MPL Experiment 04

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D15A / 32

Aim: To Create an Interactive Form Using the Form Widget

Description of Form Pages:

1. Login Page:

- **Purpose:** Allows users to enter credentials and log in.
- **Widgets Used:**
  - `Form`: Wraps the input fields to enable validation.
  - `TextFormField`: For entering username and password.
  - `ElevatedButton`: For submitting the login form.
  - `InkWell`: For navigating to the sign-up page.
  - `Snackbar`: Displays validation messages.

2. Signup Page:

- **Purpose:** Allows new users to register by entering personal details.
- **Widgets Used:**
  - `Form`: Manages input validation.
  - `TextFormField`: Fields for username, email, password, and phone number.
  - `DropdownButtonFormField`: For selecting gender.
  - `CheckboxListTile`: For accepting terms and conditions.
  - `ElevatedButton`: Submits the form after validation.
  - `Navigator.push`: Redirects users after successful sign-up.

3. Profile Update Page:

- **Purpose:** Allows users to edit their profile details.
- **Widgets Used:**
  - `Form`: Ensures structured data entry.
  - `TextFormField`: For updating username, email, and phone number.
  - `ImagePicker`: Enables users to upload a profile picture.
  - `DropdownButtonFormField`: Lets users update their preferences.
  - `SwitchListTile`: Toggles notification preferences.

- `ElevatedButton`: Saves updates.

Key Features & Functionalities Implemented:

- **Validation:**
  - Used `validator` property in `TextFormField` to validate empty fields and input formats.
  - Displayed error messages using `SnackBar` or inline text.
- **State Management:**
  - Used `GlobalKey<FormState>` to validate and submit forms.
- **Navigation Between Forms:**
  - Utilized `Navigator.push` and `Navigator.pop` for seamless transitions.
- **User Experience Enhancements:**
  - Added proper padding, margins, and icons for better UI.
  - Included loaders and visual feedback on button presses.

CODE :

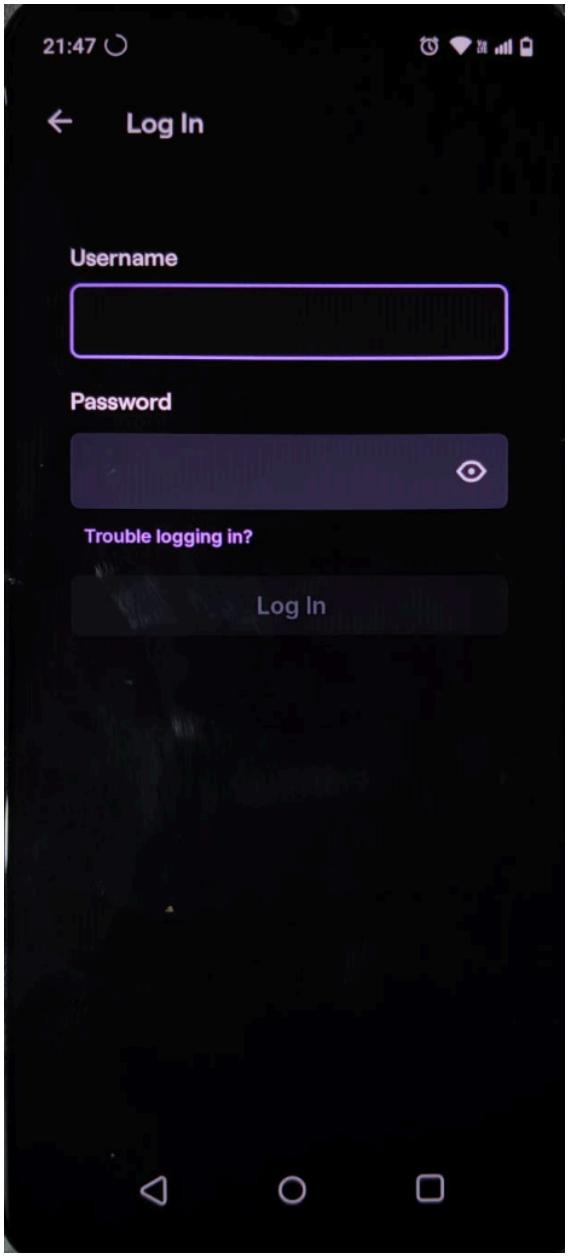
```
class LoginPage extends StatefulWidget {
  final VoidCallback onLoginSuccess;

  LoginPage({required this.onLoginSuccess});

  @override
  _LoginPageState createState() => _LoginPageState();
}

class _LoginPageState extends State<LoginPage> {
  final TextEditingController _emailController = TextEditingController();
  final TextEditingController _passwordController =
TextEditingController();
  final FirebaseAuth _auth = FirebaseAuth.instance;

  Future<void> _login() async {
    try {
      await _auth.signInWithEmailAndPassword(
        email: _emailController.text.trim(),
        password: _passwordController.text.trim(),
      );
      widget.onLoginSuccess();
```

