Hey GDEs, I think you should look at Flutter

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OVH
Team DevRel

DevFest du Bout du Monde

Breizh C@mp
Mix de technologies

Finist Devs

Google Developers Experts 2015
Web Technologies GDE

What's Flutter?

Yet another mobile solution?

Flutter

Flutter is Google's new open-source mobile UI toolkit, helping developers to craft high-quality native experiences across mobile platforms in record time

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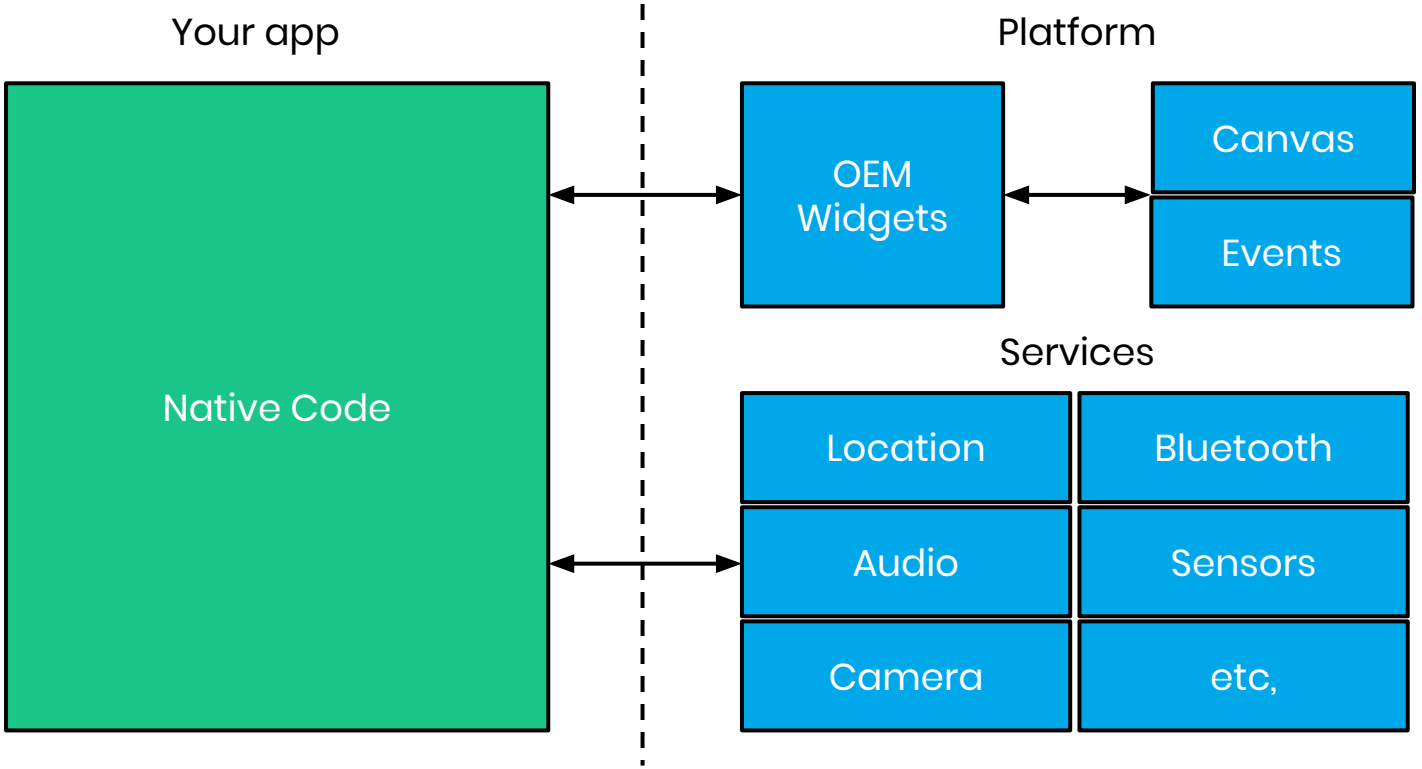
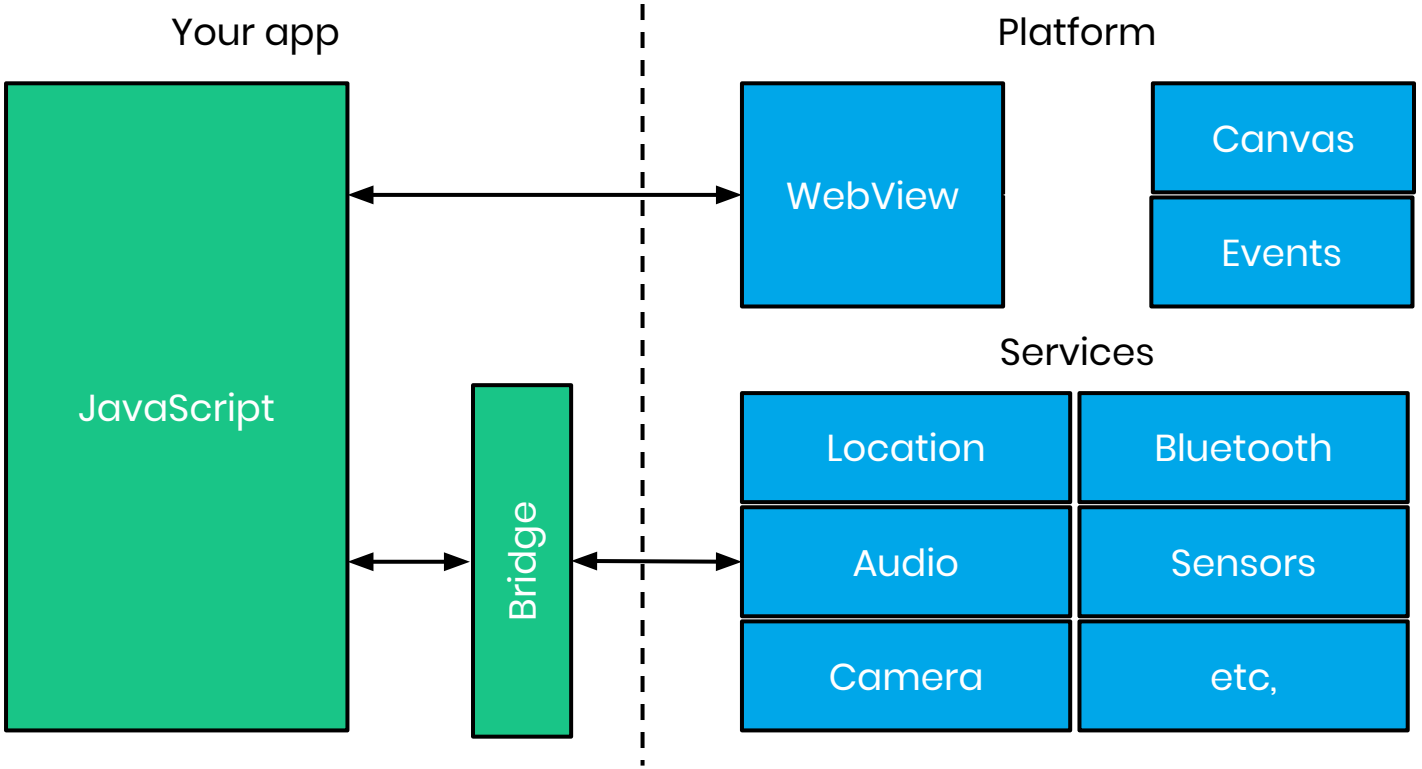
Looking back

