

Flutter

구글이 개발한 크로스플랫폼 개발환경

20165198 컴퓨터공학과 유성현

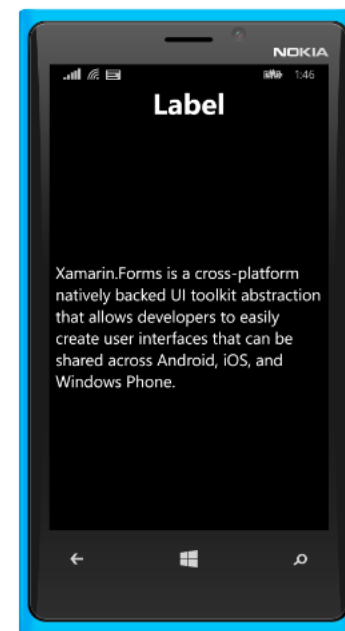
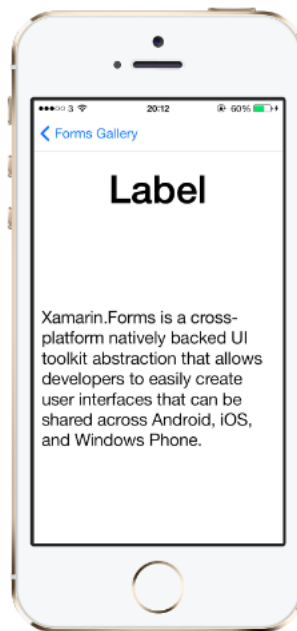
1 플러터



Flutter는 **하나의 코드베이스**로
모바일, 웹, 데스크톱에서 **네이티브**로 컴파일 되는 구글의 아름다운 **UI 킷**입니다.

1 플러터

하나의 코드베이스 # 네이티브 # UI 킷



UI 컴포넌트를 추상화해서 라이브러리화하면 되잖아!
Label은 결국 다 똑같은데?

1 플러터

하나의 코드베이스 # 네이티브 # UI 킷

꼭 UI를 불러와야 하나?
비슷하게 그려주면 안 돼?

