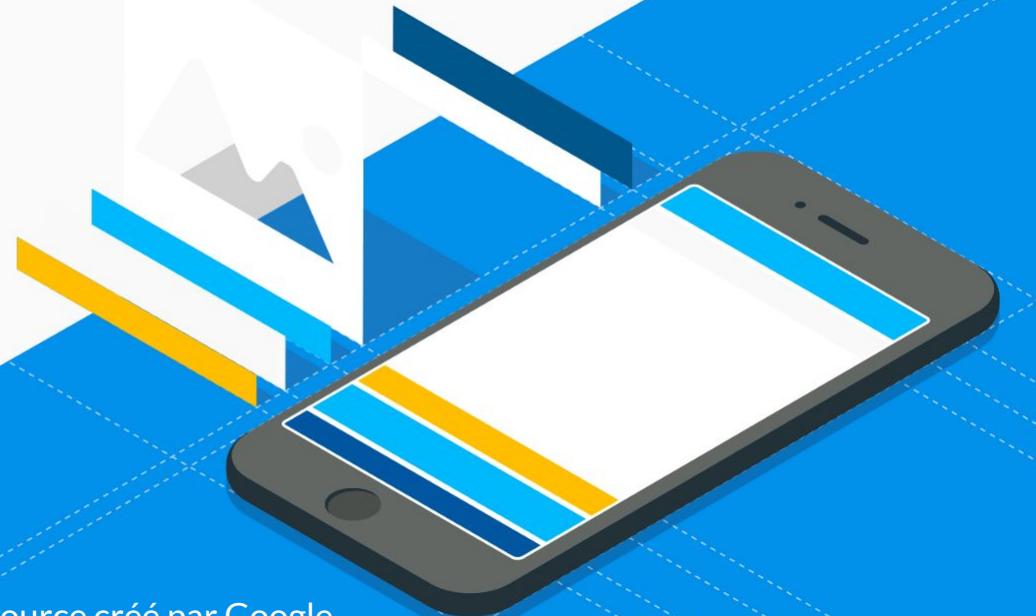




# Flutter



framework open source créé par Google



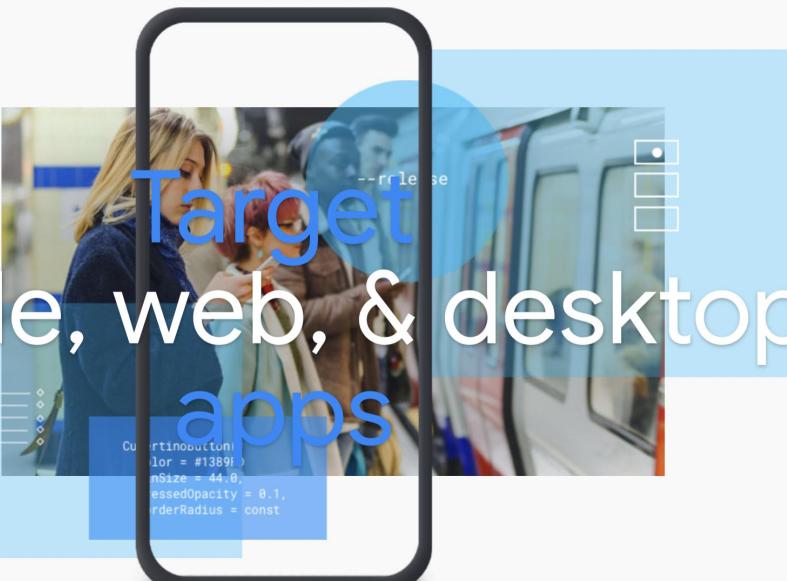
Docs Showcase Community



Get started

Help improve Flutter! Take our Q1 survey

Target  
mobile, web, & desktop  
apps



--rrelese

```
CupertinoButton(
    color = #138913,
    size = 44.0,
    pressedOpacity = 0.1,
    borderRadius = const
```