Diving into the history of mobile app development

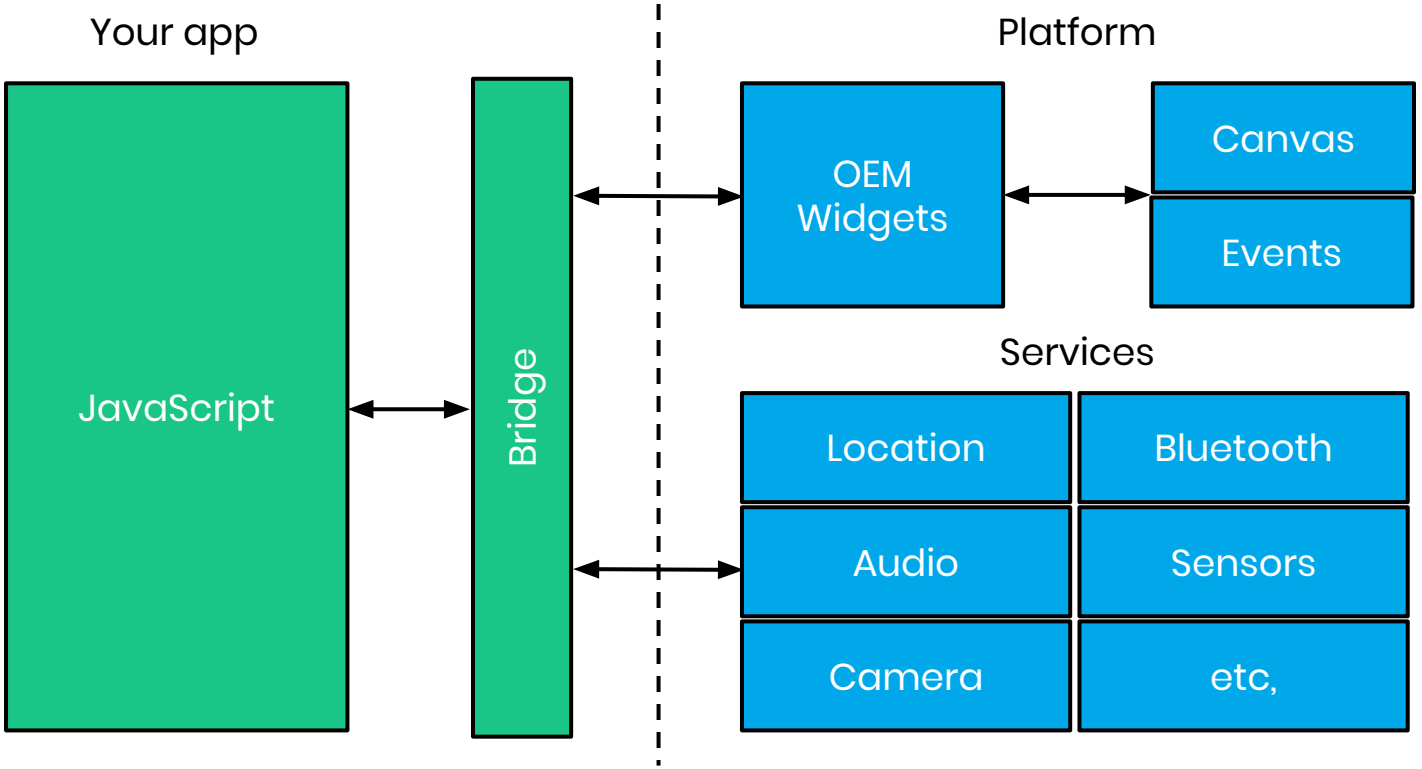
At the beginning there were the SDKs



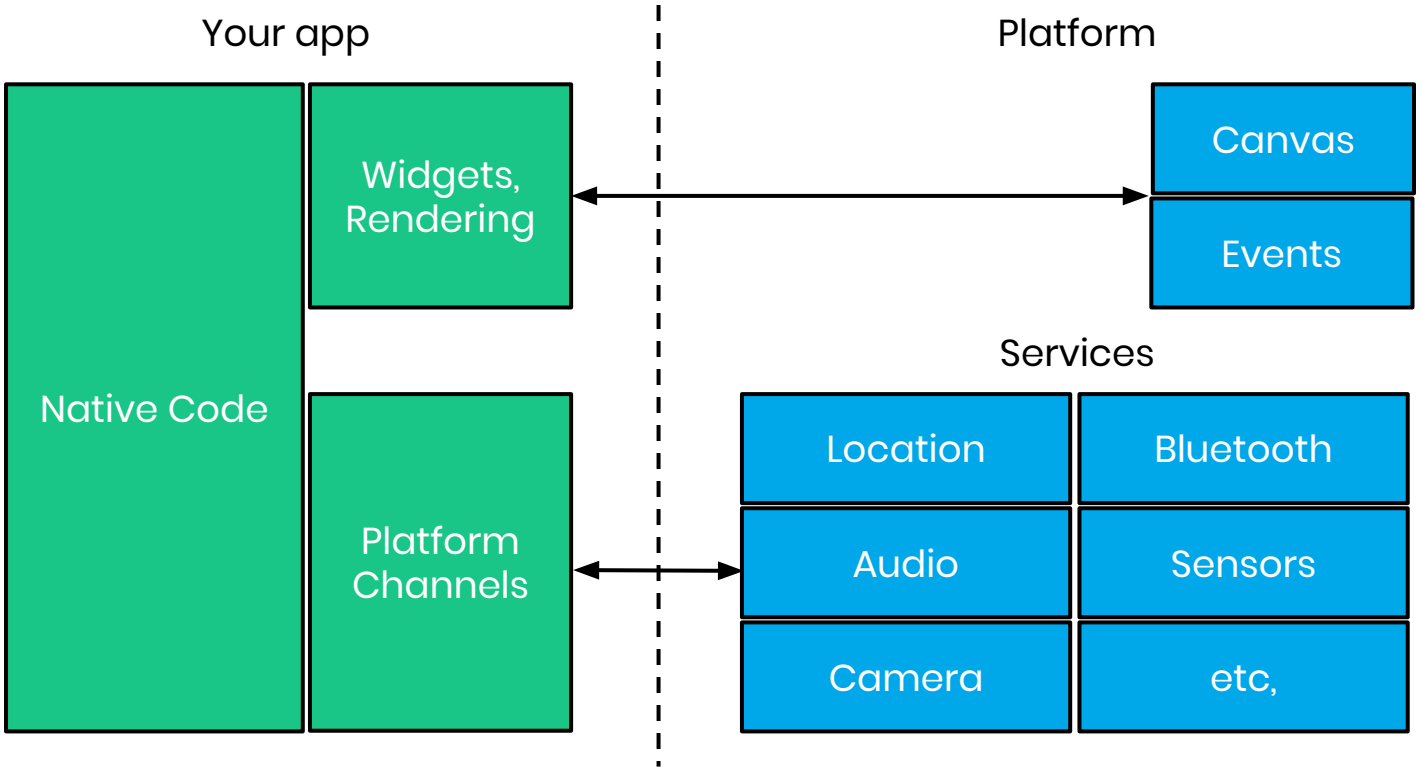
Then the Webviews...



