

Social Media Apps Programming

Case Study on Social Media Apps Programming and Marketing in Google Play and App Store

1021SMAP09 TLMXM1A (8687) (M2143) (Fall 2013) (MIS MBA) (2 Credits, Elective) [Full English Course] Thu 9,10 (16:10-18:00) V201



Min-Yuh Day, Ph.D. Assistant Professor

<u>Department of Information Management</u>
Tamkang University

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



Course Schedule (1/3)

Week Date Subject/Topics 1 2013/09/19 Mid-Autumn Festival (Day off) 2013/09/26 Course Orientation and Introduction to Social Media and Mobile Apps Programming 2013/10/03 Introduction to Android / iOS Apps **Programming** 4 2013/10/10 Double Tenth Day (Day off) • 5 2013/10/17 Developing Android Native Apps with Java (Eclipse) (MIT App Inventor)

with Objective-C (Xcode)

2013/10/24

Developing iPhone / iPad Native Apps

Course Schedule (2/3)

```
Week Date Subject/Topics
```

- 7 2013/10/31 Mobile Apps using HTML5/CSS3/JavaScript
- 8 2013/11/07 jQuery Mobile
- 9 2013/11/14 Create Hybrid Apps with PhoneGap
- 10 2013/11/21 Midterm Exam Week (Midterm Project Report)
- 11 2013/11/28 jQuery Mobile/Phonegap
- 12 2013/12/05 Invited Talk:

Social, Mobile and Business Model in PIXNET

[Invited Speaker: Dr. Rick Cheng-Yu Lu]

Course Schedule (3/3)

```
Week Date Subject/Topics
      2013/12/12 Case Study on Social Media Apps
                   Programming and Marketing in Google Play
                   and App Store
     2013/12/19 Google App Engine and Google Map API
      2013/12/26 Facebook API (Facebook JavaScript SDK)
                   (Integrate Facebook with iOS/Android Apps)
      2014/01/02
  16
                   Twitter API
  17 2014/01/09 Final Project Presentation
      2014/01/16 Final Exam Week (Final Project Report)
  18
```

Outline

- Case Study on
 Social Media Apps
 Programming and Marketing in Google Play and App Store
 - Business Model
 - Apps Development Life Cycle
 - Programming
 - Marketing