## Language DART

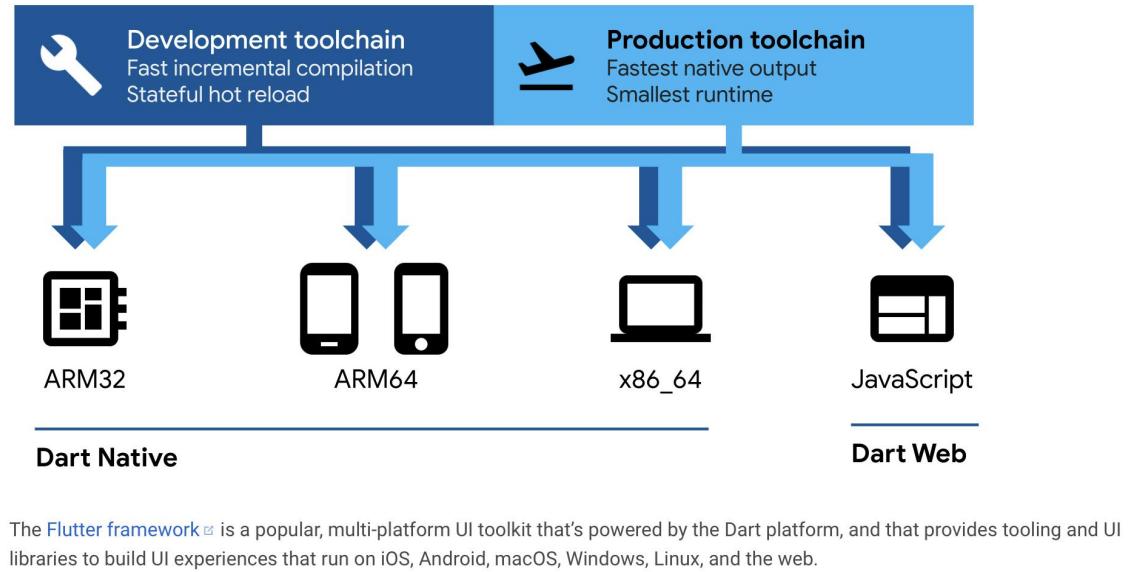
- > orienté objet
- > UI déclarative (plus besoin de storyboard et de xml)
- > la compilation AOT (Ahead of Time)
- > single-thread avec un système d'event loop comme javascript

Puces

## Dart: The platforms

Dart's compiler technology lets you run code in different ways:

- **Native platform:** For apps targeting mobile and desktop devices, Dart includes both a Dart VM with just-in-time (JIT) compilation and an ahead-of-time (AOT) compiler for producing machine code.
- **Web platform:** For apps targeting the web, Dart includes both a development time compiler (dartdevc) and a production time compiler (dart2js). Both compilers translate Dart into JavaScript.

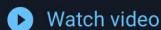


# Paint your UI to life

with Dart VM's  
instant **hot reload**

1. développer des applications multiplateformes.
2. programmer un projet.
3. exporter sur Android, iOS, macOS, Linux , Windows ou encore le web.
4. tout ceci avec la même base de code.

Dart is a client-optimized language for fast apps on any platform



Made by Google



## Optimized for UI

Develop with a programming language specialized around the needs of user interface creation



## Productive development

Make changes iteratively: use hot reload to see the result instantly in your running app



Fast on all  
platforms

Compile to ARM & x64 machine code for mobile, desktop, and backend. Or JavaScript for the web.

# SET UP an EDITOR

01:15 Jeu. 11 mars 0:40 %

Flutter

Docs Showcase Community Get started

Get started

- 1. Install
- 2. Set up an editor
- 3. Test drive
- 4. Write your first app
- 5. Learn more

From another platform?

- Flutter for Android devs
- Flutter for iOS devs
- Flutter for React Native devs
- Flutter for web devs
- Flutter for Xamarin's Forms devs
- Introduction to declarative UI
- Dart language overview
- Building a web app

Samples & tutorials

Development

Install VS Code

VS Code is a lightweight editor with Flutter app execution and debug support.