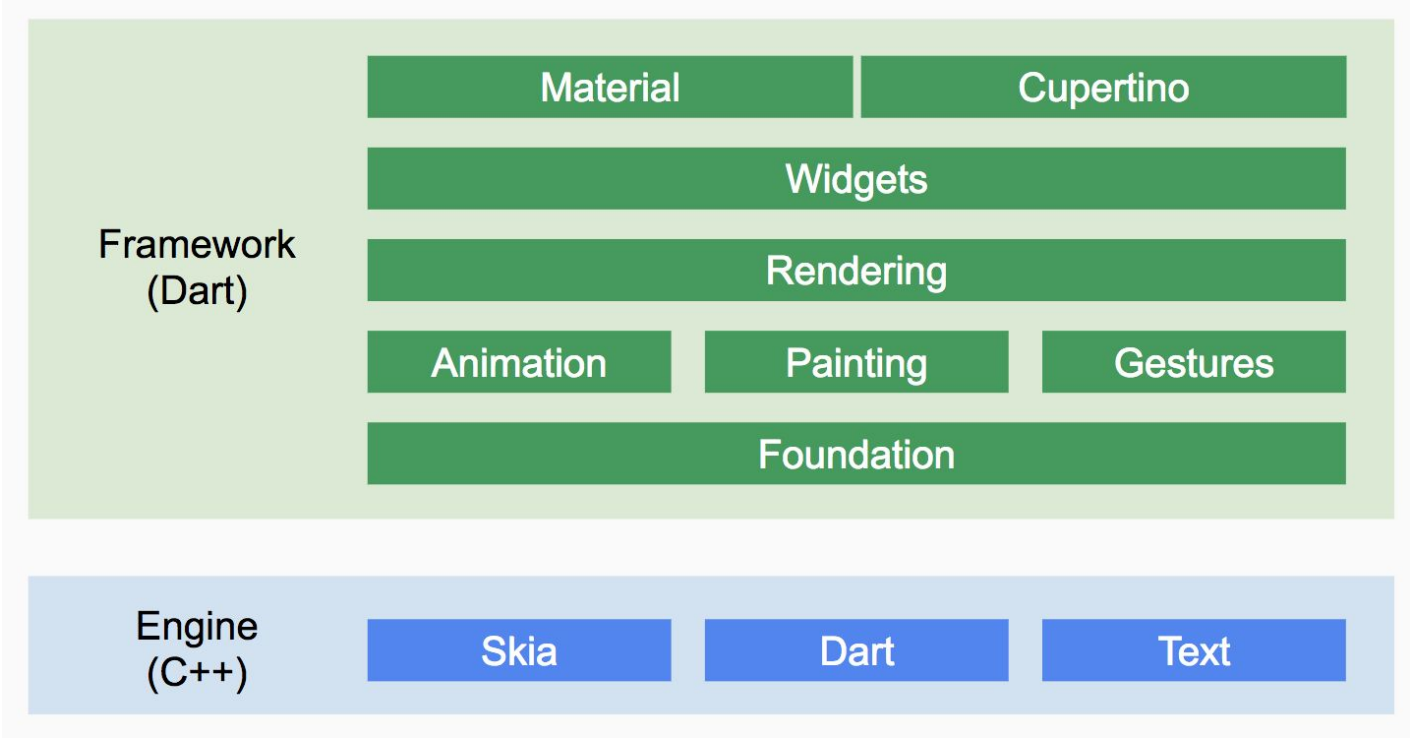
And the Reactive views



Enter Flutter



Flutter architecture



But why Dart?

Because Google, duh!
…or maybe there are good reasons?

Dart can be compiled AOT or JIT

Development builds:

- Custom **VM** offers **super fast hot reload** change cycle

Release builds:

- Full AOT-compilation to **native machine code** offers **super fast startup and execution**

Dart's allocation and GC

- Many new objects:
  - Lock-free, fast allocation

- Short-lived objects:
  - Precise, generational garbage collection

Dart is an easy, familiar language

An easy language:

- No exotic syntax
- Easy to read, easy to write
- Very expressive

A familiar language:

- JavaScript devs find it easy to learn
- Java / C# devs even more

Layout

How Flutter does layout?
CSS like? XML like?

Traditional rule based layouts

Large set of rules

- Fixed
- Applied to all the widgets

Cascading application

- Interactions & conflicts
- Low performance

Chrome team experiment

Could a different layout model allow faster rendering?

- Each widget specifies its own simple layout model
- Less rules, heavily optimized
- Complex layouts are turned into widgets