Android /iOS Apps Programming

Native Apps

Hybrid Apps

Mobile Web Apps











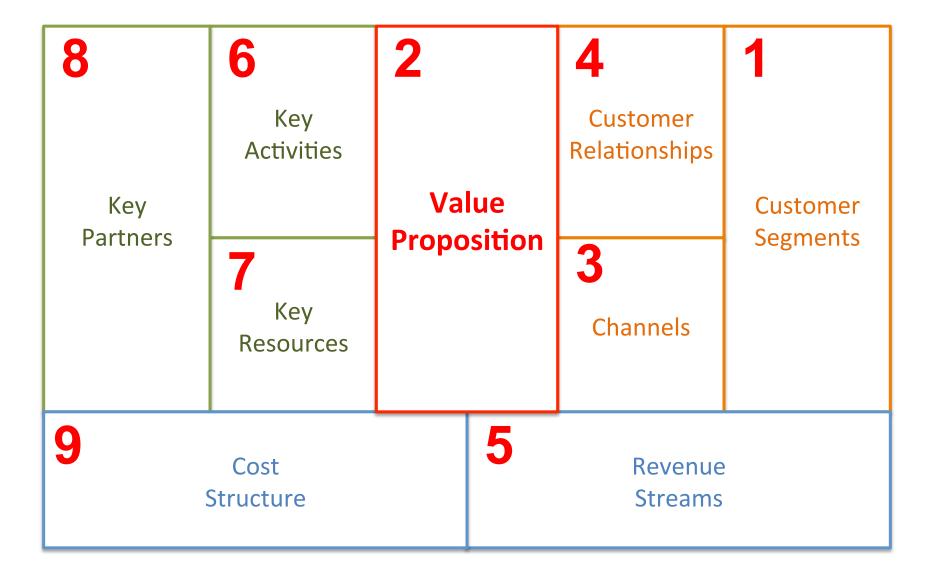








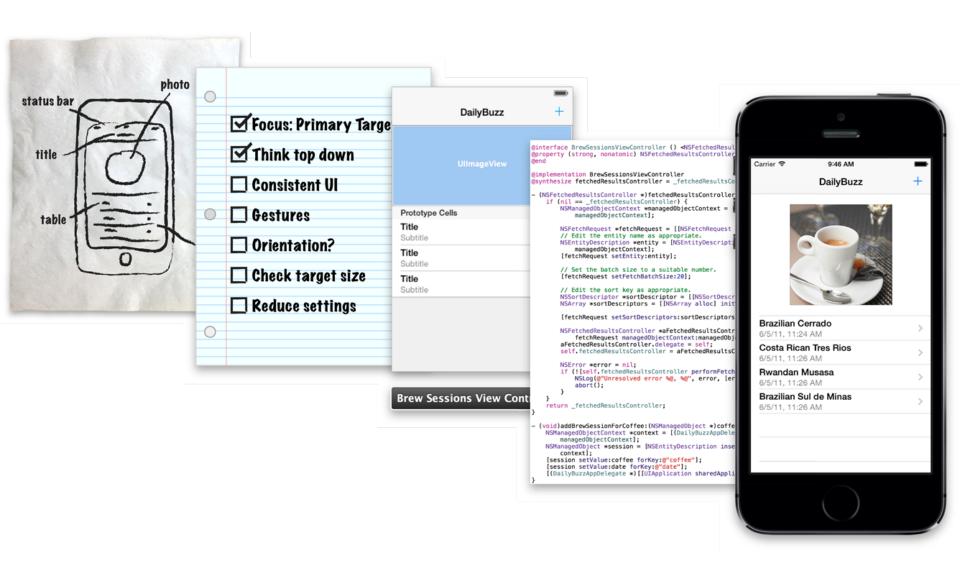
Business Model



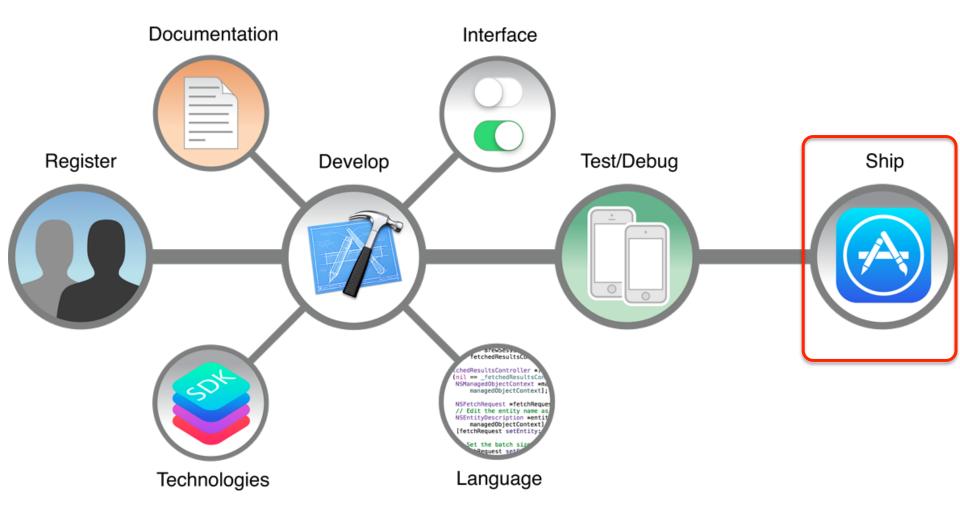
Mobile Apps Marketing

- Push Notifications
- Loyalty Cards
- Click to Call
- GPS Coupons and Deals
- QR Code Coupons
- GPS Directions
- Check-In Rewards

