Experiment No: 4

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AIM:- To create interactive form using Flutter Widgets

THEORY:-
Form Widget:

- Groups and manages form fields like text, checkboxes, etc.
- Handles validation, saving, and resetting.
- Use a GlobalKey for advanced control. **Form Fields:**

- Individual input controls like text fields, menus, etc.
- Each holds its own value and behavior.
- Popular options: TextFormField, DropdownButtonFormField, CheckboxFormField, RadioGroupFormField. **Validation:**

- Ensure user input is correct.
- Define validator function for each field or trigger form-level validation. ● Display error messages clearly. **Additional Points:**

- Customize appearance with themes and decorations.
- Manage focus with FocusNode.
- Create custom fields for specific needs.

CODE:

```
import 'package:flutter/material.dart';
import 'package:jitsi_meet/jitsi_meet.dart';
import 'package:zoom_clone_tutorial/resources/auth_methods.dart';
import 'package:zoom_clone_tutorial/resources/jitsi_meet_methods.dart';
import 'package:zoom_clone_tutorial/utils/colors.dart';
```

```dart
import 'package:zoom_clone_tutorial/widgets/meeting_option.dart';

class VideoCallScreen extends StatefulWidget {
  const VideoCallScreen({Key? key}) : super(key: key);

  @override
  State<VideoCallScreen> createState() => _VideoCallScreenState();
}

class _VideoCallScreenState extends State<VideoCallScreen> {
  final AuthMethods _authMethods = AuthMethods();
  late TextEditingController meetingIdController;
  late TextEditingController nameController;
  final JitsiMeetMethods _jitsiMeetMethods = JitsiMeetMethods();
  bool isAudioMuted = true;
  bool isVideoMuted = true;

  @override
  void initState() {
    meetingIdController = TextEditingController();
    nameController = TextEditingController(
      text: _authMethods.user.displayName,
    );
    super.initState();
  }

  @override
  void dispose() {
    super.dispose();
    meetingIdController.dispose();
    nameController.dispose();
    JitsiMeet.removeAllListeners();
  }

  _joinMeeting() {
    _jitsiMeetMethods.createMeeting(
```

```dart
      roomName: meetingIdController.text,
      isAudioMuted: isAudioMuted,
      isVideoMuted: isVideoMuted,
      username: nameController.text,
    );
}

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      elevation: 0,
      backgroundColor: backgroundColor,
      title: const Text(
        'Join a Meeting',
        style: TextStyle(
          fontSize: 18,
        ),
      ),
      centerTitle: true,
    ),
    body: Column(
      children: [
        SizedBox(
          height: 60,
          child: TextField(
            controller: meetingIdController,
            maxLines: 1,
            textAlign: TextAlign.center,
            keyboardType: TextInputType.number,
            decoration: const InputDecoration(
              fillColor: secondaryBackgroundColor,
              filled: true,
              border: InputBorder.none,
              hintText: 'Room ID',
              contentPadding: EdgeInsets.fromLTRB(16, 8, 0, 0),
```

```dart
          ),
        ),
      ),
      SizedBox(
        height: 60,
        child: TextField(
          controller: nameController,
          maxLines: 1,
          textAlign: TextAlign.center,
          keyboardType: TextInputType.number,
          decoration: const InputDecoration(
            fillColor: secondaryBackgroundColor,
            filled: true,
            border: InputBorder.none,
            hintText: 'Name',
            contentPadding: EdgeInsets.fromLTRB(16, 8, 0, 0),
          ),
        ),
      ),
      const SizedBox(height: 20),
      InkWell(
        onTap: _joinMeeting,
        child: const Padding(
          padding: EdgeInsets.all(8),
          child: Text(
            'Join',
            style: TextStyle(
              fontSize: 16,
            ),
          ),
        ),
      ),
      const SizedBox(height: 20),
      MeetingOption(
        text: 'Mute Audio',
        isMute: isAudioMuted,
```

```
          onChange: onAudioMuted,
        ),
        MeetingOption(
          text: 'Turn Off My Video',
          isMute: isVideoMuted,
          onChange: onVideoMuted,
        ),
      ],
    ),
  );
}

onAudioMuted(bool val) {
  setState(() {
    isAudioMuted = val;
  });
}

onVideoMuted(bool val) {
  setState(() {
    isVideoMuted = val;
  });
}
}
```

Output:

Explanation: This Flutter app defines a basic form with input fields for meeting id and meeting name. It incorporates form validation to ensure data accuracy. The validation includes checks for empty fields, valid name format, minimum meeting id length, and meeting id match confirmation. If the form passes validation, the submitted data is printed. The app provides a clean user interface with a responsive design, enhancing the user experience.

Conclusion:- In conclusion, the Flutter form code provided implements basic form validation with TextFormField widgets encapsulated in a Scaffold and MaterialApp structure. The design ensures clear user input with validation messages and facilitates form submission with concise error handling. By leveraging Flutter's built-in form handling mechanisms, the code delivers a straightforward and user-friendly experience for data input and validation.