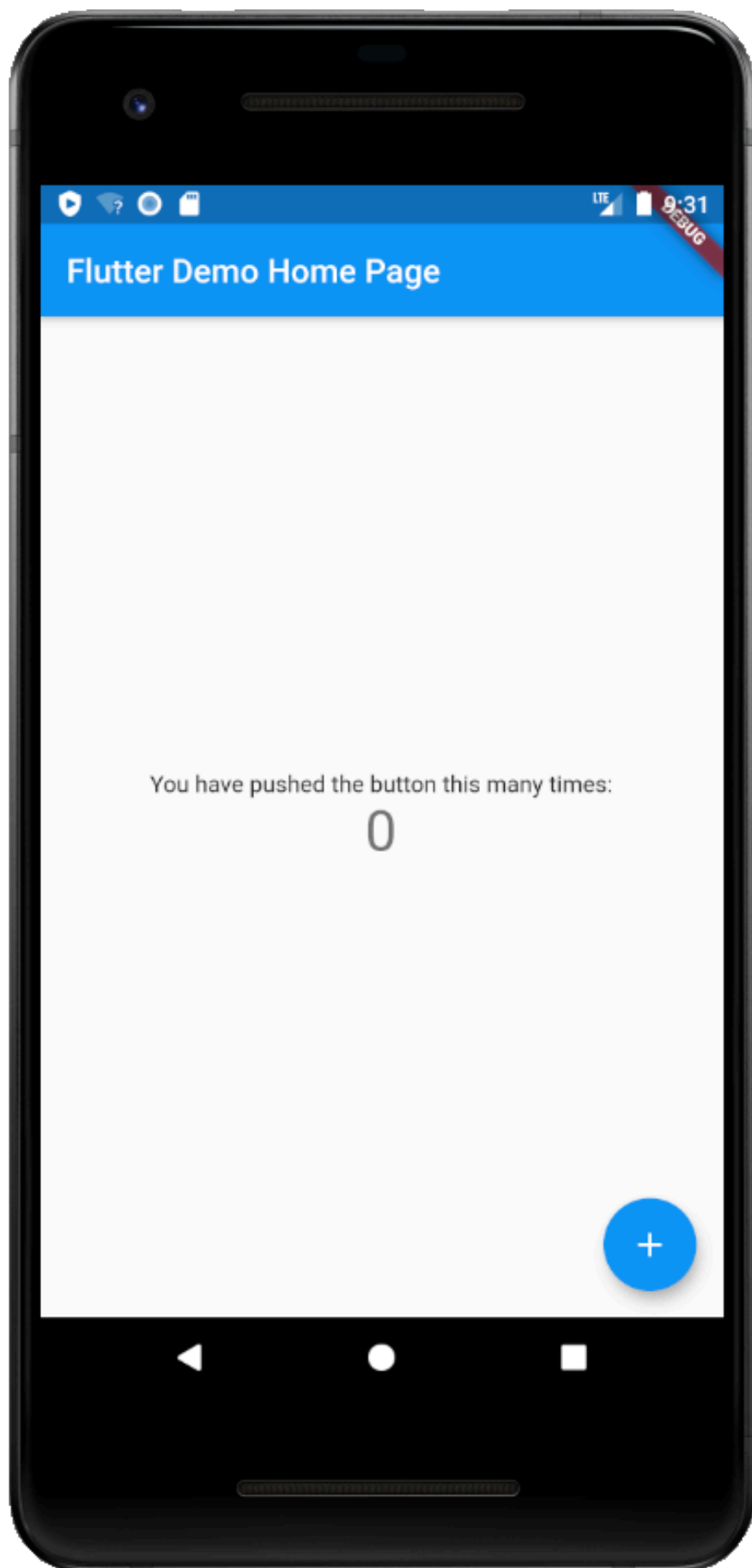Crie um aplicativo no Android Studio.

File | New Flutter Project | Flutter Application

Siga as instruções nos comentários para alterar o aplicativo.

