Skooldio

Introduction to Flutter

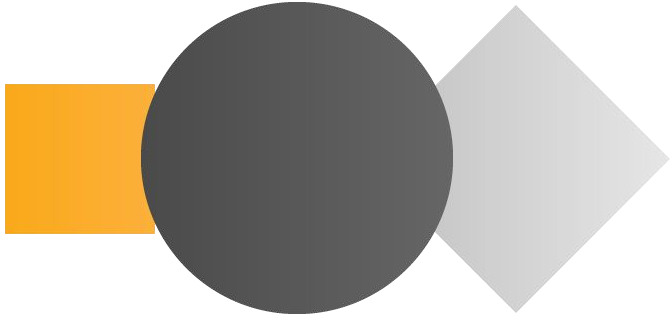
ทำความรู้จักกับ flutter ว่า flutter คืออะไร, โครงสร้างเป็นอย่างไร และทำไมนักพัฒนาถึงเลือกใช้

About this section

- Introduction to Flutter
- Flutter architecture
  - โครงสร้างของตัว framework
- Anatomy of Flutter application
  - โครงสร้างของ application
- Flutter's development tools

Skooldio

What is Flutter



Flutter

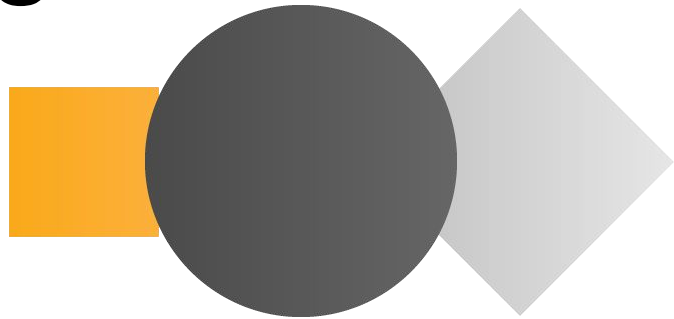
Google’s UI Toolkit

Powered by Dart

Natively compiled application

Skooldio

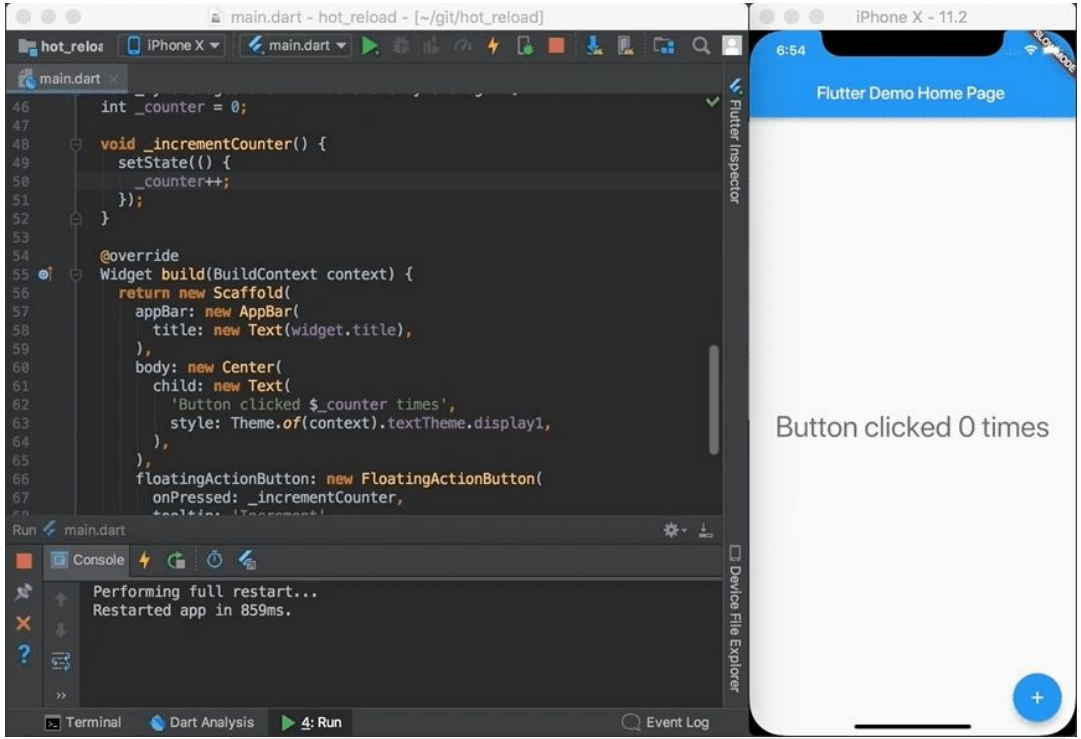
Flutter advantages



Natively compiled application

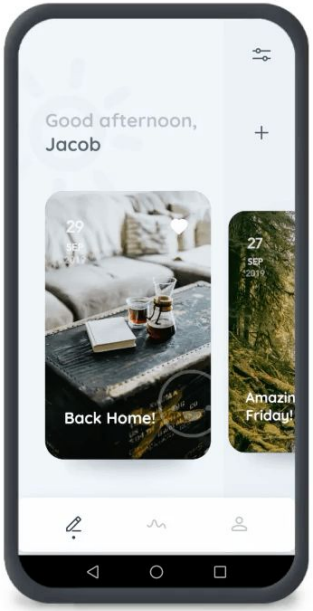
Fast development

- VS Code support
- Android Studio support
- Hot reload
- Hot restart



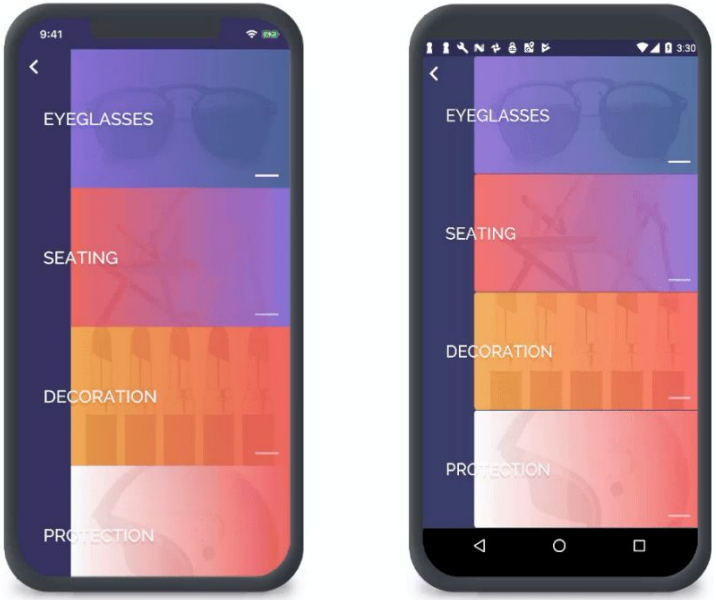
Expressive, beautiful UIs

- UI as a canvas
- We can draw anything we want or use the existing components



Native Performance

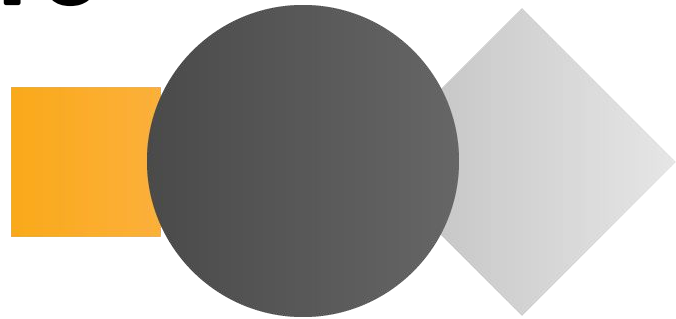
- Flutter application will be compiled and run natively on each platform

