EXPERIMENT 4

AIM:To create an interactive form using from widgets
THEORY:
Creating an interactive form using Flutter involves using various form-related widgets and handling user input. Below is a theoretical guide on creating an interactive form using form widgets in Flutter:

1. Form Widget:

- The foundation of a Flutter form is the Form widget. It provides a container for form fields and manages their state.

```
Form(
 key: _formKey,
 child: Column(
 children: [
 // Form fields go here
 ],
 ),
)
```

2. TextFormField:

- The TextFormField widget is used for text input. It includes features like validation, auto-correction, and input masking.

```
TextFormField(
 decoration: InputDecoration(
 labelText: 'Username',
 ),
 validator: (value) {
 if (value?.isEmpty ?? true) {
 return 'Please enter your username';
 }
 return null;
 },
 onSaved: (value) {
 // Handle the input value
 },
)
```

3. DropdownButtonFormField:

- For dropdown menus, use DropdownButtonFormField. It allows users to select from a list of items.

```
DropdownButtonFormField(
 value: _selectedOption,
 items: _options.map((option) {
 return DropdownMenuItem(
 value: option,
 child: Text(option),
 );
 }).toList(),
 onChanged: (value) {
 setState(() {
 _selectedOption = value.toString();
 });
 },
)
```

4. Checkbox and Radio Button:

- For binary choices, use Checkbox or Radio widgets.

```
Checkbox(
 value: _isChecked,
 onChanged: (value) {
 setState(() {
 _isChecked = value ?? false;
 });
 },
)
```

5. Submit Button:

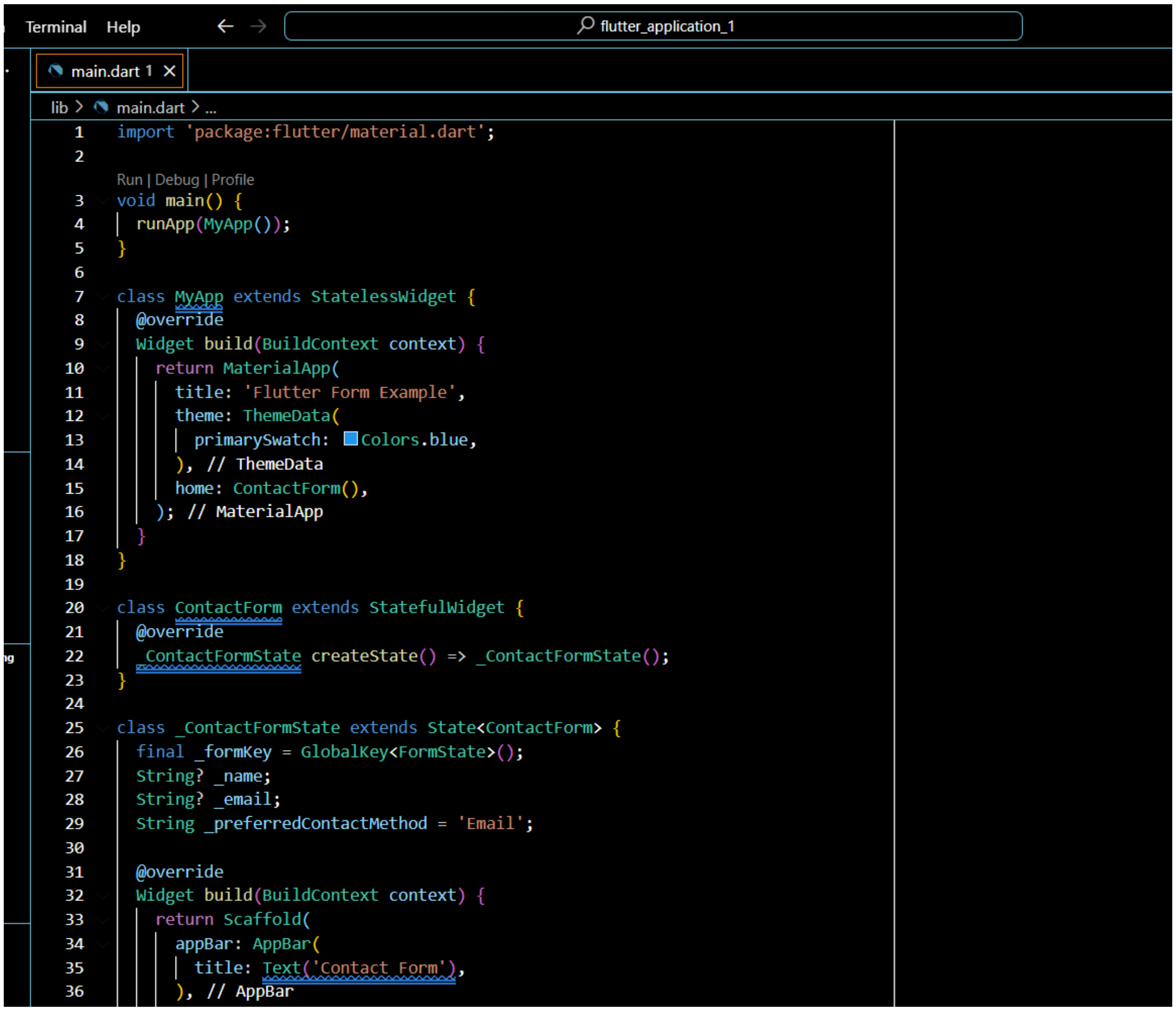
- Implement a submit button that triggers form validation and submission.

```
ElevatedButton(
 onPressed: () {
 if (_formKey.currentState?.validate() ?? false) {
 _formKey.currentState?.save();
 // Handle form submission
 }
 },
 child: Text('Submit'),
)
```