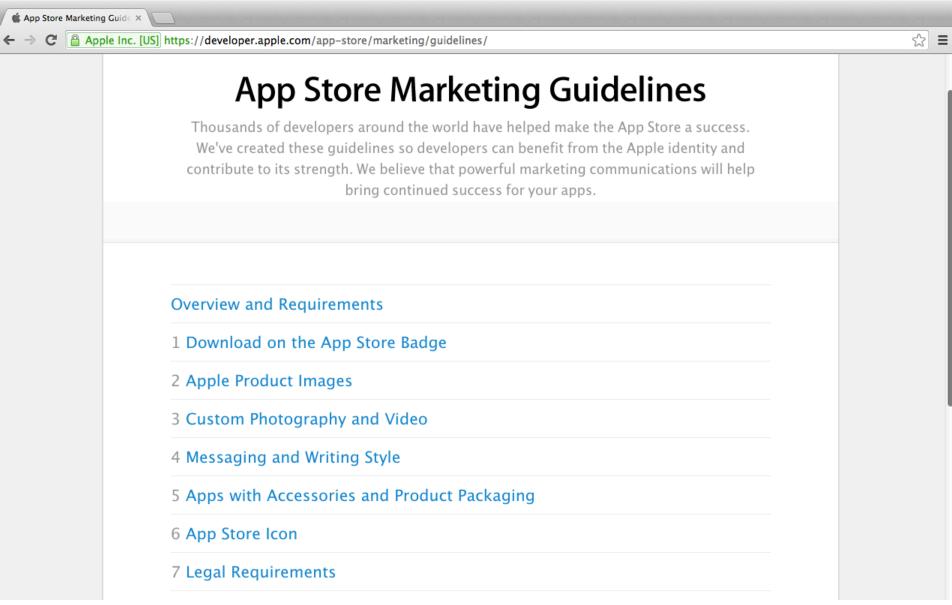
iOS App Development Process



Apps Development Life Cycle



App Store Marketing



App Marketing

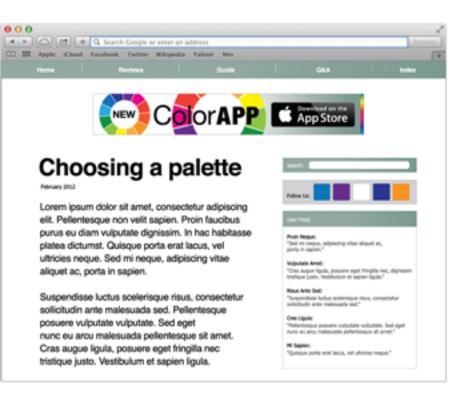


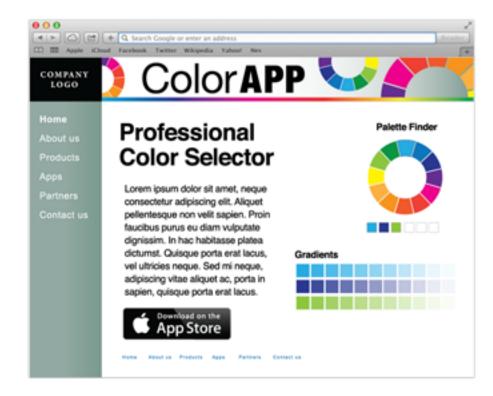