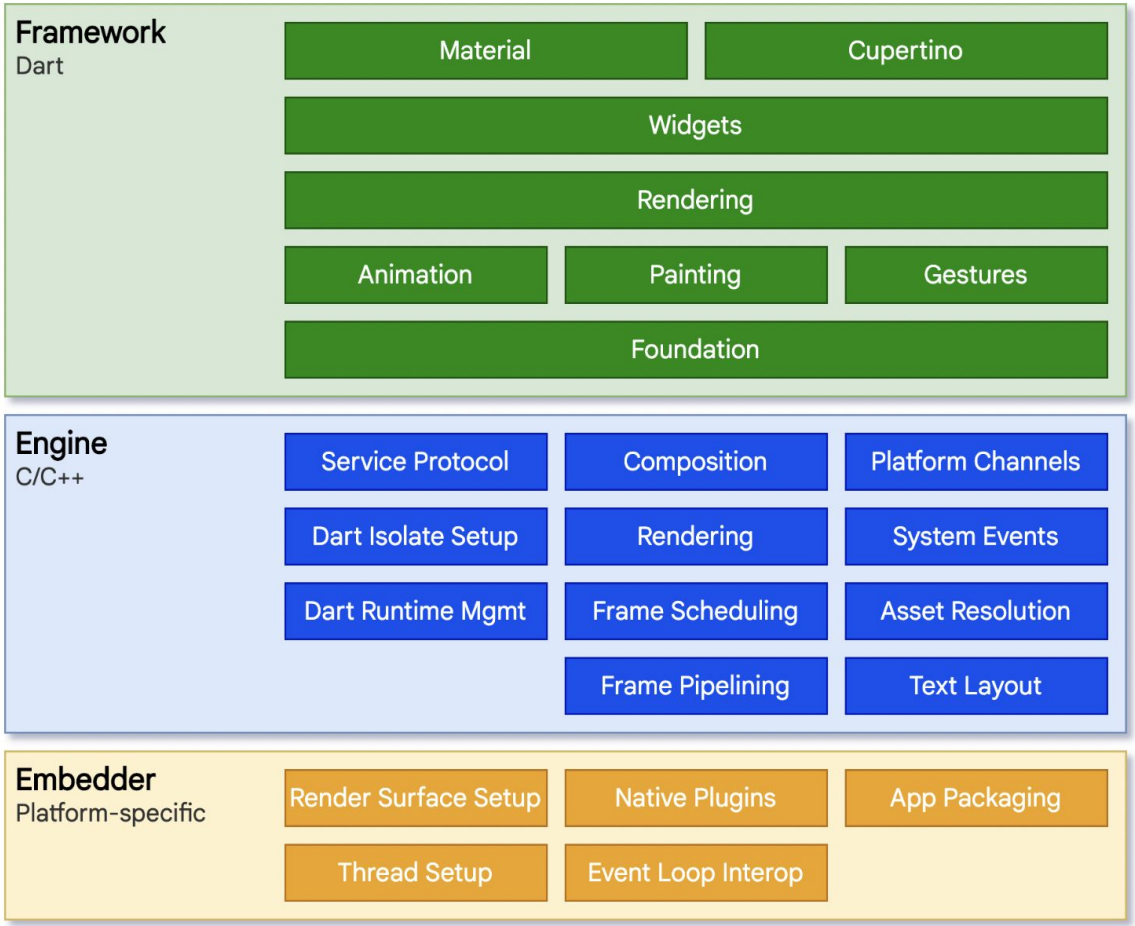


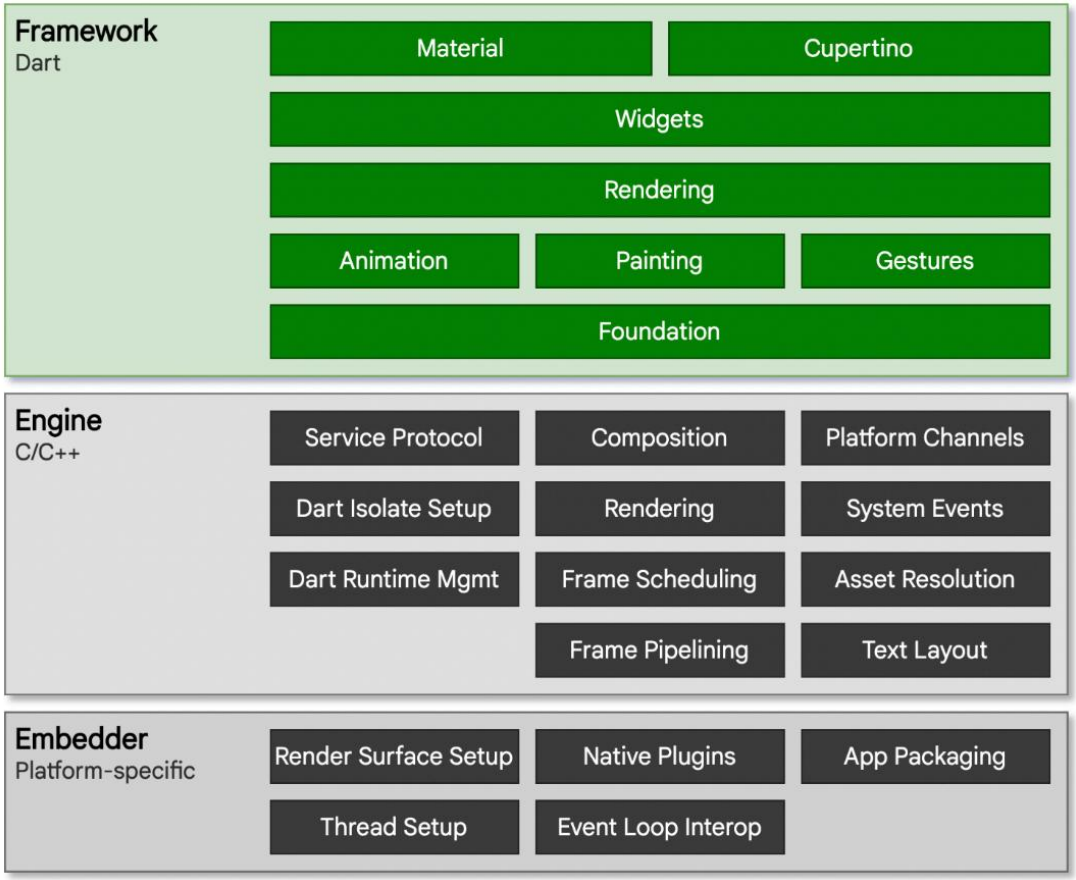
Skooldio

Flutter architecture

Architecture of flutter framework

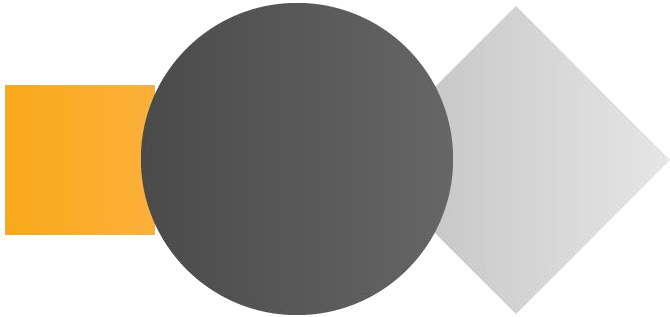


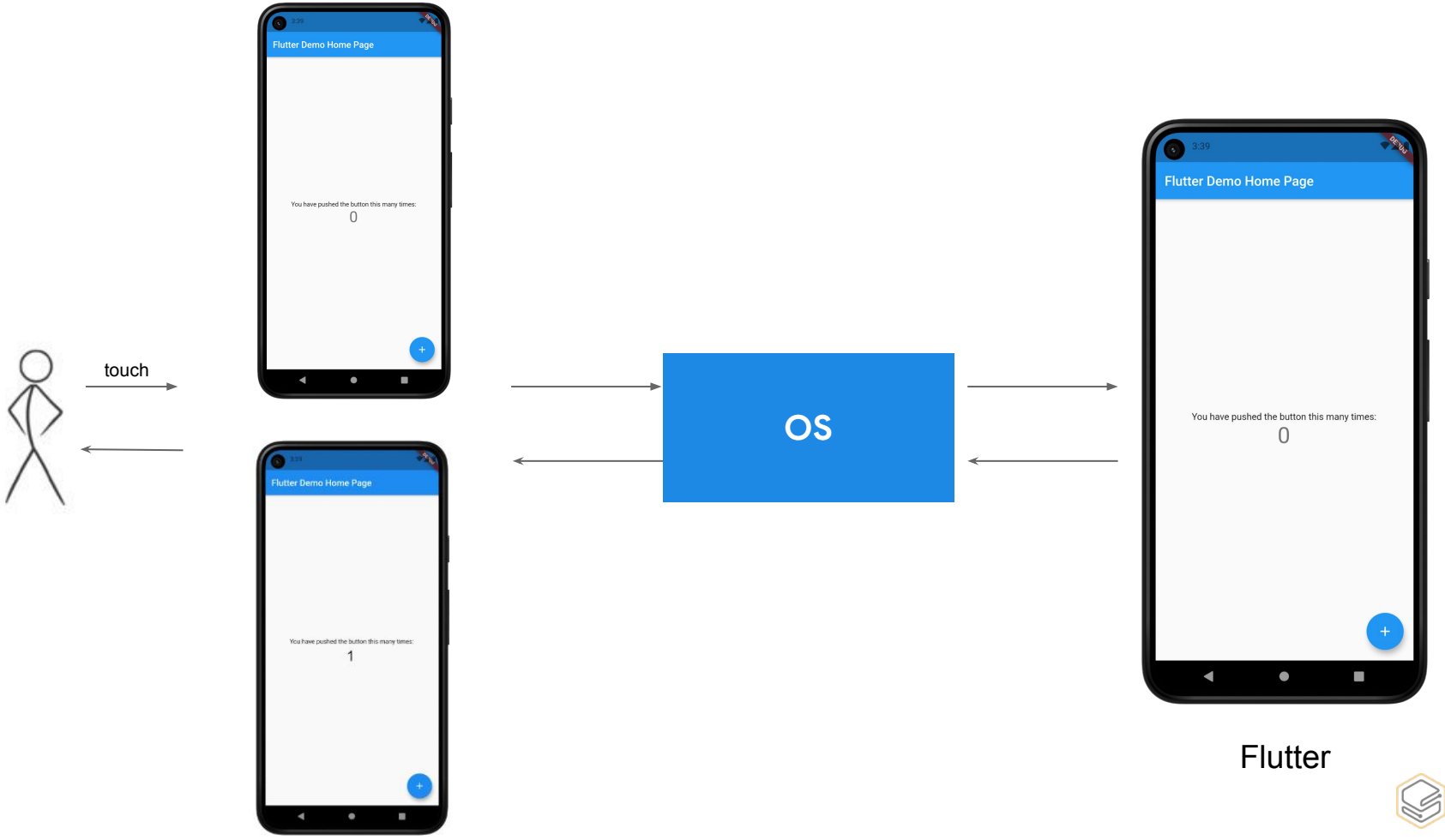

Framework
Dart
Material
Cupertino
Widgets
Rendering
Animation
Painting
Gestures
Foundation
Engine
C/C++
Service Protocol
Composition
Platform Channels
Dart Isolate Setup
Rendering
System Events
Dart Runtime Mgmt
Frame Scheduling
Asset Resolution
Frame Pipelining
Text Layout
Embedder
Platform-specific
Render Surface Setup
Native Plugins
App Packaging
Thread Setup
Event Loop Interop

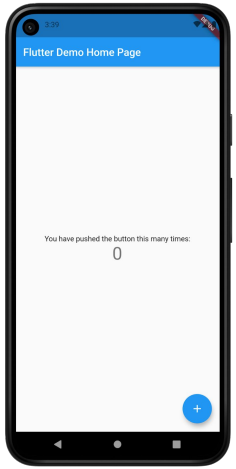

Framework
Dart
Material
Cupertino
Widgets
Rendering