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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      theme: ThemeData(
        primarySwatch: Colors.blue,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: MyHomePage(title: 'Flutter Demo Home Page'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  MyHomePage({Key key, this.title}) : super(key: key);

  final String title;

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

class _MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text(
              'You have pushed the button this many times:',
            ),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.headline4,
            ),
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      ),
    );
  }
}
```
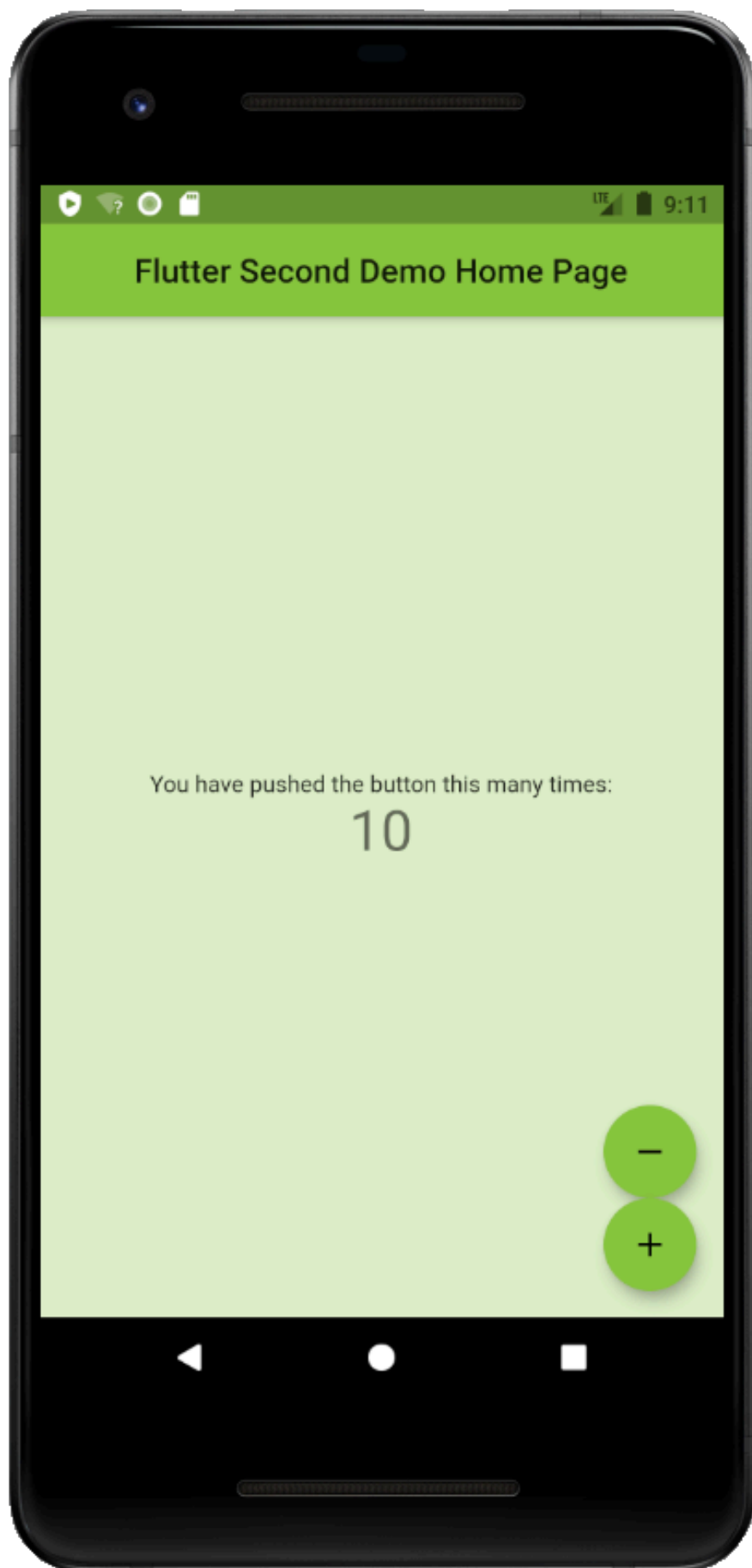
Altere o aplicativo para permitir incrementar ou decrementar o contador. Utilize dois botões organizados em coluna.

Flutter Second Demo Home Page

You have pushed the button this many times:

10

—

+

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

void main() =>
  runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Flutter Second Demo',
      theme: ThemeData(
        primarySwatch: Colors.lightGreen,
        canvasColor: Colors.lightGreen.shade100,
