Experiment No. 4

AIM : To create an interactive Form using form widget

Theory:

1. **Form Widget**:
    - The Form widget is a container for managing form-related interactions. It allows for validation and saving the form data.
    - It keeps track of the state of all the fields within the form (like TextFormField widgets) through a GlobalKey<FormState>.
2. **TextFormField**:
    - This is the main widget used for collecting user input (such as text). It integrates easily with form validation and submission.
    - You can apply validators to the TextFormField to ensure the input meets specific criteria (e.g., required fields, correct format).
3. **GlobalKey**:
    - A GlobalKey<FormState> is essential for managing the form's state (e.g., validating fields, saving data). It's assigned to the Form widget and can be used to trigger actions like form validation or saving the data.
4. **Validation**:
    - You can define validation rules on each form field. The TextFormField widget has a validator property, which allows you to write logic that will run whenever the form is validated.
    - A validator checks whether the input meets the required format (such as checking for valid email format or a non-empty field).
5. **Form Submission**:
    - When you're ready to submit the form, you can call formKey.currentState?.save() to trigger the save method for all fields or formKey.currentState?.validate() to check if all the fields pass the validation checks.
6. **Saving Data**:
    - After validation, data entered in the form fields can be saved to variables or used for further processing, such as sending it to a server.

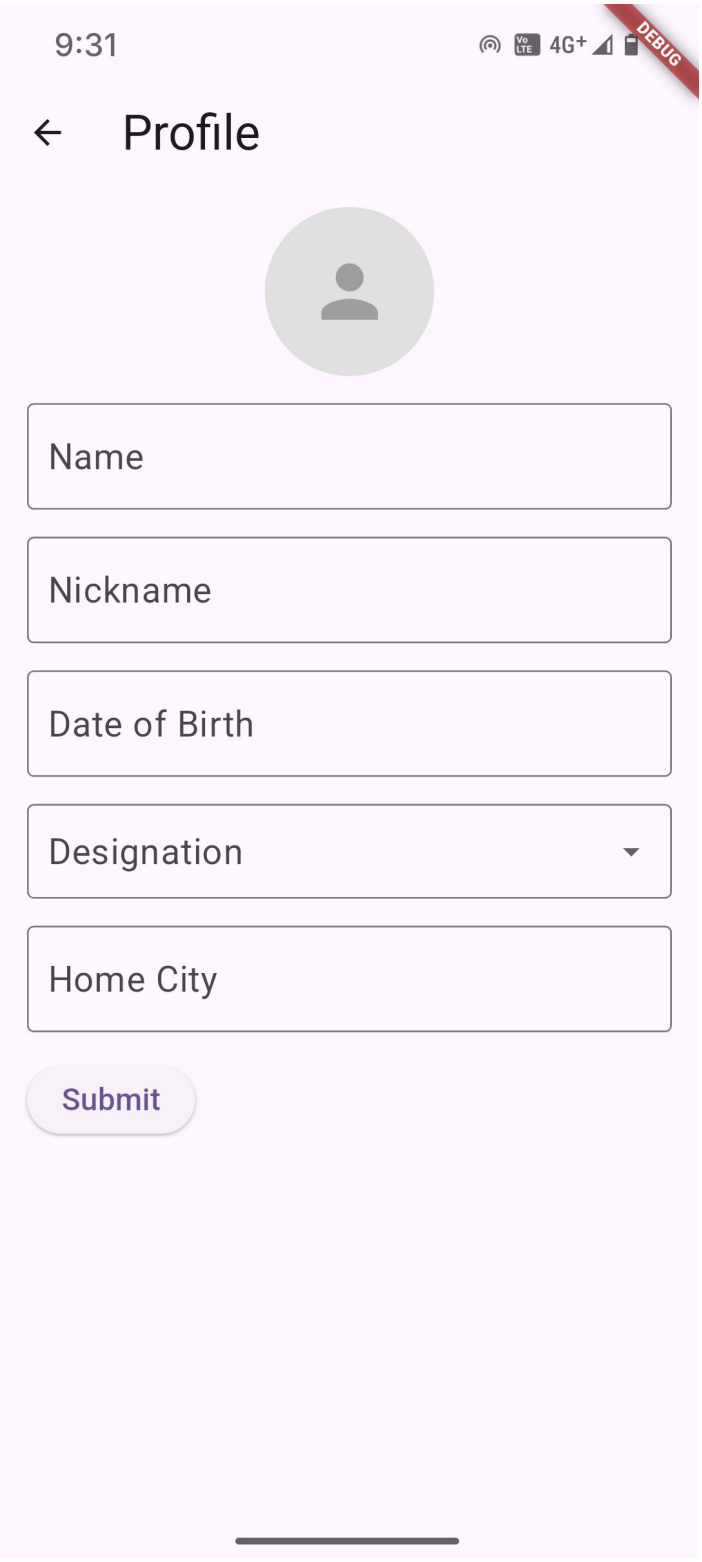
Form Workflow:

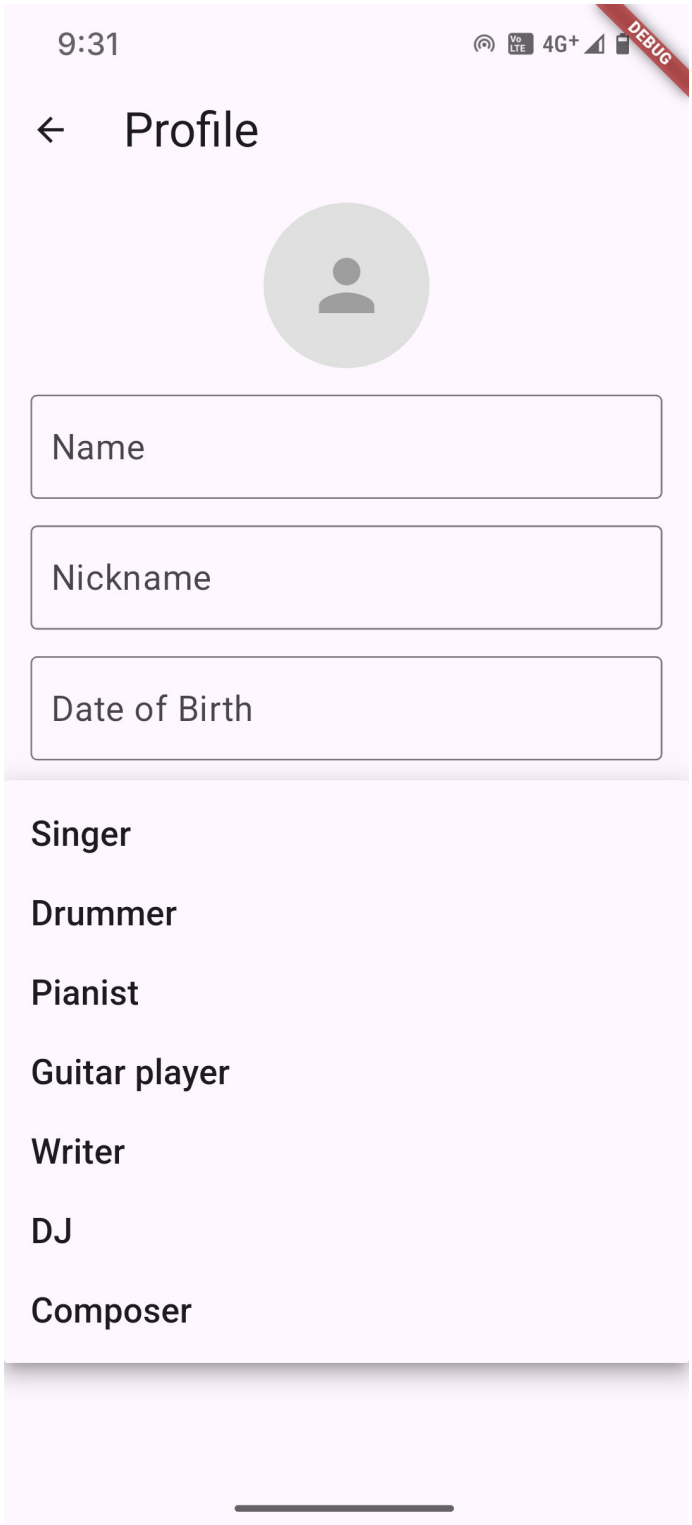
1. **Create a form**: Use the Form widget to wrap all input fields.
2. **Add form fields**: Use widgets like TextFormField to collect data.
3. **Set up validation**: Add validation logic to the form fields.