Everything is a widget

Layouts

Margin

Padding

Themes

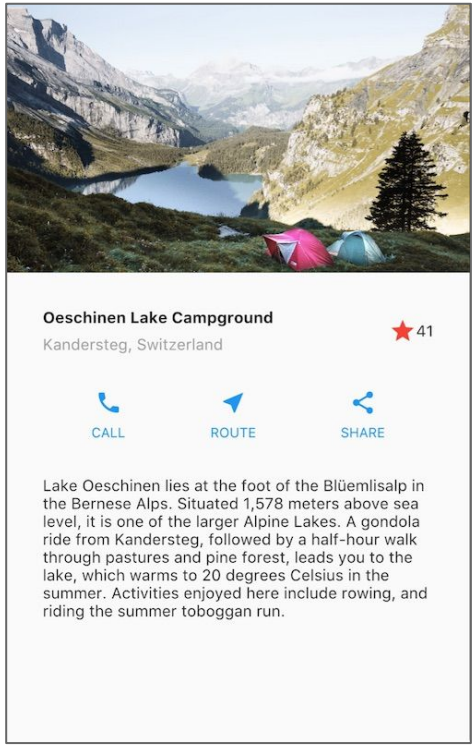
Application

Navigation

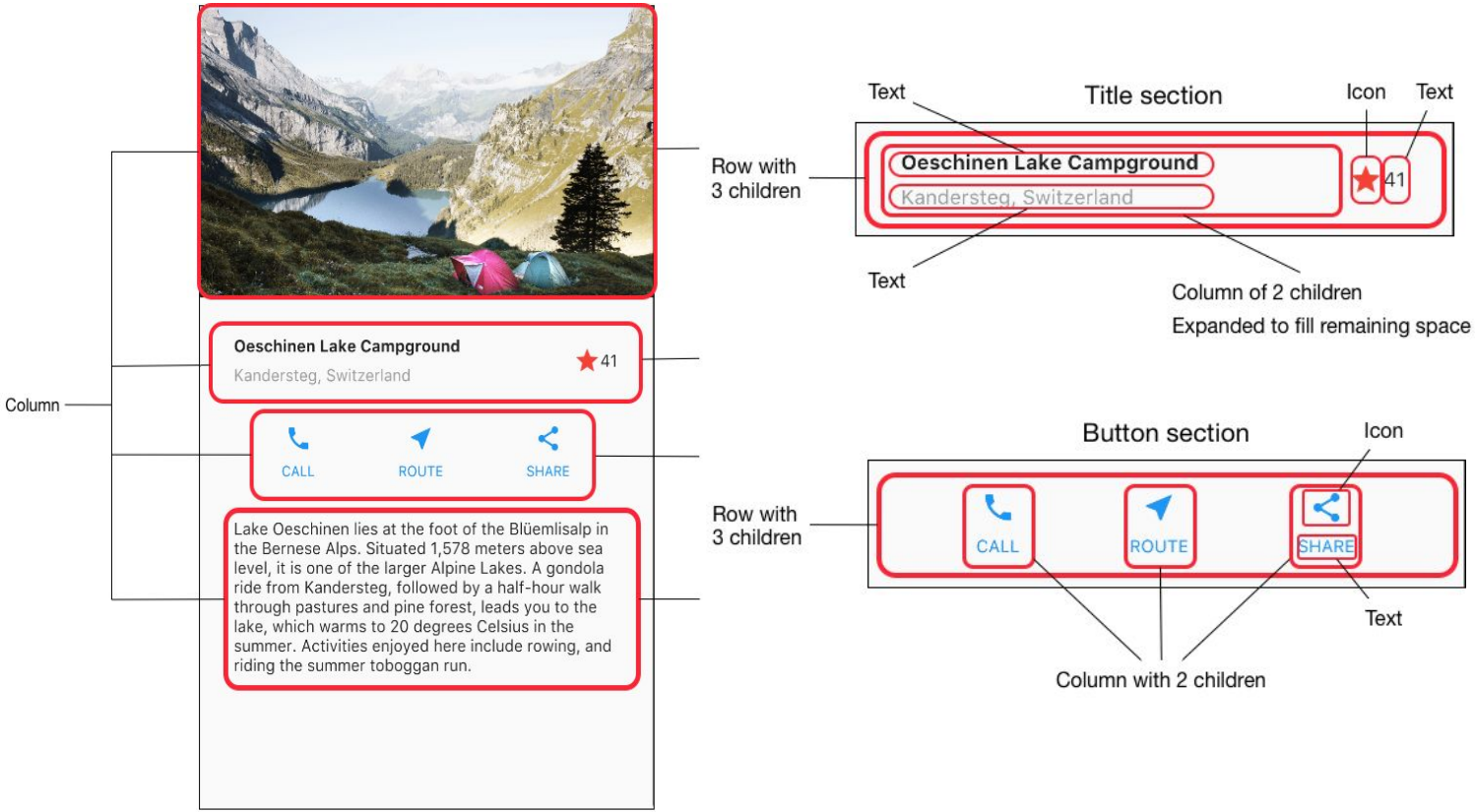
are widgets

even scrolling is a widget!

Le Layout


Oeschinen Lake Campground
Kandersteg, Switzerland
41
CALL
ROUTE
SHARE
Lake Oeschinen lies at the foot of the Blüemlisalp in the Bernese Alps. Situated 1,578 meters above sea level, it is one of the larger Alpine Lakes. A gondola ride from Kandersteg, followed by a half-hour walk through pastures and pine forest, leads you to the lake, which warms to 20 degrees Celsius in the summer. Activities enjoyed here include rowing, and riding the summer toboggan run.

Le Layout


Oeschinen Lake Campground
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CALL
ROUTE
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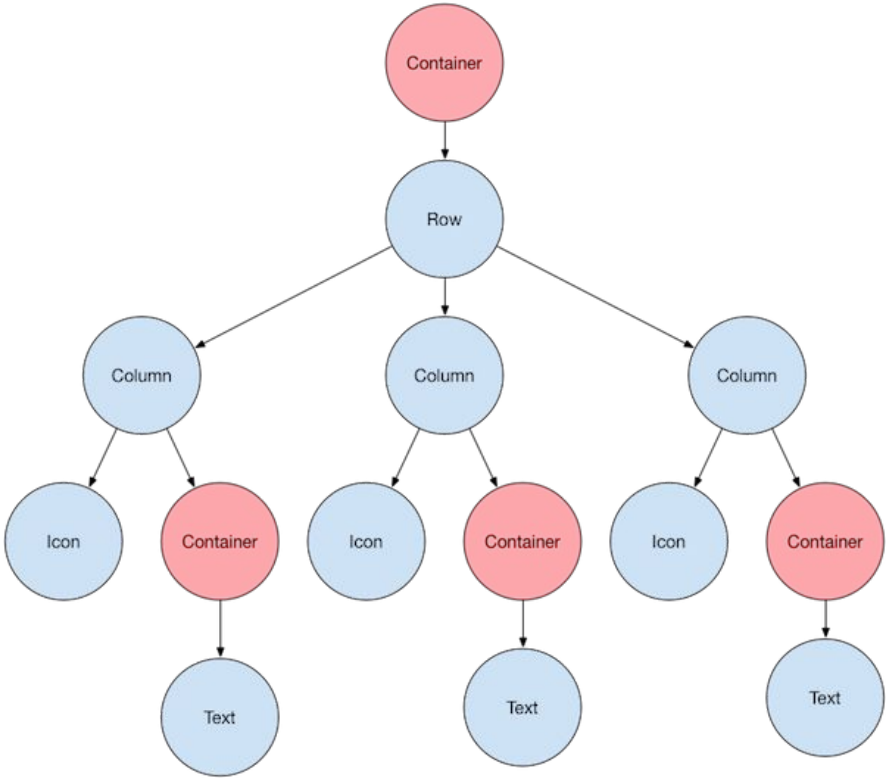
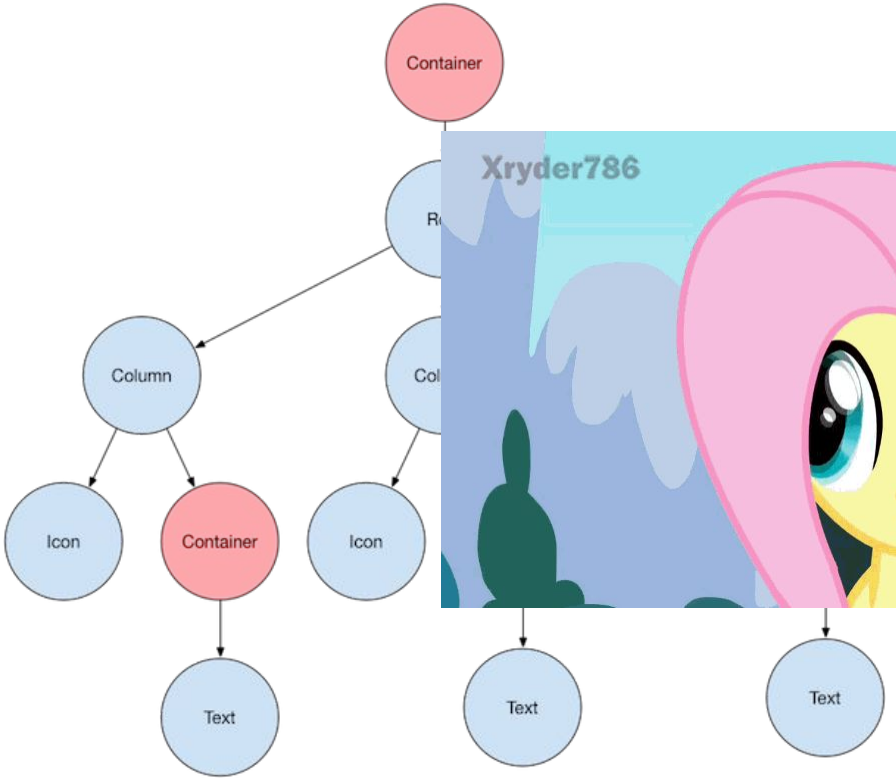
Lake Oeschinen lies at the foot of the Blüemlisalp in the Bernese Alps. Situated 1,578 meters above sea level, it is one of the larger Alpine Lakes. A gondola ride from Kandersteg, followed by a half-hour walk through pastures and pine forest, leads you to the lake, which warms to 20 degrees Celsius in the summer. Activities enjoyed here include rowing, and riding the summer toboggan run.
Column
Row with 3 children
Text
Title section
Icon
Text
Oeschinen Lake Campground
Kandersteg, Switzerland
41
Text
Column of 2 children
Expanded to fill remaining space
Row with 3 children
Button section
Icon
CALL
ROUTE
SHARE
Text
Column with 2 children