Animation
Painting
Gestures
Foundation
Engine
C/C++
Service Protocol
Composition
Platform Channels
Dart Isolate Setup
Rendering
System Events
Dart Runtime Mgmt
Frame Scheduling
Asset Resolution
Frame Pipelining
Text Layout
Embedder
Platform-specific
Render Surface Setup
Native Plugins
App Packaging
Thread Setup
Event Loop Interop

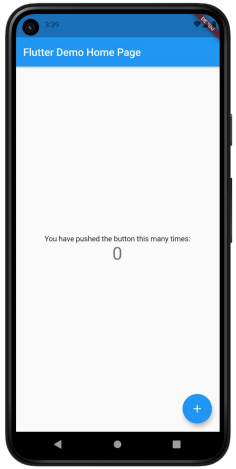
Skooldio

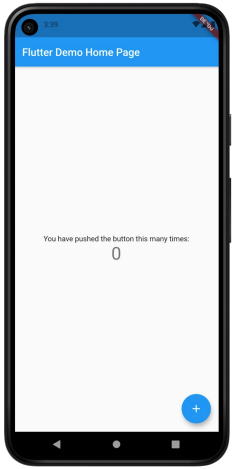
Flutter app

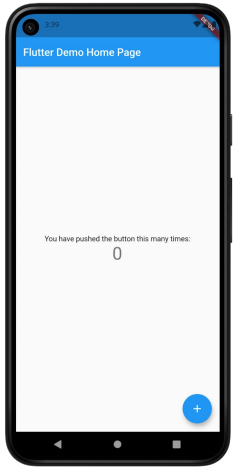



touch
Flutter Demo Home Page
You have pushed the button this many times:
0
Flutter Demo Home Page
You have pushed the button this many times:
1
OS
Flutter Demo Home Page
You have pushed the button this many times:
0
Flutter









