EXPERIMENT NO: - 04

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AIM: - To create an interactive Form using form widget.

Theory: -

A form in Flutter is a structured container that collects user input through various fields like text fields, dropdowns, checkboxes, and buttons. It plays a crucial role in applications that require user data entry, such as login pages, registration forms, and feedback submissions. Flutter provides the Form widget, which works alongside TextFormField and other input elements to manage validation, state handling, and error messages efficiently. By using form validation techniques, developers can ensure data accuracy and enhance user experience.

When you create a form, it is necessary to provide the GlobalKey. This key uniquely identifies the form and allows you to do any validation in the form fields. The form widget uses child widget TextFormField to provide the users to enter the text field. This widget renders a material design text field and also allows us to display validation errors when they occur.

Creation of a Form

➢ While creating a form in Flutter, the **Form widget** is essential as it acts as a container for grouping multiple form fields and managing validation.

➢ A **GlobalKey<FormState>** is required to uniquely identify the form and enable validation or data retrieval from the form fields.

➢ The **TextFormField widget** is used to provide input fields where users can enter data such as names, phone numbers, or email addresses.

➢ To enhance the appearance and usability of input fields, **InputDecoration** is used, allowing customization of labels, icons, borders, and hint text.

➢ Validation plays a crucial role in forms, and the **validator property** within **TextFormField** ensures user input meets specific criteria before submission.

➢ Different types of input require appropriate **keyboard types**, such as TextInputType.number for numeric fields or TextInputType.emailAddress for email fields.

➢ Proper **state management** is needed to store and retrieve user input, ensuring the form data is processed correctly.

➢ A **submit button** is necessary to trigger form validation and submit the collected data for further processing.

Some Properties of Form Widget

- **key:** A GlobalKey that uniquely identifies the Form. You can use this key to interact with the form, such as validating, resetting, or saving its state.

- **child:** The child widget that contains the form fields. Typically, this is a Column, ListView, or another widget that allows you to arrange the form fields vertically.

- **autovalidateMode:** An enum that specifies when the form should automatically validate its fields.

Some Methods of Form Widget

- **validate():** This method is used to trigger the validation of all the form fields within the Form. It returns true if all fields are valid, otherwise false. You can use it to check the overall validity of the form before submitting it.

- **save():** This method is used to save the current values of all form fields. It invokes the onSaved callback for each field. Typically, this method is called after validation succeeds.

- **reset():** Resets the form to its initial state, clearing any user-entered data.

- **currentState:** A getter that returns the current FormState associated with the form.

CODE :

Sign_in_screen.dart :

```dart
import 'package:flutter/material.dart';
import 'package:google_fonts/google_fonts.dart';
import 'package:booking/screens/home_screen.dart';
// Correct import
class SignInScreen extends StatefulWidget {
  @override
  _SignInScreenState createState() => _SignInScreenState();
}


class _SignInScreenState extends State<SignInScreen> {
  final TextEditingController _emailController =
TextEditingController();
  final TextEditingController _passwordController =
TextEditingController();
  bool _isPasswordVisible = false;


  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.white,
      appBar: AppBar(
        backgroundColor: const Color(0xFF003580),
        elevation: 0,
        leading: IconButton(
          icon: const Icon(Icons.close, color: Colors.white),
          onPressed: () => Navigator.pop(context),
        ),
        centerTitle: true,
        title: Text(
          "Booking.com",
          style: GoogleFonts.montserrat(
            fontSize: 22,
            fontWeight: FontWeight.w600,
            color: Colors.white,
          ),
        ),
      ),
      body: Padding(
        padding: const EdgeInsets.all(20.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            Text(
              "Sign in",
              style: GoogleFonts.montserrat(
                fontSize: 22,
                fontWeight: FontWeight.bold,
                color: Colors.black,
              ),
            ),
            const SizedBox(height: 20),


            // Email Field
            Text(
              "Email address",
              style: GoogleFonts.montserrat(
                fontSize: 14,
                fontWeight: FontWeight.w500,
                color: Colors.black,
```

```dart
        controller: _emailController,
        keyboardType: TextInputType.emailAddress,
        decoration: InputDecoration(
          hintText: "Enter your email",
          hintStyle: GoogleFonts.montserrat(color:
Colors.grey[500]),
          border: OutlineInputBorder(
            borderRadius: BorderRadius.circular(8),
            borderSide: const BorderSide(color: Colors.blue),
          ),
          focusedBorder: OutlineInputBorder(
            borderRadius: BorderRadius.circular(8),
            borderSide: const BorderSide(color:
Colors.blue, width: 2),
          ),
          contentPadding: const EdgeInsets.symmetric(
            vertical: 12,
            horizontal: 15,
          ),
        ),
      ),
      // Sign In Button
      SizedBox(
        width: double.infinity,
        height: 50,
        child: ElevatedButton(
          onPressed: () {
            String email = _emailController.text.trim();
            String password = _passwordController.text.trim();

            if (email.isEmpty || !email.contains("@")) {
              ScaffoldMessenger.of(context).showSna
ckBar(
                const SnackBar(
                    content: Text("Please enter a valid
email")),
              );
            } else if (password.isEmpty ||
password.length < 6) {
              ScaffoldMessenger.of(context).showSna
ckBar(
                const SnackBar(
                    content:
                        Text("Password must be at least 6
characters")),
              );
            } else {
              // Navigate to Home Screen after
successful login
              Navigator.pushReplacement(
                context,
                MaterialPageRoute(
                    builder: (context) => HomeScreen()),
// Corrected
              );
            }
          },
          style: ElevatedButton.styleFrom(
            backgroundColor: const
Color(0xFF003580), // Booking.com Blue
            shape: RoundedRectangleBorder(
              borderRadius: BorderRadius.circular(8),
            ),
          );
        }
      }
```