- VS Code, latest stable version

Install the Flutter and Dart plugins

- Start VS Code.
- Invoke View > Command Palette...
- Type "Install", and select Extensions: Install Extensions.
- Type "flutter" in the extensions search field, select Flutter in the list, and click Install. This also installs the required Dart plugin.

Validate your setup with the Flutter Doctor

01:15 Jeu. 11 mars 0:40 %

Flutter

Docs Showcase Community Get started

Get started

- 1. Install
- 2. Set up an editor
- 3. Test drive
- 4. Write your first app
- 5. Learn more

From another platform?

- Flutter for Android devs
- Flutter for iOS devs
- Flutter for React Native devs
- Flutter for web devs
- Flutter for Xamarin's Forms devs
- Introduction to declarative UI
- Dart language overview
- Building a web app

Samples & tutorials

Development

Install Emacs

Emacs is a lightweight editor with support for Flutter and Dart.

- Emacs, latest stable version

Install the lsp-dart package

For information on how to install and use the package, see the [lsp-dart documentation](#).

Install Test drive

01:14 Jeu. 11 mars 0:40 %

Flutter

Docs Showcase Community Get started

Get started

- 1. Install
- 2. Set up an editor
- 3. Test drive
- 4. Write your first app
- 5. Learn more

From another platform?

- Flutter for Android devs
- Flutter for iOS devs
- Flutter for React Native devs
- Flutter for web devs
- Flutter for Xamarin's Forms devs
- Introduction to declarative UI
- Dart language overview
- Building a web app

Samples & tutorials

Development

Install the Flutter and Dart plugins

The installation instructions vary by platform:

Mac

Use the following instructions for macOS:

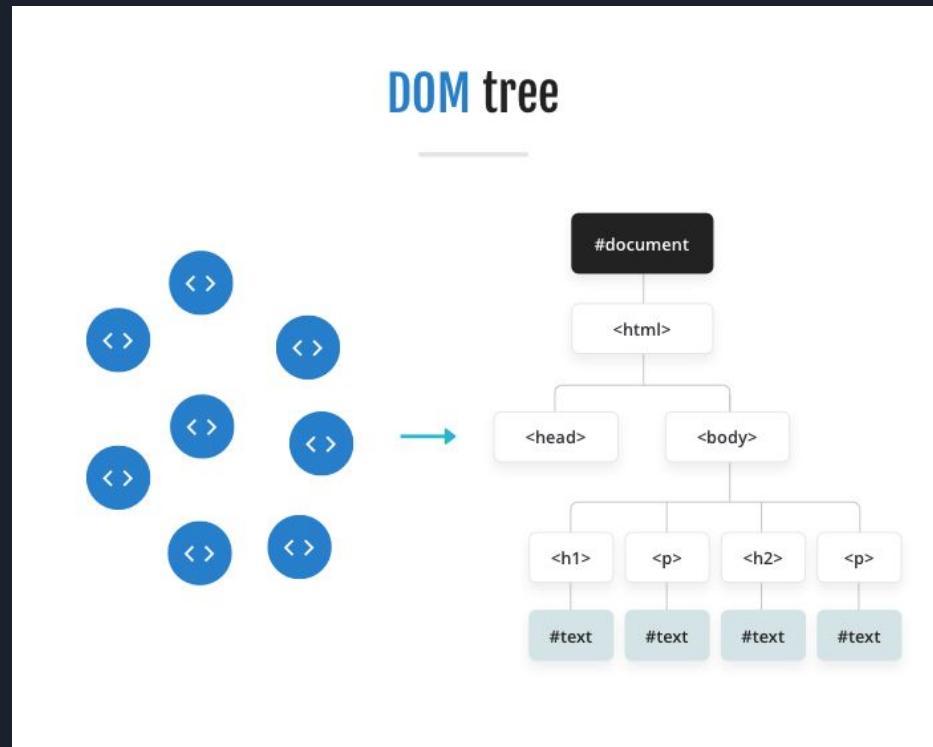
- Start Android Studio.
- Open plugin preferences (Configure > Plugins) as of v3.6.3.0 or later.
- Select the Flutter plugin and click Install.
- Click Yes when prompted to install the Dart plugin.
- Click Restart when prompted.