OS

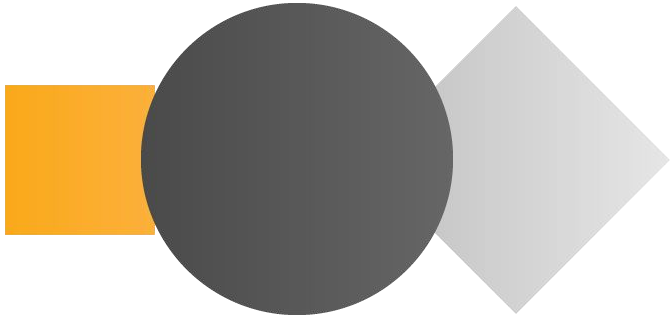
Android

Flutter

App

Skooldio

Flutter development tools



Development Tools

SDK

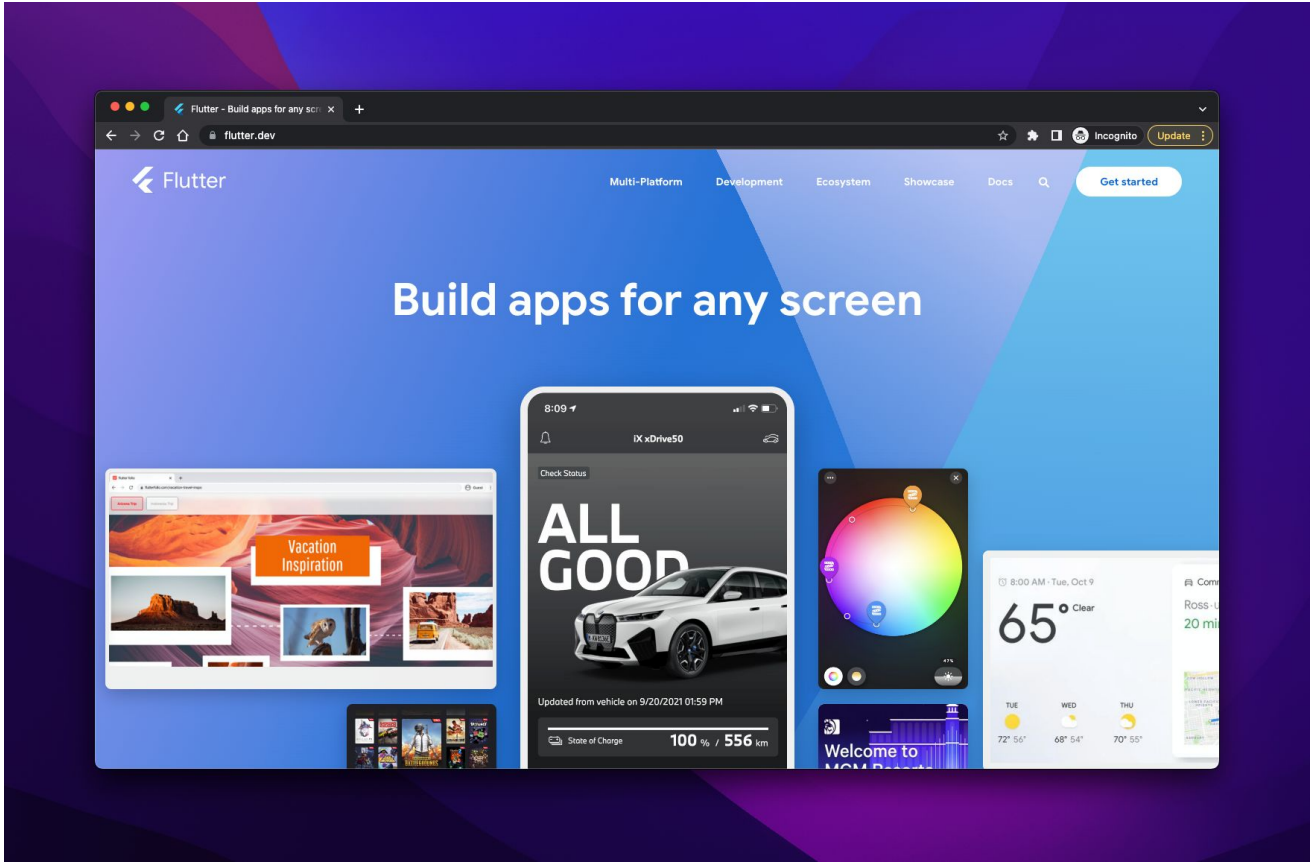
- Flutter SDK
- (iOS) Xcode
- (Android) Android SDK

