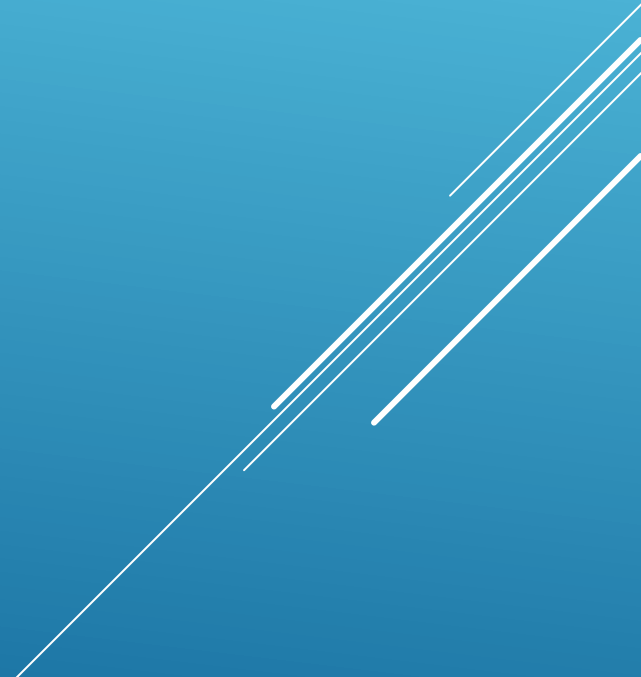




INTRODUCTION TO FLUTTER

Presented by Wing Chan

AGENDA

- ▶ What is Flutter?
 - ▶ What is Dart?
 - ▶ FlutterSystem Overview
 - ▶ What is Widgets?
 - ▶ Flutter vs Xamarin
 - ▶ Live Demo
 - ▶ Q&A?
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- A series of white diagonal lines of varying lengths and thicknesses, located in the bottom right corner of the slide, creating a modern, abstract graphic element.

WHAT IS FLUTTER?

- ▶ Made by Google
 - ▶ Cross platform Mobile framework (iOS & Android)
 - ▶ Future Roadmap: Web, Desktop & Embedded devices
 - ▶ Open source
 - ▶ Initial release in May 2017
 - ▶ Written in Dart
- 
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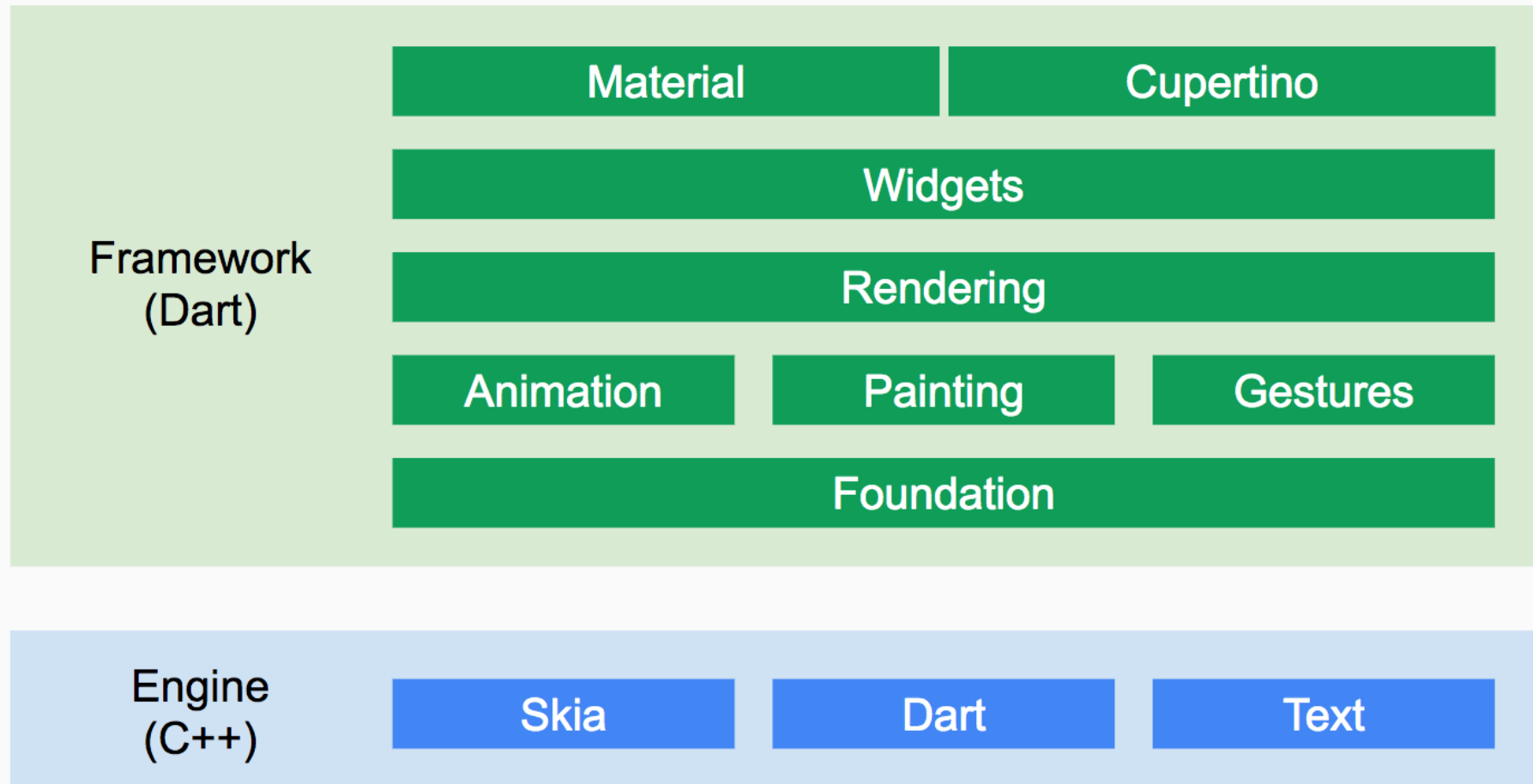
WHAT IS DART?