1 플러터

하나의 코드베이스 # 네이티브 # UI 킷

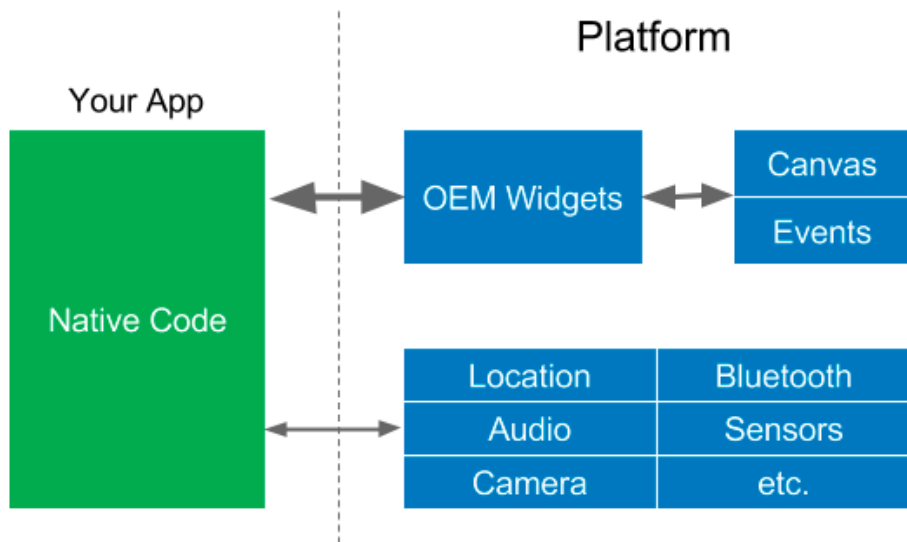


구글에 의해 2005년 C++로 개발된 2D 그래픽 렌더링 엔진

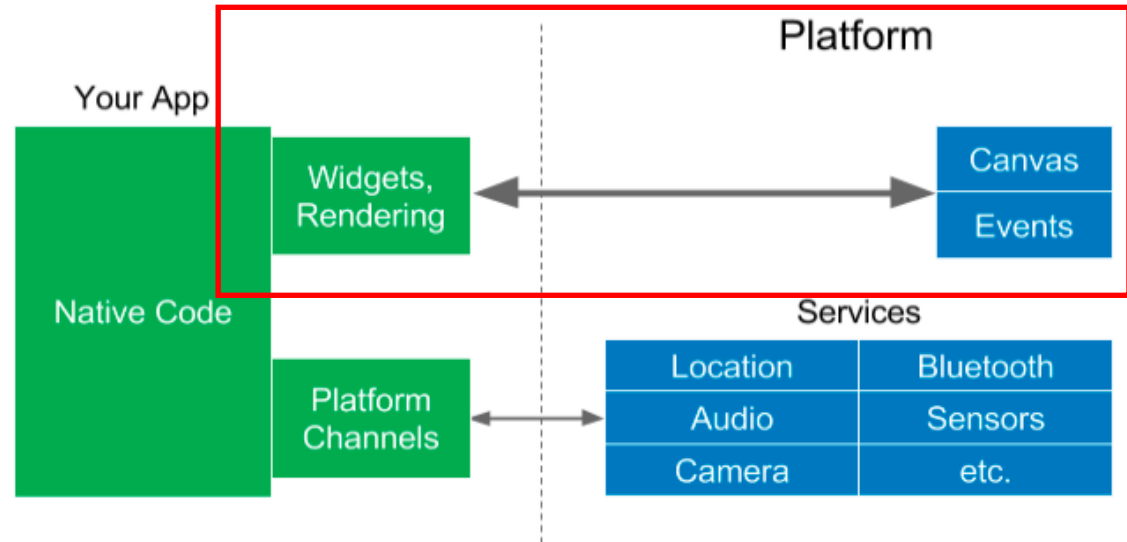
꼭 UI를 불러와야 하나?
비슷하게 그려주면 안 돼?

1 플러터

하나의 코드베이스 # 네이티브 # UI 킷

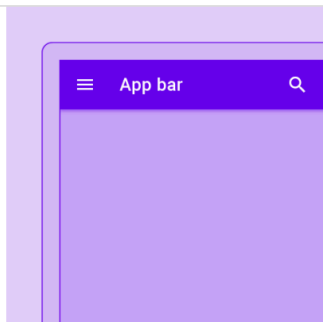


네이티브 앱



Flutter

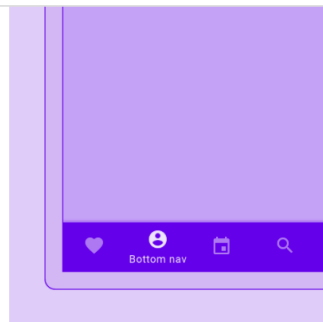
App structure and navigation



AppBar

A Material Design app bar. An app bar consists of a toolbar and potentially other widgets, such as a TabBar and a FlexibleSpaceBar.

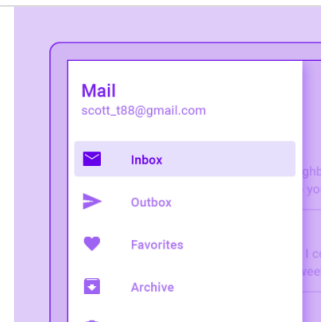
[Documentation](#)



BottomNavigationBar

Bottom navigation bars make it easy to explore and switch between top-level views in a single tap. The BottomNavigationBar widget implements this component.

[Documentation](#)



Drawer

A Material Design panel that slides in horizontally from the edge of a Scaffold to show navigation links in an application.