IDE/Code Editor

- Android Studio / VS Code / Dartpad
- Flutter Plugin

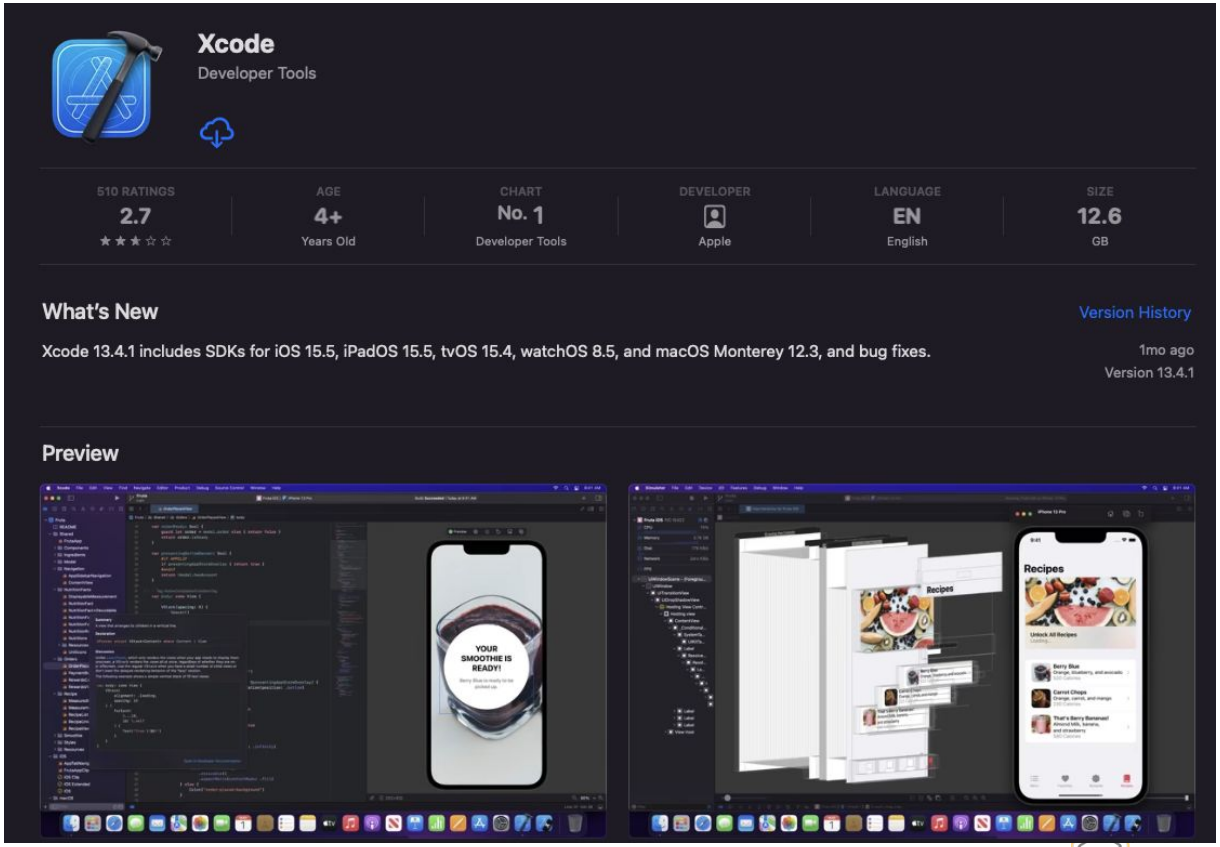
Flutter SDK

- Flutter.dev
- Windows, macOS, Linux



Xcode

App Store
(mac only, for iOS)