Linux or Windows

Examples here

<https://flutter.github.io/samples/#>

# Web pages have a DOM

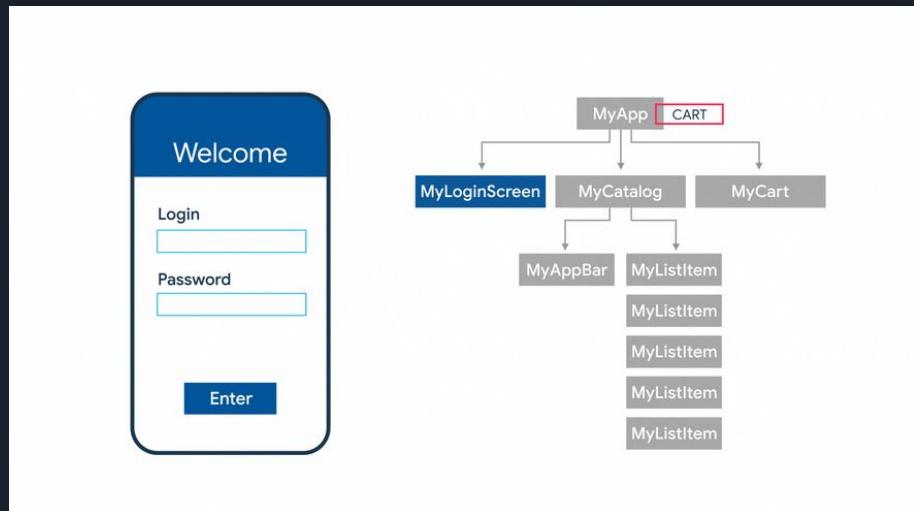


# In Flutter, everything is a widget

Widget tree is a structure that represents how our widgets are organized.

Web pages have a **DOM** and Flutter have a **Widget Tree**.

Flutter also uses a declarative UI approach, it means that the interface represents the state of the app.



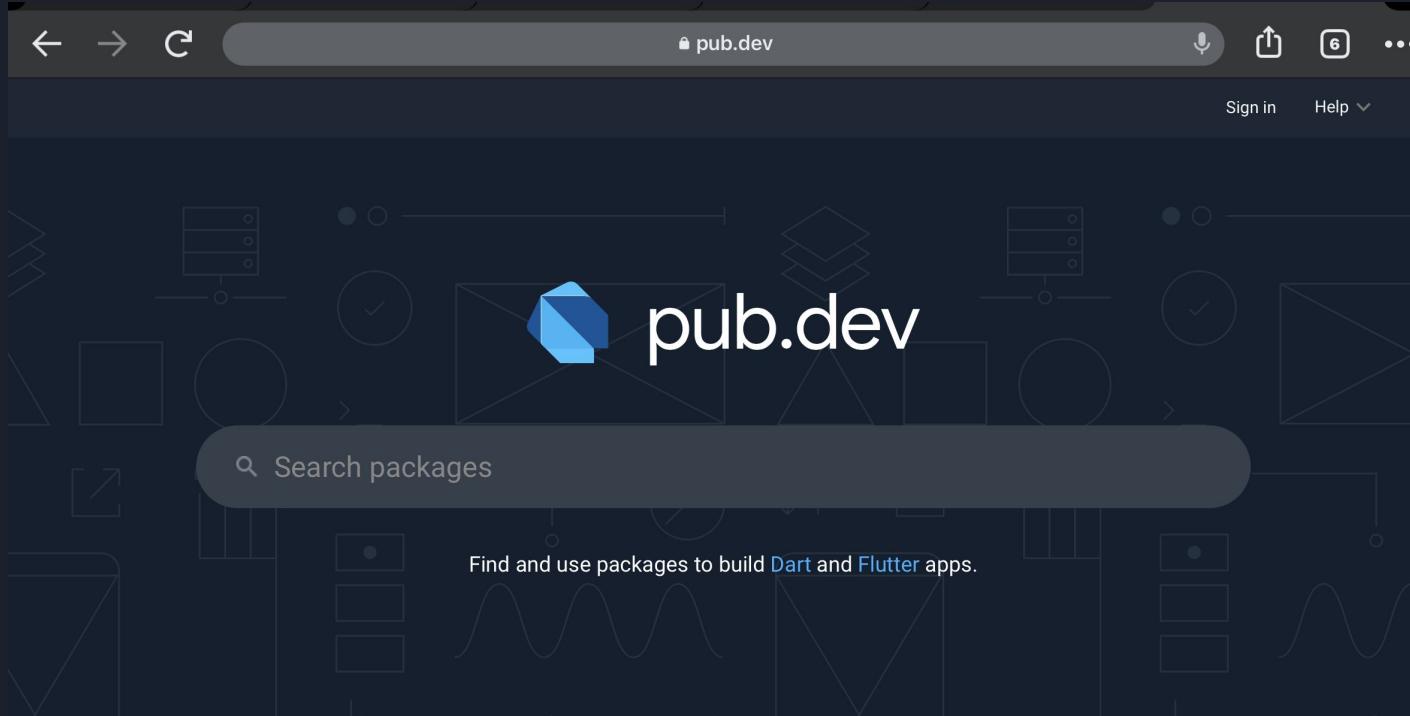
# Start thinking declaratively

**UI = f( state )**

The layout  
on the screen

Your  
build  
methods

The application state



Where to find PLUGINS and PACKAGES

## All Samples

A curated list of Flutter samples and apps

 Search

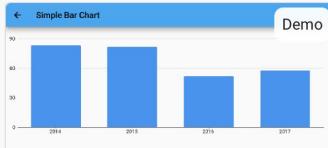
X

All Sample Cookbook Web Demos



### Gallery

A collection of material design widgets, behaviors, and vignette...



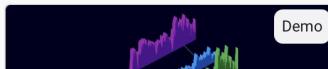
### Charts

A general-purpose charting library.



### Filipino Cuisine

Flutter Create challenge entry

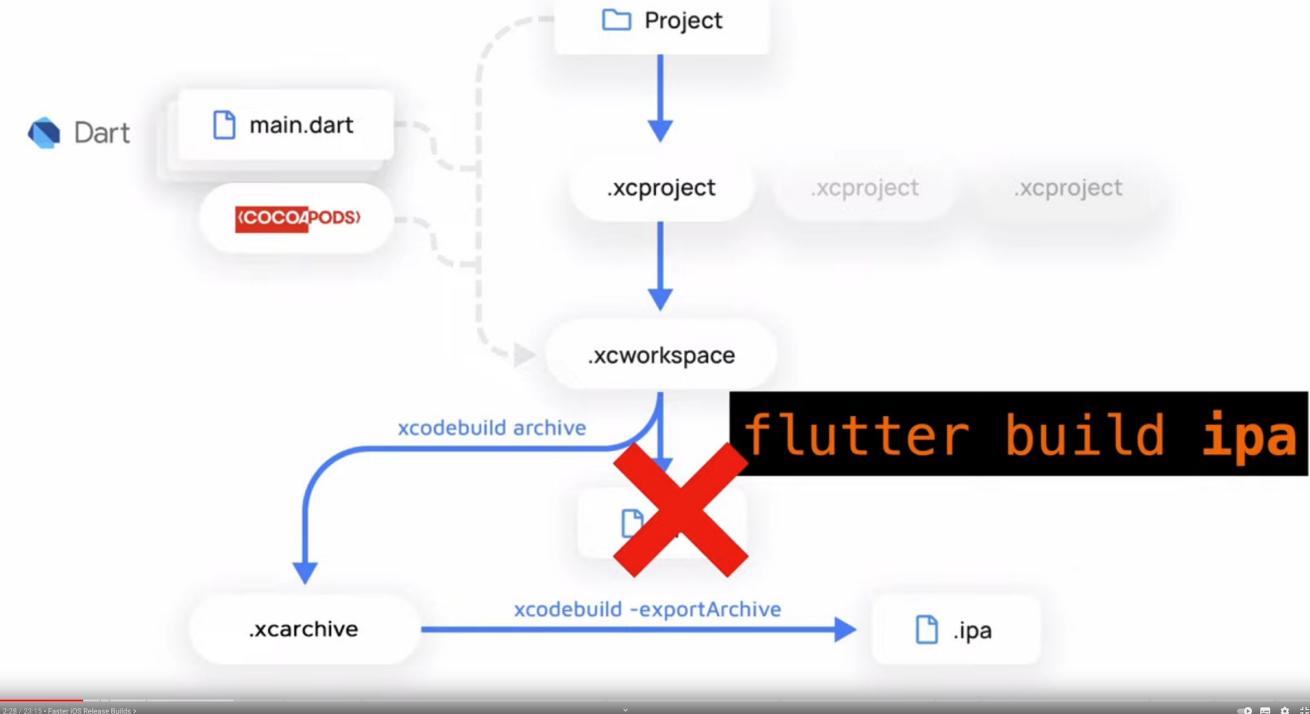


Examples

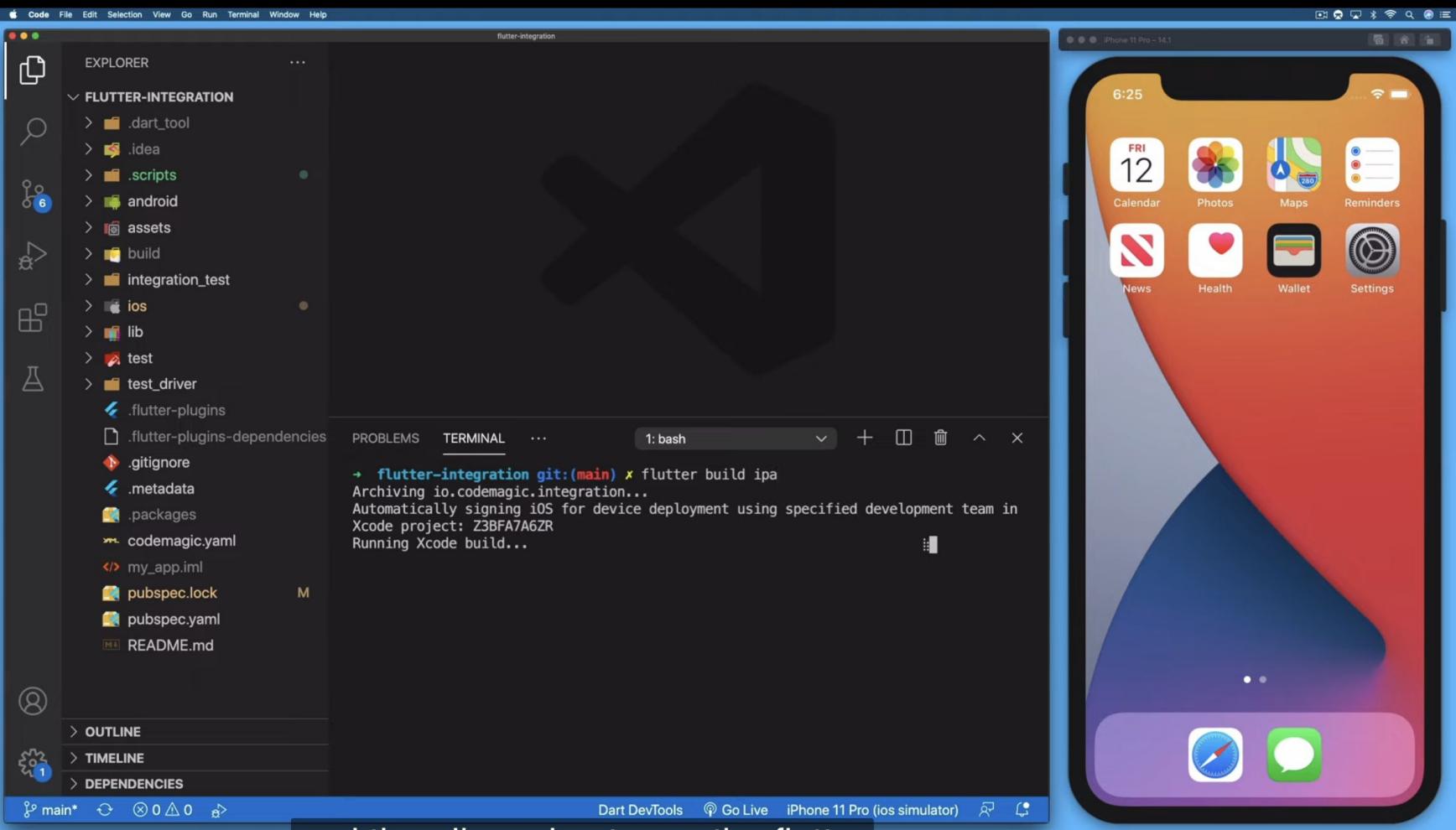


What's new?  
FLUTTER 2

## export en .ipa plus direct et plus rapide



<https://youtu.be/yX1truEFmQ4>



and then i'm going to run the flutter  
build ipa command

The screenshot shows a development environment with a Dart project named "widgetexample". The main.dart file is open, displaying the following code:

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

class FancyButton extends StatelessWidget {
  FancyButton({@required this.onPressed});

  final GestureTapCallback onPressed;

  @override
  Widget build(BuildContext context) {
    return RawMaterialButton(
      fillColor: Colors.deepOrange,
      splashColor: Colors.orange,
      child: Text("PURCHASE"),
      onPressed: onPressed,
      shape: const StadiumBorder(),
    );
  }
}
```

The "fancy\_button.dart" file is also visible in the project tree. The bottom-left corner of the screen shows the Android Studio debugger interface with the message "Performing hot reload... Reloaded 2 of 389 libraries in 693ms.". To the right of the code editor, a preview window displays a woman in a light-colored outfit standing against a blue wall. A hand is shown pressing a large orange "PURCHASE" button.

# FLUTTER COMMUNITY

The screenshot shows the 'Community' tab of the Flutter website. The page lists several resources for the Flutter community:

- @FlutterDev** (Twitter): Follow the Flutter team in real-time with information on new features, upcoming events, and more. [Learn more](#)
- Medium**: Get the latest news and insights from a diverse group of users building with Flutter. [Learn more](#)
- slack**: Connect and work through problems with a group of knowledgeable Flutter people. [Learn more](#)
- YouTube**: Watch these videos to learn from Google and developers as you build with Flutter. [Learn more](#)
- r/FlutterDev** (Reddit): Join the large community on Reddit with discussions around every aspect of Flutter. [Learn more](#)
- Discord**: Talk to other Flutter developers about everything Flutter-related, and share useful resources. [Learn more](#)
- UX Research** (Google Forms): Sign up to participate in the UX research plan and have a front row seat into the progression of Flutter. [Learn more](#)
- Hashnode**: Read and write Flutter-related posts, participate in Flutter discussions or ask questions about working with Flutter. [Learn more](#)



<



**pooja\_bhaumik**

12 Publications 662 Abonnés

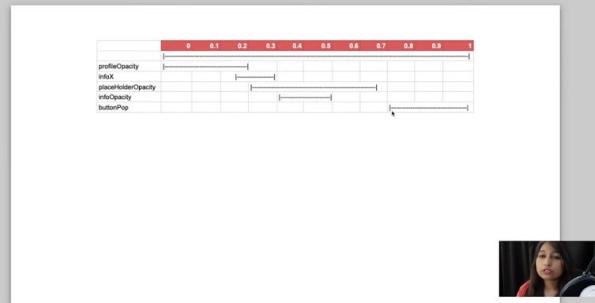
**Pooja Bhaumik | Flutter Dev**  
 Google Developer Expert for Flutter | (& first woman tech GDE for India)   
 Public Speaker & Technical Blogger |  

[linktr.ee/poopjabhaumik](https://linktr.ee/poopjabhaumik)

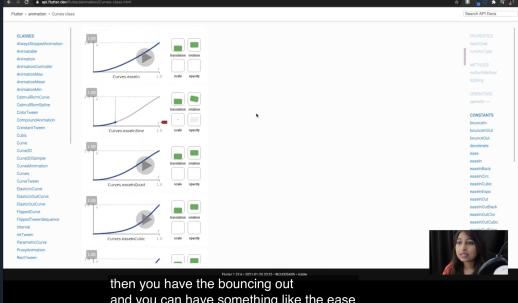
[Voir la traduction](#)

**Abonné(e) ▾**

**Écrire**



profileOpacity  
infoX  
planeUnderOpacity  
infoOpacity  
buttonPop



then you have the bouncing out  
and you can have something like the ease

## Suggestions pour vous



Ismail • Flutter De...  
[flutter.widgets](#)



Flutter community  
[thefluttercommunity](#)



DartPad

New Pad

Reset

Format

Install SDK

DartPad for dart.dev/overview

Samples



