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# Experiment 4

## Aim:To create an interactive Form using form widget

Theory:

- Form Widget: The Form widget is the container for form fields. It manages the form state and provides methods to validate, save, reset, and submit the form.
- Form Fields: Form fields are input fields where users can enter data. Flutter provides various types of form fields, such as TextFormField, DropdownButtonFormField, CheckboxFormField, RadioFormField, etc. Each form field has its own properties and behavior.
- Submission: Form submission involves taking the data entered by the user and processing it, such as sending it to a server, saving it locally, or performing other actions based on the application's logic. In Flutter, you can handle form submission by implementing a callback function that gets triggered when the form is submitted.
- Error Handling: Error handling in forms involves displaying error messages to the user when the data entered is invalid or when there are issues with form submission

Code:

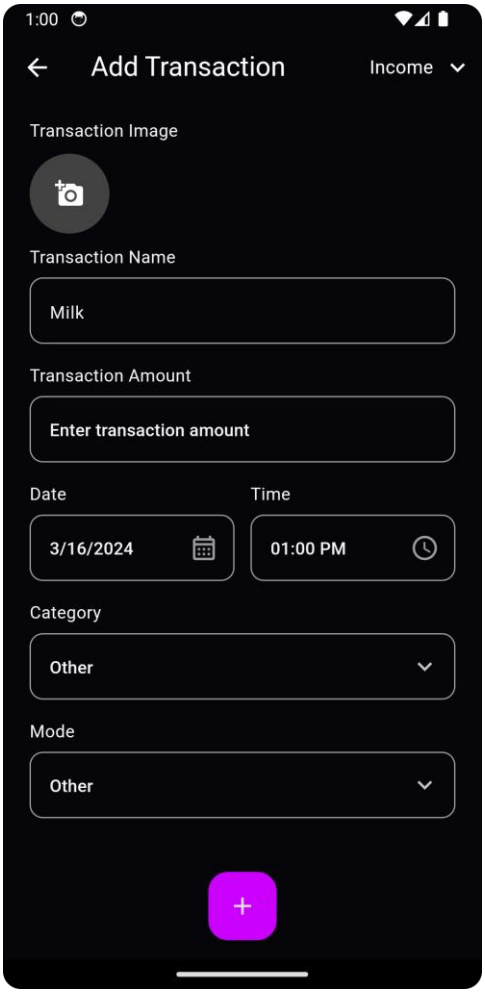
```
import 'package:flutter/material.dart';

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context)
    { return MaterialApp( home:
    MyHomePage(), theme: ThemeData(
```

```
            primaryColor: Colors.blue, hintColor:
            Colors.blueAccent, inputDecorationTheme:
            InputDecorationTheme(
              border: OutlineInputBorder(),
             contentPadding: EdgeInsets.symmetric(vertical: 12.0,
horizontal: 16.0),
            ),
          ),
        );
    }
}

class MyHomePage extends StatefulWidget {
  @override
  _MyHomePageState createState() =>
  _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
  final _formKey = GlobalKey<FormState>();
  String _name = "";
  String _email = "";
  String _password = "";
  String _confirmPassword = "";

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('ToDo App Validation Form'),
      ), body:
      SingleChildScrollView(
        padding: const EdgeInsets.all(16.0),
        child: Form(
          key: _formKey, child: Column(
          crossAxisAlignment: CrossAxisAlignment.stretch,
          children: [
```

```
TextFormField( decoration:
  InputDecoration(
    labelText: "Name",
  ), validator:
  (value) {
    if (value == null || value.isEmpty)
    {
      return "Please enter your name";
    } if
    (RegExp(r'\d').hasMatch(value)) {
      return "Name should not contain numbers";
    } return
    null;
  }, onSaved: (value) => _name =
  value!,
),
SizedBox(height: 16.0),
TextFormField( decoration:
  InputDecoration(
    labelText: "Email",
  ), validator:
  (value) {
    if (value == null || value.isEmpty) {
      return "Please enter your email";
    } if
    (!RegExp(
r"^[a-zA-Z0-9.a-zA-Z0-9.!#$%&'*+/=?^_`{|}~-]+@[a-zA-Z0-9-]+\.[a-zA-
Z] +")
        .hasMatch(value!)) {
      return "Enter valid Email";
    } return
    null;
  }, onSaved: (value) => _email =
  value!,
),
SizedBox(height: 16.0),
```

```
TextFormField( decoration:
  InputDecoration(
    labelText: "Password",
  ), validator:
  (value) {
    if (value == null || value.isEmpty) {
      return "Please enter your password";
    } if (value.length <
    8) { return "Password
    length should be more
    than 8";
    } return
    null;
  }, obscureText: true, onSaved: (value)
  => _password = value!,
),
SizedBox(height: 16.0),
TextFormField( decoration:
  InputDecoration(
    labelText: "Confirm Password",
  ), validator:
  (value) {
    if (value == null || value.isEmpty)
    {
      return "Please confirm your password";
    } if (value !=
    _password) {
      return "Passwords do not match";
    } return
    null;
  }, obscureText: true, onSaved: (value) =>
  _confirmPassword = value!,
),
SizedBox(height: 32.0),
ElevatedButton( onPressed: () { final isValid =
  _formKey.currentState!.validate(); if (isValid) {
```

```
                    _formKey.currentState!.save();
                    print(
                        "Name: $_name, Email: $_email,
Password:$_password");
                    // Handle successful form submission
                  here } }, child: Text('Submit'),
                ),
              ],
            ),
          ),
        ),
      );
    }
}
```




Conclusion: In summary, using a form widget to create interactive forms enhances user engagement and data collection. It streamlines information input, offers customization options, and improves overall user experience. Interactive forms are versatile tools for surveys,

registrations, and feedback mechanisms, facilitating efficient data capture and processing in digital environments.