



Developer Student Clubs
Princess Sumaya University for Technology

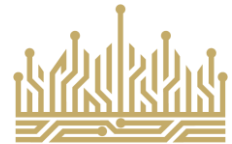
Flutter

Build beautiful native apps in record time



Saif M. Al-Ansari

Head of Mobile Apps Dept. at **AWAEL**
IT SOLUTIONS



Crown Prince Award
For Best Government Service Application

2nd Place

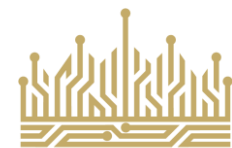


Who am I ?



Saif M. Al-Ansari

- Head of Mobile Apps Dept. at
- 9 Years in the IT Field , 7 of them in Coding.
- Regional Public Relations Director at Toastmasters International.
(Jordan & Lebanon)



Crown Prince Award
For Best Government Service Application

2nd Place



IEEE



Developer Circles **Amman**
from facebook

Workshop Outline

- What is Flutter.
- Dart Language.
- Flutter UI.
- Widgets.
- Material Design.
- Challenges of Mobile Development.
- Main Features of Flutter.
- Who use Flutter ?
- Tools that integrate with Flutter.
- Flutter Is not only for Android and IOS.
- Jobs in Jordan & Middle East.
- Hands-On Examples : Dart Basics.
- Hands-On Example : Designing a List from API.
- Resources To Start your Career with Flutter.

What is Flutter ?



Flutter is a “tool” that allows you to build **native cross-platform** (iOS, Android) apps with **One Programming Language** and **One Codebase**.

Dart ?

Dart is a programming language developed by Google

Object Oriented and
Strongly Typed



Syntax is like a mixture of JavaScript, Java , C# (You don't have to know these languages !)

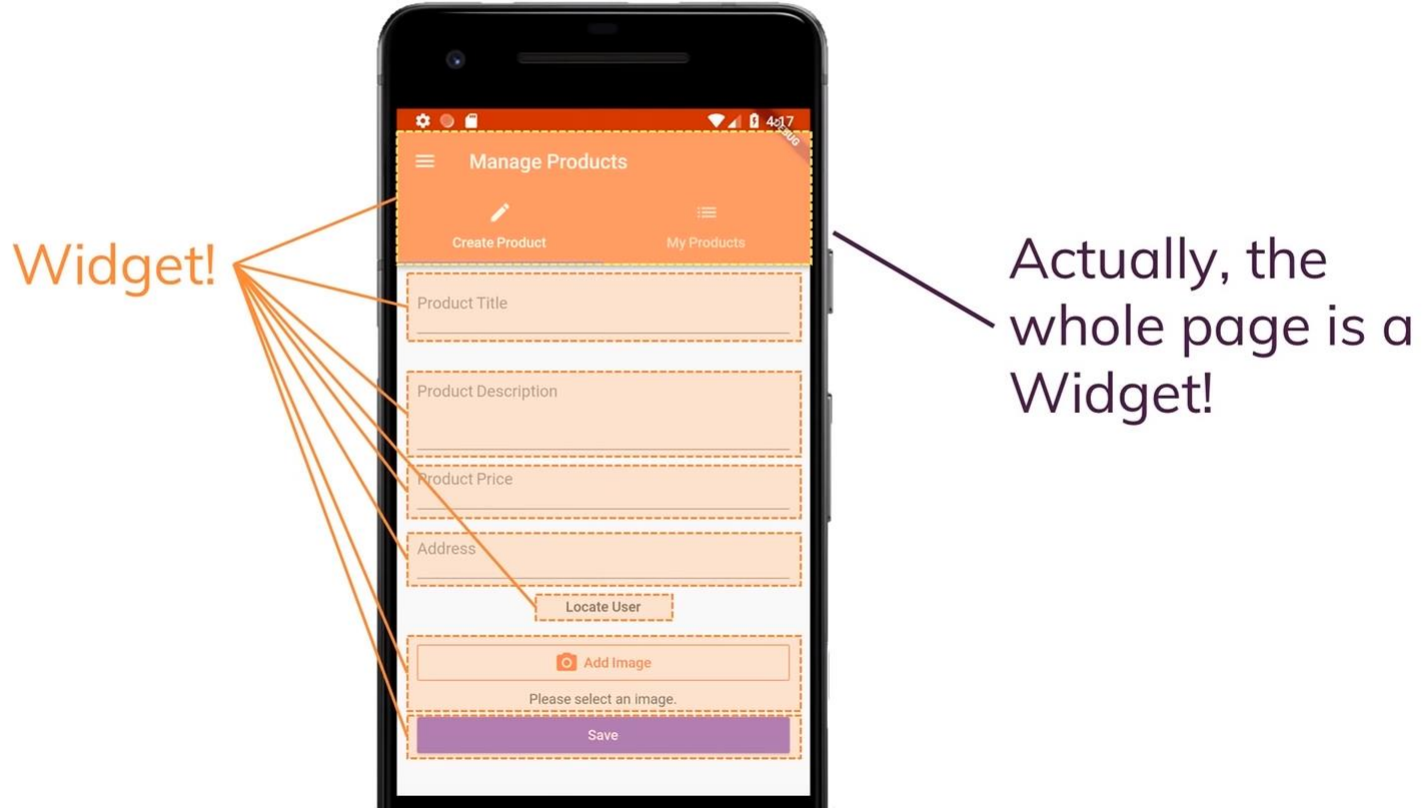
Focused on **Frontend** (Mobile apps, Web) **user interface** (UI) Development

