



Social Media Apps Programming

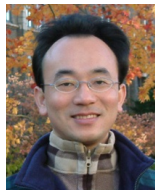
Course Orientation and Introduction to Social Media and Mobile Apps Programming

1061SMAP01

TLMXM1A (8648) (M2143) (Fall 2017)

(MIS MBA) (2 Credits, Elective) [Full English Course]

Fri 8,9 (15:10-17:00) B206



Min-Yuh Day, Ph.D.

Assistant Professor

Department of Information Management

Tamkang University

<http://mail.tku.edu.tw/myday>

2017-09-22



Android /iOS Apps Programming

Native Apps

Hybrid Apps

Mobile Web Apps



Native Mobile App

Hybrid Mobile App

Responsive Web App

Progressive Web App (PWA)



Progressive Web App (PWA)

Responsive Web Apps

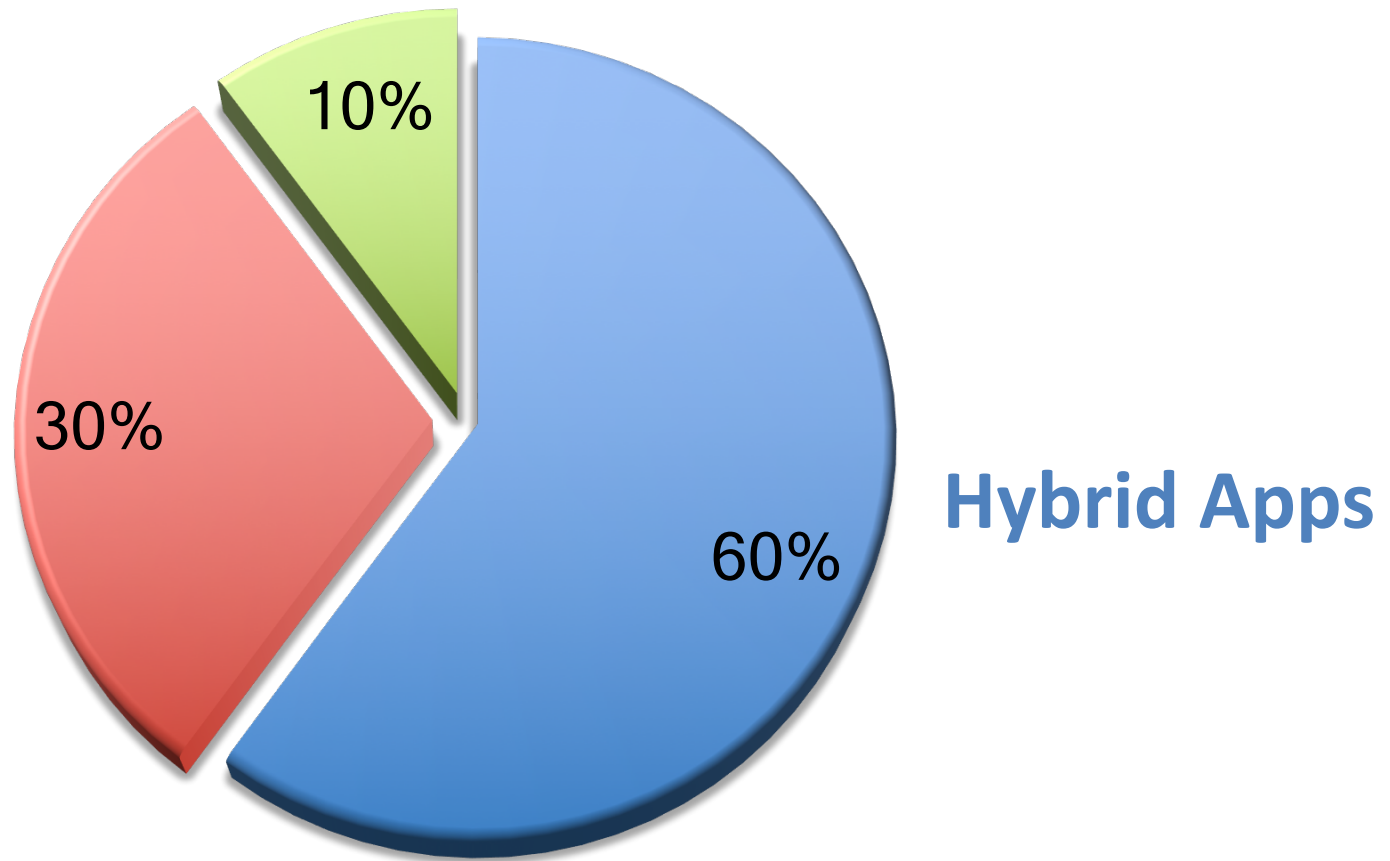
Responsive Design

HTML5/CSS3/JavaScript



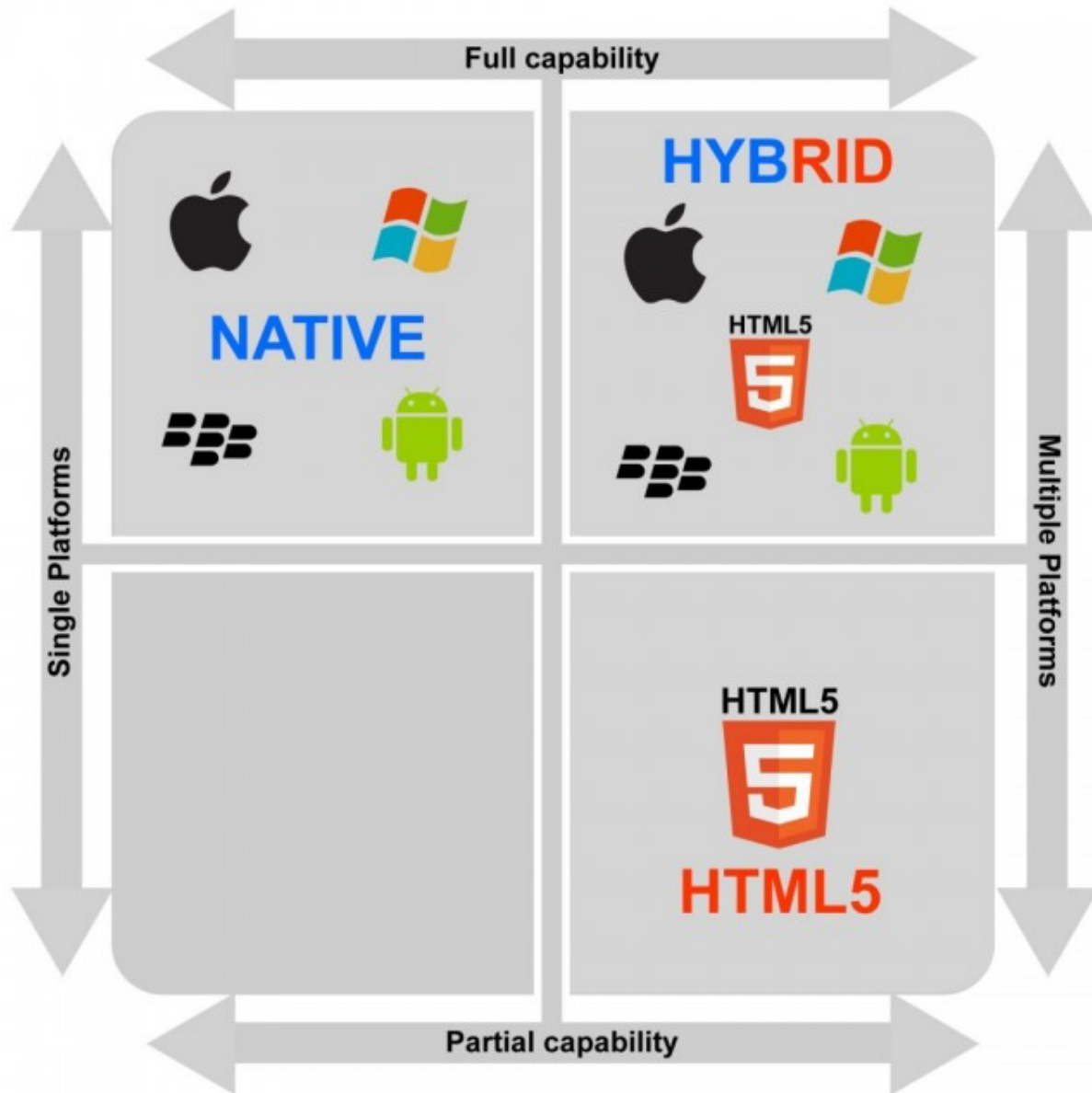
Enterprise Apps in 2015

■ Hybrid Apps ■ Native Apps ■ Web Apps



Gartner recommend **hybrid apps** over **native apps** development for businesses

Enterprise Apps (Hybrid HTML5) in 2016



Building Android Apps with HTML, CSS, and JavaScript: Making Native Apps with Standards-Based Web Tools,

Jonathan Stark & Brian Jepson, O'Reilly, 2012



Building iPhone Apps with HTML, CSS, and JavaScript: Making App Store Apps Without Objective-C or Cocoa,

Jonathan Stark, O'Reilly, 2010

Making App Store Apps Without Objective-C or Cocoa



Building

iPhone
Apps

with HTML, CSS, and JavaScript

O'REILLY®

Jonathan Stark

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App Development Comparison



Native Apps

Full

Very Fast

Expensive

Available

Mandatory

Hybrid Apps

Full

Native Speed as Necessary

Reasonable

Available

Low Overhead

Web Apps

Partial

Fast

Reasonable

Not Available

None



Course Syllabus

Tamkang University

Academic Year 106, 1st Semester (Fall, 2017)

- Course Title: Social Media Apps Programming
- Instructor: Min-Yuh Day
- Course Class: TLMXM1A (MIS MBA)
 - Master's Program, Department of Information Management, 1A
- Details
 - Selective
 - One Semester
 - 2 Credits
- Time & Place: Fri 8, 9 (15:10-17:00) B206



Department Teaching Objectives

- Devoting to the integration and research of information technology and business management knowledge
- Cultivating for society, middle and higher level managers with both information capabilities and modern management skills



Department Core Competences

1. Use of modern management knowledge
2. Logical thinking
3. Critical analysis
4. Integration of information technology and business management
5. Research and innovation
6. Theory and applications data analysis
7. Information and communication security management