Android SDK / Android Studio

android studio

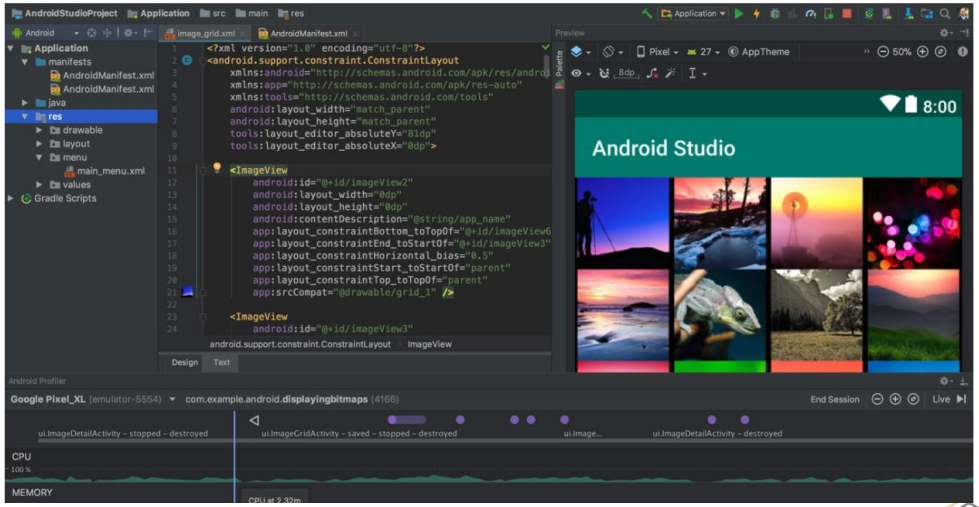
Android Studio provides the fastest tools for building apps on every type of Android device.

Download Android Studio

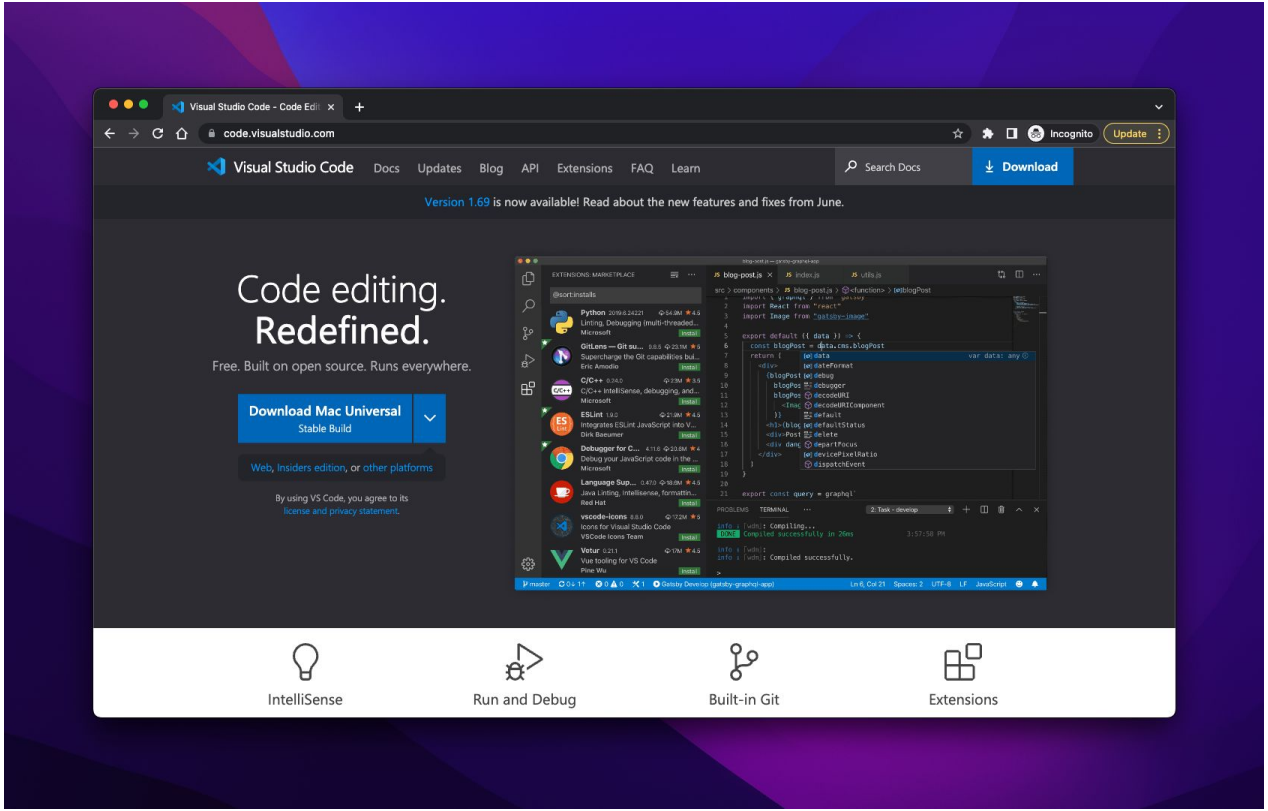
Android Studio Chipmunk | 2021.2.1 Patch 1 for Mac (~1017 MiB)

Download options

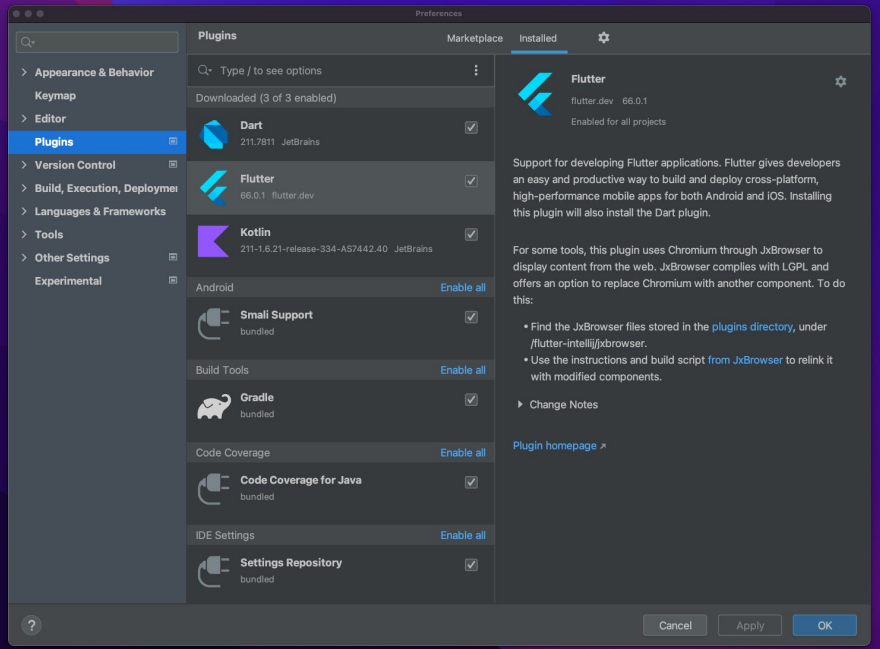
Release notes

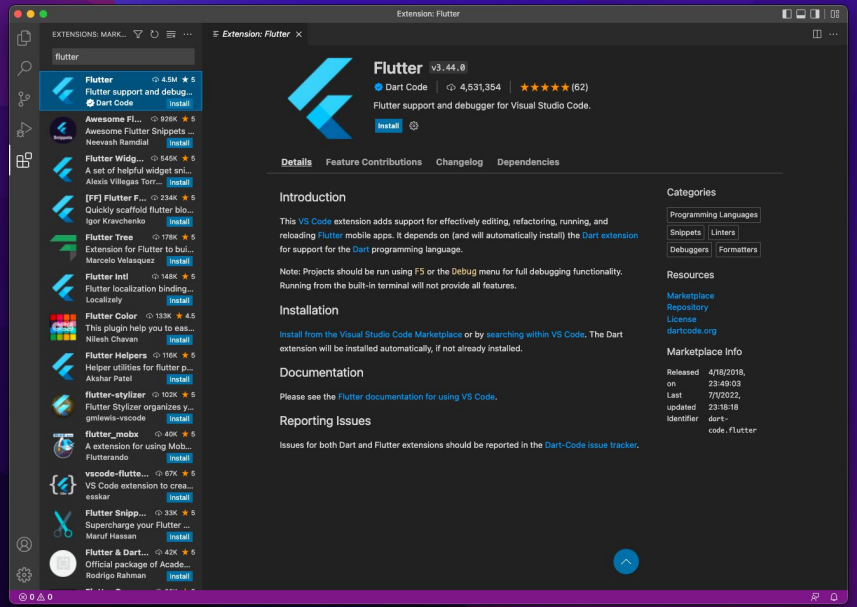


VS Code

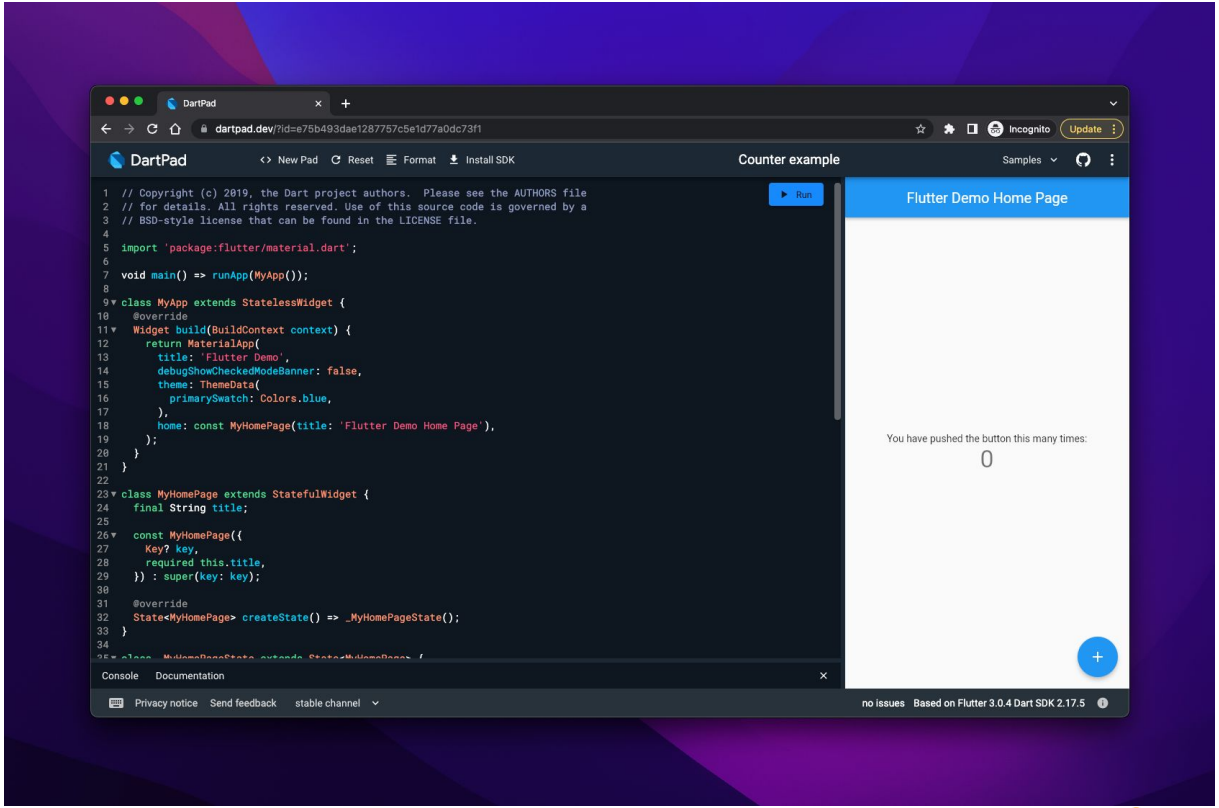

Visual Studio Code - Code Edit
code.visualstudio.com
Incognito
Update
Visual Studio Code
Docs
Updates
Blog
API
Extensions
FAQ
Learn
Search Docs
Download
Version 1.69 is now available! Read about the new features and fixes from June.
Code editing.
Redefined.
Free. Built on open source. Runs everywhere.
Download Mac Universal
Stable Build
Web, Insiders edition, or other platforms
By using VS Code, you agree to its
license and privacy statement.
IntelliSense
Run and Debug
Built-in Git
Extensions

Flutter Plugin



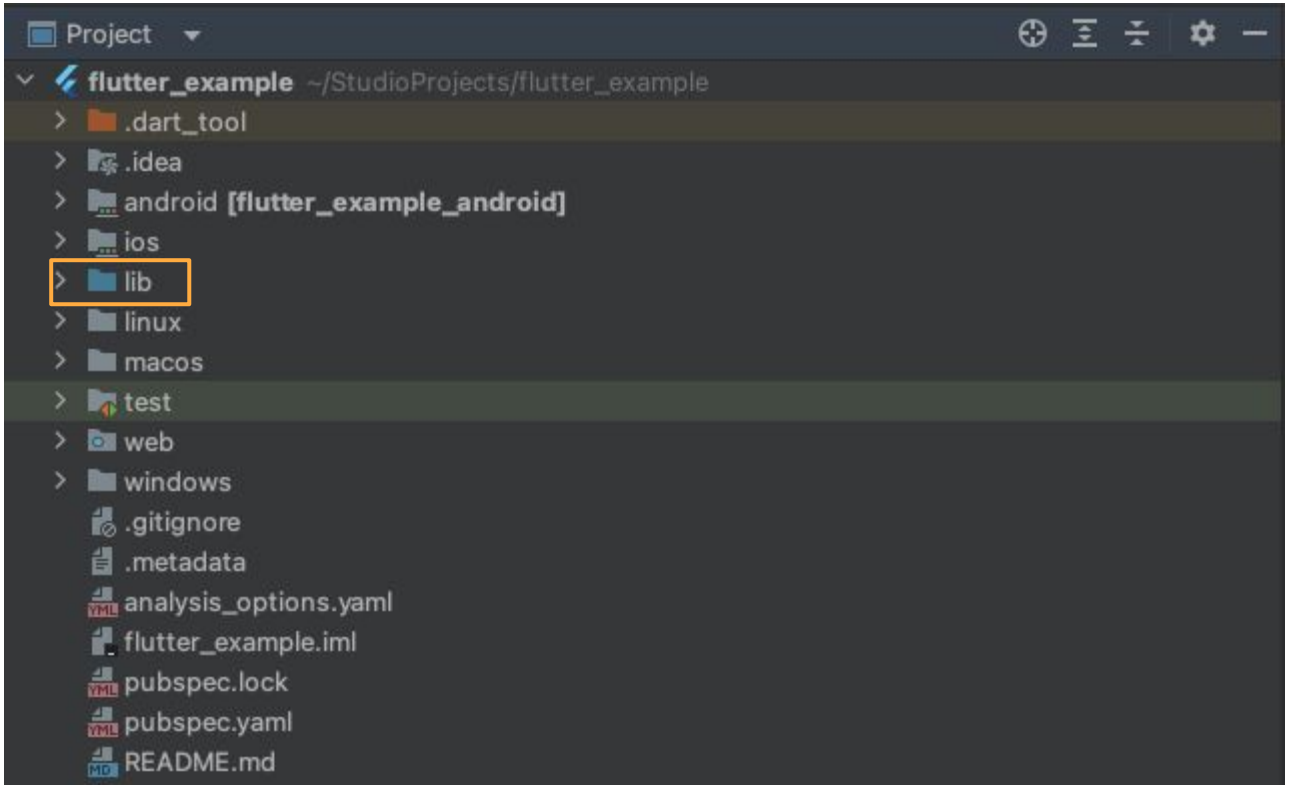


Dartpad


DartPad
dartpad.dev/?id=e75b493dae1287757c5e1d77a0dc73f1
Incognito
Update
DartPad
New Pad
Reset
Format
Install SDK
Counter example
Samples
Run
// Copyright (c) 2019, the Dart project authors. Please see the AUTHORS file
// for details. All rights reserved. Use of this source code is governed by a
// BSD-style license that can be found in the LICENSE file.
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,
),
home: const MyHomePage(title: 'Flutter Demo Home Page'),
);
}
}
class MyHomePage extends StatefulWidget {
final String title;
const MyHomePage({
Key? key,
required this.title,
}) : super(key: key);
@override
State<MyHomePage> createState() => _MyHomePageState();
}
Flutter Demo Home Page
You have pushed the button this many times:
0
Console
Documentation
Privacy notice
Send feedback
stable channel
no issues
Based on Flutter 3.0.4 Dart SDK 2.17.5

Skooldio

Demo/Tutorials


Project
flutter_example ~/StudioProjects/flutter_example
.dart_tool
.idea
android [flutter_example_android]
ios
lib
linux
macos
test
web
windows
.gitignore
.metadata
analysis_options.yaml
flutter_example.iml
pubspec.lock
pubspec.yaml
README.md