

MAD LAB 4

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ROLL NO:44

DIV:D15A

AIM: To create an interactive Form using form widget.

THEORY:

In Flutter, form widgets and input widgets play a crucial role in creating interactive user interfaces, especially when dealing with user input and data submission.

1. Form Widgets:

The Form widget is a container that holds form fields for gathering user input.

It helps in managing form state, validation, and submission.

A `GlobalKey<FormState>` is required to uniquely identify the form and access its state.

2. Text Input Widgets:

Flutter provides several text input widgets for gathering textual user input:

1. `TextField`: Basic text input field.

2. `TextFormField`: A form field that integrates with the Form widget and provides features like validation, error handling, and saving form data.

These widgets allow users to input text using the device's keyboard.

3. Input Validation:

Input validation ensures that user input meets certain criteria or constraints before proceeding.

Each input widget typically includes a `validator` property where you can provide a validation function.

4. Form Submission:

Form submission involves validating user input and handling the form data.

After validating all form fields, it calls the `save` method on the `FormState` to save the form data.

Upon submission, it can perform actions like sending data to a server, updating local state, or navigating to another screen.

Steps for creating interactive form:

1. Creating a global form key

```
final _formKey = GlobalKey<FormState>();
```

```
String _name = '';
String _email = '';
```

2.Adding text form field with validation logic

```
SizedBox(height: 10),
TextFormField(
  style: TextStyle(color: Colors.black),
  decoration: InputDecoration(
    labelText: 'Email',
    filled: true,
    fillColor: Colors.white.withOpacity(0.7),
    border: OutlineInputBorder(
      borderRadius: BorderRadius.circular(10.0),
    ),
  ),
),
validator: (value) {
  if (value == null || value.isEmpty) {
    return 'Please enter your email';
  }
  // This is a basic email validation
  if (!value.contains('@')) {
    return 'Please enter a valid email';
  }
  return null;
}
```

3.Adding submit button for validation and form submission

```
SizedBox(height: 10),
Padding(
  padding: const EdgeInsets.symmetric(vertical: 16.0),
  child: ElevatedButton(
    onPressed: () {
      _submitForm();
    },
    child: Text('Submit'),
  ),
)
```

Code:

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

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Interactive Form',
      theme: ThemeData(
```

```

        primarySwatch: Colors.blue,
    ),
    home: MyForm(),
);
}
}

class MyForm extends StatefulWidget {
  @override
  _MyFormState createState() => _MyFormState();
}

class _MyFormState extends State<MyForm> {
  final _formKey = GlobalKey<FormState>();
  String _name = '';
  String _email = '';

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('USER DETAILS'),
      ),
      body: Stack(
        children: [
          // Background Image
          Image.asset(
            'assets/whatsapp image.jpg',
            width: MediaQuery.of(context).size.width,
            height: MediaQuery.of(context).size.height,
            fit: BoxFit.cover,
          ),
          // Form
          Padding(
            padding: EdgeInsets.all(16.0),
            child: Form(
              key: _formKey,
              child: Column(
                crossAxisAlignment: CrossAxisAlignment.start,
                children: <Widget>[
                  TextFormField(
                    style: TextStyle(color: Colors.black),
                    decoration: InputDecoration(
                      labelText: 'Name',
                      filled: true,
                      fillColor: Colors.white.withOpacity(0.7),
                      border: OutlineInputBorder(
                        borderRadius: BorderRadius.circular(10.0),
                      ),

```

```

    ),
    validator: (value) {
      if (value == null || value.isEmpty) {
        return 'Please enter your name';
      }
      return null;
    },
    onSave: (value) {
      _name = value!;
    },
  ),
  SizedBox(height: 10),
  TextFormField(
    style: TextStyle(color: Colors.black),
    decoration: InputDecoration(
      labelText: 'Email',
      filled: true,
      fillColor: Colors.white.withOpacity(0.7),
      border: OutlineInputBorder(
        borderRadius: BorderRadius.circular(10.0),
      ),
    ),
  ),
  validator: (value) {
    if (value == null || value.isEmpty) {
      return 'Please enter your email';
    }
    // This is a basic email validation
    if (!value.contains('@')) {
      return 'Please enter a valid email';
    }
    return null;
  },
  onSave: (value) {
    _email = value!;
  },
),
SizedBox(height: 10),
Padding(
  padding: const EdgeInsets.symmetric(vertical: 16.0),
  child: ElevatedButton(
    onPressed: () {
      _submitForm();
    },
    child: Text('Submit'),
  ),
),
],
),
),
),

```

```
        ),  
      ],  
    ),  
  );  
}  
  
void _submitForm() {  
  if (_formKey.currentState!.validate()) {  
    _formKey.currentState!.save();  
    // You can handle form submission here  
    print('Name: $_name, Email: $_email');  
  }  
}  
}
```

OUTPUT:

1.Incorrect details:

9:25



USER DETAILS

Name

chetan

Email

1

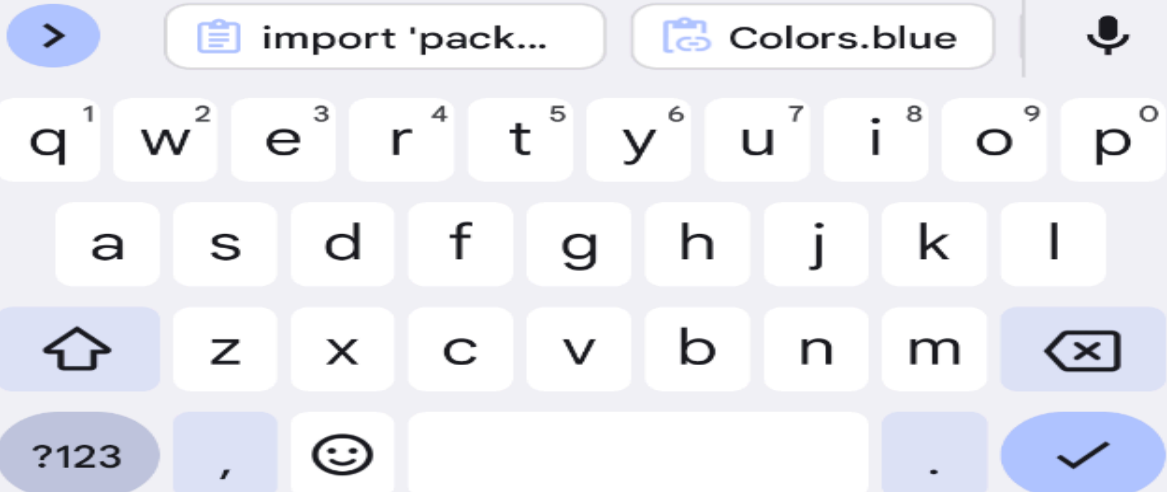
Please enter a valid email

Submit

Welcome to WhatsApp

Read our [Privacy Policy](#). Tap "Agree & Continue" to accept the [Terms of Service](#).

Agree & Continue



2. Successful submission

9:26



DEBUG

USER DETAILS

Name

chetan

Email

pilane14@gmail.com

Submit

Welcome to WhatsApp

Read our [Privacy Policy](#). Tap "Agree & Continue" to accept the [Terms of Service](#).

Agree & Continue



import 'pack...



Colors.blue



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Conclusion: Sucessfully understood and demonstrated the concept of form creation and validation using Flutter UI widgets.