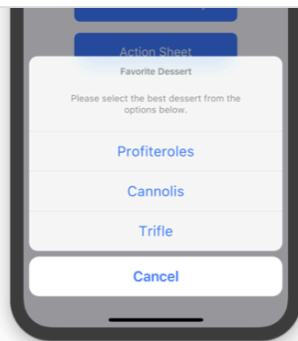
[Documentation](#)

<https://flutter-ko.dev/docs/development/ui/widgets/material>

1 플러터

Beautiful and high-fidelity widgets for current iOS design language.

See more widgets in the [widget catalog](#).



CupertinoActionSheet

An iOS-style modal bottom action sheet to choose an option among many.

[Documentation](#)



CupertinoActivityIndicator

An iOS-style activity indicator. Displays a circular 'spinner'.

[Documentation](#)

Allow "Maps" to access your location while you use the app?
Your current location will be displayed on the map and used for directions, nearby search results, and estimated travel times.

[Don't Allow](#)

[Allow](#)

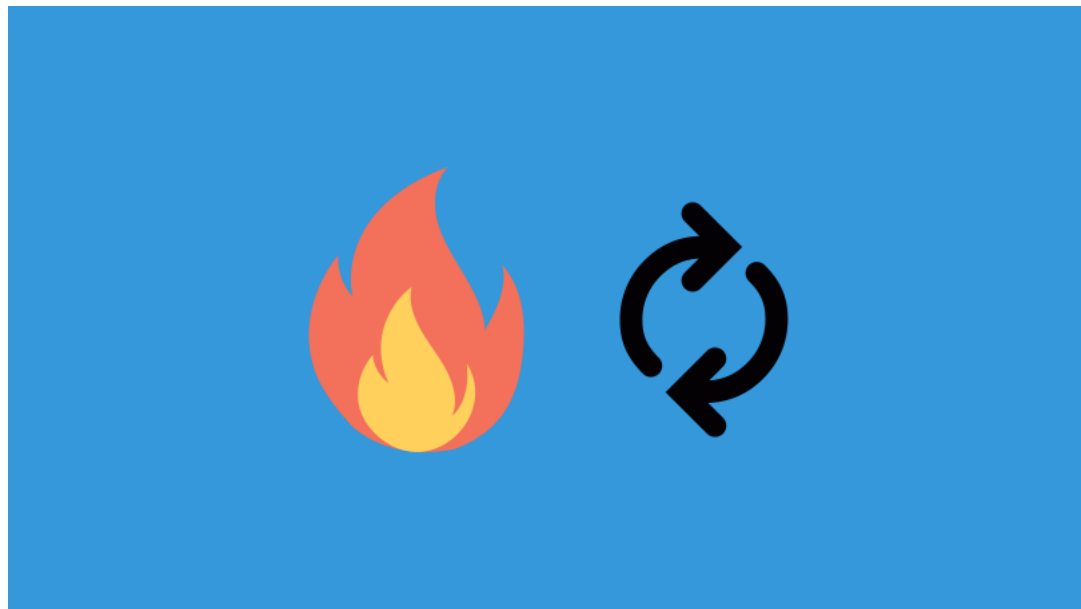
CupertinoAlertDialog

An iOS-style alert dialog.

[Documentation](#)