8. Verbal and writing communication skills

Course Introduction



- This course introduces the fundamental concepts and practices of social media and mobile apps programming.
- Topics include
 - Introduction to Android / iOS apps programming,
 - Developing Android native apps with Java (Android Studio),
 - Developing iPhone / iPad apps native apps with Swift (XCode),
 - Mobile apps using HTML5/CSS3/JavaScript,
 - jQuery Mobile,
 - Create hybrid apps with Phonegap,
 - Google Cloud Platform,
 - Google app engine, Google map API,
 - Facebook API,
 - Twitter API,
 - Case study on social media apps programming and marketing in Google Play and App Store.



Teaching Objectives

Students will be able to
understand and apply
the fundamental concepts
and practices of
social media and
mobile apps programming



Teaching Methods

- Lecture
- Discussion
- Simulation
- Practicum
- Problem Solving



Assessment

- Practicum
 - Report
- Participation

Course Schedule (1/2)



Tamkang
University

Week	Date	Subject/Topics
1	2017/09/22	Course Orientation and Introduction to Social Media and Mobile Apps Programming
2	2017/09/29	Introduction to Android / iOS Apps Programming
3	2017/10/06	Developing Android Native Apps with Java (Android Studio)
4	2017/10/13	Developing iPhone / iPad Native Apps with Swift (XCode)
5	2017/10/20	Mobile Apps using HTML5/CSS3/JavaScript
6	2017/10/27	jQuery Mobile
7	2017/11/03	Create Hybrid Apps with Phonegap
8	2017/11/10	jQuery Mobile/Phonegap
9	2017/11/17	jQuery Mobile/Phonegap

Course Schedule (2/2)



**Tamkang
University**

Week	Date	Subject/Topics
10	2017/11/24	Midterm Project Report
11	2017/12/01	Case Study on Social Media Apps Programming and Marketing in Google Play and App Store
12	2017/12/08	Google Cloud Platform
13	2017/12/15	Google App Engine
14	2017/12/22	Google Map API
15	2017/12/29	Facebook API (Facebook JavaScript SDK) (Integrate Facebook with iOS/Android Apps)
16	2018/01/05	Twitter API
17	2018/01/12	Final Project Presentation
18	2018/01/19	Final Exam Week (Final Project Presentation)



Grading Policy

- Mark of Usual: 50%
- Final Apps Project: 50%
 - Midterm Project Report
 - Final Project Report



Textbooks and References

- Textbook: Slides
 - <http://mail.tku.edu.tw/myday/teaching.htm#1061SMAP>
- Jonathan Stark, Building iPhone Apps with HTML, CSS, and JavaScript: Making App Store Apps Without Objective-C or Cocoa, O'reilly, 2010.
- Rohit Ghatol and Yogesh Patel, Beginning PhoneGap: Mobile Web Framework for JavaScript and HTML5, Apress, 2012.
- Jon Reid, jQuery Mobile, O'reilly, 2012.

