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

decoration: InputDecoration(),
filled: true,),
fillColor: Colors.white,),
prefixText: '+91',	
hintText: 'Phone number',	// OR divider
border: OutlineInputBorder(const Padding(
borderRadius:	padding:
BorderRadius.circular(8),	EdgeInsets.symmetric(vertical: 24.0),
borderSide:	child: Row(
BorderSide.none,	children: [
),	Expanded(
contentPadding: const	child: Divider(color:
EdgeInsets.symmetric(Colors.white38, thickness: 1),
horizontal: 16,),
vertical: 16,	Padding(
),	padding:
),	EdgeInsets.symmetric(horizontal: 16.0),
),	child: Text(
	'OR',
const SizedBox(height: 16),	style: TextStyle(
· -	color: Colors.white,
// Send OTP Button	fontSize: 14,
SizedBox(),
width: double.infinity,),
child: ElevatedButton(),
onPressed: () {},	Expanded(
style:	child: Divider(color:
ElevatedButton.styleFrom(Colors.white38, thickness: 1),
backgroundColor:),
Colors.black,],
padding: const),
EdgeInsets.symmetric(vertical: 16),),
shape:	,,
RoundedRectangleBorder(// Email Button
borderRadius:	SizedBox(
BorderRadius.circular(8),	width: double.infinity,
),	child: ElevatedButton.icon(
).	onPressed: () {},
child: const Text(icon: const
'Send OTP',	Icon(Icons.email_outlined),
style: TextStyle(fontSize:	label: const Text('Continue
16),	with Email'),

style:),
ElevatedButton.styleFrom(),
backgroundColor:),
Colors.white,	const SizedBox(width: 16),
foregroundColor:	Expanded(
Colors.black,	child: ElevatedButton.icon(
padding: const	onPressed: () {},
EdgeInsets.symmetric(vertical: 16),	icon: const
shape:	Icon(Icons.g_mobiledata),
RoundedRectangleBorder(label: const Text('Google')
borderRadius:	style:
BorderRadius.circular(8),	ElevatedButton.styleFrom(
),	backgroundColor:
),	Colors.white,
),	foregroundColor:
),	Colors.black,
<i>,,</i>	padding: const
const SizedBox(height: 16),	EdgeInsets.symmetric(vertical: 16),
\ \	shape:
// Social Buttons	RoundedRectangleBorder(
Row(borderRadius:
children: [BorderRadius.circular(8),
Expanded(),
child: ElevatedButton.icon(),
onPressed: () {},),
icon: const),
Icon(Icons.facebook),],
label: const),
Text('Facebook'),	<i>,</i>
style:	// Terms text
ElevatedButton.styleFrom(const Spacer(),
backgroundColor:	const Text(
Colors.white,	'By continuing, you agree to
foregroundColor:	our',
Colors.black,	style: TextStyle(
padding: const	color: Colors.white70,
EdgeInsets.symmetric(vertical: 16),	fontSize: 12,
shape:),
RoundedRectangleBorder(),
borderRadius:	Row(
BorderRadius.circular(8),	mainAxisAlignment:
),	MainAxisAlignment.center,

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

OUTPUT:

