedBox(height: 16.0),

SizedBox(height: 5.0),
TextButton(
  onPressed: () {
    Navigator.push(
      context,
      MaterialPageRoute(builder: (context) => SignupPage()),
    );
  },
  child: RichText(
    text: TextSpan(
      text: 'Don\'t have an account? ',
      style: TextStyle(color: Colors.black54, fontSize: 16),
      children: <TextSpan>[
        TextSpan(
          text: 'Sign up',
          style: TextStyle(color: Colors.red, fontSize: 16),
        ),
      ],
    ),
  ),

```

```

    ),
  ),
),
],
),
),
),
),
),
);
}
}

```

Code:

```

import 'package:cached_network_image/cached_network_image.dart';
import 'package:faker/faker.dart';
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';
import 'package:font_awesome_flutter/font_awesome_flutter.dart';
import 'package:google_fonts/google_fonts.dart';

```

```

class DetailPage extends StatelessWidget {
  const DetailPage({super.key, required this.imageUrl});
  final String imageUrl;

```

@override

```

Widget build(BuildContext context) {
  return Scaffold(
    body: Column(
      children: [
        Expanded(
          child: Container(
            decoration: BoxDecoration(
              image: DecorationImage(
                image: CachedNetworkImageProvider(imageUrl),
                fit: BoxFit.cover,
              ),
            ),
          ),
        child: SafeArea(
          child: Padding(
            padding: const EdgeInsets.symmetric(horizontal: 18),
            child: Column(
              mainAxisAlignment: MainAxisAlignment.spaceBetween,
              crossAxisAlignment: CrossAxisAlignment.end,

```



```

children: [
  Row(
    mainAxisAlignment: MainAxisAlignment.spaceBetween,
    children: [
      InkWell(
        onTap: () => Navigator.pop(context),
        child: CircleAvatar(
          backgroundColor: Colors.black.withOpacity(0.2),
          child: const Icon(
            CupertinoIcons.chevron_back,
            color: Colors.white,
            size: 28,
          ),
        ),
      ),
      InkWell(
        onTap: () {
          showModalBottomSheet(
            context: context,
            builder: (context) {
              return SizedBox(
                height: 330,
                child: Padding(
                  padding: const EdgeInsets.symmetric(
                    horizontal: 12, vertical: 16),
                  child: Column(
                    crossAxisAlignment:
                      CrossAxisAlignment.start,
                    children: [
                      Row(
                        crossAxisAlignment:
                          CrossAxisAlignment.center,
                        children: [
                          const Icon(
                            FontAwesomeIcons.xmark),
                          const SizedBox(
                            width: 12,
                          ),
                          Text(
                            'Options',
                            style: GoogleFonts.notoSans(),
                          ),
                        ],
                      ),
                      const SizedBox(
                        height: 30,

```

```
),  
Text(  
  'Follow ${Faker().internet.userName()}',  
  style: GoogleFonts.notoSans(  
    fontSize: 18,  
    fontWeight: FontWeight.w500,  
  ),  
,  
const SizedBox(  
  height: 15,  
,  
Text(  
  'Copy link',  
  style: GoogleFonts.notoSans(  
    fontSize: 18,  
    fontWeight: FontWeight.w500,  
  ),  
,  
const SizedBox(  
  height: 15,  
,  
Text(  
  'Download image',  
  style: GoogleFonts.notoSans(  
    fontSize: 18,  
    fontWeight: FontWeight.w500,  
  ),  
,  
const SizedBox(  
  height: 15,  
,  
Text(  
  'Hide Pin',  
  style: GoogleFonts.notoSans(  
    fontSize: 18,  
    fontWeight: FontWeight.w500,  
  ),  
,  
const SizedBox(  
  height: 15,  
,  
Text(  
  'Report Pin',  
  style: GoogleFonts.notoSans(  
    fontSize: 18,  
    fontWeight: FontWeight.w500,
```