References

- jQuery Mobil: <http://jquerymobile.com/>
- PhoneGap: <http://phonegap.com/>
- MIT App Inventor: <http://appinventor.mit.edu/>
- Apple Developer: <https://developer.apple.com/>
- Android Developer: <http://developer.android.com/>
- Facebook Developers: <https://developers.facebook.com/>
- Twitter Developers: <https://dev.twitter.com/>
- Google App Engine: <https://developers.google.com/appengine/>
- Gephi: Social Network Analysis and Visualization:
<https://gephi.org/>
- Netvizz: Facebook Netvizz app:
<https://apps.facebook.com/netvizz/>

Building iPhone Apps with HTML, CSS, and JavaScript: Making App Store Apps Without Objective-C or Cocoa,

Jonathan Stark, O'Reilly, 2010

Making App Store Apps Without Objective-C or Cocoa



Building

iPhone
Apps

with HTML, CSS, and JavaScript

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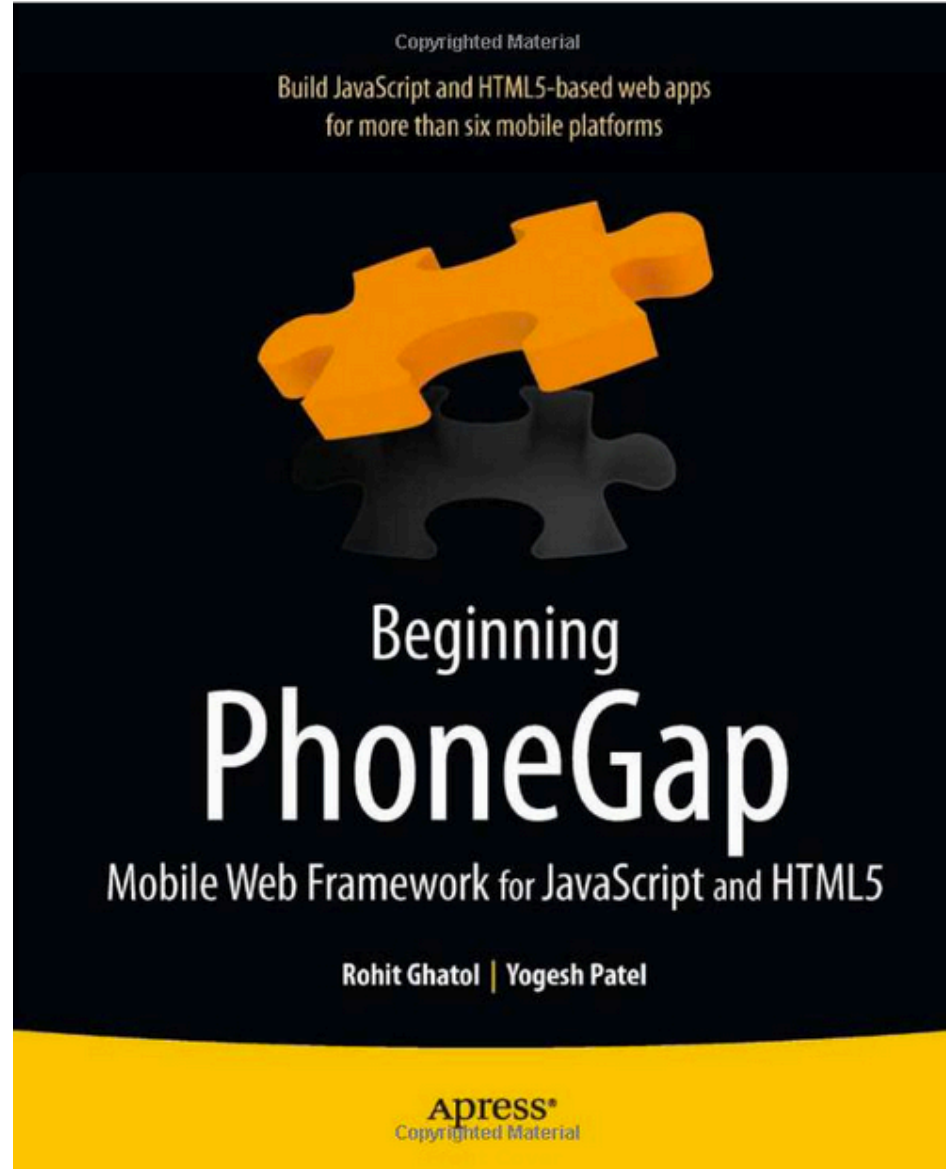
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Building Android Apps with HTML, CSS, and JavaScript: Making Native Apps with Standards-Based Web Tools,

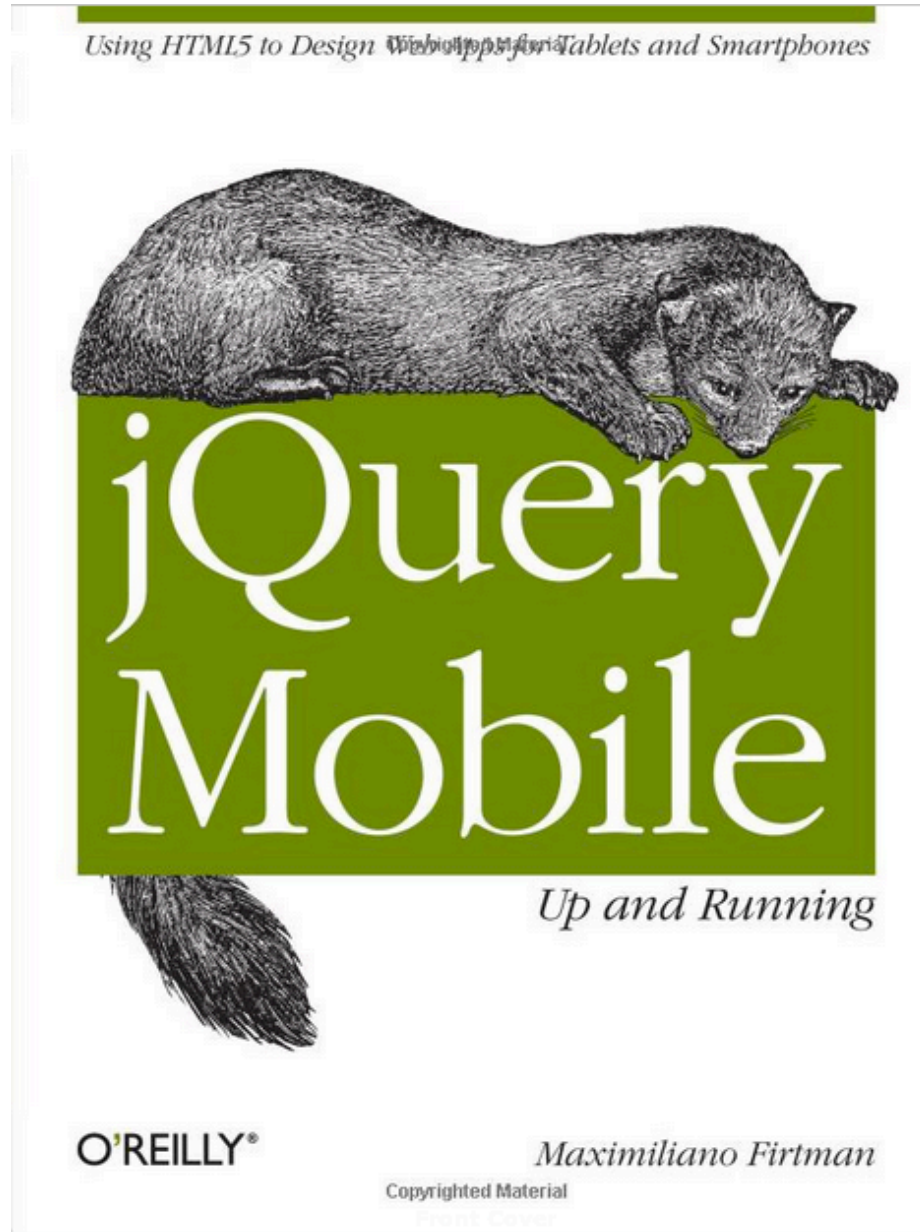
Jonathan Stark & Brian Jepson, O'Reilly, 2012