<https://flutter-ko.dev/docs/development/ui/widgets/cupertino>

1 플러터



Hot-Reload



Dart

Worst Programming Languages to Learn in 2018 Rankings

Ranked from Worst to Best Languages to Learn

	Overall Rankings	Community Engagement	Job Market	Growth and Trends
1	Dart	Dart	Dart	Objective-C
2	Objective-C	CoffeeScript	Rust	CoffeeScript
3	CoffeeScript	Objective-C	Elm	Dart
4	Erlang	Lua	Lua	Perl
5	Lua	Elm	Erlang	Erlang
6	Clojure	Clojure	Clojure	Clojure
7	Perl	Elixir	Kotlin	Ruby
8	Elm	Erlang	Elixir	C#
9	Elixir	Kotlin	R	Lua
10	Haskell	Perl	Perl	C
11	Rust	Scala	Haskell	Haskell
12	Scala	TypeScript	CoffeeScript	Rust
13	C	Haskell	Scala	Elm
14	Ruby	Rust	TypeScript	Elixir
15	Go	R	Objective-C	Scala
16	TypeScript	Swift	C	Swift
17	Swift	Go	Go	Go
18	Kotlin	C	Swift	R
19	R	Ruby	C#	TypeScript
20	C#	C#	Ruby	Kotlin

2018년 가장 배우지 말아야할 언어 1위

2020년 8월 기준 순위 24위
Kotlin보다 상위에 있음.

2 닥트

```
## Method  
Void something(  
    String name,  
    {int age},  
    {int height = 180},  
    {@required int numer}  
);
```

가장 자바와 다르다고 느꼈던 점

2 닥트

<https://medium.com/@hj.veronica.shim/플러터-flutter-시작하기-1-개발-환경-구축-1131711dd651>

2 개발환경 구축

설치

[에디터 설정](#) >



[문서](#) > [시작하기](#) > [설치](#)

Flutter를 설치할 운영 체제를 선택해주세요:

참고: Are you on Chrome OS?

If so, see the official [Chrome OS Flutter installation docs!](#)

윈도우 

맥OS 

리눅스 

중요: 중국에 있다면, 먼저 [중국에서 Flutter 사용하기](#)를 읽어보세요.

[에디터 설정](#) >

<https://flutter-ko.dev/docs/get-started/install>

2 개발환경 구축

1. Flutter SDK 다운로드
2. 임의의 공간에 압축 해제 (C:/Dev)
3. 윈도우의 경우 CMD로 Flutter/bin 폴더로 이동
4. 맥의 경우 .base_profile 파일을 열어
export PATH="\$PATH:/Users/sunghyun/development/flutter/bin/"
이후 source .bash_profile 실행
혹은 / export PATH="\$PATH:`pwd`/flutter/bin 터미널 입력
5. flutter doctor 실행.
6. flutter doctor 요구사항대로 설치 및 실행