Flutter is Google's UI Framework

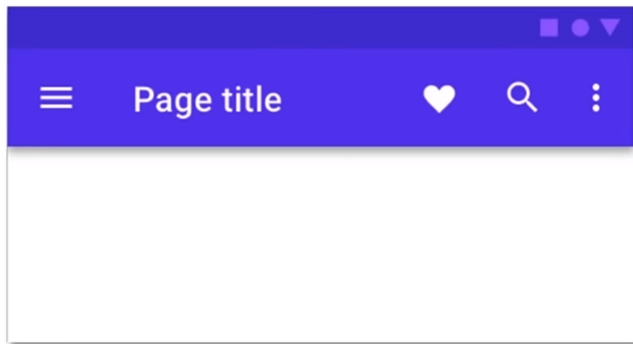
Helping developers craft high-quality native experiences across multiple platforms in record time.



Everything is a widget !



Material Design Everywhere



Material is a **Design System** created (and heavily used) by Google

It's NOT Google's Style for Everyone! It is indeed **highly customizable**

Embrace Platform Differences



```
child: Theme.of(context).platform == TargetPlatform.iOS  
  ? CupertinoButton(...) // Apple look & feel  
  : RaisedButton(...) // Material (Google) look & feel
```

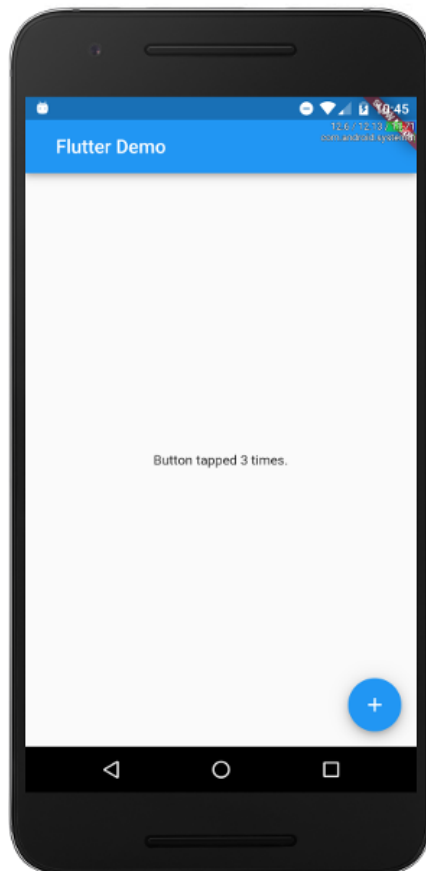
UI as Code

No Drag & Drop

No Visual Editor

Code only

But extremely
straightforward



```
return Scaffold(  
  appBar: AppBar(  
    title: Text(widget.title),  
  ), // AppBar  
  body: Center(  
    child: Column(  
      mainAxisAlignment: MainAxisAlignment.center,  
      children: <Widget>[  
        Text(  
          'You have pushed the button this many times:',  
        ), // Text  
        Text(  
          '$_counter',  
          style: Theme.of(context).textTheme.display1,  
        ), // Text  
      ], // <Widget>[]  
    ), // Column  
  ), // Center  
  floatingActionButton: FloatingActionButton(  
    onPressed: _incrementCounter,  
    tooltip: 'Increment',  
    child: Icon(Icons.add),  
  ), // FloatingActionButton  
); // Scaffold
```

Challenges of mobile development today

“To the metal” approaches

- ✓ **High-quality apps**
Platform and system integrations
- ✓ **High-performance UIs**
Native code, GPU accelerated
- ✗ **Must fund two apps**
Two teams, codebases, & investments
- ✗ **Inconsistent brand, features**
Different across devices & OEMs

“Cross platform” approaches

- ✓ **Fast development**
Quick iterations, hot reload
- ✓ **Portability, reach**
Single codebase
- ✗ **Poor Performance**
Slow, jerky, unpredictable
- ✗ **Non-Native Look/Feel**
Users can tell the difference



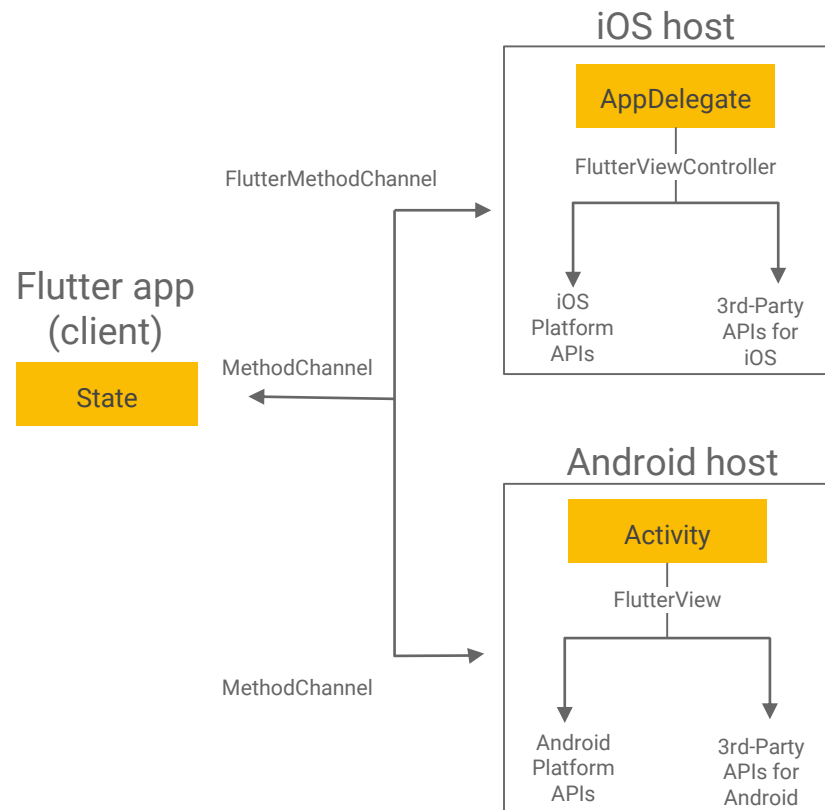
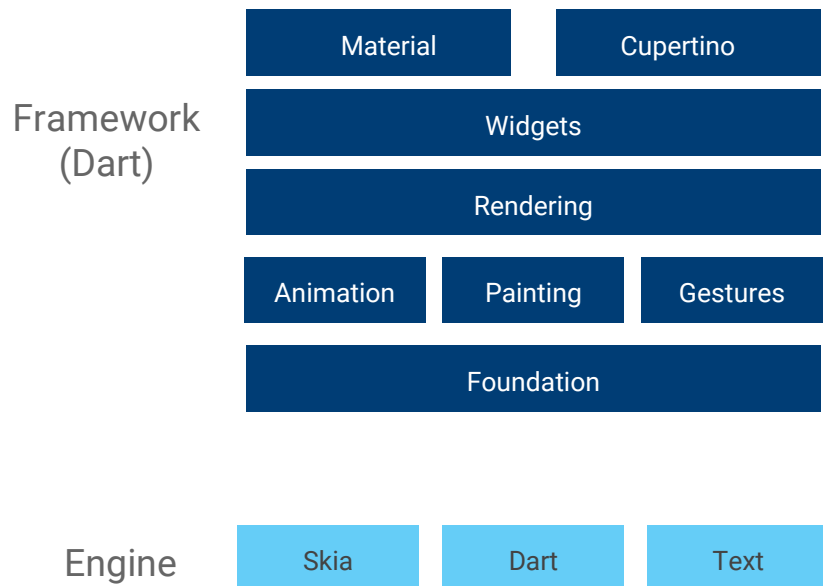
Flutter offers the best of both worlds

“Flutter combines
native performance and quality
with **high-velocity development**
and **multi-platform reach**. ”

- ✓ **High-quality apps**
Platform and system integrations
- ✓ **High-performance UIs**
Native code, GPU accelerated
- ✓ **Fast development**
Quick iterations, hot reload
- ✓ **Portability, reach**
Single codebase



Flutter is a modern UI toolkit for native apps



Flutter Main Features



High-Velocity
Development



Expressive and
Flexible Toolkit



Native iOS and
Android App



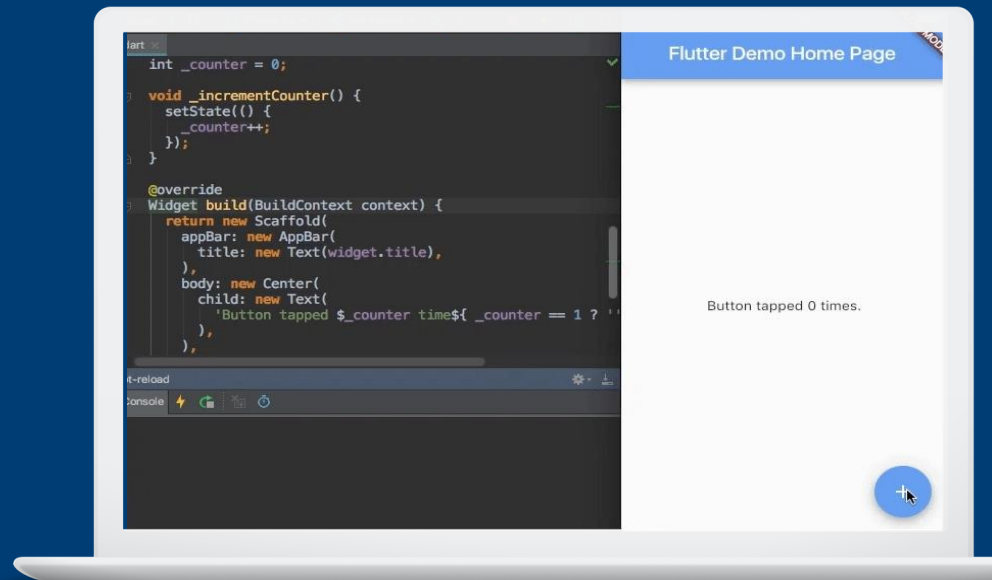
High-velocity development

Sub-second reload times

More time to experiment & test features

Single-codebase for faster collab

3X Productivity Gains



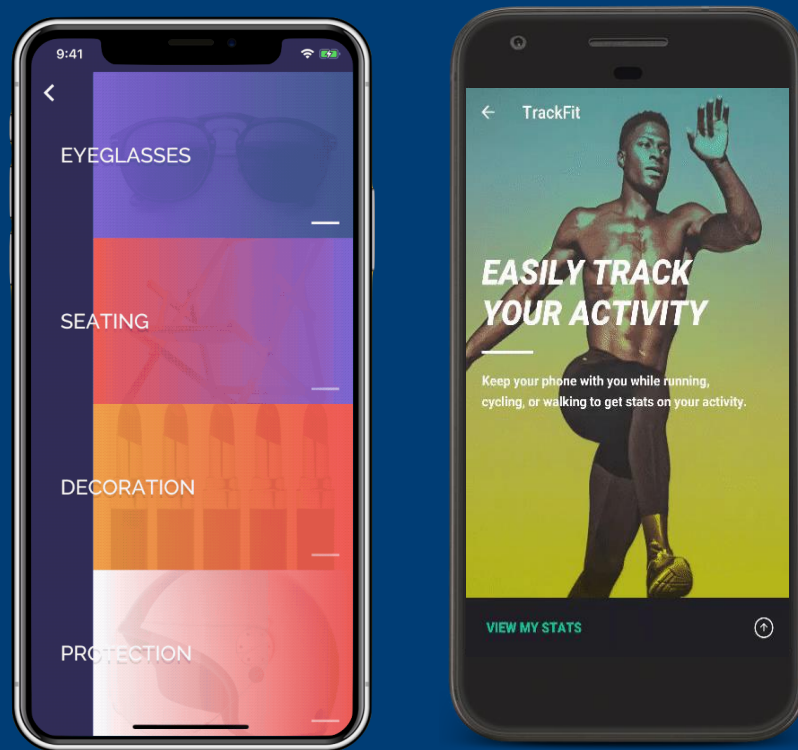
Flexibility and Control for beautiful UI's

