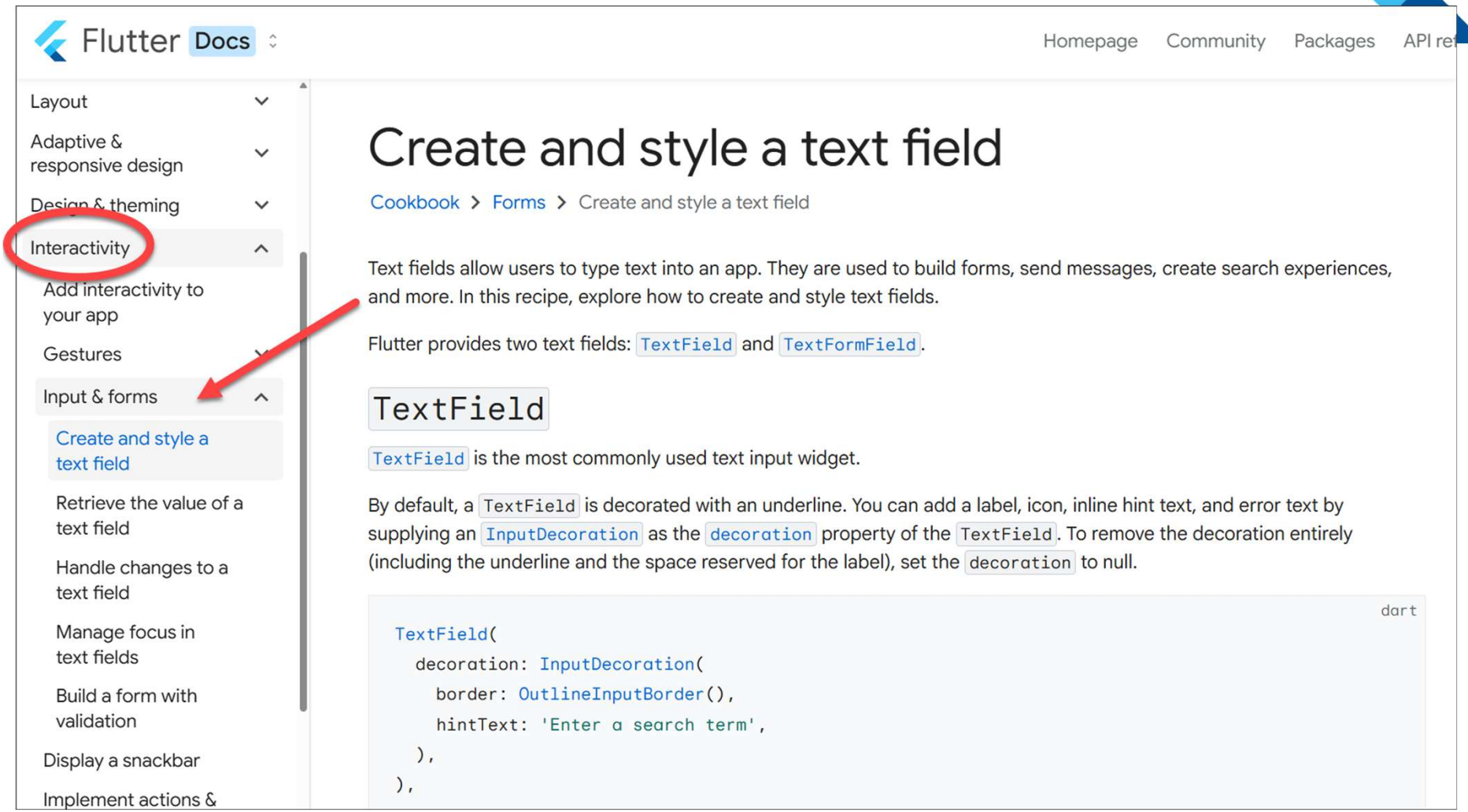
Flutter Fundamentals
TextInput / Form controls

Peter Kassenaar –
info@kassenaar.com

Reading user input

Using textboxes to feth user input

Generic documentation “Interactivity”