        platform: TargetPlatform.iOS,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: MyHomePage(title: 'Flutter Second Demo Home Page'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  MyHomePage({Key key, this.title}) : super(key: key);

  final String title;

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

class _MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  void _decrementCounter() {
    setState(() {
      _counter--;
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text(
              'You have pushed the button this many times:',
            ),
            Text(
              '$_counter',
```

```dart
            style: Theme.of(context).textTheme.headline4,
          ),
        ],
      ),
    ),
    floatingActionButton: Column(
        mainAxisAlignment: MainAxisAlignment.end,
        children: [
      FloatingActionButton(
        onPressed: _decrementCounter,
        tooltip: 'Decrement',
        child: Icon(Icons.remove),
      ),
      FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      )
    ]), // This trailing comma makes auto-formatting nicer for build methods.
  );
  }
}
```
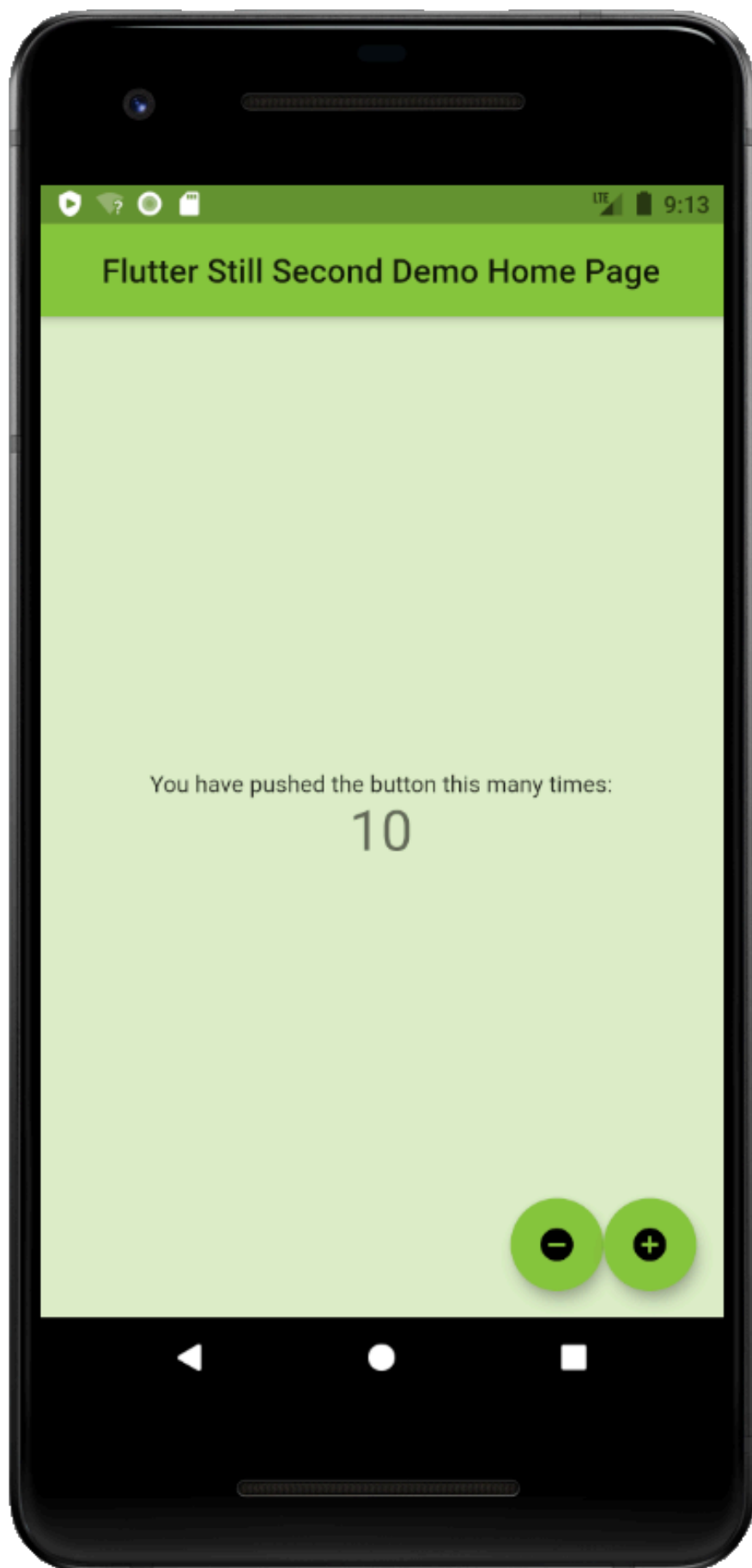
Altere a tela para permitir incrementar ou decrementar o contador. Utilize botões organizados em linha. Altere os ícones nos botões.