Control every pixel on the screen

Never say "no" to your designer

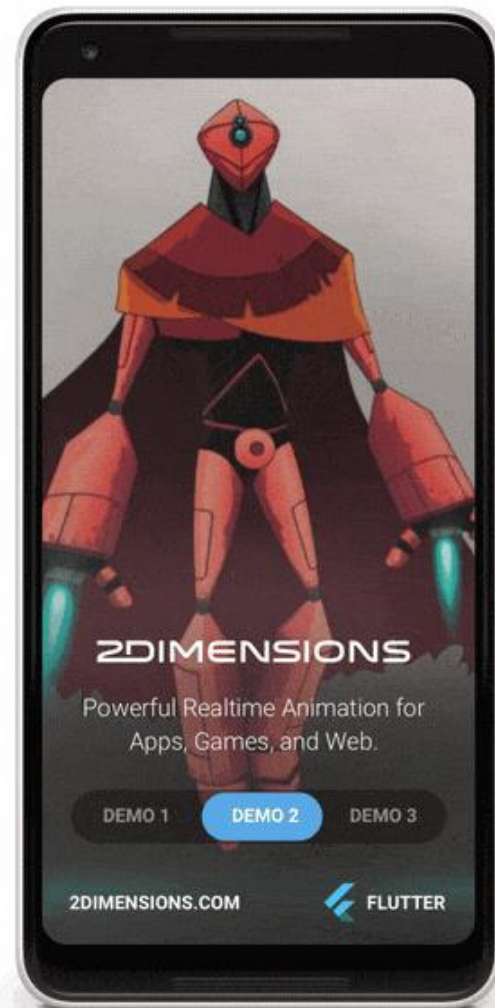
Stand out in the marketplace

Win awards with beautiful UI



Graphic Horsepower

Flutter seamlessly combines user interface widgets with 60fps animated graphics generated in real time, with the same code running on iOS and Android



Natively- Apps for iOS and Android

Compiles directly to native ARM code Does not use a JavaScript bridge

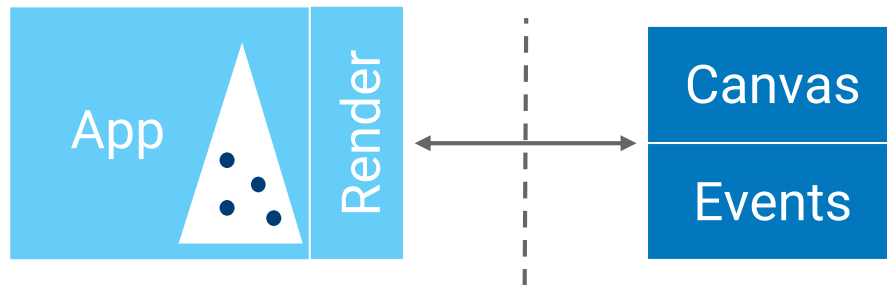
60fps, GPU accelerated

Smooth animations

Deep platform integrations

Natural look and feel

Critical platform differences
(scrolling, navigation, fonts)



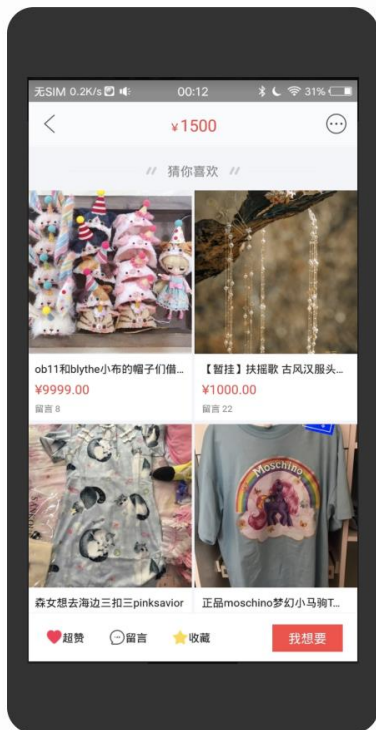
Compiles to ARM native code,
GPU accelerated graphics