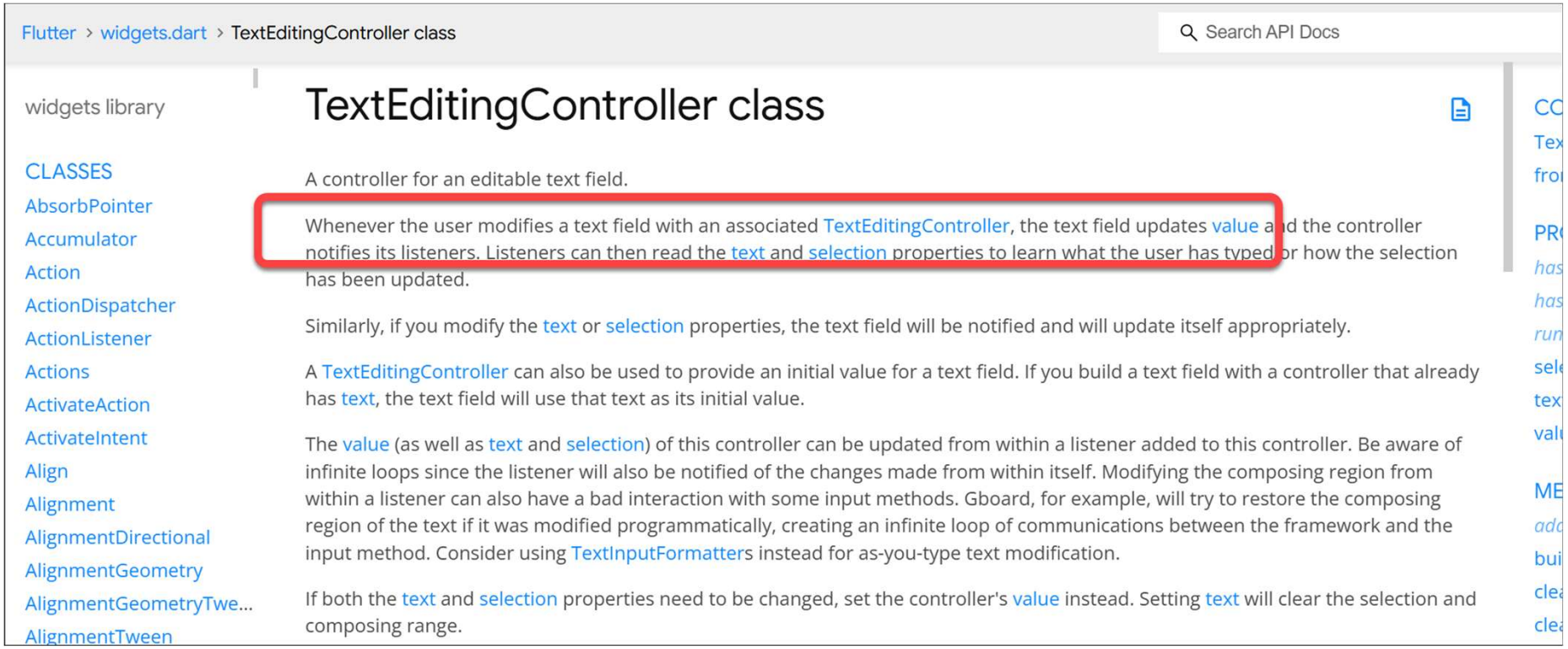


https://docs.flutter.dev/cookbook/forms/text-input

Controller for an editable text field:

“Whenever the user modifies a text field with an associated TextEditingController, the text field updates value and the controller notifies its listeners. Listeners can then read the text and selection properties to learn what the user has typed or how the selection has been updated.”

Creating a textbox to read user input



https://api.flutter.dev/flutter/widgets/TextEditingController-class.html

Adding a `textController`

GOAL: We want to search for (a list of) countries:

1. Create a textController and a countryName

```
final textController = TextEditingController();
String countryName = '';
```