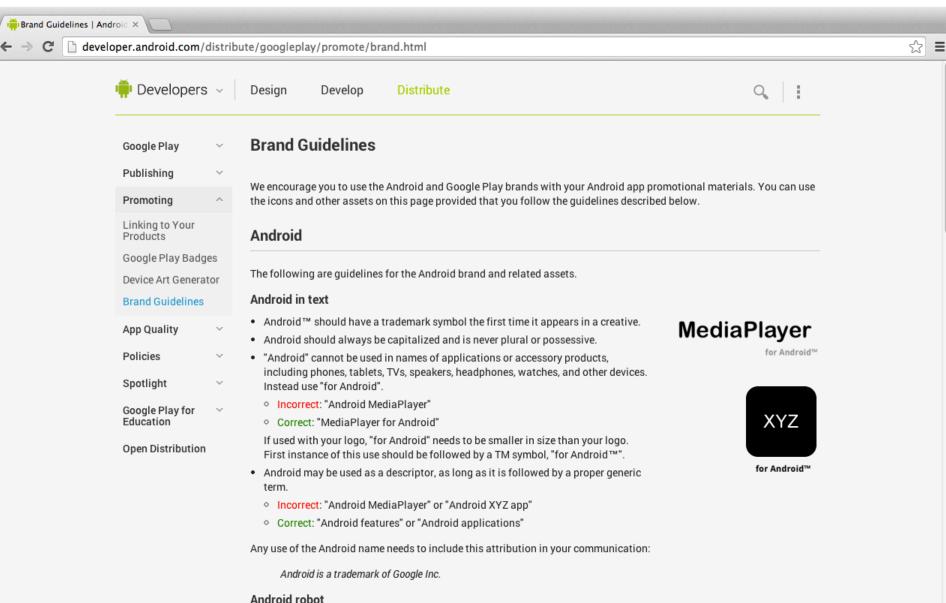
Web Marketing







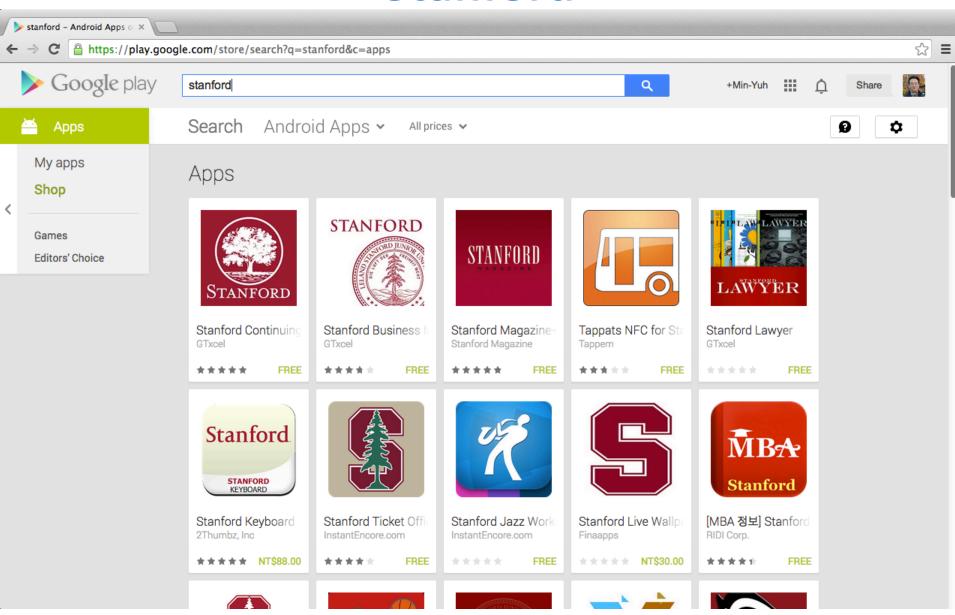
Google Play Brand Guidelines



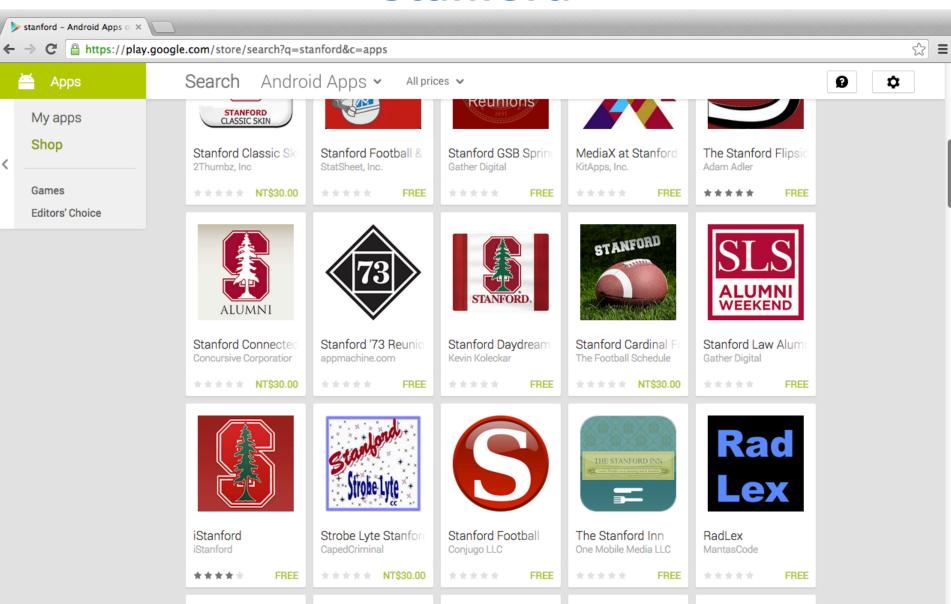
Case Study on Google Play