2 개발환경 구축

```
C:\Windows\system32\cmd.exe
2020-09-28 오전 10:23 <DIR>          examples
2020-09-16 오전 02:34                1,731 flutter_console.bat
2020-09-16 오전 02:34                303 flutter_root.iml
2020-09-16 오전 02:34                1,544 LICENSE
2020-09-28 오전 10:23 <DIR>          packages
2020-09-16 오전 02:34                1,124 PATENT_GRANT
2020-09-16 오전 02:34                4,688 README.md
2020-09-16 오전 02:37                  6 version
                16개 파일            68,882 바이트
                10개 디렉터리  63,097,622,526 바이트 남음

C:\Dev\flutter>cd bin
C:\Dev\flutter\bin>flutter doctor

Welcome to Flutter! - https://flutter.dev

The Flutter tool uses Google Analytics to anonymously report feature usage
statistics and basic crash reports. This data is used to help improve
Flutter tools over time.

Flutter tool analytics are not sent on the very first run. To disable
reporting, type 'flutter config --no-analytics'. To display the current
setting, type 'flutter config'. If you opt out of analytics, an opt-out
event will be sent, and then no further information will be sent by the
Flutter tool.

By downloading the Flutter SDK, you agree to the Google Terms of Service.
Note: The Google Privacy Policy describes how data is handled in this
service.

Moreover, Flutter includes the Dart SDK, which may send usage metrics and
crash reports to Google.

Read about data we send with crash reports:
https://flutter.dev/docs/reference/crash-reporting

See Google's privacy policy:
https://policies.google.com/privacy

Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 1.20.4, on Microsoft Windows [Version 10.0.18363.1082], locale ko-KR)

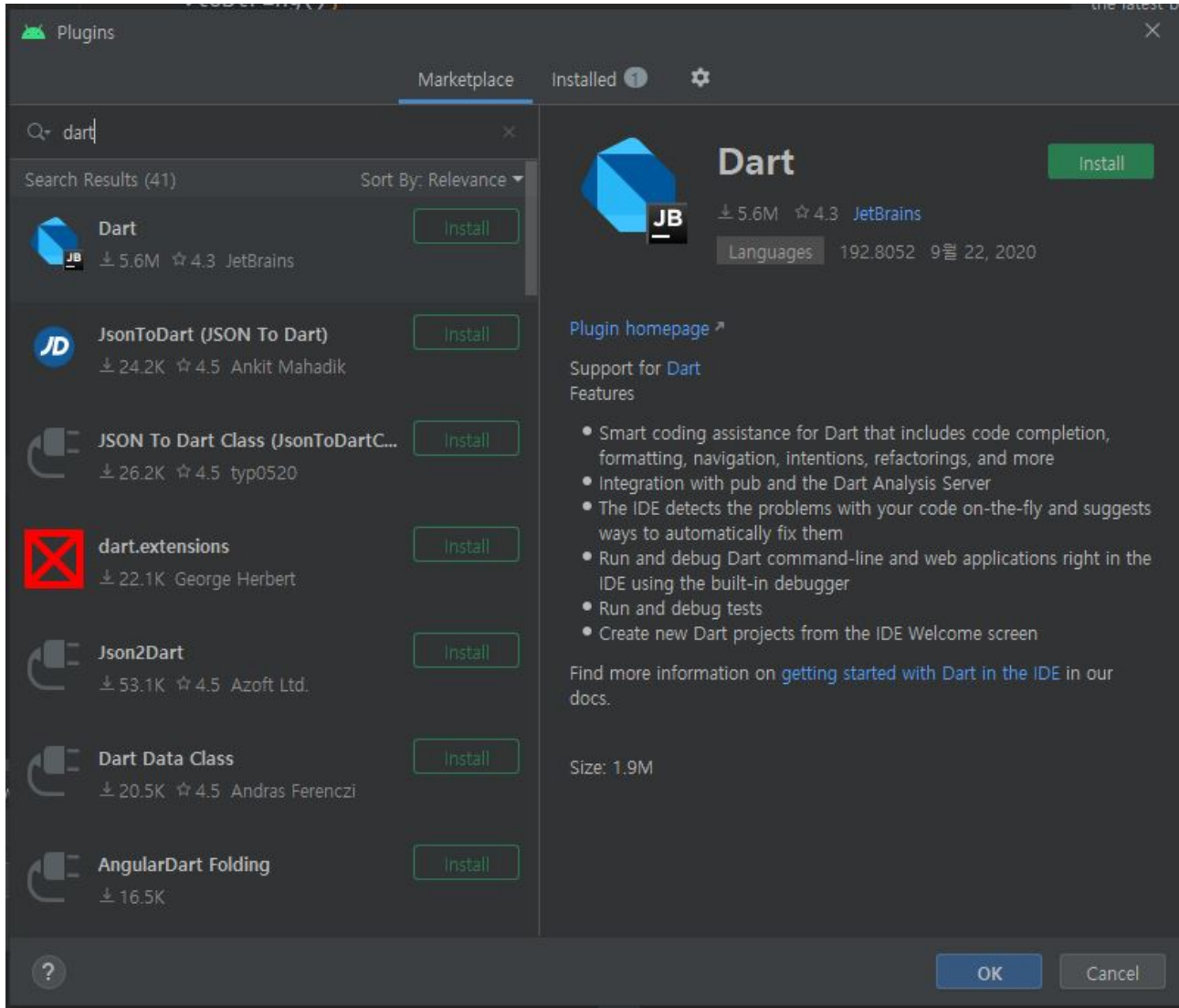
[!] Android toolchain - develop for Android devices (Android SDK version 29.0.3)
    ! Some Android licenses not accepted. To resolve this, run: flutter doctor --android-licenses
[!] Android Studio (version 3.6)
    X Flutter plugin not installed; this adds Flutter specific functionality.
    X Dart plugin not installed; this adds Dart specific functionality.
[!] VS Code (version 1.46.0)
    X Flutter extension not installed; install from
      https://marketplace.visualstudio.com/items?itemName=Dart-Code.flutter
[!] Connected device
    ! No devices available

! Doctor found issues in 4 categories.

C:\Dev\flutter\bin>
```