Le Layout




```
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    Widget titleSection = new Container(
      padding: const EdgeInsets.all(32.0),
      child: new Row(
        children: [
          new Expanded(
            child: new Column(
              crossAxisAlignment: CrossAxisAlignment.start,
              children: [
                new Container(
                  padding: const EdgeInsets.only(bottom: 8.0),
                  child: new Text(
                    'Oeschinen Lake Campground',
                    style: new TextStyle(
                      fontWeight: FontWeight.bold,
                    ),
                  ),
                ),
                new Text(
                  'Kandersteg, Switzerland',
                  style: new TextStyle(
                    color: Colors.grey[500],
                  ),
                ),
              ],
            ),
          ),
          new Icon(
            Icons.star,
            color: Colors.red[500],
          ),
          new Text('41'),
        ],
      ),
    );
  }
```

Le Layout

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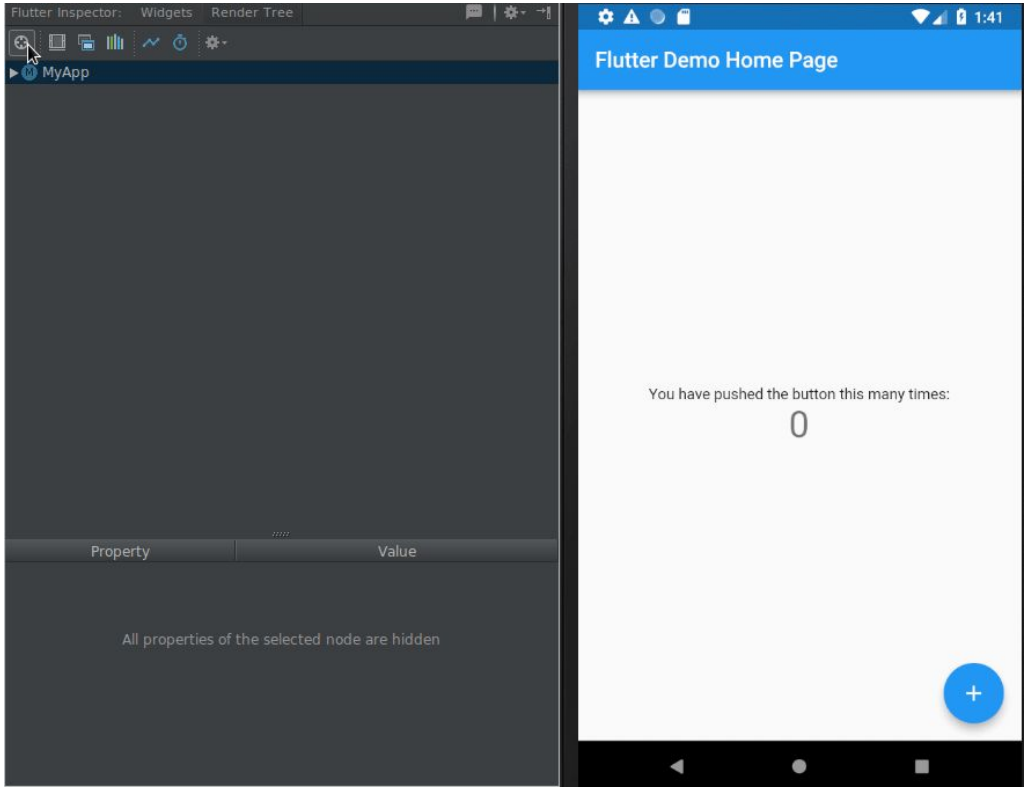
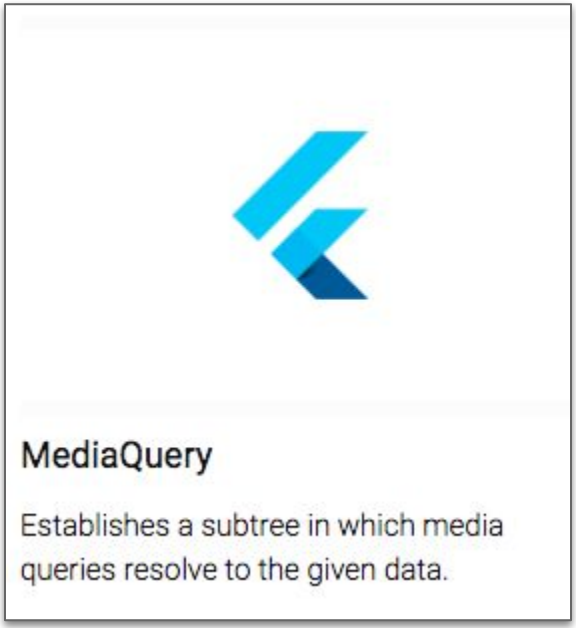