Rohit Ghatol and Yogesh Patel, Beginning PhoneGap: Mobile Web Framework for JavaScript and HTML5, Apress, 2012



Jon Reid, **jQuery Mobile**, O'reilly, 2012



Source: <http://www.amazon.com/jquery-Mobile-Running-Maximiliano-Firtman/dp/1449397654>

jQuery Mobile

<http://jquerymobile.com/>



Your donations help fund the continued development and growth of jQuery.

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Search



A Touch-Optimized Web Framework

jQuery Mobile is a HTML5-based user interface system designed to make responsive web sites and apps that are accessible on all smartphone, tablet and desktop devices.

Download jQuery Mobile

Custom download

Latest stable

Version 1.4.5

jQuery 1.8 - 1.11 / 2.1

Seriously cross-platform with HTML5

jQuery Mobile framework takes the "write less, do more" mantra to the next level: Instead of writing unique applications for each mobile device or OS, the jQuery mobile framework allows you to design a single highly-branded responsive web site or application that will work on all popular smartphone, tablet, and desktop platforms.

[Browser Support](#)



Developer Links

- [Source Code \(GitHub\)](#)
- jQuery Mobile Git (WIP Build)
 - [JavaScript](#)
 - [CSS](#)
- [Report an issue](#)
- [Browser Support](#)
- [Changelog](#)

PhoneGap

<http://phonegap.com/>



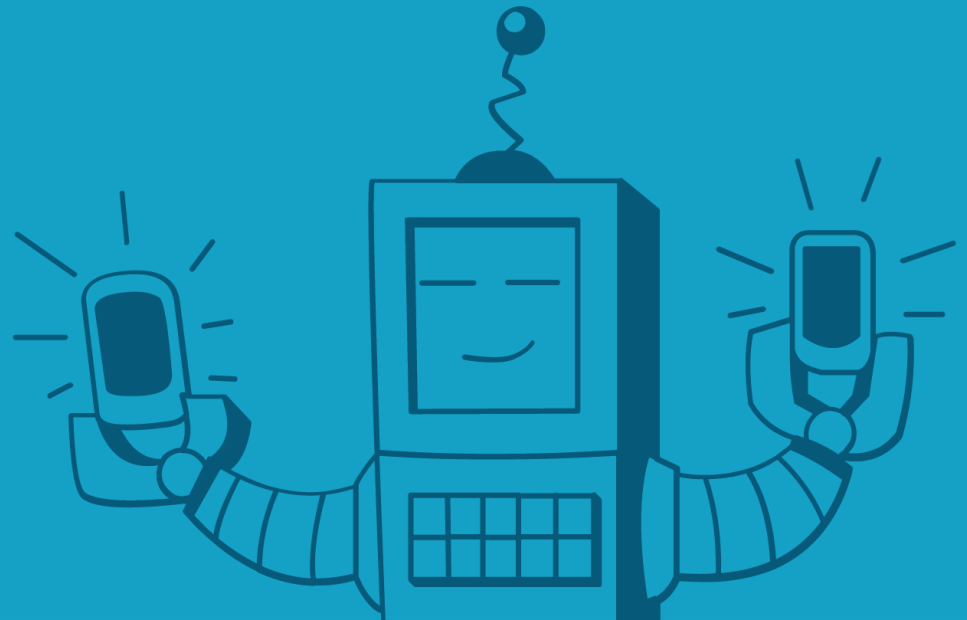
Adobe PhoneGap

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Build amazing mobile apps
powered by open web tech.

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Create your app with PhoneGap

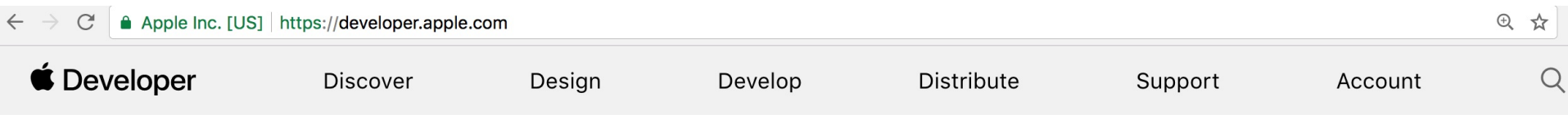
Reuse existing web development skills to quickly make hybrid applications built with HTML, CSS and JavaScript. Create experiences for multiple platforms with a single codebase so you can reach your audience no matter

Package your app in the cloud

PhoneGap Build takes the pain out of compiling PhoneGap apps. Get app-store ready apps without the headache of maintaining native SDKs. Our PhoneGap Build service does the work for you by compiling in the cloud.

