

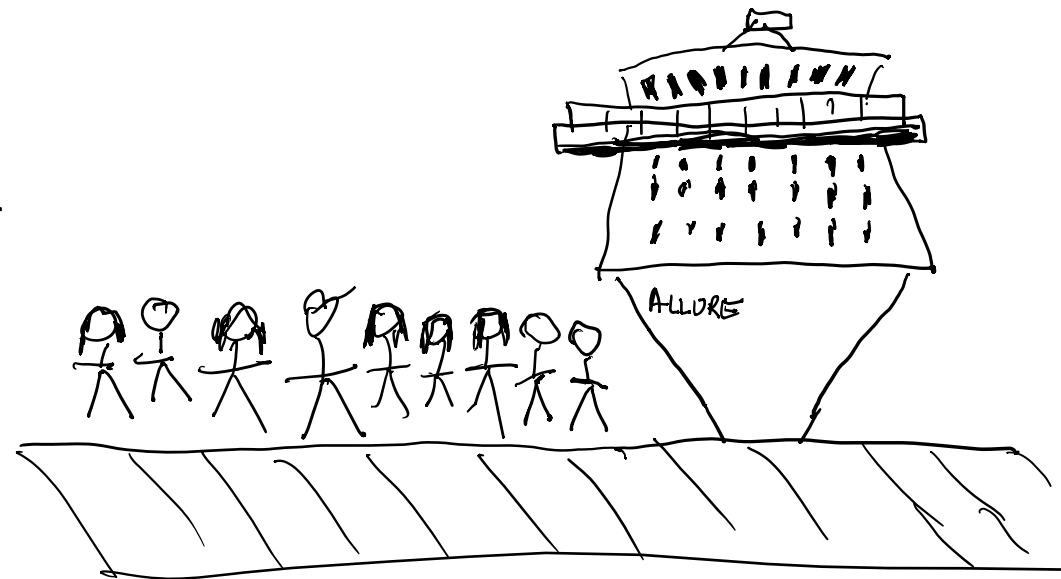
Flutter Clock Contest fail

William Austin

MDC 2020

Me

- Technical Architect w/
AgileThought Tampa FL
- Previous MDC speaker 2018
- Co-organizer Twin Cities .NET User
Group Meetup (2 yrs)
- TechMasters (3 yrs, 1 yr President)
- Active in the MeetUp community.
- @wyldebill00

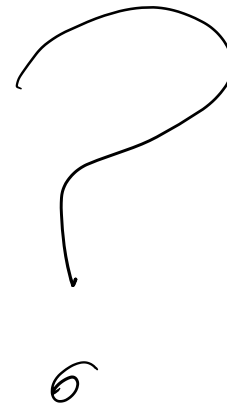


You're a .Net guy, why Flutter?

- Why not? Do not be a One Trick Pony.
- History of Everything Flutter app.
- Flutter Clock Contest

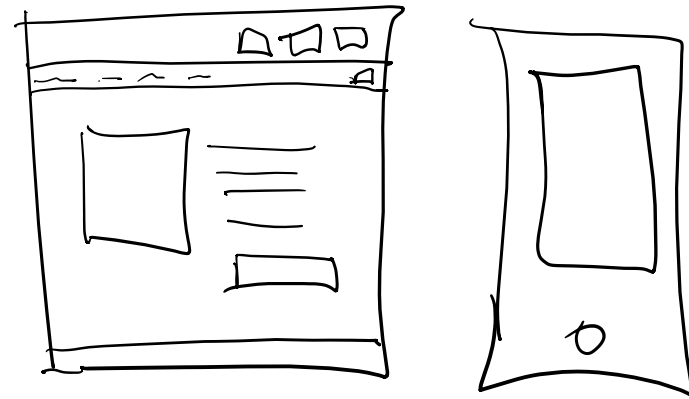
<https://youtu.be/PaPUkxYHDUw>

- Philip Okonkwo/NPKompleet.
<https://medium.com/@NPKompleet/creating-an-analog-clock-in-flutter-i-68def107d9f4>



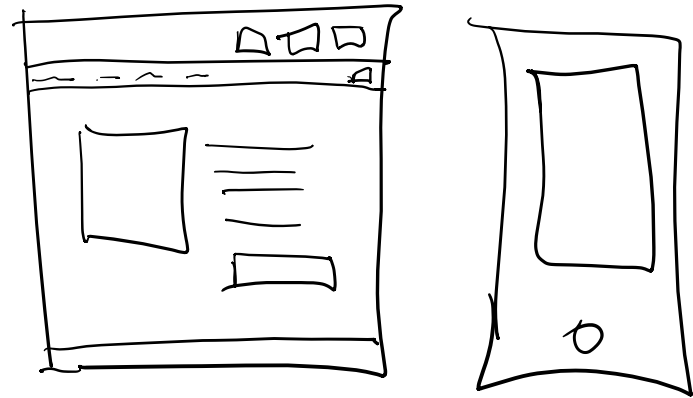
What is Flutter?