6. Form Validation:

- Use the validator property in form fields to implement validation logic.

```
validator: (value) {
 if (value?.isEmpty ?? true) {
 return 'Field cannot be empty';
 }
 return null;
}
```



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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Form Example',
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ), // ThemeData
      home: ContactForm(),
    ); // MaterialApp
  }
}

class ContactForm extends StatefulWidget {
  @override
  _ContactFormState createState() => _ContactFormState();
}

class _ContactFormState extends State<ContactForm> {
  final _formKey = GlobalKey<FormState>();
  String? _name;
  String? _email;
  String _preferredContactMethod = 'Email';

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Contact Form'),
      ), // AppBar
```

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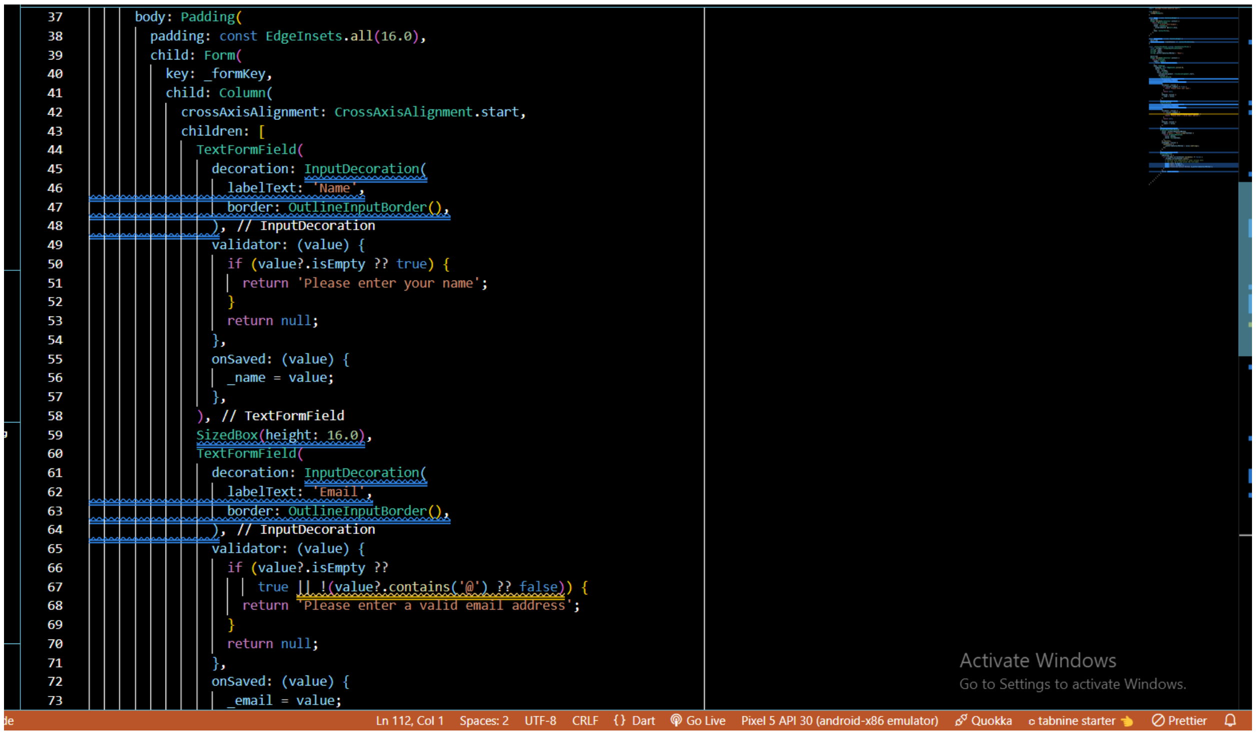
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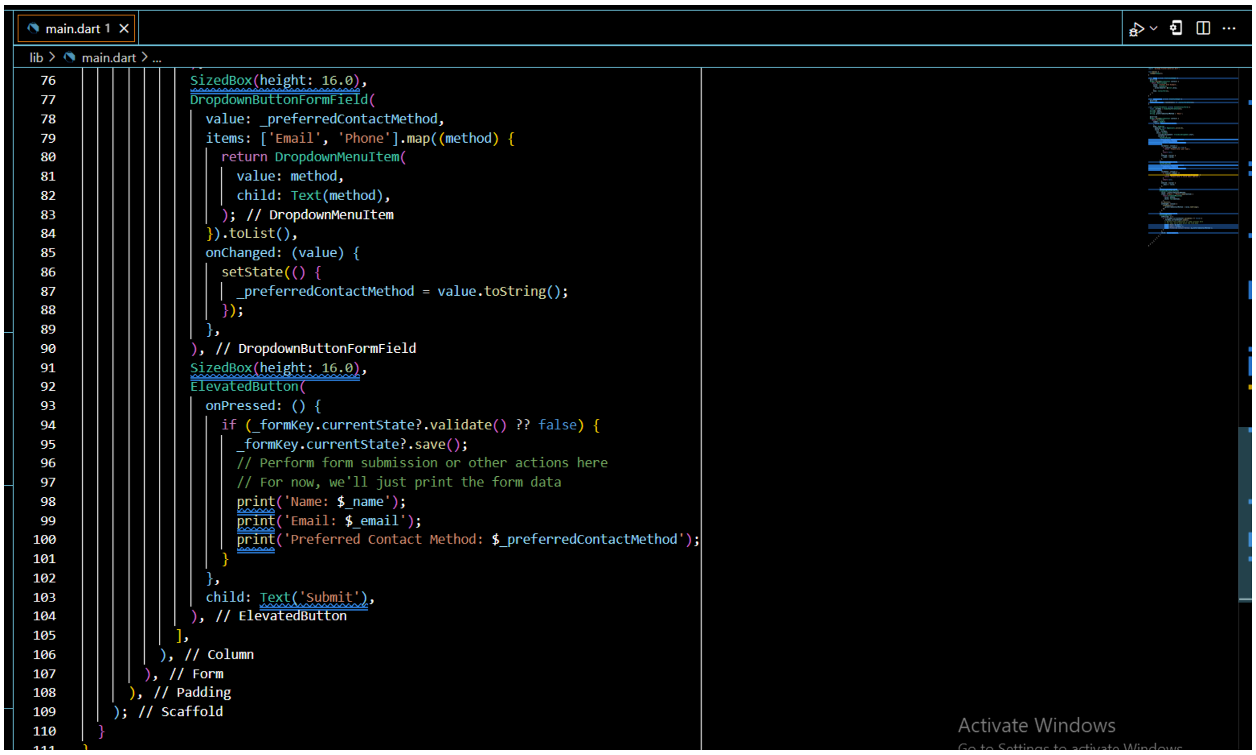
Go to Settings to activate Windows.
Ln 112, Col 1 Spaces: 2 UTF-8 CRLF {} Dart Go Live Pixel 5 API 30 (android-x86 emulator) Quokka tabnine starter Prettier

```dart
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: Form(
          key: _formKey,
          child: Column(
            crossAxisAlignment: CrossAxisAlignment.start,
            children: [
              TextFormField(
                decoration: InputDecoration(
                  labelText: 'Name',
                  border: OutlineInputBorder(),
                ), // InputDecoration
                validator: (value) {
                  if (value?.isEmpty ?? true) {
                    return 'Please enter your name';
                  }
                  return null;
                },
                onSaved: (value) {
                  _name = value;
                },
              ), // TextFormField
              SizedBox(height: 16.0),
              TextFormField(
                decoration: InputDecoration(
                  labelText: 'Email',
                  border: OutlineInputBorder(),
                ), // InputDecoration
                validator: (value) {
                  if (value?.isEmpty ??
                      true || !(value?.contains('@') ?? false)) {
                    return 'Please enter a valid email address';
                  }
                  return null;
                },
                onSaved: (value) {
                  _email = value;
```