- ▶ Dart is an object-oriented, class defined, garbage-collected language using a C-style syntax created by Google.

```
import 'dart:math' as math;
class Point {
  final num x, y;
  Point(this.x, this.y);
  Point.origin(): x = 0, y = 0;
  num distanceTo(Point other) {
    var dx = x - other.x;
    var dy = y - other.y;
    return math.sqrt(dx * dx + dy * dy);
  }
  Point operator +(Point other) => Point(x + other.x, y + other.y);
}

void main() {
  var p1 = Point(10, 10);
  var p2 = Point.origin();
  var distance = p1.distanceTo(p2);
  print(distance);
}
```

FLUTTER SYSTEM OVERVIEW



WHAT IS WIDGETS?

- ▶ In Flutter, *everything* is a widget.
- ▶ 2 classes of widgets: *StatelessWidget* and *StatefulWidget*

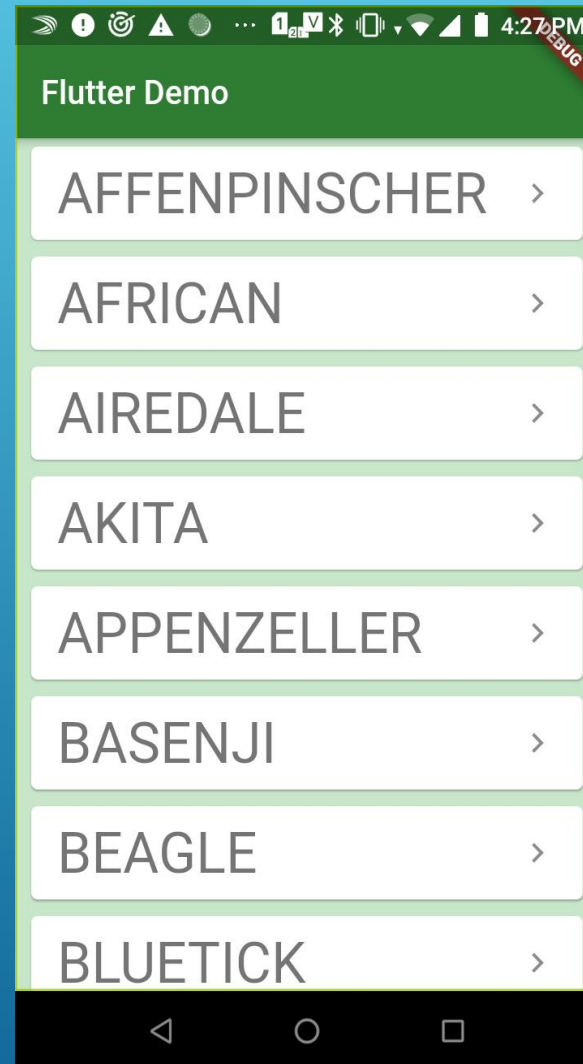
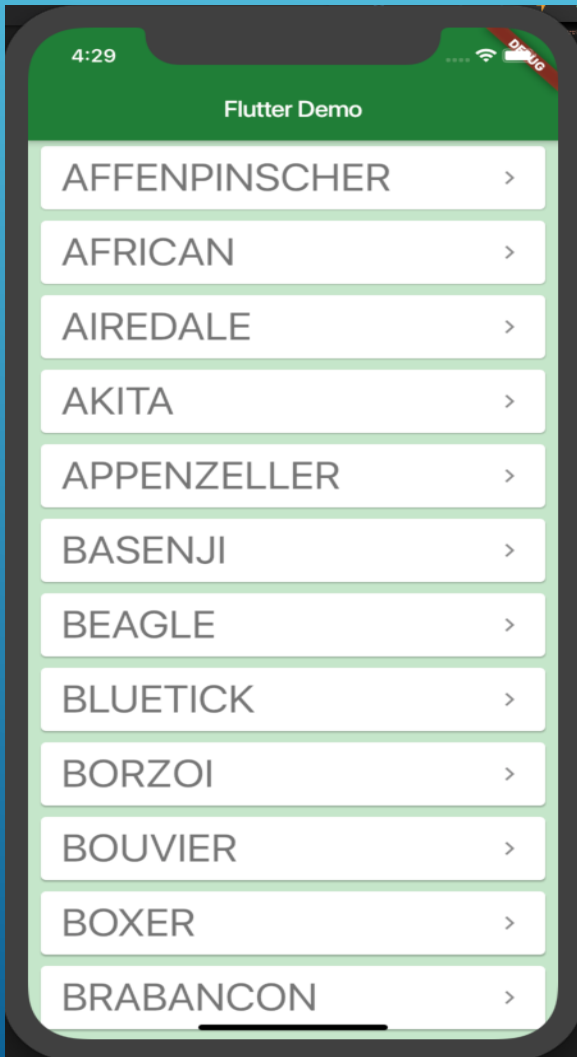
```
class BigText extends StatelessWidget {  
  final String text;  
  
  BigText(this.text);  
  
  Widget build(context) {  
    return new Text(  
      text,  
      textStyle: new TextStyle(fontSize: 20.0),  
    );  
  }  
}
```

```
class Counter extends StatefulWidget {  
  Counter({Key key, this.title}) : super(key: key);  
  @override  
  _MyHomePageState createState() => new _MyHomePageState();  
}  
  
class _MyHomePageState extends State<MyHomePage> {  
  int counter = 0;  
  void increaseCount() {  
    setState(() {  
      this.counter++;  
    })  
  }  
  Widget build(context) {  
    return new RaisedButton(  
      onPressed: increaseCount,  
      child: new Text('Tap to Increase'),  
    );  
  }  
}
```

	Xamarin	Flutter
Code	C#	Dart
Compilation	iOS:AOT, Android:JIT	AOT + Dart VM
Portability	iOS, Android, Windows, MacOS	Current: IOS, Android Future: Web, Desktop and Embedded
Code Reuse	Xamarin Native: Moderate Xamarin Form: High	High
UI	Native components	Customize UI Widgets
Price	Free, Open Source	Free, Open Source
Community	Large	Growing
App Size	Relatively Big	Relatively Big
Graphics handling	Poor	Moderate (60 fps)

FLUTTER VS XAMARIN

DEMO



Q&A

- ▶ Demo Source Code: <http://bit.ly/2LHyg4r>
 - ▶ Flutter: <http://flutter.dev>
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