안드로이드 스튜디오 플러그인이 설치 안 되어 있음.
안드로이드 툴체인 + 라이선스 문제가 있음.

2 개발환경 구축



안드로이드 스튜디오 실행

SHIFT + SHIFT 두번 탭
Plugin 검색으로 플러그인 매니저 로드

이후 Dart, Flutter 검색 후 IDE 재시작

2 개발환경 구축

```
C:\Windows\system32\cmd.exe

C:\Dev\flutter\bin>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 1.20.4, on Microsoft Windows [Version 10.0.18363.1082], locale ko-KR)

[!] Android toolchain - develop for Android devices (Android SDK version 29.0.3)
    ! Some Android licenses not accepted. To resolve this, run: flutter doctor --android-licenses
[✓] Android Studio (version 3.6)
[!] VS Code (version 1.46.0)
    X Flutter extension not installed; install from
      https://marketplace.visualstudio.com/items?itemName=Dart-Code.flutter
[!] Connected device
    ! No devices available

! Doctor found issues in 3 categories.

C:\Dev\flutter\bin>flutter --android-licenses
Could not find an option named "android-licenses".

Run 'flutter -h' (or 'flutter <command> -h') for available flutter commands and options.

C:\Dev\flutter\bin>flutter doctor --android-licenses
Warning: File C:\Users\optid\android\repositories.cfg could not be loaded.
5 of 7 SDK package licenses not accepted. 100% Computing updates...
Review licenses that have not been accepted (y/N)? y

1/5: License android-googletv-license:
-----
Terms and Conditions

This is the Google TV Add-on for the Android Software Development Kit License Agreement.

1. Introduction

1.1 The Google TV Add-on for the Android Software Development Kit (referred to in this License Agreement as the "Google TV Add-on" and specifically including the Android system files, packaged APIs, and Google APIs add-ons) is licensed to you subject to the terms of this License Agreement. This License Agreement forms a legally binding contract between you and Google in relation to your use of the Google TV Add-on.