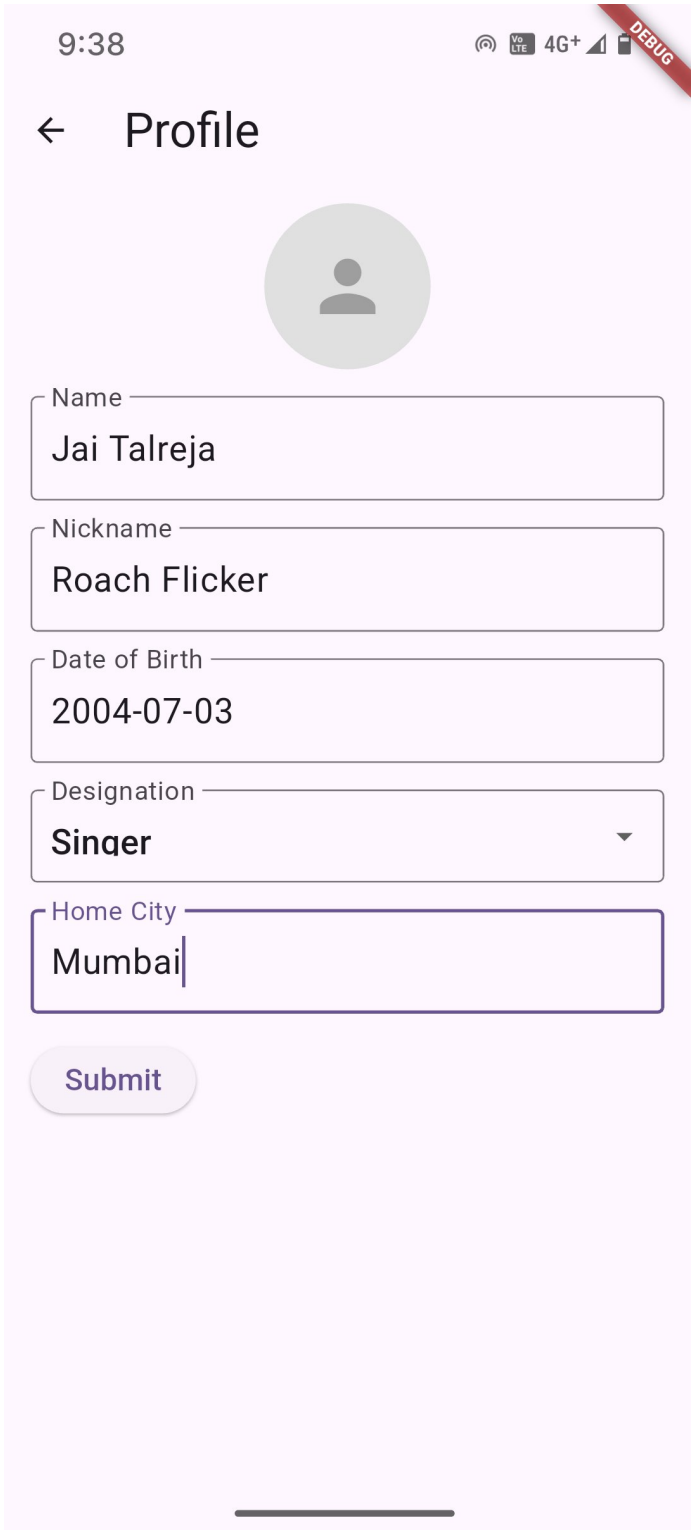
4. **Submit the form**: Trigger validation and handle the form submission.
5. **Save data**: Capture the entered data once validation passes.

Flutter's form management tools are powerful, enabling you to handle complex forms with various input types, validations, and submissions effectively.

Screenshots:




9:31
4G+
DEBUG
Profile
Name
Nickname
Date of Birth
Singer
Drummer
Pianist
Guitar player
Writer
DJ
Composer


9:38
4G+
DEBUG
Profile
Name
Jai Talreja
Nickname
Roach Flicker
Date of Birth
2004-07-03
Designation
Singer
Home City
Mumbai
Submit

Code Snippets:

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

class ProfilePage extends StatelessWidget {
  const ProfilePage({super.key});

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text('Profile'),
        leading: IconButton(
          icon: const Icon(Icons.arrow_back),
          onPressed: () => Navigator.pop(context),
        ),
      ),
      body: SingleChildScrollView(
        padding: const EdgeInsets.all(16.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: [
            // Image Placeholder
            Center(
              child: Container(
                width: 100,
                height: 100,
                decoration: BoxDecoration(
                  color: Colors.grey[300],
                  borderRadius: BorderRadius.circular(50),
                ),
                child: const Icon(
                  Icons.person,
                  size: 50,
                  color: Colors.grey,
                ),
              ),
```

```
),
const SizedBox(height: 16),

// Name Field
TextField(
  decoration: InputDecoration(
    labelText: 'Name',
    border: OutlineInputBorder(),
  ),
),
const SizedBox(height: 16),

// Nickname Field
TextField(
  decoration: InputDecoration(
    labelText: 'Nickname',
    border: OutlineInputBorder(),
  ),
),
const SizedBox(height: 16),

// Date of Birth Field
TextField(
  decoration: InputDecoration(
    labelText: 'Date of Birth',
    border: OutlineInputBorder(),
    hintText: 'YYYY-MM-DD',
  ),
  keyboardType: TextInputType.datetime,
),
const SizedBox(height: 16),

// Designation Dropdown
DropdownButtonFormField<String>(
  decoration: InputDecoration(
    labelText: 'Designation',
    border: OutlineInputBorder(),
```

```
            ),
            items: const [
              DropdownMenuItem(value: 'Singer', child: Text('Singer')),
              DropdownMenuItem(value: 'Drummer', child: Text('Drummer')),
              DropdownMenuItem(value: 'Pianist', child: Text('Pianist')),
              DropdownMenuItem(value: 'Guitar player', child: Text('Guitar player')),
              DropdownMenuItem(value: 'Writer', child: Text('Writer')),
              DropdownMenuItem(value: 'DJ', child: Text('DJ')),
              DropdownMenuItem(value: 'Composer', child: Text('Composer')),
            ],
            onChanged: (value) {},
          ),
          const SizedBox(height: 16),

          // Home City Field
          TextField(
            decoration: InputDecoration(
              labelText: 'Home City',
              border: OutlineInputBorder(),
            ),
          ),
          const SizedBox(height: 16),

          // Submit Button
          ElevatedButton(
            onPressed: () {
              // Handle form submission
            },
            child: const Text('Submit'),
          ),
        ],
      ),
    ),
  );
 }
}
```