Built and used by Google, developers and companies around the world

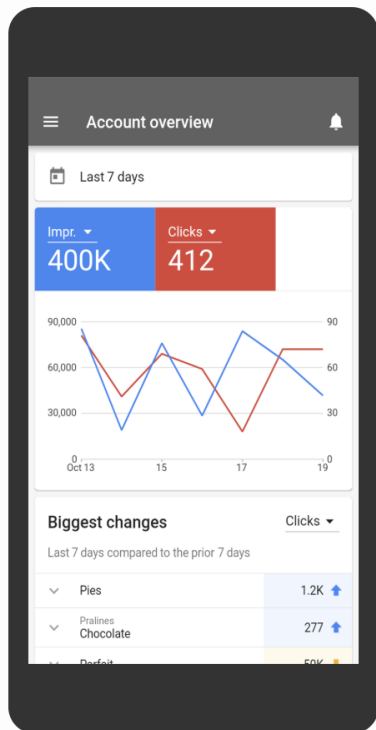


Alibaba



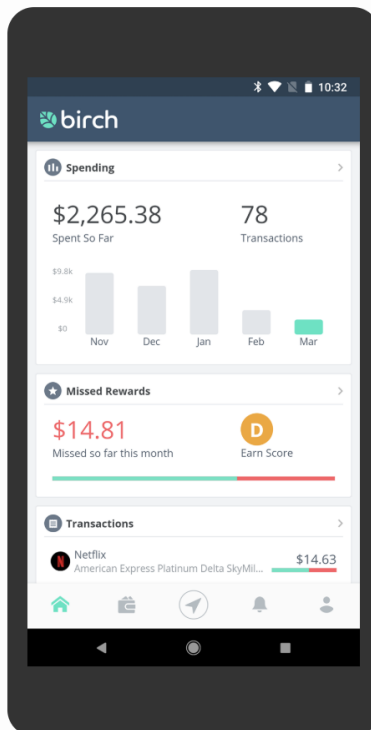
Alibaba's app incorporates Flutter to power parts of their app.

Google AdWords



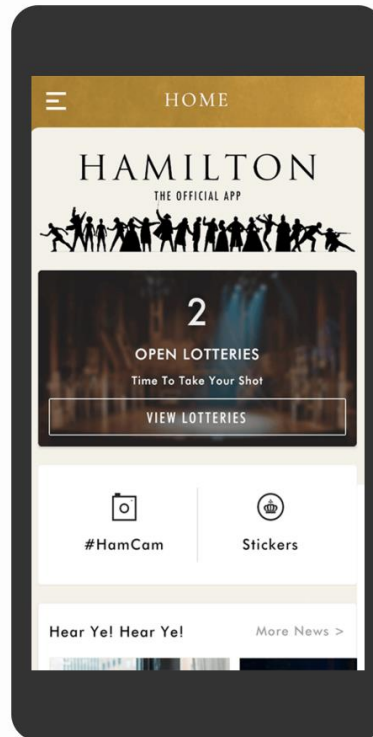
The Google AdWords app helps you keep your ad campaigns running smoothly — no matter where your business takes you.