                                    rossAxisAlignment.start,
                                    geInsets.only(bottom: 8.0),
                                    Campground',
                                    style(
                                    ontWeight.bold,
                                    erland',
                                    yle(
                                    rey[500],
          ),
          new Icon(
            Icons.star,
            color: Colors.red[500],
          ),
          new Text('41'),
        ],
      ),
    );
  }
```

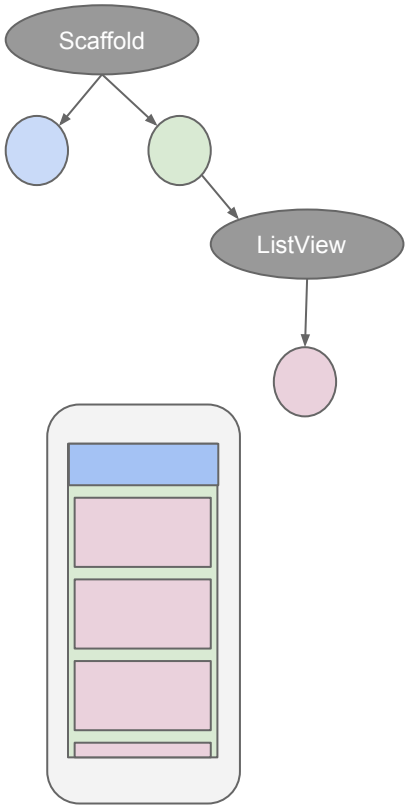
Widget Inspector

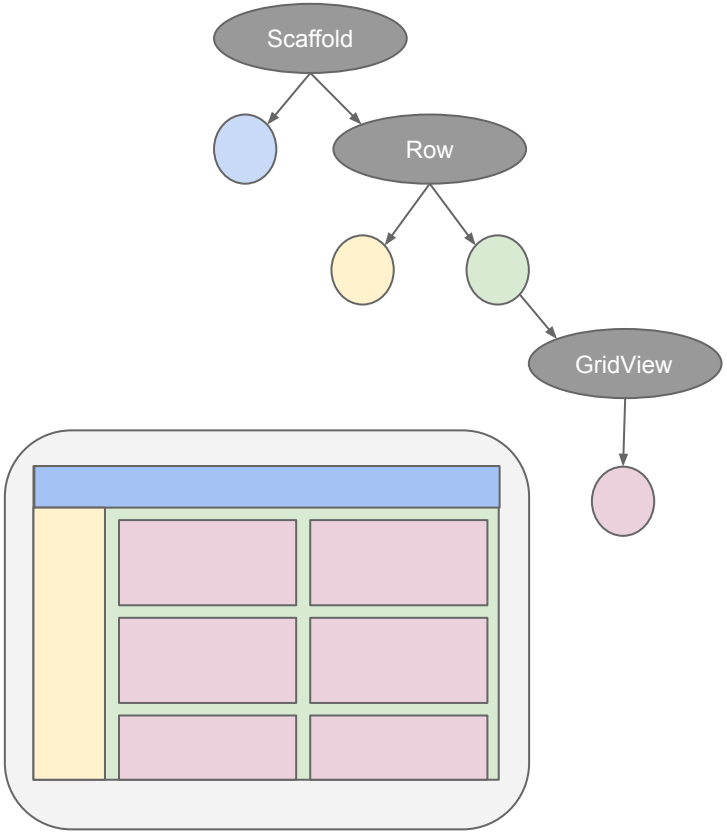


Responsive ?

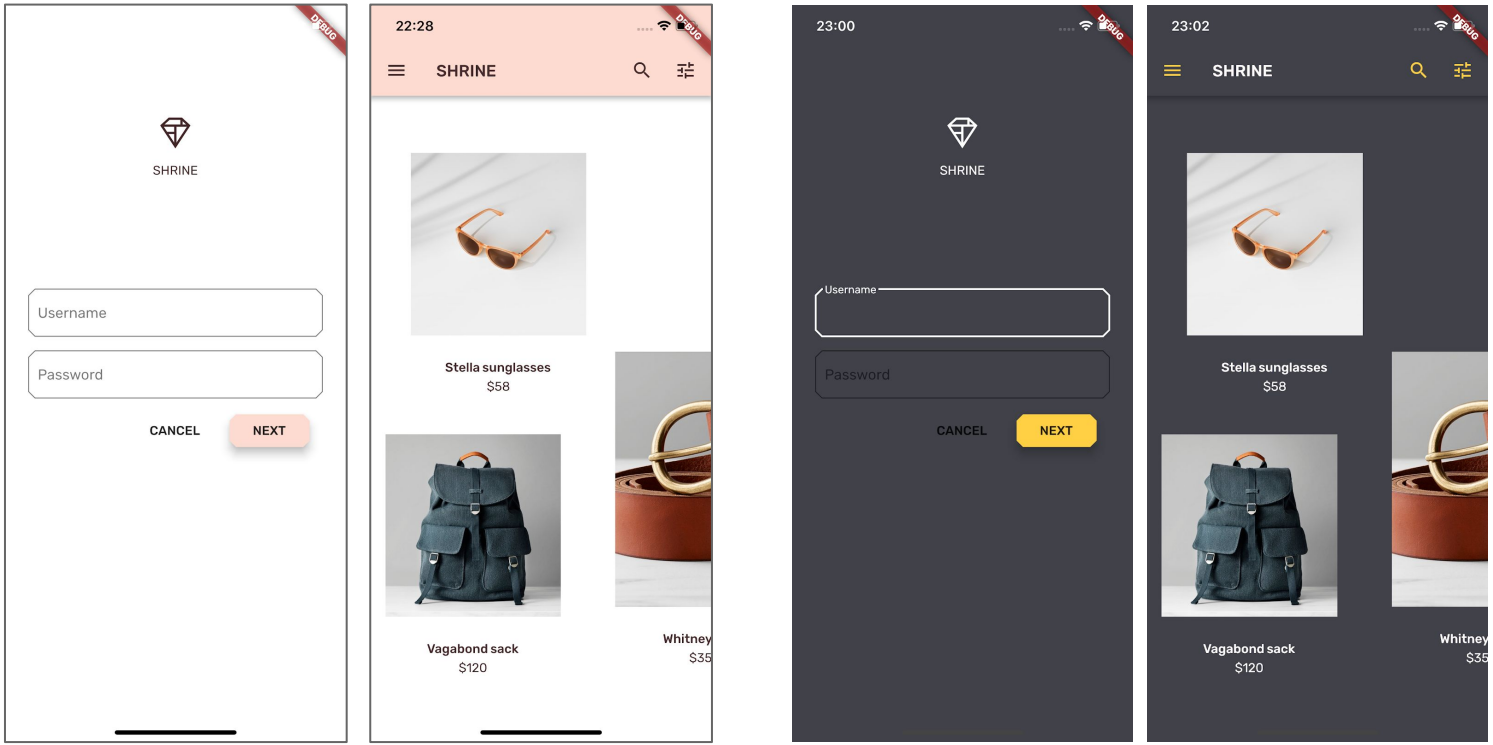

MediaQuery
Establishes a subtree in which media queries resolve to the given data.

Responsive !

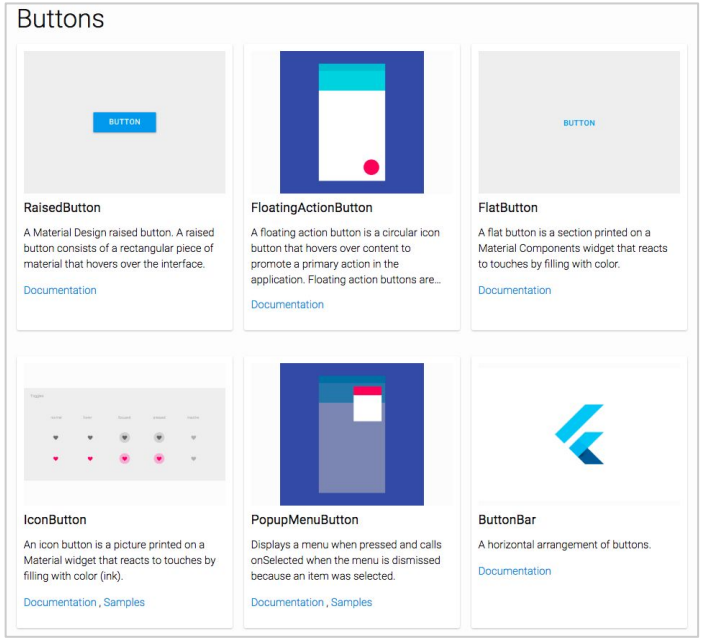


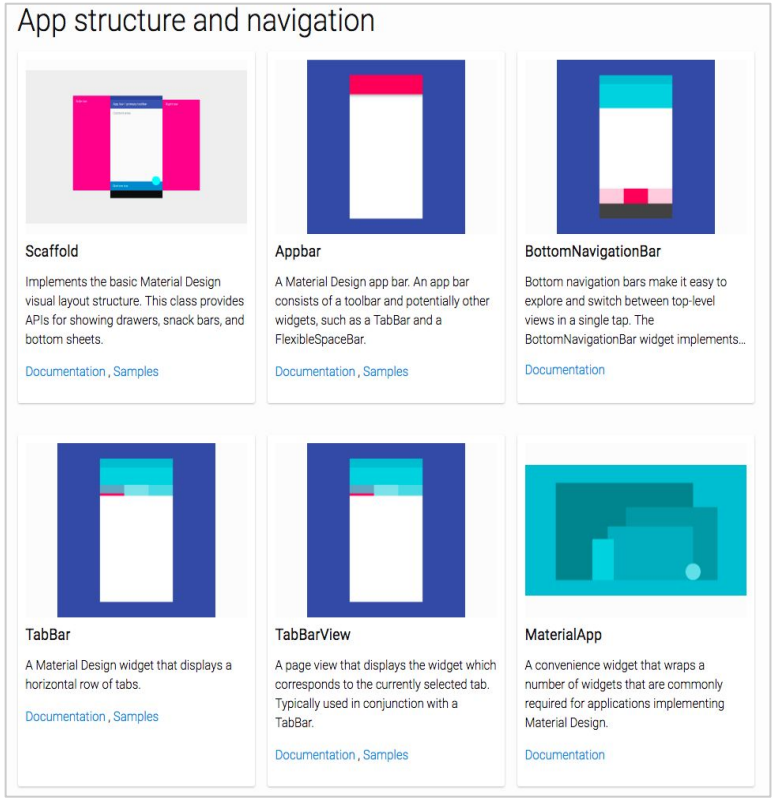


Gestion des thèmes

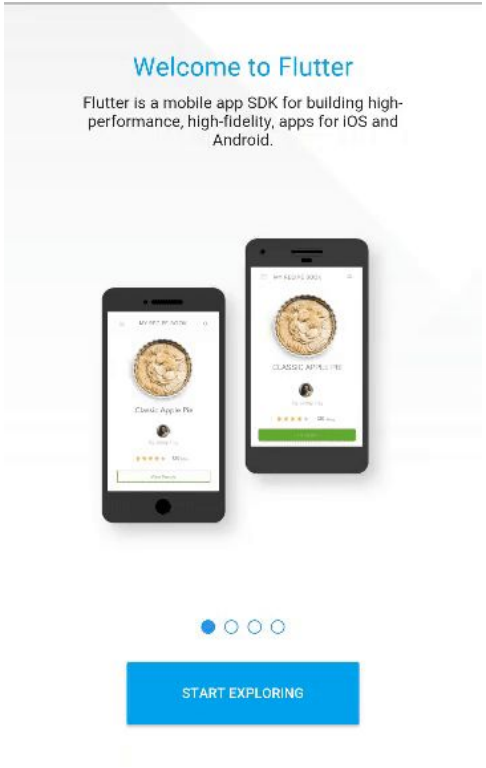


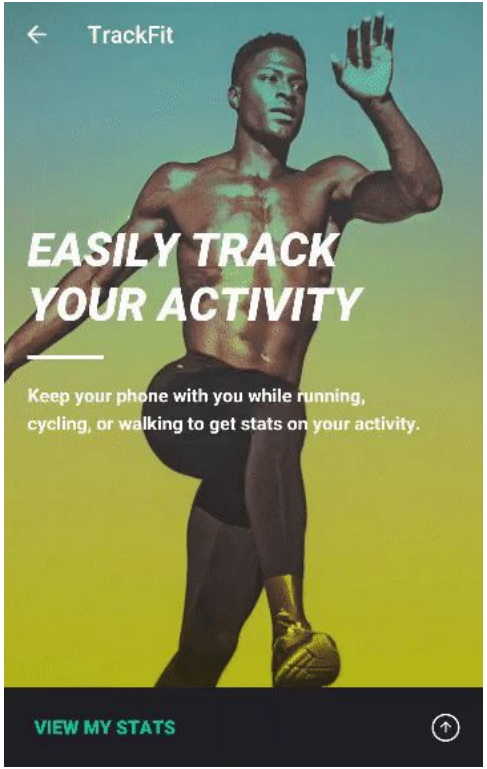
Material Design 2.0





Blazing fast and flexible layouts





Why to choose Flutter?

OK, so it's a new technology to build mobile apps, rather cool, yeah… but why should I choose it?

