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MPL Experiment 4

AIM : To create an interactive Form using form widget

THEORY :

1. Introduction

Interactive forms are widely used in applications to collect user input in a structured way. These forms enhance user experience by providing a smooth and responsive interface. One common technique to ensure security in forms is OTP (One-Time Password) verification. OTP verification is commonly used for authentication and user identity confirmation.

2. Objective

To design an interactive form using form widgets.

To implement OTP verification to authenticate users.

To validate user inputs dynamically.

3. Form Widgets in UI Development

Form widgets are essential UI elements used to collect input from users. Some commonly used form widgets include:

TextField/Input Field – To enter text or numbers.

Dropdowns – To select options.

CheckBoxes and Radio Buttons – For multiple-choice selections.

Buttons – To submit the form.

Snackbar/Dialog – To show messages to users.

4. OTP Verification Technique

OTP verification is a security mechanism used in various applications for authentication.

It typically involves the following steps:

User Enters Phone Number/Email

The user provides their phone number or email to receive an OTP.

OTP Generation

The server generates a random OTP and sends it via SMS or email.

User Enters OTP

The user inputs the received OTP into the form.

OTP Validation

The entered OTP is compared with the generated OTP.

If it matches, the user is authenticated.

CODE :

Login-screen

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

class LoginScreen extends StatelessWidget {
  const LoginScreen({Key? key}) :
    super(key: key);

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Container(
        decoration: BoxDecoration(
          gradient: LinearGradient(
            begin: Alignment.topCenter,
            end: Alignment.bottomCenter,
            colors: [
              Colors.red.shade700,
              Colors.red.shade900,
            ],
          ),
        ),
        child: SafeArea(
          child: Padding(
            padding: const
              EdgeInsets.symmetric(horizontal: 24.0),
            child: Column(
              children: [
                // Top bar with Skip button
                Row(
                  mainAxisAlignment:
                    MainAxisAlignment.end,
                  children: [
                    TextButton(
                      onPressed: () {},
                      child: const Text(
                        'Skip',
                        style: TextStyle(
                          color: Colors.white,
                          fontSize: 16,
                        ),
                      ),
                    ),
                    // Zomato Logo
                    const SizedBox(height: 40),
                    Image.asset(
                      'assets/Zomato_Logo.svg.png', // Make
                        sure this path matches your asset location
                      height: 80, // Adjust the
                        height as needed
                    ),
                    const SizedBox(height: 80),
                    // Phone Input
                    TextField(
                      keyboardType:
                        TextInputType.phone,
                      style: const TextStyle(color:
                        Colors.black),
                    ),
                  ],
                ),
              ],
            ),
          ),
        ),
      ),
    );
  }
}
```

```

        decoration: InputDecoration(
          filled: true,
          fillColor: Colors.white,
          prefixText: '+91 ',
          hintText: 'Phone number',
          border: OutlineInputBorder(
            borderRadius:
BorderRadius.circular(8),
            borderSide:
BorderSide.none,
          ),
          contentPadding: const
EdgeInsets.symmetric(
            horizontal: 16,
            vertical: 16,
          ),
        ),
      ),
    ),
    const SizedBox(height: 16),

    // Send OTP Button
    SizedBox(
      width: double.infinity,
      child: ElevatedButton(
        onPressed: () {},
        style:
ElevatedButton.styleFrom(
          backgroundColor:
Colors.black,
          padding: const
EdgeInsets.symmetric(vertical: 16),
          shape:
RoundedRectangleBorder(
            borderRadius:
BorderRadius.circular(8),
          ),
        ),
      child: const Text(
        'Send OTP',
        style: TextStyle(fontSize:
16),

```

```

      ),
    ),
    ),

    // OR divider
    const Padding(
      padding:
EdgeInsets.symmetric(vertical: 24.0),
      child: Row(
        children: [
          Expanded(
            child: Divider(color:
Colors.white38, thickness: 1),
          ),
          Padding(
            padding:
EdgeInsets.symmetric(horizontal: 16.0),
            child: Text(
              'OR',
              style: TextStyle(
                color: Colors.white,
                fontSize: 14,
              ),
            ),
          ),
          Expanded(
            child: Divider(color:
Colors.white38, thickness: 1),
          ),
        ],
      ),
    ),

    // Email Button
    SizedBox(
      width: double.infinity,
      child: ElevatedButton.icon(
        onPressed: () {},
        icon: const
Icon(Icons.email_outlined),
        label: const Text('Continue
with Email'),

```



```

children: [
  TextButton(
    onPressed: () {},
    child: const Text(
      'Terms of Service',
      style: TextStyle(
        color: Colors.white,
        fontSize: 12,
        decoration:
TextDecoration.underline,
      ),
    ),
  ),
  const Text(
    '•',
    style: TextStyle(color:
Colors.white),
  ),
  TextButton(
    onPressed: () {},
    child: const Text(
      'Privacy Policy',
      style: TextStyle(
        color: Colors.white,
        fontSize: 12,
        decoration:
TextDecoration.underline,
      ),
    ),
  ),
  const Text(
    '•',
    style: TextStyle(color:
Colors.white),
  ),
  TextButton(
    onPressed: () {},
    child: const Text(
      'Content Policy',
      style: TextStyle(
        color: Colors.white,
        fontSize: 12,
        decoration:
TextDecoration.underline,
      ),
    ),
  ),
],
const SizedBox(height: 8),
);
}
}

```

OUTPUT :

