

EXPERIMENT NO 4

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CLASS-D15A

ROLL NO-12

AIM-To create an interactive form using form widget

THEORY-

Forms are essential components of web and mobile applications, allowing users to input and submit data. An interactive form enhances user experience by providing real-time validation, user-friendly input fields, and seamless data handling.

A **Form Widget** is a structured way to manage user input, validate data, and handle submissions efficiently. It provides an interactive interface for users to enter and modify information.

Key Features of Interactive Forms

- **User Input Fields:** Text fields, dropdowns, checkboxes, radio buttons, and other input elements.
- **Real-time Validation:** Ensures correct data format before submission.
- **Error Handling:** Displays messages for invalid inputs.
- **Data Submission:** Sends user input to a backend or local storage for further processing.
- **Dynamic Updates:** Auto-fills or adjusts form fields based on user selections.

Components of Form Widget

- **Form Container:** Wraps all input fields.
- **Input Fields:** Text fields, number fields, password inputs, email inputs, etc.
- **Buttons:** Submit and reset buttons to process or clear input.
- **Validation Mechanisms:** Ensures valid input before submission.

SYNTAX

```
Form(  
  key: formKey, // Unique key to manage form state  
  child: Column(  
    children: [  
      TextFormField(  
        decoration: InputDecoration(labelText: "Enter your name"),  
        validator: (value) {  
          if (value == null || value.isEmpty) {  
            return "This field cannot be empty";  
          }  
          return null;  
        },  
      ),  
      SizedBox(height: 10),  
      ElevatedButton(  
        onPressed: () {  
          if (formKey.currentState!.validate()) {  
            // Perform form submission action  
          }  
        },  
        child: Text("Submit"),  
      ),  
    ],  
  ),  
)
```

Widget Properties

1)key

- Used to uniquely identify the Form widget.
- Typically assigned a GlobalKey<FormState> to manage validation and submissions.

Example, final _formKey = GlobalKey<FormState>();

```
Form(  
  key: _formKey,  
  child: Column(  
    children: [ /* Form fields go here */ ],  
  ),  
);
```

2)child

- Defines the content inside the Form, usually containing form fields like TextFormField, DropdownButtonFormField, etc.

Example:

```
Form(  
  child: Column(  
    children: [  
      TextFormField(),  
      ElevatedButton(onPressed: () {}, child: Text("Submit")),  
    ],  
  ),  
);
```

3)onchanged

- A callback function that gets triggered when any field inside the form changes.
- Can be used to update state based on form input.

Example:

```
Form(  
  onChanged: () {  
    print("Form data changed!");  
  },  
  child: TextFormField(),  
);
```

CODE

```
import 'package:flutter/material.dart';  
  
class IntroPage extends StatelessWidget {  
  const IntroPage({Key? key}) : super(key: key);  
  
  @override  
  Widget build(BuildContext context) {  
    return Scaffold(  
      backgroundColor: Colors.blue[600],  
      body: SafeArea(  
        child: Padding(  
          padding: const EdgeInsets.symmetric(horizontal: 24.0),  
          child: Column(  
            mainAxisAlignment: MainAxisAlignment.spaceBetween,  
            children: [  
              // Top section with time and status bar is handled by system UI  
  
              // Logo and illustration section  
              Column(  
                children: [  
                  // Top section with time and status bar is handled by system UI  
  
                  // Logo and illustration section
```

```

const SizedBox(height: 60),
// App logo
const Text(
  'Uber',
  style: TextStyle(
    color: Colors.white,
    fontSize: 40,
    fontWeight: FontWeight.bold,
  ),
),
const SizedBox(height: 40),
// Image instead of the white box
Container(
  height: 120,
  width: 120,
  decoration: BoxDecoration(
    borderRadius: BorderRadius.circular(16),
  ),
  child: ClipRRect(
    borderRadius: BorderRadius.circular(16),
    child: Image.asset(
      '/Screenshot-2020-07-01-at-8.jpg', // Replace with your image path
      fit: BoxFit.cover,
    ),
  ),
),
],
),

// Move with Safety text
const Text(
  'Move with Safety',