Why choose Flutter?

Beautiful

Fast

Productive

Extensible

Beautiful

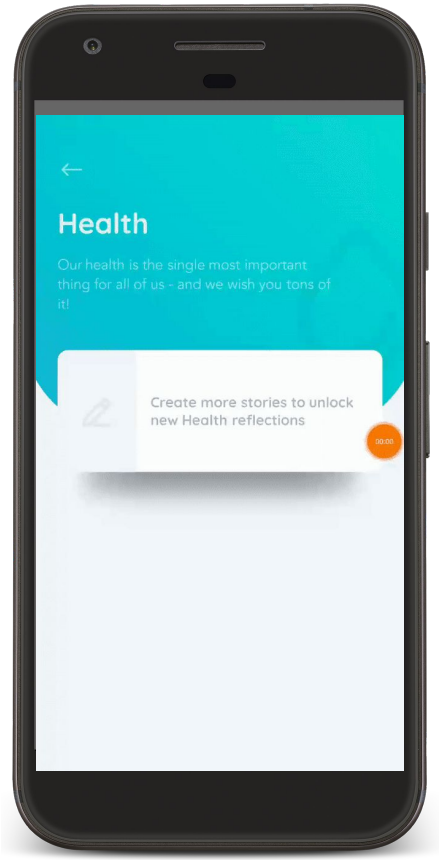
Control every pixel on the screen

Make your brand come to life

Never say "no" to your designer

Stand out in the marketplace

Win awards with beautiful UI



Fast

Brings the power of a games engine
to user experience development

60fps, GPU accelerated

Compiled to native machine code

Productive

Sub-second reload times

Paint your app to life

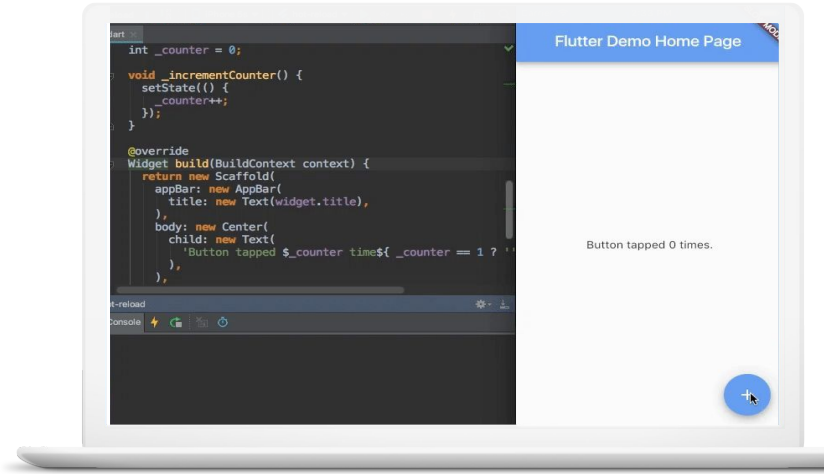
Iterate rapidly on features

Test hypotheses quicker than ever

More time to experiment & test features

Single-codebase for faster collab

3X Productivity Gains



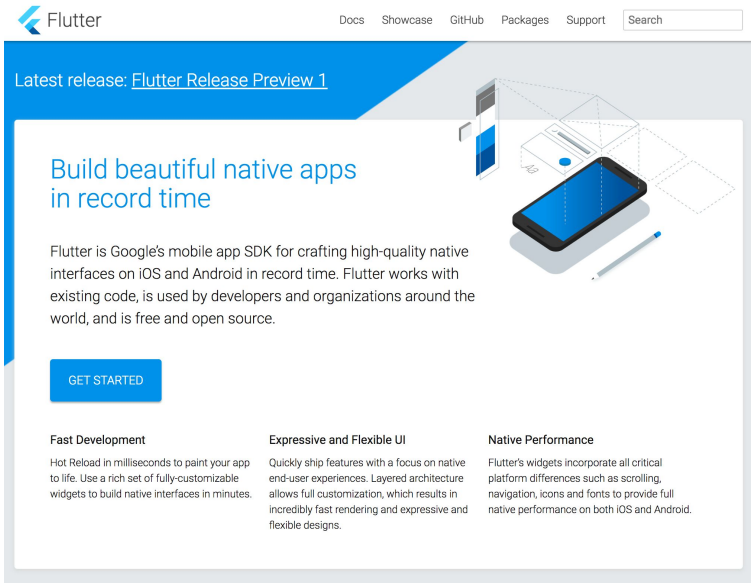
Extensible

Everything is free and open source

Layered architecture: easy to extend

Deep platform integrations

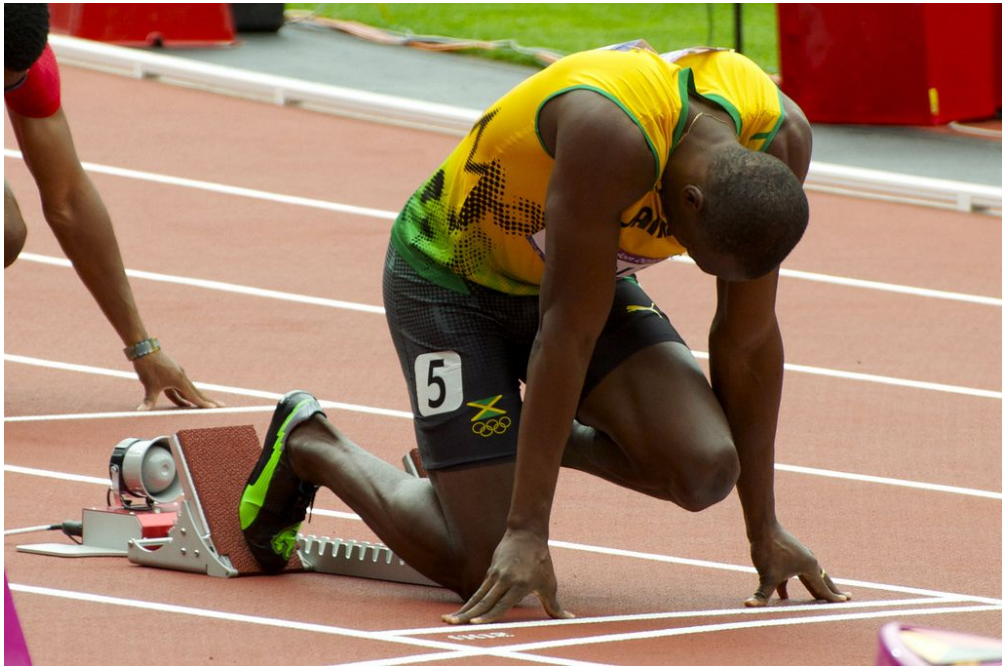
Hundreds of third-party packages (ads, videos, database, cloud etc.)



A wonderful time to begin with Flutter

Flutter is getting momentum, and the 1.0 is around the corner...

Flutter 1.0 on the starting blocks



Latest release: Flutter Release Preview 2

Getting momentum

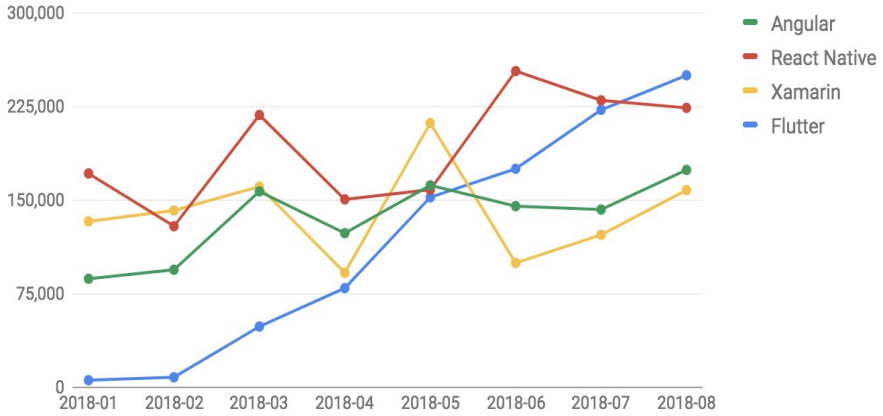