2. Update `getCountries()` to receive countryName as argument (Don't forget to update the API-endpoint!)

Passing `countryName` as argument

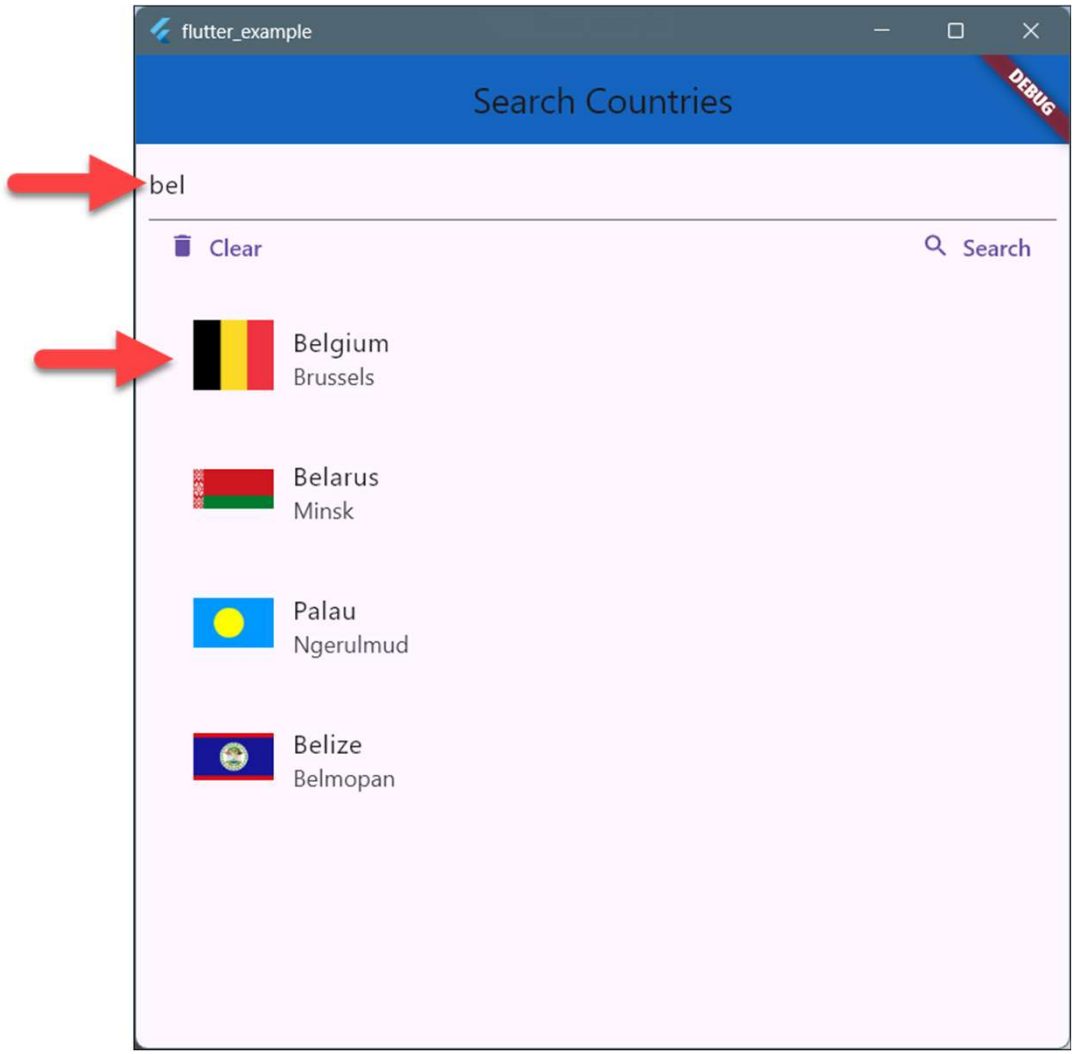
```
class _HomeCountriesState extends State<HomeCountries> {
  // variables in this Widget
  final textController = TextEditingController();
  String countryName = '';
  String url = 'https://restcountries.com/v3.1/name';
  …
  // 3. Get our countries
  void getCountries(String countryName) async {
    // 3a. get the response
    Response response = await get(Uri.parse('$url/$countryName$fields'));

    …
  }
}
```

Updating the UI with a TextBox

```
body: Column(
  children: <Widget>[
    Padding(
      padding: EdgeInsets.fromLTRB(8, 0, 8, 0),
      child: Column(
        children: <Widget>[
          TextField(
            controller: textController,
            decoration: InputDecoration(
              hintText: 'Search countries...'),
          ),
          Row(
          …
         ),
    ),
    Expanded(…),
  ],
```

```
Row(
  mainAxisAlignment: MainAxisAlignment.spaceBetween,
  children: <Widget>[
    // Clear the selection
    TextButton.icon(
      icon: Icon(Icons.delete),
      label: Text('Clear'),
      onPressed: () {
        setState(() {
          countryName = '';
          textController.text = '';
          countries = []; // reset array with countries
        });
      },
    ),
    // Search for countries
    TextButton.icon(
      icon: Icon(Icons.search),
      label: Text('Search'),
      onPressed: () {
        print(textController.text); // just to check
        getCountries(textController.text);
      },
    ),
  ],
),
```

Result


flutter_example
Search Countries
DEBUG
bel
Clear
Search
Belgium
Brussels
Belarus
Minsk
Palau
Ngerulmud
Belize
Belmopan

Summary

- In order to read text from a form field:
  - Use `TextField()` for quick inputs, or
  - Use `TextFormField()` (=with validation, form submission)
- Bind the field to `TextEditingController()`
- Use styling, decoration, focus, etc.
- Read the `textController.text` for the text that was typed in the input field.