```

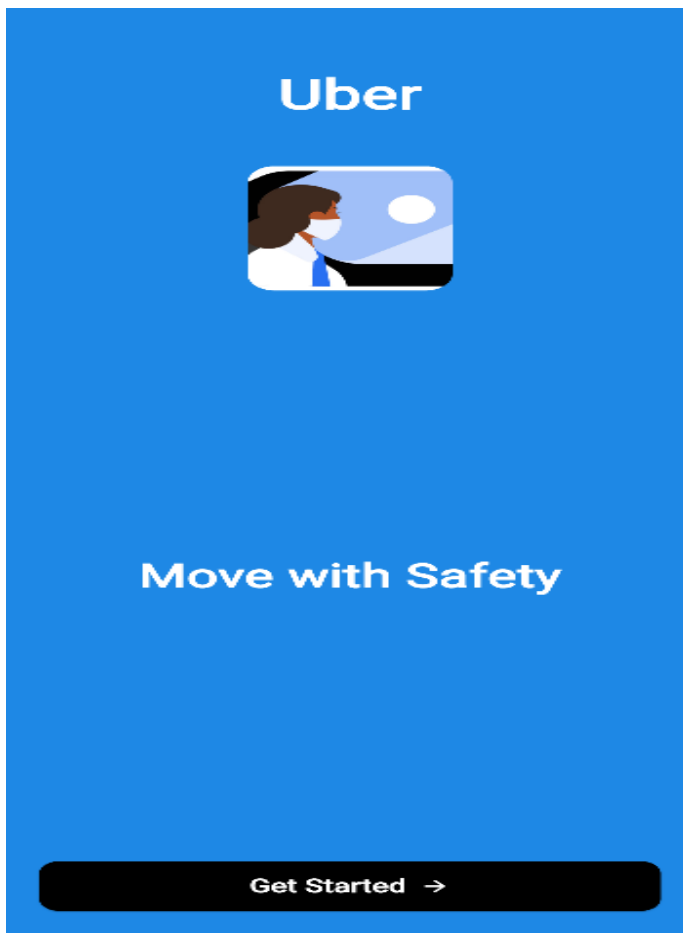


```

        ),
        SizedBox(width: 8),
        Icon(Icons.arrow_forward, color: Colors.white),
      ],
    ),
  ),
),
],
),
),
);
}

```

OUTPUT



Login Page

CODE

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

import 'otp_page.dart'; // Replace with actual OTP page import
import 'signup_page.dart'; // Import the signup page

class LoginPage extends StatefulWidget {
  @override
  _LoginPageState createState() => _LoginPageState();
}

class _LoginPageState extends State<LoginPage> {
  final TextEditingController _phoneController = TextEditingController();

  void _navigateToOtpPage() {
    if (_phoneController.text.length == 10) {
      Navigator.push(
        context,
        MaterialPageRoute(
          builder: (context) => OtpPage(phoneNumber: _phoneController.text),
        ),
      );
    } else {
      ScaffoldMessenger.of(context).showSnackBar(
        SnackBar(content: Text("Please enter a valid 10-digit number")),
      );
    }
  }

  void _navigateToSignupPage() {
```



```
Navigator.push(
  context,
  MaterialPageRoute(builder: (context) => SignupPage()),
);
}

@override
Widget build(BuildContext context) {
  return Scaffold(
    body: Padding(
      padding: const EdgeInsets.all(16.0),
      child: Column(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: [
          SizedBox(height: 50),
          Text("Enter your mobile number", style: TextStyle(fontSize: 18)),
          SizedBox(height: 10),
          Row(
            children: [
              Container(
                decoration: BoxDecoration(
                  border: Border.all(color: Colors.grey),
                  borderRadius: BorderRadius.circular(8),
                ),
                padding: EdgeInsets.symmetric(horizontal: 12, vertical: 14),
                child: Row(
                  children: [
                    Image.asset("/india_flag.png", width: 24), // Add flag asset
                    SizedBox(width: 8),
                    Text("+91"),
                  ],
                ),
              ),
            ],
          ),
        ],
      ),
    ),
  );
}
```