DESAFIO A2

Altere a tela para permitir incrementar ou decrementar o contador. Utilize botões organizados em linha. Altere os ícones nos botões.

Flutter Still Second Demo Home Page

You have pushed the button this many times:

10

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

void main() =>
  runApp(MyApp());


class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Flutter Second Demo',
      theme: ThemeData(
        primarySwatch: Colors.lightGreen,
        canvasColor: Colors.lightGreen.shade100,
        platform: TargetPlatform.iOS,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: MyHomePage(title: 'Flutter Still Second Demo Home Page'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  MyHomePage({Key key, this.title}) : super(key: key);

  final String title;

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

class _MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  void _decrementCounter() {
    setState(() {
      _counter--;
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text(
              'You have pushed the button this many times:',
            ),
            Text(
```

```dart
              '$_counter',
              style: Theme.of(context).textTheme.headline4,
            ),
          ],
        ),
      ),
      floatingActionButton: Row(
        mainAxisAlignment: MainAxisAlignment.end,
        children: [
          FloatingActionButton(
            onPressed: _decrementCounter,
            tooltip: 'Decrement',
            child: Icon(Icons.remove_circle),
          ),
          FloatingActionButton(
            onPressed: _incrementCounter,
            tooltip: 'Increment',
            child: Icon(Icons.add_circle),
          )