Apple Developer

<https://developer.apple.com/>

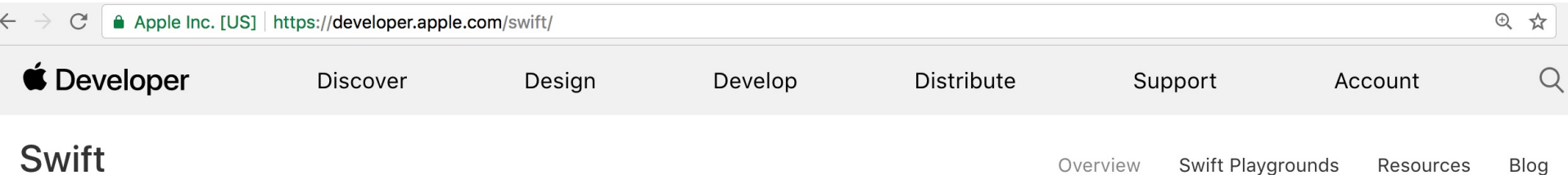


iPhone X

[Get your apps ready >](#)



Apple Swift for iOS



Swift 4

The powerful programming language that is also easy to learn.

Swift is a powerful and intuitive programming language for macOS, iOS, watchOS and tvOS. Writing Swift code is interactive and fun, the syntax is concise yet expressive, and Swift includes modern features developers love. Swift code is safe by design, yet also produces software that runs lightning-fast.

Android Developer

<http://developer.android.com/>

Secure | <https://developer.android.com/index.html>

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- TV
- Auto
- Chrome OS
- Things

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STORIES

Android 8.0 Oreo

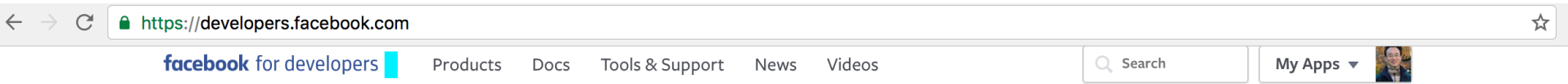
Smarter, faster, and more powerful than ever. The world's favorite cookie is your new favorite Android release.

> Learn more



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Facebook Developers



Connect on a global scale.
Build, grow and monetize your apps with Facebook



Facebook Login

Account Creation in
two taps



Sharing on Facebook

Promote your app or
website organically



Facebook Analytics for Apps

Understand how
people use your app



Mobile Monetization

Monetize your mobile
app or mobile website
with ads



Messenger Platform

Build your bot to
reach 1 billion people

<https://developers.facebook.com/>

Integrate Facebook with your native iOS apps



iOS

Integrate Facebook with your native iOS apps.

Facebook SDK for iOS

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Graph API

IOS SDK

Getting Started

Calling the Graph API

Errors

FAQ & Troubleshooting

Changelog

Upgrade Guide

iOS 9

Reference

Downloads

Deprecated

Android SDK

JavaScript SDK

PHP SDK

Unity SDK

Facebook SDK for iOS

Helps you build engaging social apps and get more installs.

Download the SDK

Includes Bolts, Audience Network, and Facebook frameworks. Requires iOS 7.

v4.6.0. See [Change Log](#) or [Upgrade Guide](#).

 [Read our iOS 9 guide](#)

 [Get Started on iOS](#)
Basics for iOS

 [SDK Reference Docs](#)
API Reference Docs



In iOS SDK

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[Related Resources](#)

In iOS SDK

Share

People on your app can [share](#), [send a message](#), or [like content](#) in your app. They can also share

Login

People can sign in to your app with their Facebook Login.


Integrate Facebook with your native Android apps.



Android

Integrate Facebook with your native Android apps.

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Android SDK

Getting Started

Calling the Graph API

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JavaScript SDK

PHP SDK

Unity SDK


Facebook SDK for Android


Helps you build engaging social apps and get more installs.


Download the SDK

Includes Audience Network, and Facebook packages. Requires Android API 15.

v4.6.0. See [Change Log](#) or [Upgrade Guide](#).

 **Get Started**
Basic guide for Android

 **SDK Reference Docs**
Reference Docs and sample code



In Android SDK

Other Resources

Login

Share

People can easily sign in to your app with their

People using your app can [share](#) or [send a](#)

Twitter Developers

<https://dev.twitter.com/>

The screenshot shows the Twitter Developers website. The browser's address bar displays <https://dev.twitter.com>. The page header includes the Twitter logo, a navigation menu with "/ Developers", a search bar, and links for "English" and "Sign in". The main content area features a dark blue background with a white Twitter bird logo. Below the logo, the text "#HelloWorld" is displayed in a large, white, sans-serif font, with the year "2016" in a smaller font underneath. The text "Learn how to build with the Twitter Platform" is centered below the year. A blue button labeled "View Event Locations" is positioned below the text. The footer contains four columns of text: "Build the Best Apps", "Tap into Twitter", "Gain Unique Insight", and "Tweets by @TwitterDev".

Twitter / Developers ▾ Search English ▾ Sign in

#HelloWorld
2016



Learn how to build with the
Twitter Platform

View Event Locations

Build the Best Apps Tap into Twitter Gain Unique Insight Tweets by @TwitterDev

Google Cloud Platform


← → ↻ <https://cloud.google.com> ☆


 Google Cloud Platform 🔍 Search [Console](#) 

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Analyze sentiment and entities with the Google Cloud NL API.


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Google Cloud Storage

Why you should add cloud storage to your data protection strategy.

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Google App Engine

← → ↻ <https://cloud.google.com/appengine/> ☆

 Google Cloud Platform

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Console



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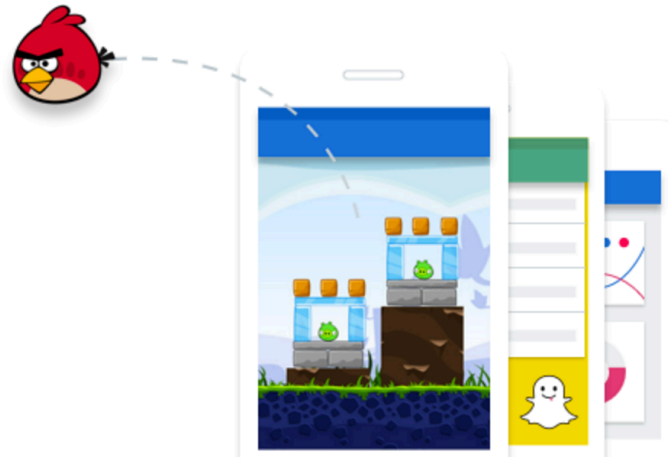
APP ENGINE

A powerful platform to build web and mobile apps that scale automatically

TRY IT FREE

Build Apps, Scale Automatically


Google App Engine is a platform for **building scalable web applications and mobile backends**. App Engine provides you with built-in services and APIs such as **NoSQL datastores, memcache, and a user authentication API**, common to most applications.