1.2 "Google" means Google Inc., a Delaware corporation with principal place of business at 1600 Amphitheatre Parkway, Mountain View, CA 94043, United States.

2. Accepting this License Agreement

2.1 In order to use the Google TV Add-on, you must first agree to this License Agreement. You may not use the Google TV Add-on if you do not accept this License Agreement.

2.2 You can accept this License Agreement by:

(A) clicking to accept or agree to this License Agreement, where this option is made available to you; or

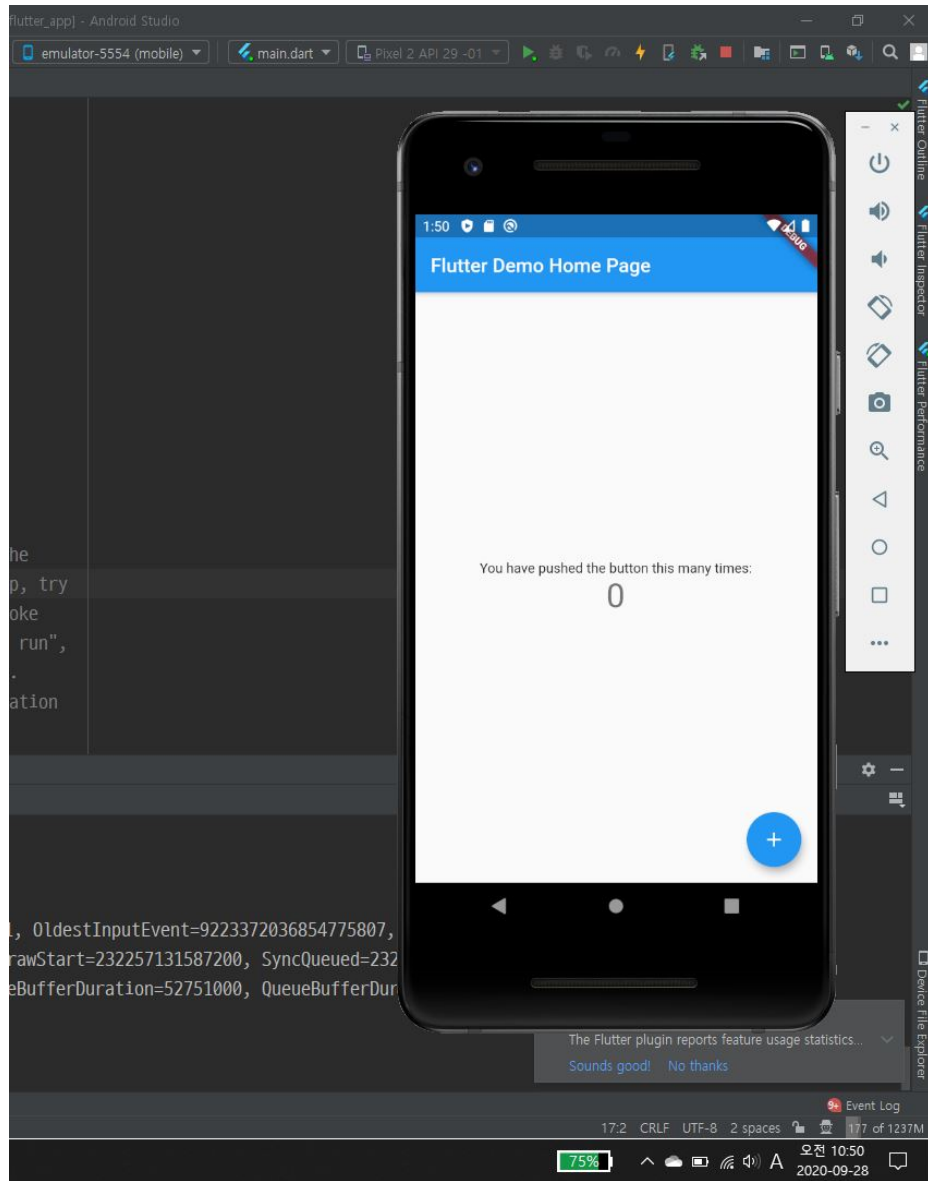
(B) by actually using the Google TV Add-on. In this case, you agree that use of the Google TV Add-on constitutes acceptance of the License Agreement from that point onwards.

2.3 You may not use the Google TV Add-on and may not accept the Licensing Agreement if you are a person barred from receiving the Google TV Add-on under the laws of the United States or other countries including the country in which you are resident or from which you use the Google TV Add-on.
```

Flutter doctor android-licenses 입력

무수히 많은 약관, Y로 동의.

2 개발환경 구축



**안드로이드 스튜디오에서
플러터 프로젝트 시작 후
에뮬레이터, 기기 연결한 후 빌드.**

3 Hello World!

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Welcome to Flutter',
      home: Scaffold(
        appBar: AppBar(
          title: Text('Welcome to Flutter'),
        ),
        body: Center(
          child: Text('Hello World'),
        ),
      ), // Scaffold
    ); // Material App
  } //build
} // MyApp
```