        ]), // This trailing comma makes auto-formatting nicer for build methods.
    );
  }
}
```
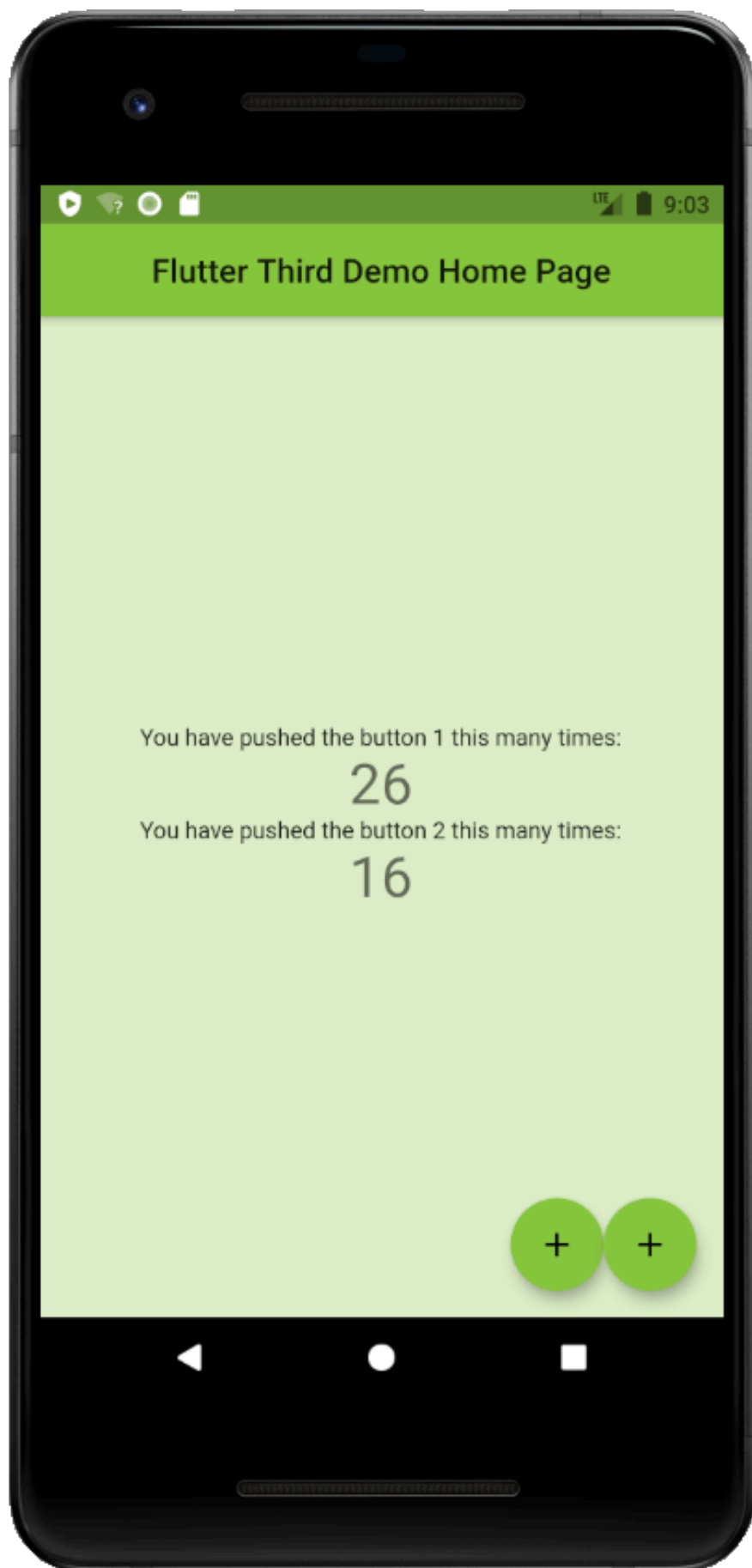
Altere a aplicação para apresentar dois contadores.

Flutter Third Demo Home Page

You have pushed the button 1 this many times:

26

You have pushed the button 2 this many times:

16

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Flutter Second Demo',
      theme: ThemeData(
        primarySwatch: Colors.lightGreen,
        canvasColor: Colors.lightGreen.shade100,
        platform: TargetPlatform.iOS,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: MyHomePage(title: 'Flutter Third Demo Home Page'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  MyHomePage({Key key, this.title}) : super(key: key);

  final String title;

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

class _MyHomePageState extends State<MyHomePage> {
  int _counter1 = 0;
  int _counter2 = 0;
  void _incrementCounter1() {
    setState(() {
      _counter1++;
    });
  }

  void _incrementCounter2() {
    setState(() {
      _counter2++;
    });
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text(
              'You have pushed the button 1 this many times:',
            ),
            Text(
              '$_counter1',
              style: Theme.of(context).textTheme.headline4,
```

```dart
            ),
            Text(
              'You have pushed the button 2 this many times:',
            ),
            Text(
              '$_counter2',
              style: Theme.of(context).textTheme.headline4,
            ),
          ],
        ),
      ),
      floatingActionButton:
          Row(mainAxisAlignment: MainAxisAlignment.end, children: [
        FloatingActionButton(
          onPressed: _incrementCounter1,