```
    ),
  ),
  SizedBox(width: 10),
  Expanded(
    child: TextField(
      controller: _phoneController,
      keyboardType: TextInputType.phone,
      decoration: InputDecoration(
        border: OutlineInputBorder(),
      ),
    ),
  ),
  ),
  ),
  ),
  SizedBox(width: 8),
  Icon(Icons.person_outline),
],
),
SizedBox(height: 20),
ElevatedButton(
  onPressed: _navigateToOtpPage,
  child: Text("Continue"),
  style: ElevatedButton.styleFrom(
    minimumSize: Size(double.infinity, 50),
  ),
),
SizedBox(height: 20),
Row(children: [
  Expanded(child: Divider()),
  Padding(
    padding: const EdgeInsets.symmetric(horizontal: 10),
    child: Text("or"),
  ),
],
```

```
Expanded(child: Divider()),
    ),
    SizedBox(height: 10),
    ElevatedButton.icon(
      onPressed: _navigateToSignupPage,
      icon: Icon(Icons.g_translate),
      label: Text("Continue with Google"),
      style: ElevatedButton.styleFrom(
        backgroundColor: Colors.white,
        foregroundColor: Colors.black,
        minimumSize: Size(double.infinity, 50),
      ),
    ),
    SizedBox(height: 10),
    ElevatedButton.icon(
      onPressed: _navigateToSignupPage,
      icon: Icon(Icons.apple),
      label: Text("Continue with Apple"),
      style: ElevatedButton.styleFrom(
        backgroundColor: Colors.white,
        foregroundColor: Colors.black,
        minimumSize: Size(double.infinity, 50),
      ),
    ),
    SizedBox(height: 10),
    ElevatedButton.icon(
      onPressed: _navigateToSignupPage,
      icon: Icon(Icons.email),
      label: Text("Continue with Email"),
      style: ElevatedButton.styleFrom(
        backgroundColor: Colors.white,
```

```

        foregroundColor: Colors.black,
        minimumSize: Size(double.infinity, 50),
    ),
),
SizedBox(height: 20),
Center(
    child: TextButton(
        onPressed: _navigateToSignupPage,
        child: Text("Find my account", style: TextStyle(fontSize: 16)),
    ),
),
SizedBox(height: 10),
Text(
    "By proceeding, you consent to get calls, WhatsApp or SMS/RCS messages, including
by automated means, from Uber and its affiliates to the number provided.",
    textAlign: TextAlign.center,
    style: TextStyle(fontSize: 12, color: Colors.grey),
),
],
),
),
);
}
}

```

OUTPUT

← Verify OTP

Enter the 4-digit code sent via SMS at
9632587412

[Resend code via SMS](#)

[Call me with code](#)

Enter your mobile number



[Continue](#)

or



[Continue with Google](#)



[Continue with Apple](#)



[Continue with Email](#)

[Find my account](#)

By proceeding, you consent to get calls, WhatsApp or SMS/RCS messages, including by automated means, from Uber and its affiliates to the number provided.

← Accept Terms & Privacy



Accept Uber's Terms & Review Privacy Notice

By selecting 'I Agree' below, I have reviewed and agree to the Terms of Use and acknowledge the Privacy Notice. I am at least 18 years of age.

I Agree

☐

Back

Next

CODE

```
import 'package:flutter/material.dart';
import 'otp_email_page.dart'; // Import the OTP page

class SignupPage extends StatelessWidget {
  final TextEditingController emailController = TextEditingController();