Birch Finance

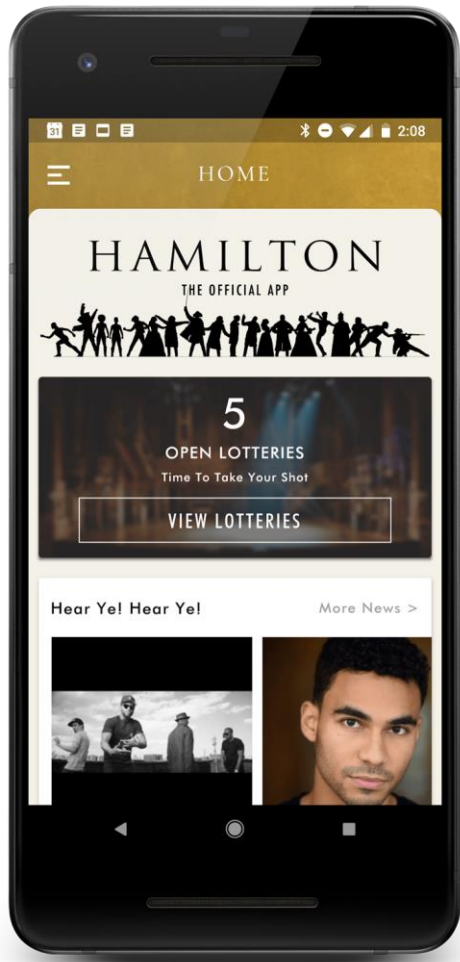


Credit card rewards app to manage and optimize your existing cards.

Hamilton Musical



Official app of the hit Broadway musical, Hamilton. Includes daily lotteries, exclusive news and videos, a trivia game, merchandise store, and more.



“ Hamilton launched as a *featured* app on iOS and Android **within three months of us writing our first line of Flutter code.** ”

David DeRemer
Co-Founder, Posse

Key component of the Google Developer family

Flutter offers a portable, high-quality UI toolkit, and a fast, expressive way to build native app UIs.



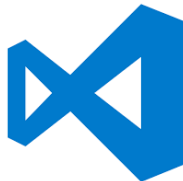
Works with popular tools and platforms



Android Studio



Xcode



VS Code



Firebase



Android APIs



iOS APIs



Material Design



Redux



Rich ecosystem and community

- 1,100+ other packages in repository
- 24,000+ Github stars
- 500+ apps in Play Store
- startflutter.com, flutter.rocks, flutter.institute, and more
- Open source (250+ contributors), BSD license



Flutter For :

Android

IOS

Web

Windows

MacOS

Fuchsia



مجموعة وائل (HR & Schools)



- الأعمال المتأخرة
- المشاريع المتأخرة
- الأعمال المتوقع تسليمها اليوم
- الأعمال غير المغلفة

المشاريع المتأخرة

8

الأعمال غير المغلفة

19

الأعمال المتوقع تسليمها اليوم

0

الأعمال المتأخرة

27



يمنع تقديم أي خدمة غير طارئة للعملاء قبل اخذ الموافقه

مجموعة غسان (ERP.Net)



- الأعمال المتأخرة
- المشاريع المتأخرة
- الأعمال المتوقع تسليمها اليوم
- الأعمال غير المغلفة

المشاريع المتأخرة
32

الأعمال غير المغلفة
19

الأعمال المتوقع تسليمها اليوم
2

الأعمال المتأخرة
6

مجموعة محمد جروان (ERP.Net)



- الأعمال المتأخرة
- المشاريع المتأخرة
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- الأعمال غير المغلفة

المشاريع المتأخرة
3

الأعمال غير المغلفة
9

الأعمال المتوقع تسليمها اليوم
2

الأعمال المتأخرة
3

Jobs in Jordan



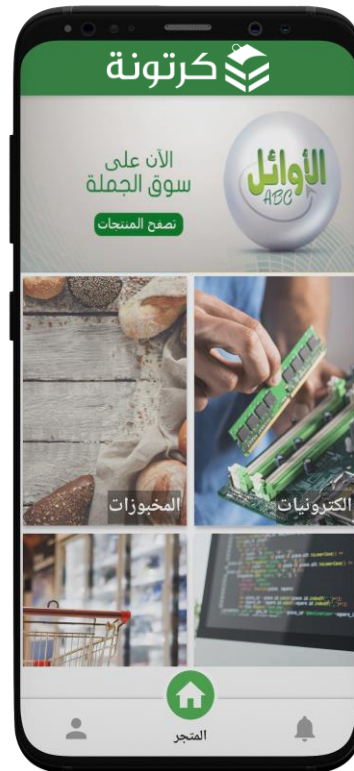
الأوائل

AWAEL

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Hand-On Practice

Dart Basics

dartpad.dartlang.org

Simple UI Design : Creating a List from API



Resources :

- shorturl.at/blpuV (Widgets Examples)
- flutter.io (Official Documentation)
- startflutter.com
- flutter.rocks
- flutter.institute
- [Udemy](https://www.udemy.com/flutter/)

Thank you!

flutter.dev



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