```dart
              SizedBox(height: 16.0),
              DropdownButtonFormField(
                value: _preferredContactMethod,
                items: ['Email', 'Phone'].map((method) {
                  return DropdownMenuItem(
                    value: method,
                    child: Text(method),
                  ); // DropdownMenuItem
                }).toList(),
                onChanged: (value) {
                  setState(() {
                    _preferredContactMethod = value.toString();
                  });
                },
              ), // DropdownButtonFormField
              SizedBox(height: 16.0),
              ElevatedButton(
                onPressed: () {
                  if (_formKey.currentState?.validate() ?? false) {
                    _formKey.currentState?.save();
                    // Perform form submission or other actions here
                    // For now, we'll just print the form data
                    print('Name: $_name');
                    print('Email: $_email');
                    print('Preferred Contact Method: $_preferredContactMethod');
                  }
                },
                child: Text('Submit'),
              ), // ElevatedButton
            ],
          ), // Column
        ), // Form
      ), // Padding
    ); // Scaffold
  }
```

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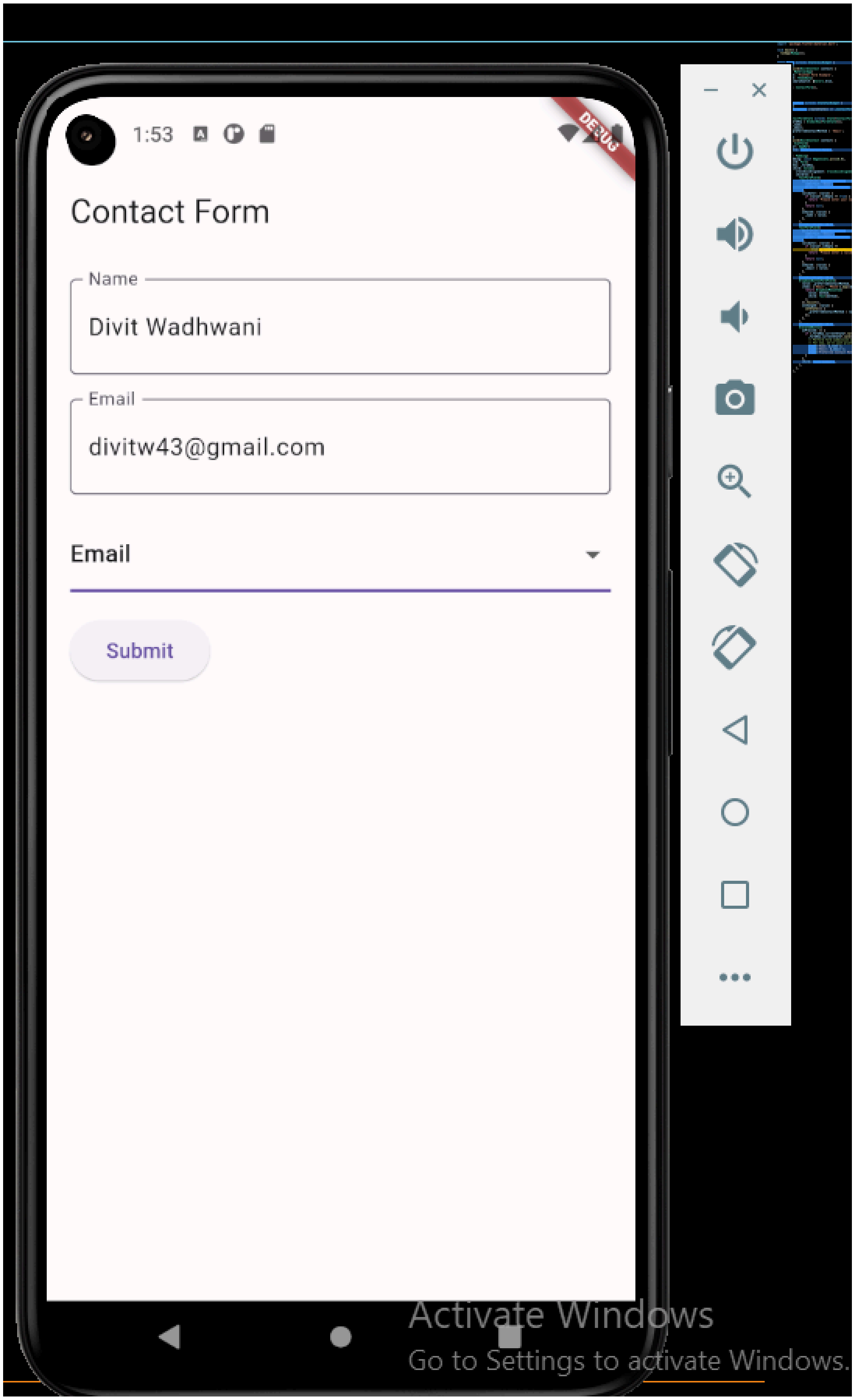

Contact Form

Name
Divit Wadhwani

Email
divitw43@gmail.com

Email

Submit

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CONCLUSION:
In summary, building an interactive form in Flutter requires thoughtful consideration of user interactions, data validation, and visual design. By combining the right form widgets and adhering to best practices, you can create a seamless and user-friendly form for your Flutter application.