```
import 'dart:math' show Random;

main() async {
  print('Compute π using the Monte Carlo method.');
  await for (final estimate in computePi().take(100)) {
    print('π ≈ $estimate');
  }
}

/// Generates a stream of increasingly accurate estimates of π.
Stream<double> computePi({int batch: 10000}) async* {
  var total = 0; // inferred to be of type int
  var count = 0;
  while (true) {
    final points = generateRandom().take(batch);
    final inside = points.where((p) => p.isInsideUnitCircle);

    total += batch;
    count += inside.length;
    final ratio = count / total;

    // Area of a circle is A = π·r², therefore π = A/r².
    // So, when given random points with x ∈ <0,1>,
    // y ∈ <0,1>, the ratio of those inside a unit circle
    // should approach π / 4. Therefore, the value of π
    // should be:
    yield ratio * 4;
  }
}

Iterable<Point> generateRandom([int? seed]) sync* {
  final random = Random(seed);
  while (true) {
    yield Point(random.nextDouble(), random.next
```

RUN

Console

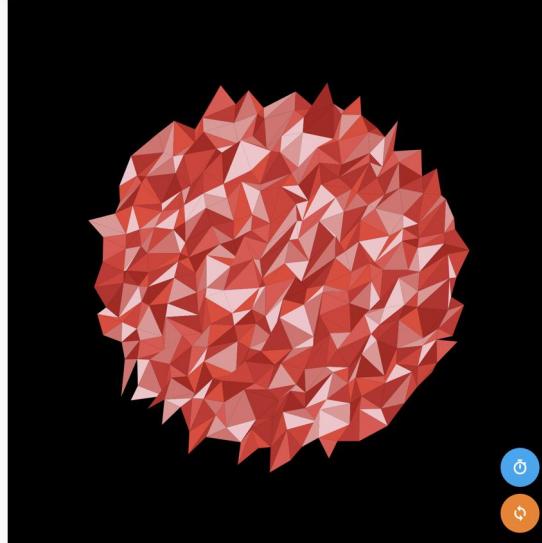
Error compiling to JavaScript:  
Warning: Interpreting this as package URI,  
'package:dartpad\_sample/main.dart'.  
lib/main.dart:31:36:  
Error: Null safety features are disabled for this library.  
Iterable<Point> generateRandom([int? seed]) sync\* {  
 ^  
Error: Compilation failed.

Documentation

# DARTPAD

Error compiling to JavaScript

<https://dartpad.dev>



A gentle animation that provides a calming experience to stressed developers.

© Flutter 2020

<https://flutter.github.io/samples/web/timeflow/#/>