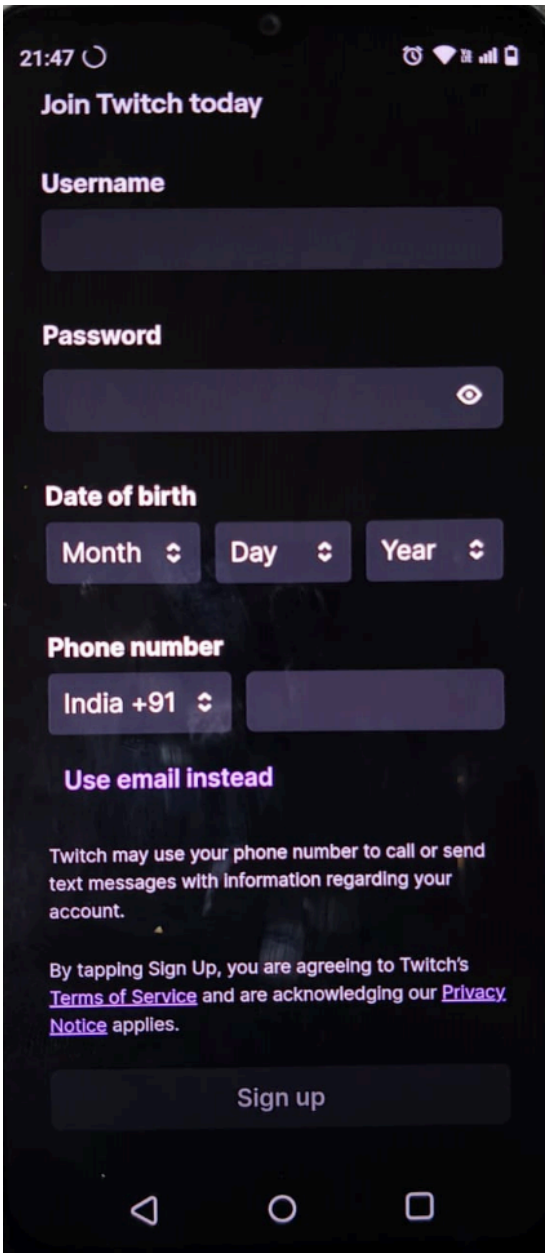
```
    } catch (e) {
      print("Login failed: $e");
      ScaffoldMessenger.of(context).showSnackBar(
        SnackBar(content: Text("Login failed: ${e.toString()}")),
      );
    }
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: Text("Log In")),
      body: Padding(
        padding: EdgeInsets.all(20),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            TextField(
              controller: _emailController,
              decoration: InputDecoration(labelText: "Email"),
            ),
            TextField(
              controller: _passwordController,
              decoration: InputDecoration(labelText: "Password"),
              obscureText: true,
            ),
            SizedBox(height: 20),
            ElevatedButton(
              onPressed: _login,
              child: Text("Log In"),
            ),
          ],
        ),
      ),
    );
  }
}

class SignupPage extends StatefulWidget {
  final VoidCallback onSignupSuccess;
```

```
  SignupPage({required this.onSignupSuccess});

  @override
  _SignupPageState createState() => _SignupPageState();
}

class _SignupPageState extends State<SignupPage> {
  final TextEditingController _emailController = TextEditingController();
  final TextEditingController _passwordController =
TextEditingController();
  final FirebaseAuth _auth = FirebaseAuth.instance;

  Future<void> _signup() async {
    try {
      await _auth.createUserWithEmailAndPassword(
        email: _emailController.text.trim(),
        password: _passwordController.text.trim(),
      );
      widget.onSignupSuccess();
    } catch (e) {
      print("Signup failed: $e");
      ScaffoldMessenger.of(context).showSnackBar(
        SnackBar(content: Text("Signup failed: ${e.toString()}")),
      );
    }
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(title: Text("Sign Up")),
      body: Padding(
        padding: EdgeInsets.all(20),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            TextField(
              controller: _emailController,
              decoration: InputDecoration(labelText: "Email"),
```

```
            ),
            TextField(
              controller: _passwordController,
              decoration: InputDecoration(labelText: "Password"),
              obscureText: true,
            ),
            SizedBox(height: 20),
            ElevatedButton(
              onPressed: _signup,
              child: Text("Sign Up"),
            ),
          ],
        ),
      ),
    );
  }
}
```

OUTPUT:


21:47
Log In
Username
Password
Trouble logging in?
Log In


21:47
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