<https://cloud.google.com/appengine/>

Google Cloud Datastore

← → ↻ <https://cloud.google.com/datastore/> ☆

 Google Cloud Platform

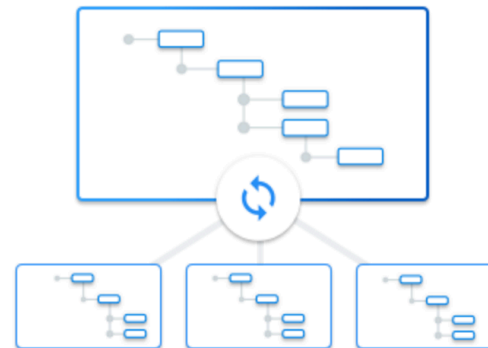
Why Google Products Solutions Launcher Pricing Customers Documentation Support Partners [Try It Free](#) [Contact Sales](#)

 **CLOUD DATASTORE**
Cloud Datastore is a highly-scalable NoSQL database for your web and mobile applications

[TRY IT FREE](#)

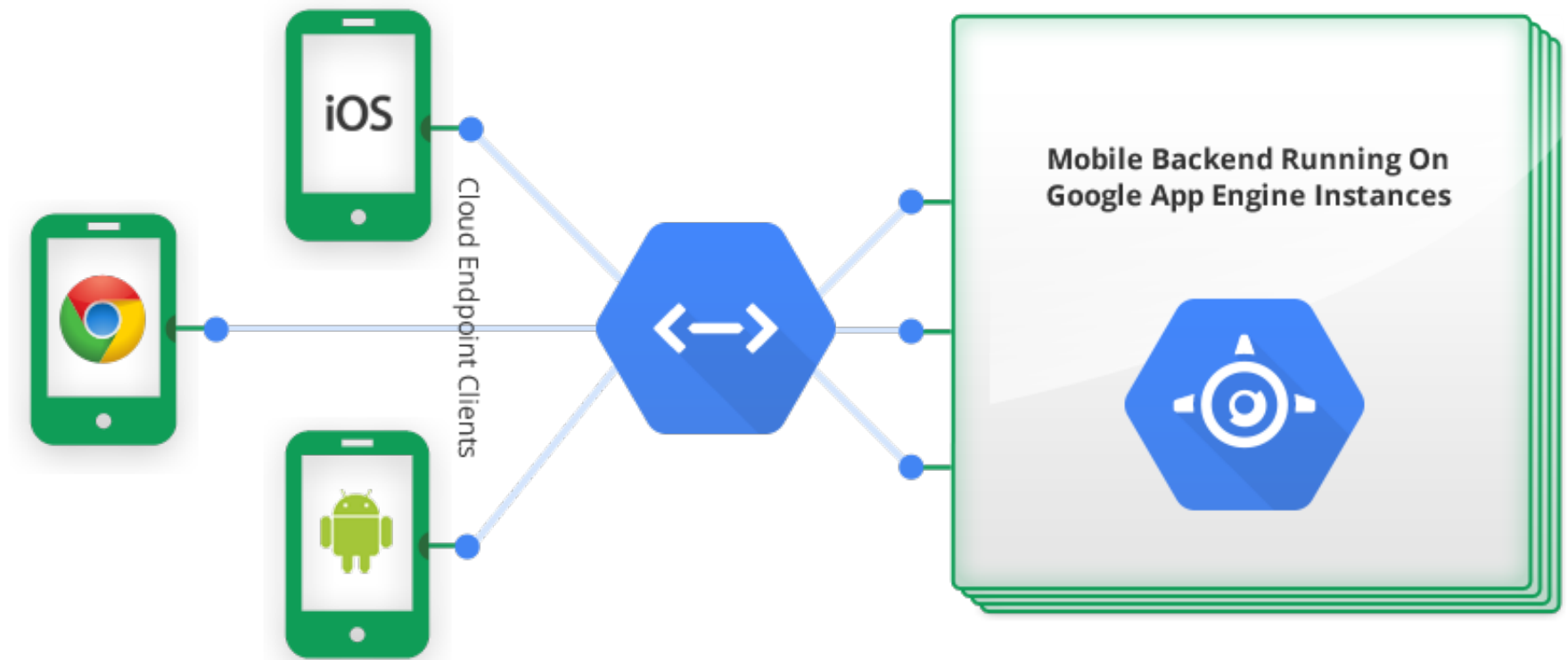
Highly Scalable NoSQL Database

Cloud Datastore is a highly-scalable NoSQL database for your applications. Cloud Datastore **automatically handles sharding and replication**, providing you with a highly available and durable database that scales automatically to handle your applications' load. Cloud Datastore provides a myriad of capabilities such as **ACID transactions, SQL-like queries, indexes and much more.**