Sign_up_screen.dart :

```dart
import 'package:flutter/material.dart';
import 'package:google_fonts/google_fonts.dart';
import 'home_screen.dart'; // Import your home
screen

class SignUpScreen extends StatefulWidget {
  @override
  _SignUpScreenState createState() =>
_SignUpScreenState();
}

class _SignUpScreenState extends
State<SignUpScreen> {
  final TextEditingController _emailController =
TextEditingController();
  final TextEditingController _passwordController =
TextEditingController();
  final TextEditingController
_confirmPasswordController =
      TextEditingController();
  bool _isPasswordVisible = false;
  bool _isConfirmPasswordVisible = false;

  void _register() {
    String email = _emailController.text.trim();
    String password =
_passwordController.text.trim();
    String confirmPassword =
_confirmPasswordController.text.trim();

    if (email.isEmpty || !email.contains("@")) {
      ScaffoldMessenger.of(context).showSnackBar(
        const SnackBar(content: Text("Please enter a
valid email")),
      );
      return;
    }
    if (password.isEmpty || password.length < 6) {
      ScaffoldMessenger.of(context).showSnackBar(
        const SnackBar(content: Text("Password must
be at least 6 characters")),
      );
      return;
    }
    if (confirmPassword.isEmpty) {
      ScaffoldMessenger.of(context).showSnackBar(
        const SnackBar(content: Text("Please confirm
your password")),
      );
      return;
```

```dart
      const SizedBox(height: 20),
          SizedBox(
            width: double.infinity,
            height: 50,
            child: ElevatedButton(
              onPressed: _register,
              style: ElevatedButton.styleFrom(
                backgroundColor: const
Color(0xFF003580),
                shape: RoundedRectangleBorder(
                    borderRadius:
BorderRadius.circular(8)),
              ),
              child: Text("Register",
                  style: GoogleFonts.montserrat(
                      fontSize: 16,
                      fontWeight: FontWeight.w400,
                      color: Colors.white)),
            ),
          ),
        ],
      ),
    ),
  );
}

  InputDecoration _inputDecoration(String
hintText) {
    return InputDecoration(
      hintText: hintText,
      hintStyle: GoogleFonts.montserrat(color:
Colors.grey[500]),
      border: OutlineInputBorder(borderRadius:
BorderRadius.circular(8)),
      focusedBorder: OutlineInputBorder(
          borderRadius: BorderRadius.circular(8),
          borderSide: const BorderSide(color:
Colors.blue, width: 2)),
      contentPadding: const
EdgeInsets.symmetric(vertical: 12, horizontal: 15),
    );
  }
EdgeInsets.symmetric(vertical
      contentPadding: const
EdgeInsets.symmetric(vertical: 12, horizontal: 15),
      suffixIcon: IconButton(
        icon: Icon(isVisible ? Icons.visibility :
Icons.visibility_off,
            color: Colors.grey),
        onPressed: toggleVisibility,
      ),
    ),
  }
}
```

Details_form_screen.dart :

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

class DetailsFormScreen extends StatefulWidget {
  @override
  _DetailsFormScreenState createState() =>
_DetailsFormScreenState();
}

class _DetailsFormScreenState extends
State<DetailsFormScreen> {
  String? selectedCountry = "India";
  bool saveDetails = false;
  String tripPurpose = "Leisure";