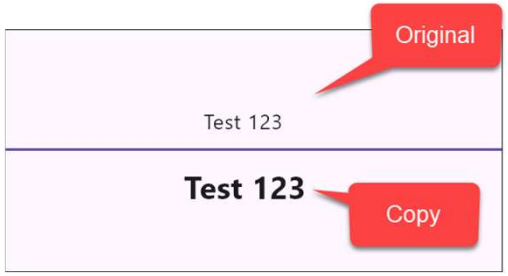
`TextField()` vs `TextFormField()`

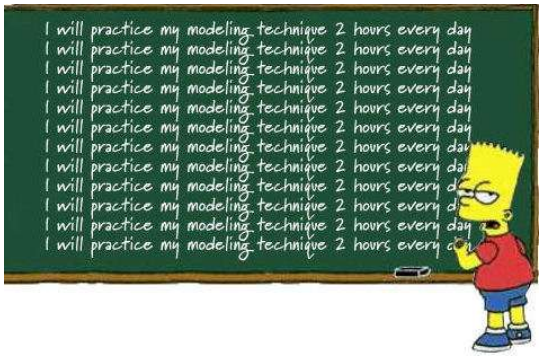
- Official Documentation:
- api.flutter.dev/flutter/material/TextField-class.html
- api.flutter.dev/flutter/material/TextFormField-class.html

Feature	`TextField`	`TextFormField`
Form Integration	❌ No built-in validation	✅ Built for `Form` / `FormState` usage
Validation	Manual validation	Built-in `validator` + `autovalidateMode`
Form Submission	Manual	Tied into `Form.of(context)` workflows
Use Case	Standalone input	Input in a validated form

Workshop - simple

- Create a new application with a `TextField()`
- Text that is typed in the `TextField()`, is echoed on the page
  - So, you're basically making a copy function
- To do this,
  - Add a page with a `TextField()` and a `TextEditingController()`
  - Attach the controller to the textfield
  - Add a listener to the controller to update text variable
  - Call `setState()` to update and display the text



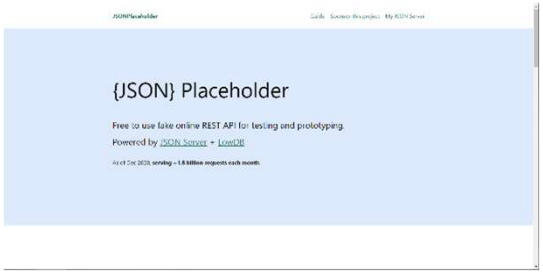


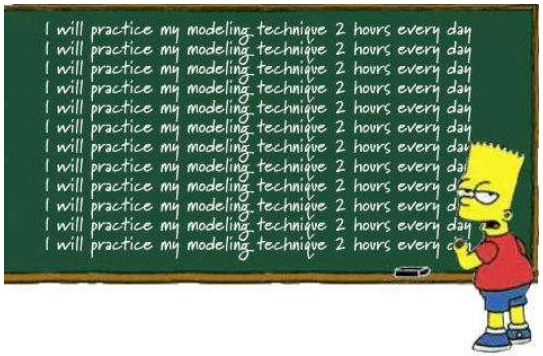
https://docs.flutter.dev/cookbook/forms/text-field-changes

Workshop - extensive

- Update your (dummy user API) application with a `TextField()` that we can type a number in.
- Search for this specific user and display their
  - Name, Username
  - Email, address, phone and company name
- The endpoint becomes

  https://jsonplaceholder.typicode.com/users/<id>
- Optional: create a dropdown that displays a list of numbers 1-10 to pick from
  - Use the `DropdownButton()` class
  - https://api.flutter.dev/flutter/material/DropdownButton-class.html





Workshop - optional

- Optional: Update the Search Countries application with a checkbox
  - If the box is checked (`true`), the flag of a country is shown
  - If the box is not checked (`false`), the flag is hidden
  - Use the `Checkbox` class
  - https://api.flutter.dev/flutter/material/Checkbox-class.html
- Also create a Country Class (model) and use it