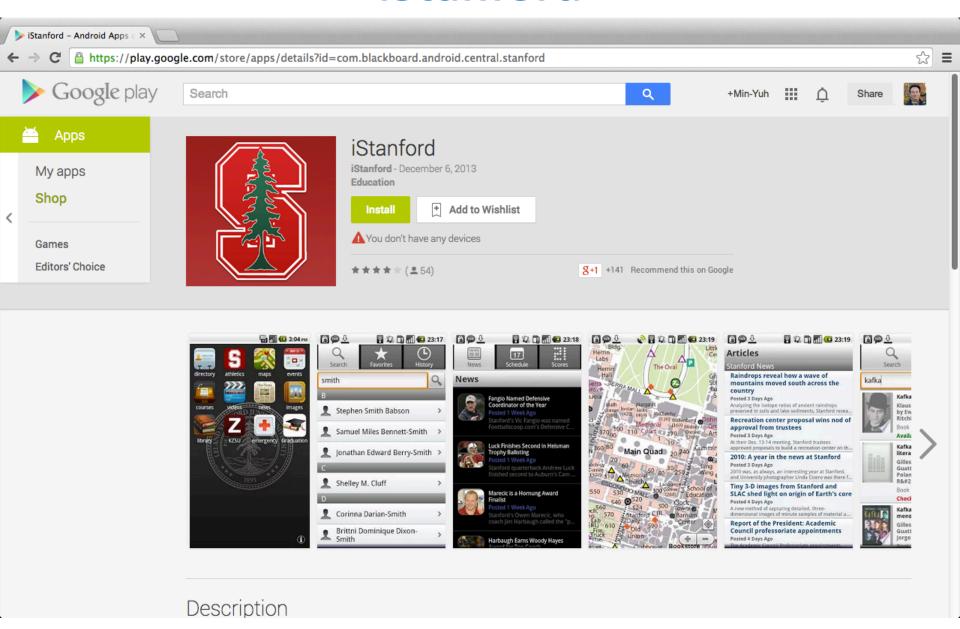
Stanford



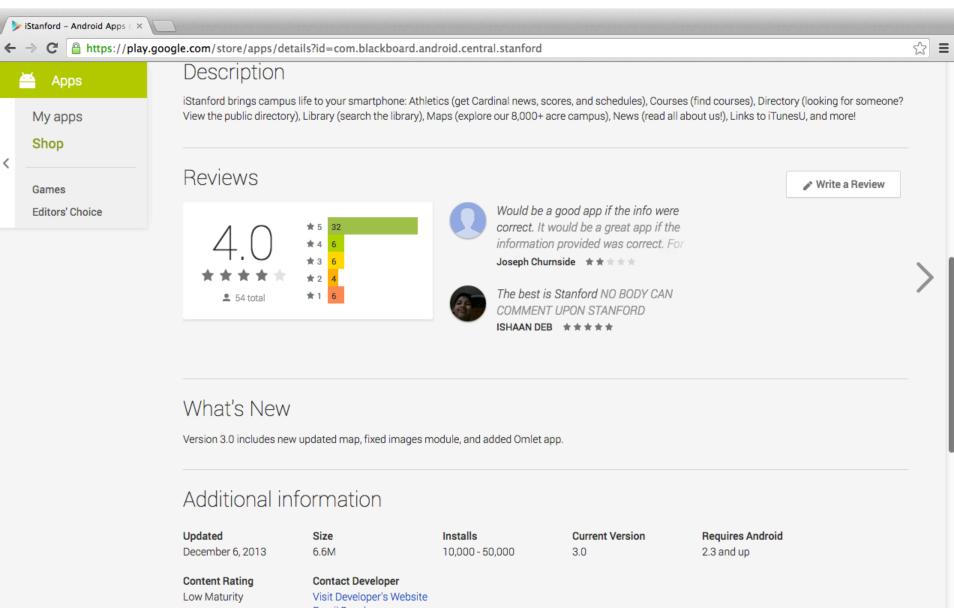
Stanford



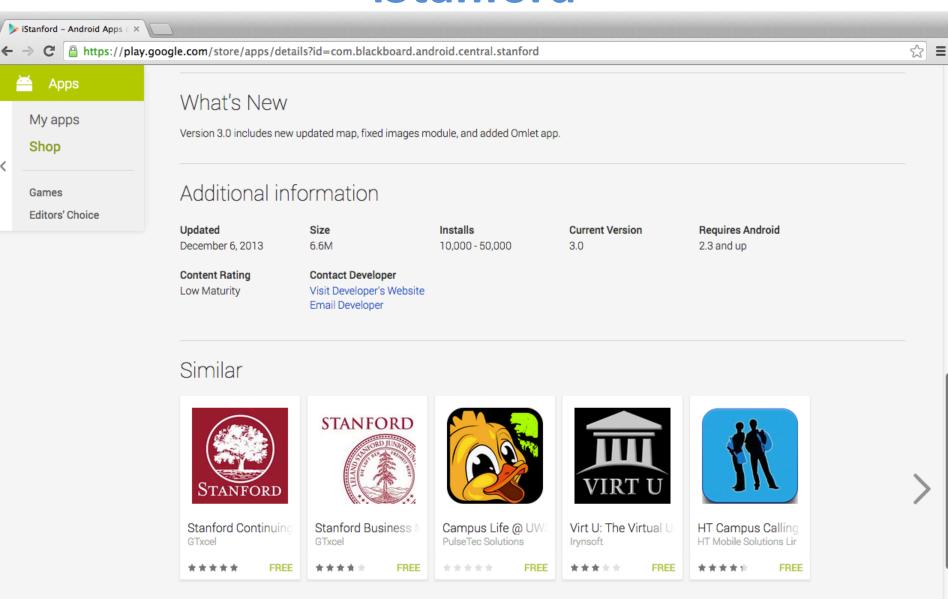
iStanford



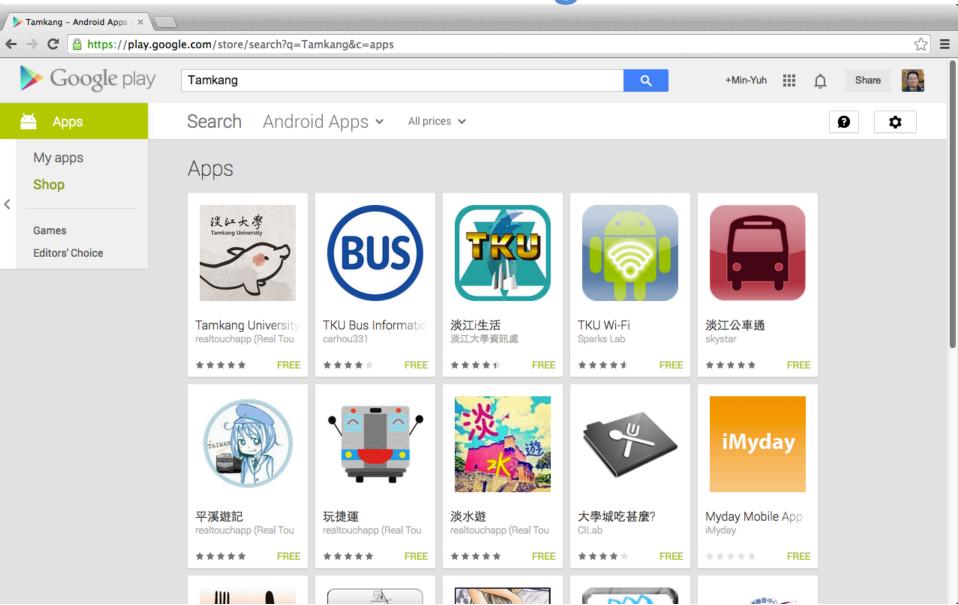
iStanford



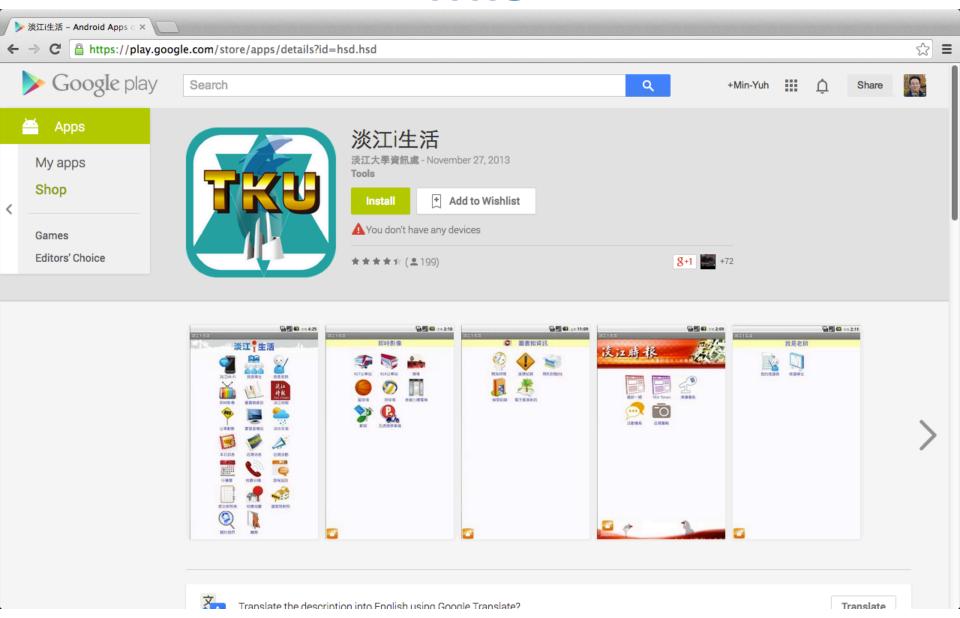