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.white, // Set
background color
      appBar: AppBar(
        backgroundColor: Color(0xFF003580), //
Booking.com blue
        title: Text(
          "Fill in your details",
          style: GoogleFonts.montserrat(
            fontSize: 18,
            fontWeight: FontWeight.w600,
            color: Colors.white,
          ),
        ),
        leading: IconButton(
          icon: Icon(Icons.arrow_back, color:
Colors.white),
          onPressed: () {
            Navigator.pop(context); // Navigate back
          },
        ),
      ),
      body: Padding(
        padding: const EdgeInsets.symmetric(
            horizontal: 20, vertical: 16), // Added
padding
        child: SingleChildScrollView(
          child: Column(
            crossAxisAlignment:
```
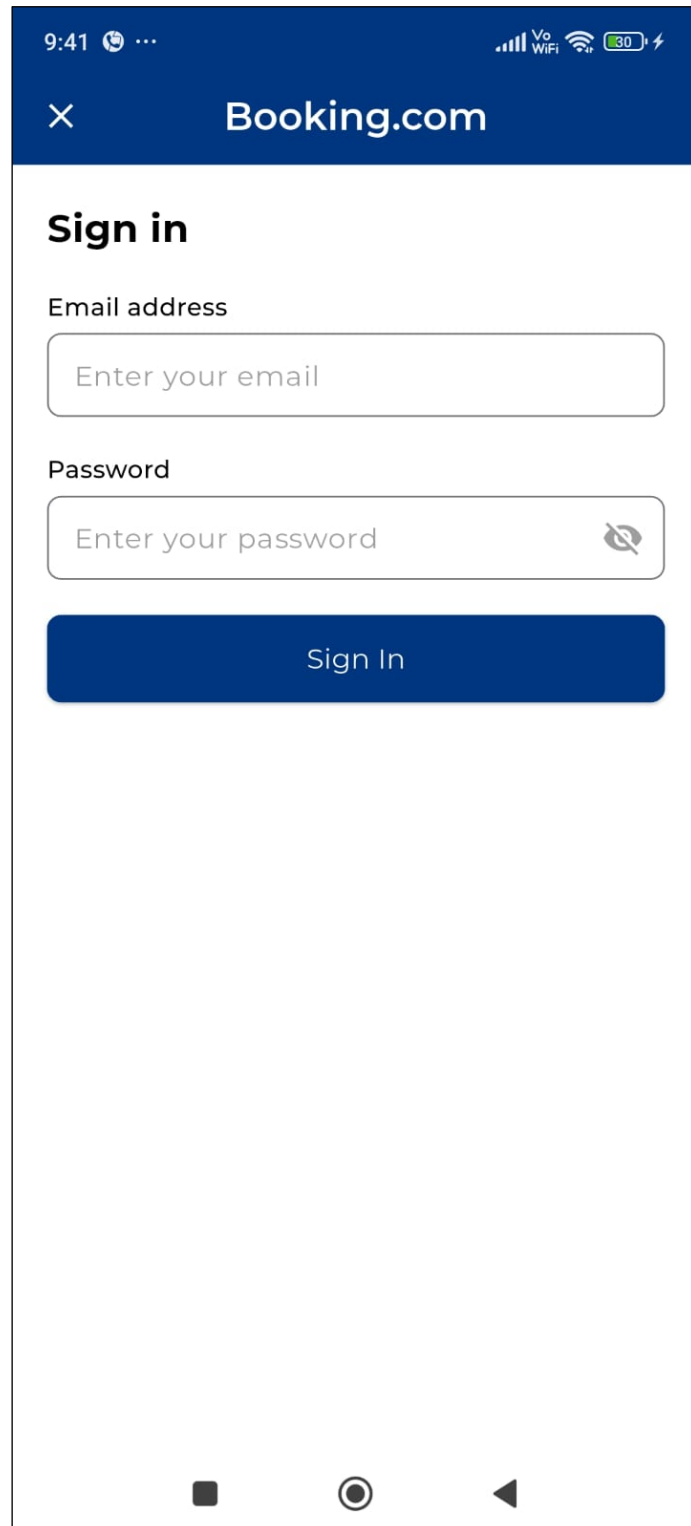
```dart
Widget buildTextField(String label) {
  return Column(
    crossAxisAlignment:
CrossAxisAlignment.start,
    children: [
      Text(
        label,
        style:
          GoogleFonts.montserrat(fontSize: 14,
fontWeight: FontWeight.w500),
      ),
      SizedBox(height: 4),
      TextFormField(
        decoration: InputDecoration(
          border: OutlineInputBorder(
            borderRadius:
BorderRadius.circular(8.0)), // Added border
        ),
      ),
      SizedBox(height: 12),
    ],
  );
}

Widget buildDropdown(String label,
List<String> options) {
  return Column(
    crossAxisAlignment:
CrossAxisAlignment.start,
    children: [
      Text(
        label,
        style:
          GoogleFonts.montserrat(fontSize: 14,
fontWeight: FontWeight.w500),
      ),
      SizedBox(height: 4),
      DropdownButtonFormField(
        value: selectedCountry,
        items: options.map((String country) {
          return DropdownMenuItem(value: country,
child: Text(country));
        }).toList(),
        onChanged: (String? newValue) {
          setState(() {
            selectedCountry = newValue;
          });
        },
        decoration: InputDecoration(
          border: OutlineInputBorder(
            borderRadius:
BorderRadius.circular(8.0)), // Added border
        ),
      ),
      SizedBox(height: 12),
    ],
  );
}
```

OUTPUT :

Booking.com

Sign Up

Email address

Enter your email

Password

Enter your password

Confirm Password

Confirm your password

Register

← **Fill in your details**

First Name *

Last Name *

Email Address *

Country/Region *

India ▼

Mobile phone *

☐ Save your details for future bookings

What is the primary purpose for your trip?

◉ Leisure

~~Rs. 21,600~~ **Rs. 11,880**

+ Rs. 2,138.40 taxes and charges

Next step

✕ **Booking.com**

Register here

We'll use this to create an account if you don't have one yet.

Email address

Continue

—————— OR ——————

G Continue with Google

f Continue with Facebook

Already have an account? Sign In