- Google's UI toolkit
 - Fast development
 - Expressive Flexible UI
 - Native performance



What we will cover today?

- Demo: Flutter Hello World
- Flutter State
- Flutter Canvas
- Demo: NPKompleet Clock breakdown



Demo: Hello World in Flutter



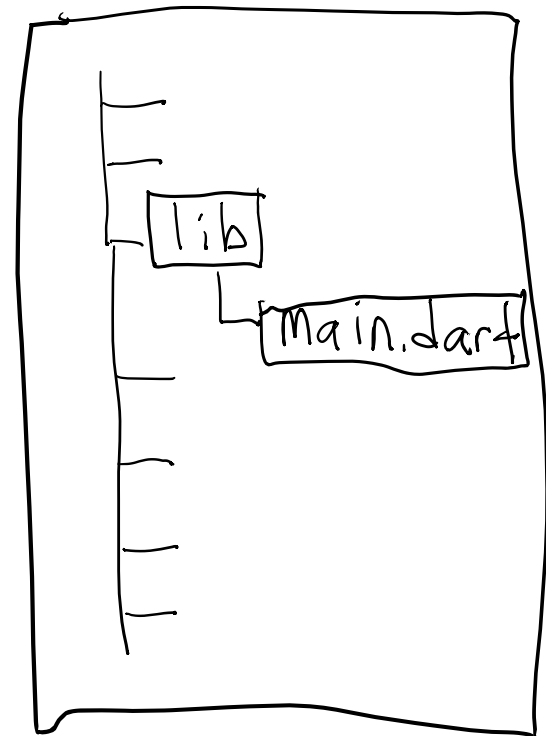
Demo: Hello World in Flutter

- Flutter doctor
- Flutter CLI to create app
- Debug/Run flutter app
- Stateful Hot Reload



Hello World Breakdown

- Startup file
- Location of IOS/Android files
- Ephemeral state / updates
- Restoring packages
- Build() method, where the magic happens.



State in Flutter apps

```
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) {
```

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Flutter Canvas and Custom Painting

- Canvas
 - Origin (positive Y goes DOWN!)
 - Translation
 - Rotation
 - Save/Restore
- Paint object
 - Like a paintbrush, color, thickness, etc.
- Path
 - MoveTo, LineTo to describe shape



CustomPaint Widget

- Needs a CustomPainter
 - Override Paint()

```
children: <Widget>[  
  new CustomPaint( painter: new HourHandPainter(  
    | | hours: dateTime.hour, minutes: dateTime.minute, showHeartSha  
    ), // CustomPaint  
  new CustomPaint(painter: new MinuteHandPainter(  
    | | minutes: dateTime.minute, seconds: dateTime.second), // Minu  
    ), // CustomPaint  
  new CustomPaint(painter: new SecondHandPainter(seconds: dateTime  
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] // <Widget>[]
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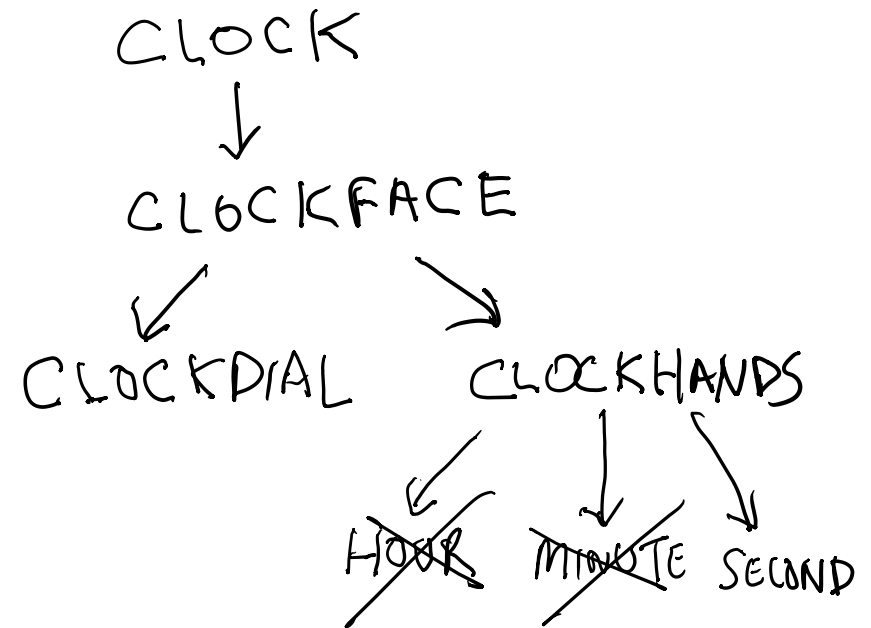

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NpKompleet's Clock App Breakdown

- State change in real application.
- Canvas and Custom Painting



Demo: Explore NPKompleet's clock widgets

Resources

- flutter.dev
- YouTube: Flutter Widget of the Week
- The App Brewery – FREE course
 - <https://www.appbrewery.co/p/intro-to-flutter>
- CodePen – Flutter support!

Wrap up/Questions

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- @wyldebill00