iStanford



Tamkang



iTKU



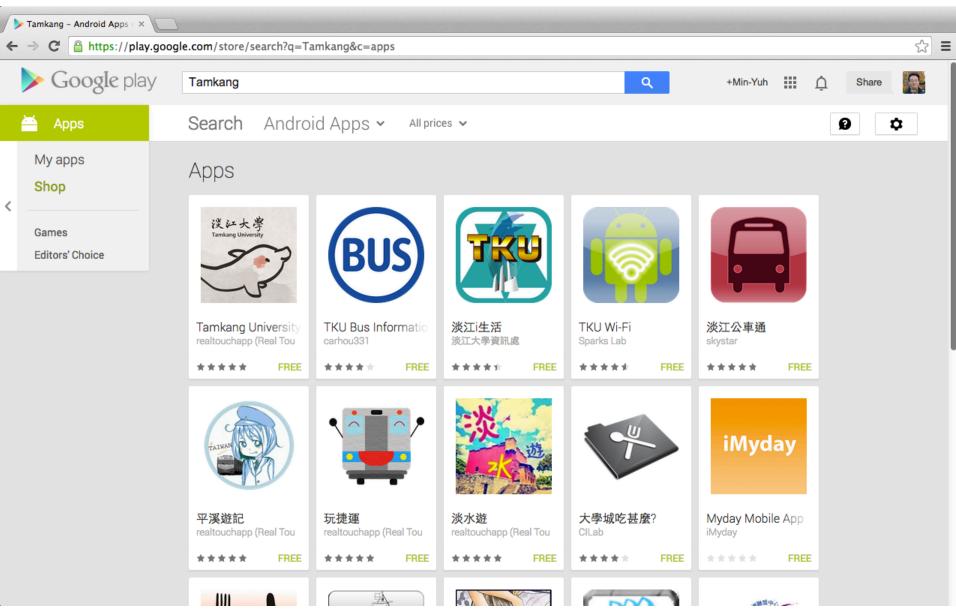
iTKU



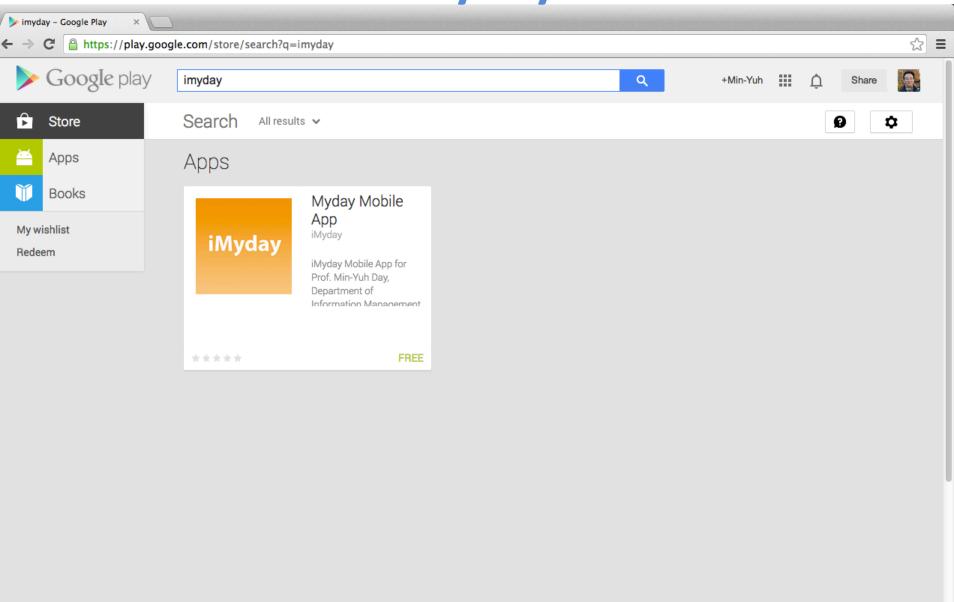




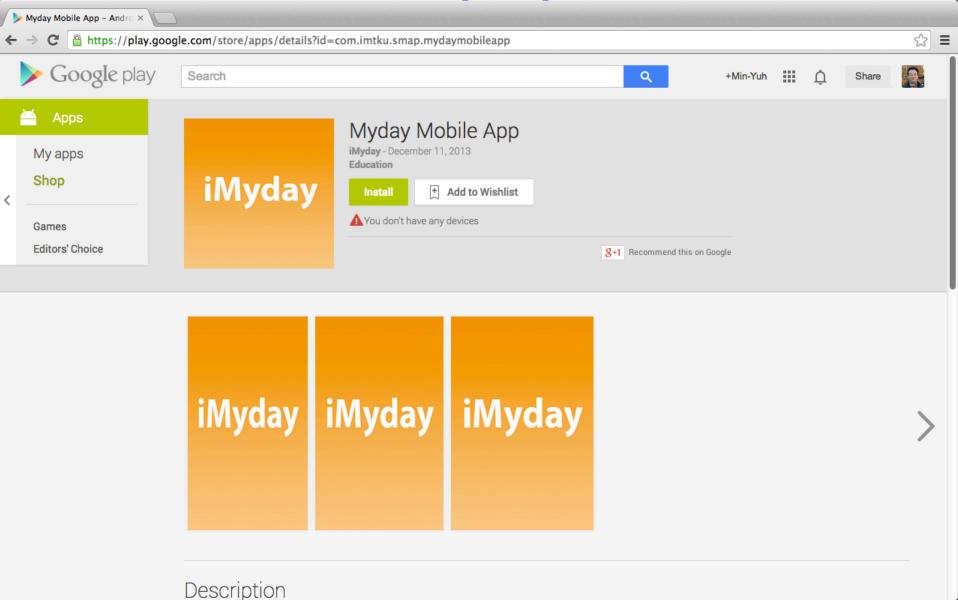




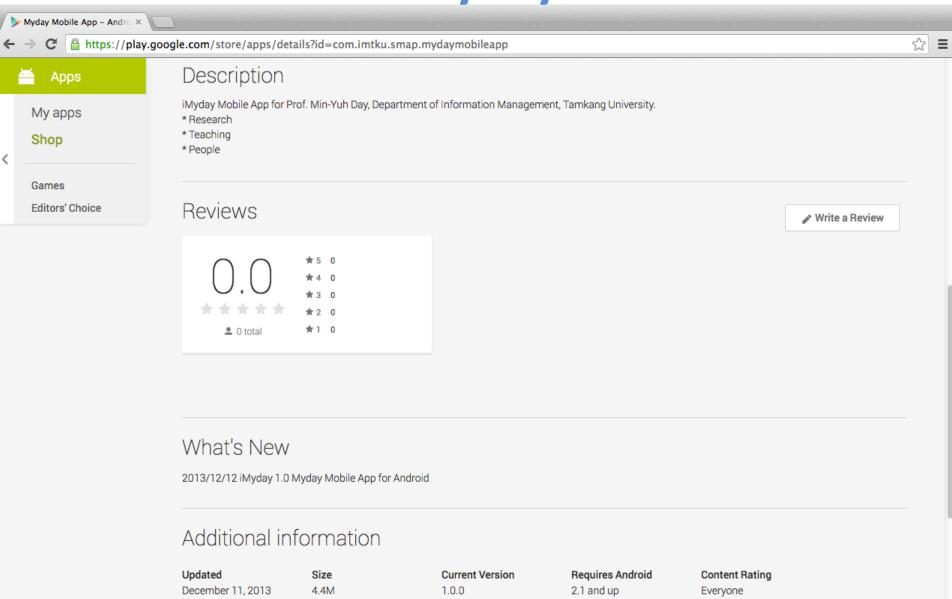