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        backgroundColor: Colors.white,
        elevation: 0,
      ),
      body: Padding(
        padding: const EdgeInsets.all(20.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Text(
              "What's your email address?",
              style: TextStyle(
                fontSize: 22,
                fontWeight: FontWeight.bold,
              ),
            ),
            SizedBox(height: 20),
            TextField(
              controller: emailController,
              decoration: InputDecoration(
                hintText: 'name@example.com',
                border: OutlineInputBorder(
                  borderRadius: BorderRadius.circular(10),
                  borderSide: BorderSide(color: Colors.black),
                ),
              ),
              keyboardType: TextInputType.emailAddress,
            ),
            Spacer(),
            Row(
              mainAxisAlignment: MainAxisAlignment.spaceBetween,
              children: [
                FloatingActionButton(
                  onPressed: () {},
                  backgroundColor: Colors.grey.shade200,
                  child: Icon(Icons.arrow_back, color: Colors.black),
                ),

```

```

ElevatedButton(
  onPressed: () {
    String email = emailController.text.trim();
    if (email.isNotEmpty) {
      Navigator.push(
        context,
        MaterialPageRoute(
          builder: (context) => OtpEmailPage(email: email),
        ),
      );
    } else {
      ScaffoldMessenger.of(context).showSnackBar(
        SnackBar(content: Text("Please enter your email")),
      );
    }
  },
  style: ElevatedButton.styleFrom(
    backgroundColor: Colors.black,
    shape: RoundedRectangleBorder(
      borderRadius: BorderRadius.circular(20),
    ),
    padding: EdgeInsets.symmetric(horizontal: 30, vertical: 15),
  ),
  child: Row(
    children: [
      Text(
        "Next",
        style: TextStyle(color: Colors.white),
      ),
      SizedBox(width: 5),
      Icon(Icons.arrow_forward, color: Colors.white),
    ],
  ),
),
],
)
],
),
);
}
}

```


NAME AND DETAILS

```
import 'package:flutter/material.dart';
import 'accept_page_details.dart'; // Import the correct Accept Page

class NameEntryPage extends StatefulWidget {
  final String email;

  NameEntryPage({required this.email});

  @override
  _NameEntryPageState createState() => _NameEntryPageState();
}

class _NameEntryPageState extends State<NameEntryPage> {
  final TextEditingController _firstNameController = TextEditingController();
  final TextEditingController _lastNameController = TextEditingController();

  void _saveName() {
    if (_firstNameController.text.isNotEmpty) {
      Navigator.push(
        context,
        MaterialPageRoute(
          builder: (context) => AcceptPageDetails(
            firstName: _firstNameController.text,
            lastName: _lastNameController.text,
            email: widget.email,
          ),
        ),
      );
    } else {
      ScaffoldMessenger.of(context).showSnackBar(
        SnackBar(content: Text("Please enter your first name")),
      );
    }
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(backgroundColor: Colors.white, elevation: 0),
      body: Padding(
        padding: const EdgeInsets.all(20.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Text(
```

```

        "What's your name?",
        style: TextStyle(fontSize: 22, fontWeight: FontWeight.bold),
    ),
    SizedBox(height: 5),
    Text("Let us know how to properly address you."),
    SizedBox(height: 20),
    TextField(
        controller: _firstNameController,
        decoration: InputDecoration(
            labelText: "First name",
            border: OutlineInputBorder(),
        ),
    ),
    SizedBox(height: 10),
    TextField(
        controller: _lastNameController,
        decoration: InputDecoration(
            labelText: "Last name",
            border: OutlineInputBorder(),
        ),
    ),
    Spacer(),
    Row(
        mainAxisAlignment: MainAxisAlignment.spaceBetween,
        children: [
            IconButton(
                icon: Icon(Icons.arrow_back),
                onPressed: () => Navigator.pop(context),
            ),
            ElevatedButton(
                onPressed: _saveName,
                child: Text("Next"),
            ),
        ],
    ),
);
}
}

```

OUTPUT



What's your name?

Let us know how to properly address you.

First name

aryan

Last name

dangat



Next



What's your email address?

bghbgfj@hdfbvhdgbv



Next →