Top Active Software Repos on GitHub

Rank	Repo	Stars
1	twbs/bootstrap	127,344
2	vuejs/vue	113,839
3	facebook/react	111,154
4	tensorflow/tensorflow	109,412
5	d3/d3	78,734
	...	
40	pallets/flask	38,739
41	moment/moment	38,562
42	GoogleChrome/puppeteer	38,118
43	getlantern/lantern	37,487
44	jakubroztocil/httpie	37,319
45	**flutter/flutter**	**37,099**
46	trekhleb/javascript-algorithms	36,776
47	django/django	36,369
48	jekyll/jekyll	35,402
49	ReactiveX/RxJava	35,356
50	ionic-team/ionic	35,309

Source: GitHub
https://github.com/timsneath/github-tracker

Flutter

StackOverflow Question Views



Integration with popular tools

Android Studio

Xcode

VS Code

Firebase

3rd-party Android SDKs

Android APIs

iOS APIs

Material Design

Redux

3rd-party iOS SDKs

Thank you!


рахмат
danke
謝謝
spas
ngiyabonga
شكراً جزيلاً
Баярлалаа
mersi
kia ora
barka
welalin
tack
teşekkür ederim
mahalo
tapadh leat
спасибо
faafetai lava
vinaka
спасибі
blagodaram
dank je
misaotra
matondo
paldies
grazzi
kiitos
dankie
nanni
nandri
dhanyavad
thank you
gracias
хвала
asante
manana
bedankt
bayarlalaa
gràçie
hvala
mauruuru
köszönöm
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dhanyavadagalu
তোমাকে ধন্যবাদ
감사합니다
xièxie
ευχαριστώ
merci