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D15B 28

Lab 04

Aim: To create an interactive Form using form widget

Theory

Form validation is an essential feature in mobile applications to ensure the correctness of user inputs before processing them. In Flutter, `Form` and `TextFormField` widgets are used to create forms with built-in validation capabilities.

Key Concepts:

1. **GlobalKey:** Used to uniquely identify the form and manage its state.
2. **TextFormField:** A widget that allows users to enter input and supports validation.
3. **Validation Logic:** Defines conditions to verify the correctness of input.
4. **Submit Button:** Triggers form validation and processes the input if valid.

Code Implementation

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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
return MaterialApp(
debugShowCheckedModeBanner: false,
home: FormScreen(),
    );
  }
}
```

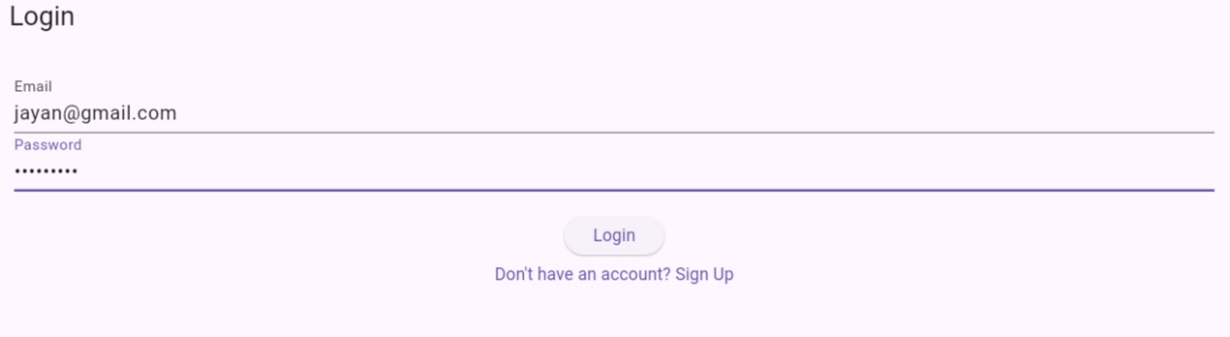
```
class FormScreen extends StatefulWidget {
  @override
  _FormScreenState createState() => _FormScreenState();
}

class _FormScreenState extends State<FormScreen> {   final
_formKey = GlobalKey<FormState>();   final TextEditingController
_nameController = TextEditingController();

  void _submitForm() {
    if (_formKey.currentState!.validate()) {
      ScaffoldMessenger.of(context).showSnackBar(
        SnackBar(content: Text('Form Submitted Successfully')),
      );
    }
  }

  @override
  Widget build(BuildContext context) {     return Scaffold(
appBar: AppBar(title: Text('Form Validation Demo')),       body:
Padding(         padding: const EdgeInsets.all(16.0),         child:
Form(           key: _formKey,           child: Column(            children: [
TextFormField(                controller: _nameController,
decoration: InputDecoration(labelText: 'Enter your name'),
validator: (value) {                  if (value == null || value.isEmpty) {
return 'Name cannot be empty';
                  }
return null;
},
              ),
              SizedBox(height: 20),
ElevatedButton(
onPressed: _submitForm,
child: Text('Submit'),
              ),
            ],
          ),
        ),
      ),
    );
  }
}
```

Output



Login

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Password
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Conclusion

Form validation in Flutter can be efficiently managed using the `GlobalKey`, `TextFormField`, and validation functions. This ensures user inputs are validated before processing, improving app reliability.