          tooltip: 'Increment 1',
          child: Icon(Icons.add),
        ),
        FloatingActionButton(
          onPressed: _incrementCounter2,
          tooltip: 'Increment 2',
          child: Icon(Icons.add),
        )
      ]), // This trailing comma makes auto-formatting nicer for build methods.
    );
  }
}
```
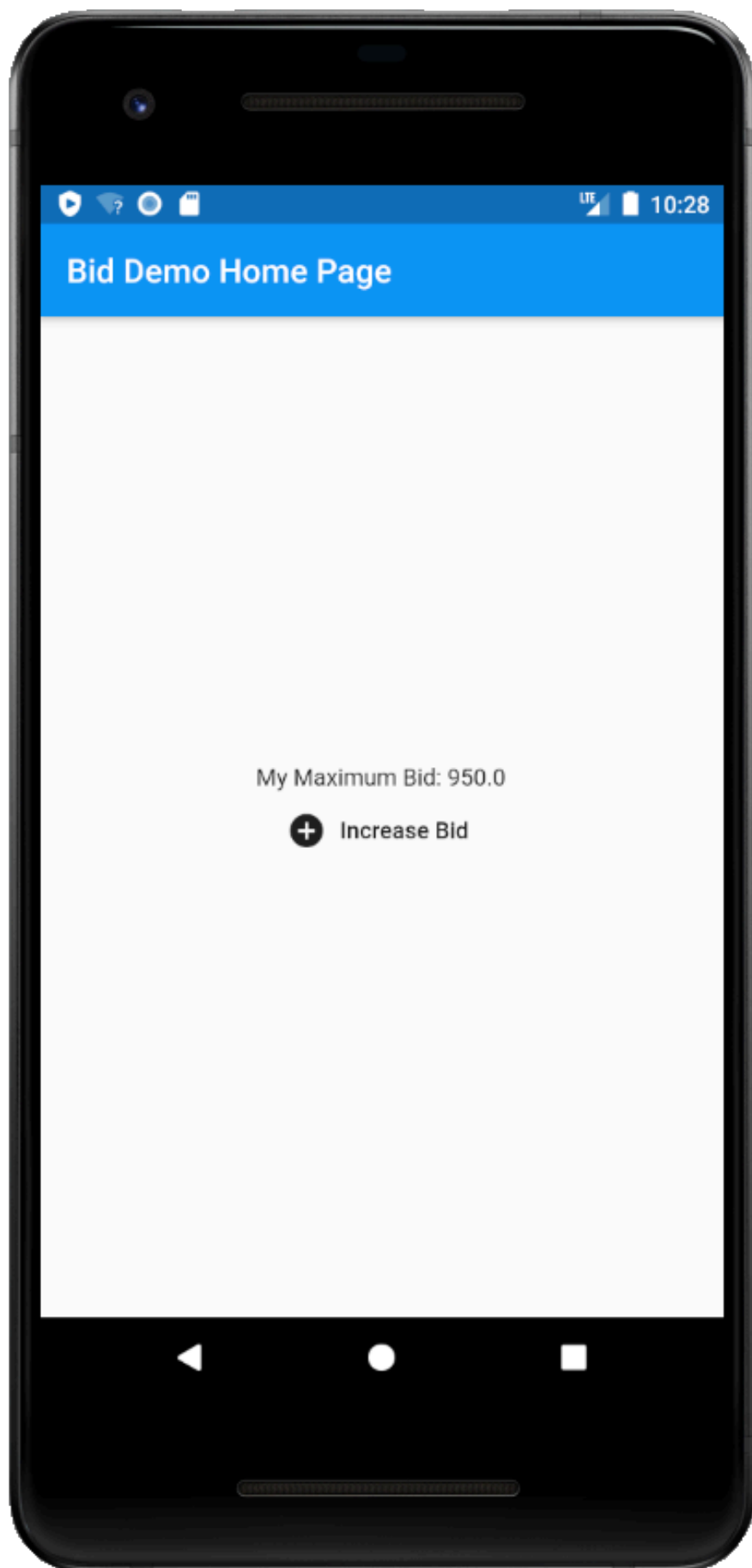
Altere a aplicação para manter um lance (bid) em um leilão. O lance aumenta em 50 unidades a cada vez.

Bid Demo Home Page

My Maximum Bid: 950.0

➕ Increase Bid

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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      debugShowCheckedModeBanner: false,
      theme: ThemeData(
        primarySwatch: Colors.blue,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: MyHomePage(title: 'Bid Demo Home Page'),
    );
  }
}

class MyHomePage extends StatelessWidget {
  MyHomePage({Key key, this.title}) : super(key: key);

  final String title;

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            MaximumBid(),
          ],
        ),
      ),
    );
  }
}

class MaximumBid extends StatefulWidget {
  @override
  _MaximumBidState createState() => _MaximumBidState();
}

class _MaximumBidState extends State<MaximumBid> {
  double _maxBid = 0.0;
  void _increaseMyMaxBid() {
    setState(() {
// Add $50 to my current bid
      _maxBid += 50.0;
    });
  }

  @override
  Widget build(BuildContext context) {
    return Column(
      children: <Widget>[
        Text('My Maximum Bid: $_maxBid'),
        FlatButton.icon(
```

```dart
              onPressed: () => _increaseMyMaxBid(),
              icon: Icon(Icons.add_circle),
              label: Text('Increase Bid'),
            ),
          ],
        );
      }
    }
```