```

        ),
      ),
      Text(
        "This goes against Pinterest's community guidelines",
        style: GoogleFonts.notoSans(
          fontSize: 14,
        ),
      ),
    ],
  ),
);
},
shape: RoundedRectangleBorder(
  borderRadius: BorderRadius.circular(20.0),
),
);
},
child: const Icon(
  CupertinoIcons.ellipsis,
  color: Colors.white,
  size: 28,
),
),
],
),
CircleAvatar(
  backgroundColor: Colors.white.withOpacity(0.8),
  child: const Icon(
    CupertinoIcons.viewfinder,
    color: Colors.black,
  ),
)
],
),
),
),
),
),
),
Container(
  padding: const EdgeInsets.only(
    top: 10,
    bottom: 30,
    left: 18,
    right: 18,
  ),
),

```

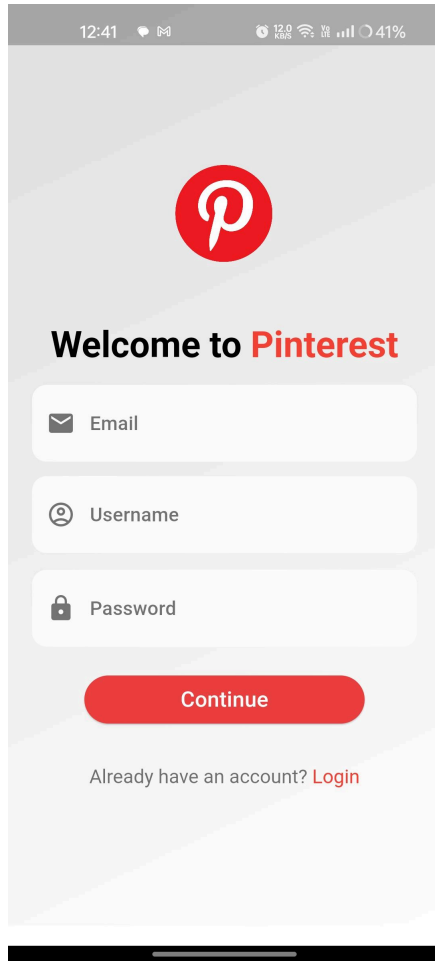
```

color: Colors.white,
child: Row(
  mainAxisAlignment: MainAxisAlignment.spaceBetween,
  children: [
    const Icon(CupertinoIcons.heart_circle_fill),
    Row(
      children: [
        Container(
          padding: const EdgeInsets.symmetric(
            horizontal: 17, vertical: 15),
          decoration: BoxDecoration(
            color: const Color(0xFFF1F1F1),
            borderRadius: BorderRadius.circular(30),
          ),
          child: Text(
            'View',
            style: GoogleFonts.notoSans(
              fontWeight: FontWeight.w500,
            ),
          ),
        ),
        const SizedBox(
          width: 6,
        ),
        Container(
          padding: const EdgeInsets.symmetric(
            horizontal: 17, vertical: 15),
          decoration: BoxDecoration(
            color: Theme.of(context).colorScheme.secondary,
            borderRadius: BorderRadius.circular(30),
          ),
          child: Text(
            'Save',
            style: GoogleFonts.notoSans(
              fontWeight: FontWeight.w500,
              color: Colors.white,
            ),
          ),
        ),
      ],
    ),
    const Icon(Icons.share),
  ],
),
],

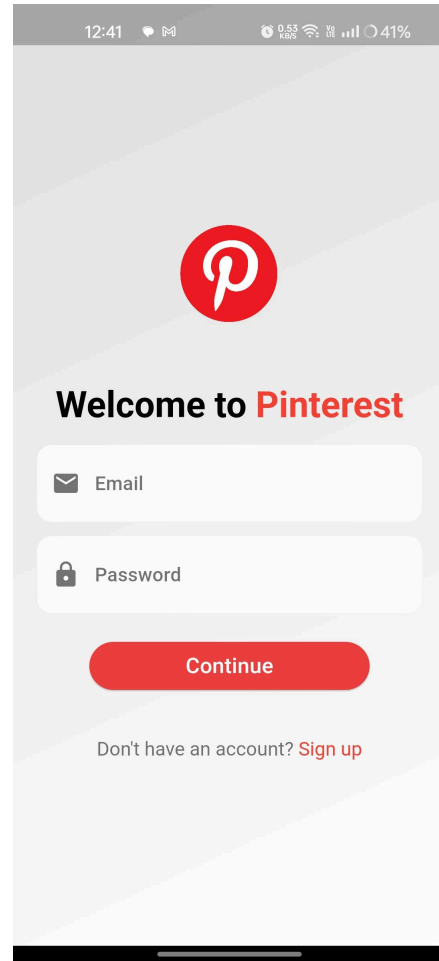
```

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

App UI:



Signup page



Login page

Widgets used: Form Widget, Form Widget Fields

Conclusion: Therefore understood the use of form widget in Flutter. Implemented signup and login page using form widget in my Flutter application.