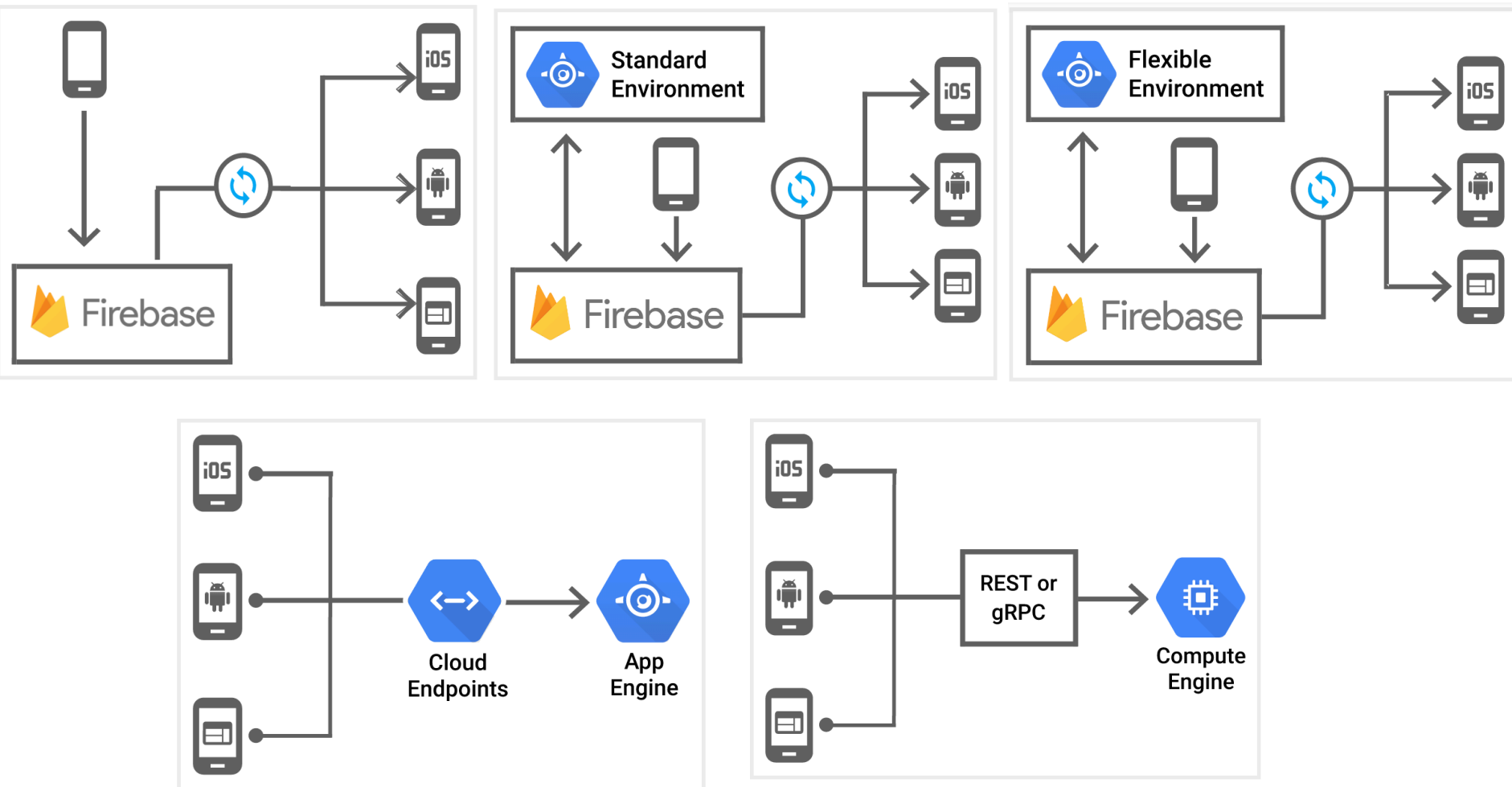
<https://cloud.google.com/datastore/>

Google Cloud Endpoints

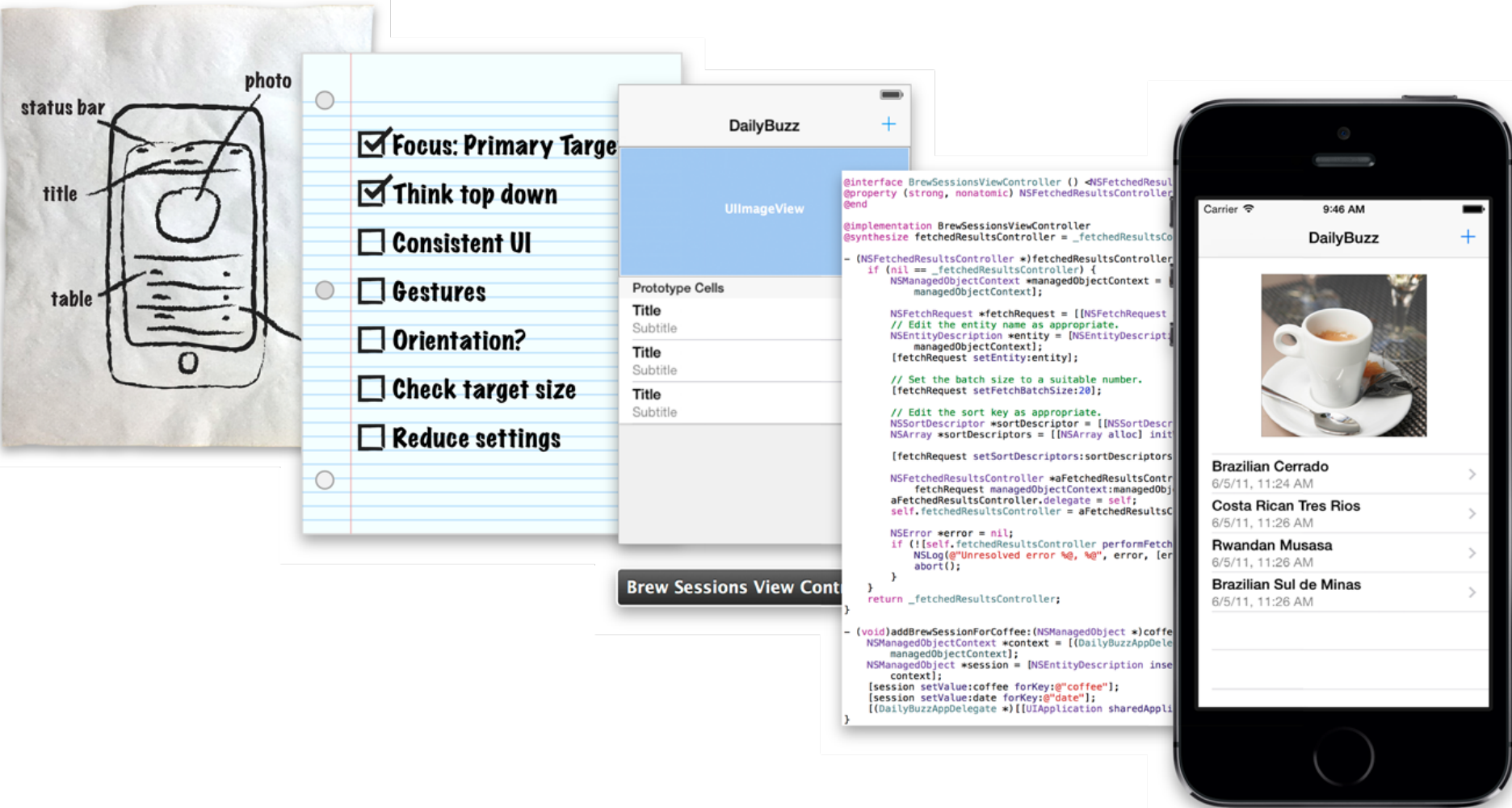




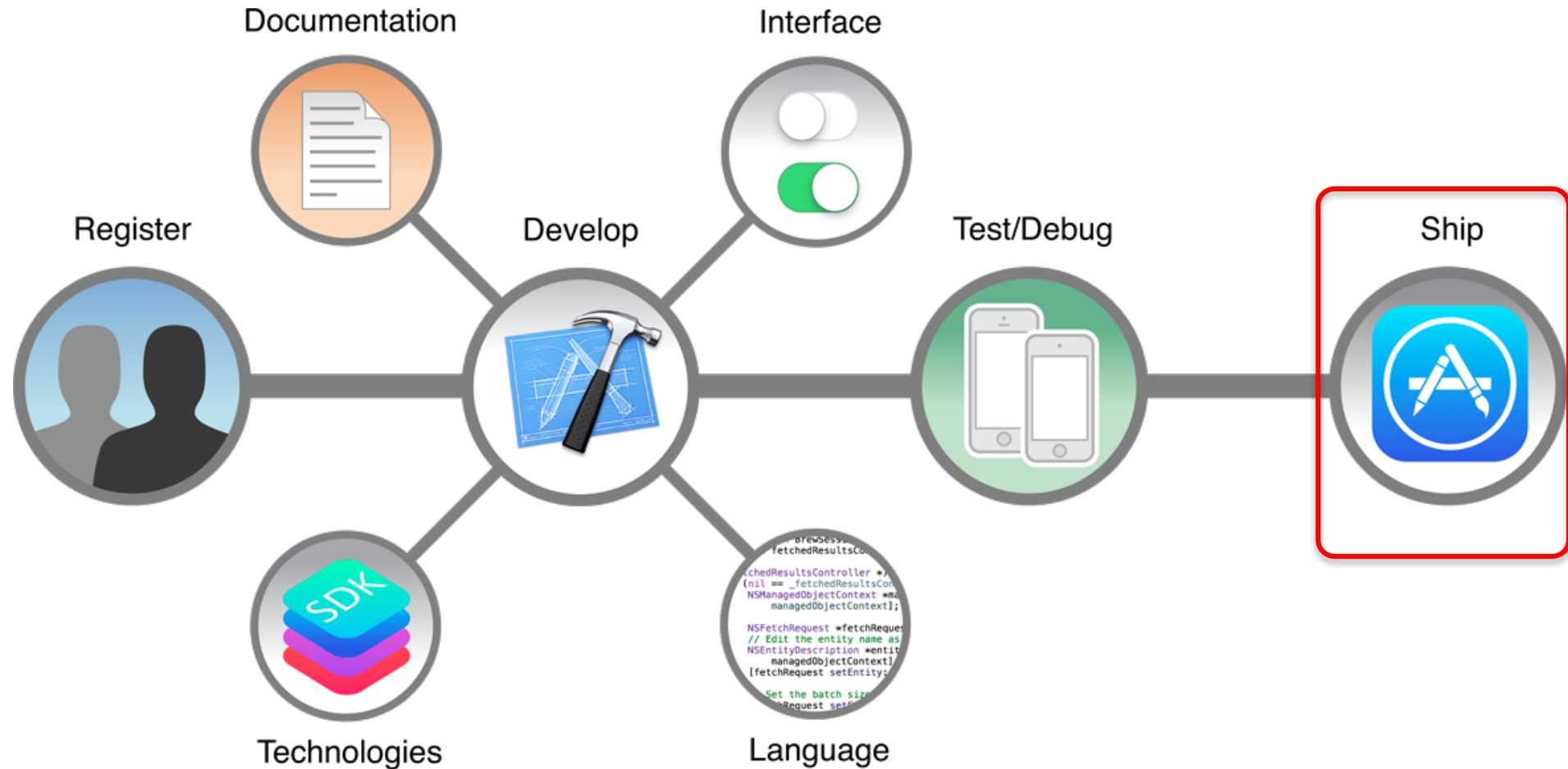
Mobile App Backend Services



iOS App Development Process




Apps Development Life Cycle



Gephi: Social Network Analysis and Visualization: <https://gephi.org/>

Gephi, an open source gra

← → ↺ <https://gephi.org>



Gephi
makes graphs handy

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The Open Graph Viz Platform

Gephi is an interactive visualization and exploration platform for all kinds of networks and complex systems, dynamic and hierarchical graphs.

Runs on Windows, Linux and Mac OS X. Gephi is open-source and free.

[Learn More on Gephi Platform »](#)



Download FREE
Gephi 0.8.2-beta

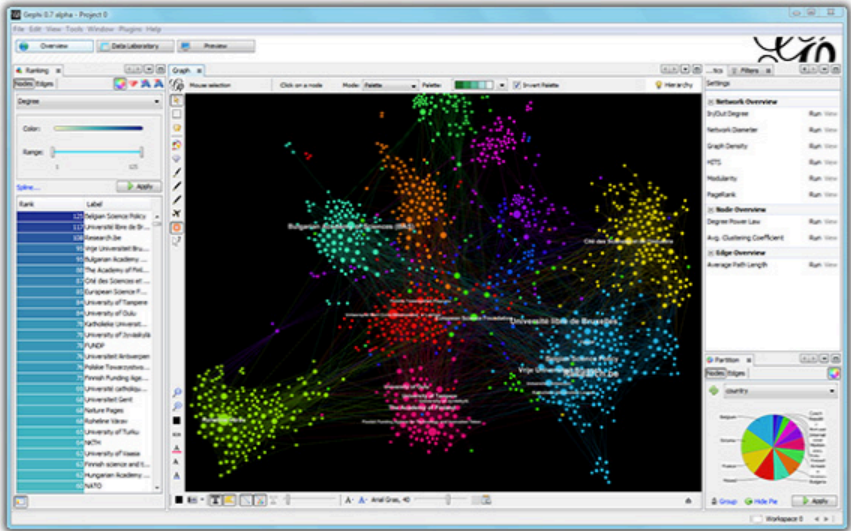
[Release Notes](#) | [System Requirements](#)

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► **Quick start**


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APPLICATIONS

- ✓ **Exploratory Data Analysis:** intuition-oriented analysis by networks manipulations in real time.
- ✓ **Link Analysis:** revealing the underlying structures of associations between objects, in particular in scale-free networks.

“Like Photoshop™ for graphs.

— the Community

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PAPERS



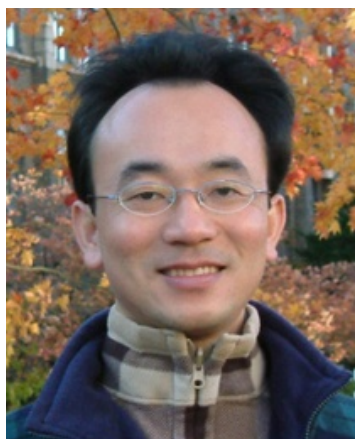
Summary

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 - Twitter API,
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Social Media Apps Programming

Contact



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Tamkang University](#)

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Web: <http://mail.tku.edu.tw/myday/>