iMyday



iMyday



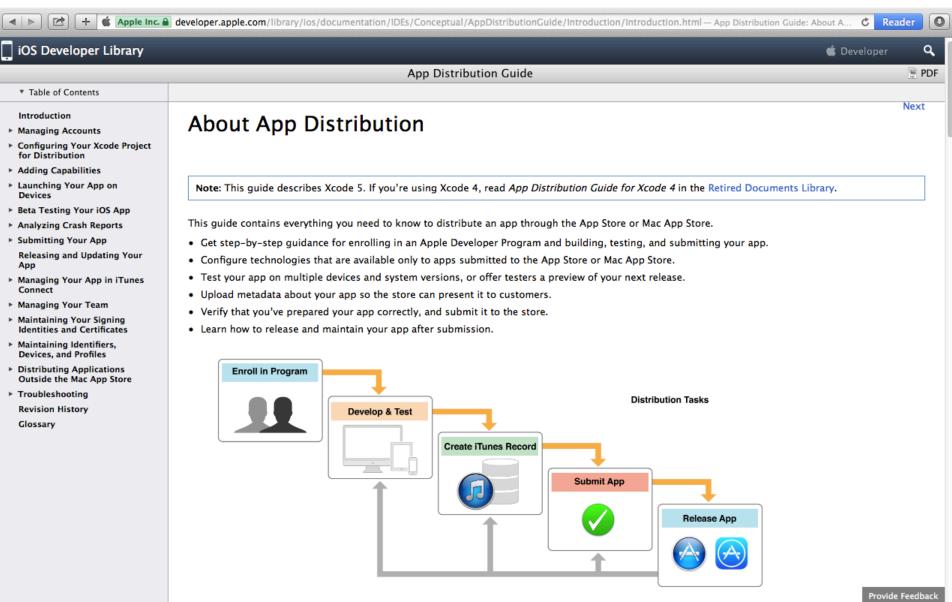
iMyday



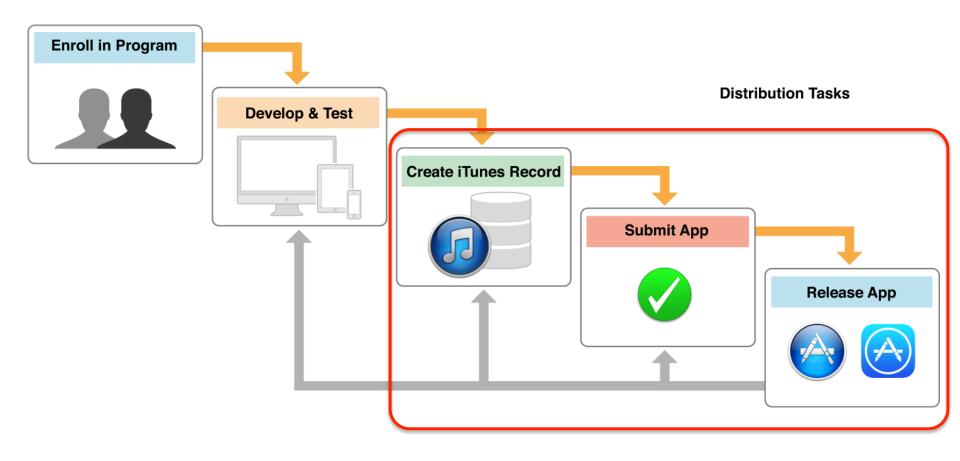
PhoneGap iOS: App Store Android: Google Play

- provide the correct certificates
- signing keys to allow distribution

iOS App Distribution on App Store



Submit and Release iOS App on App Store



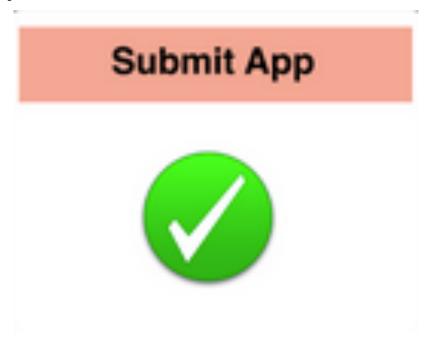
App Metadata

 Upload metadata about your app so the store can present it to customers.



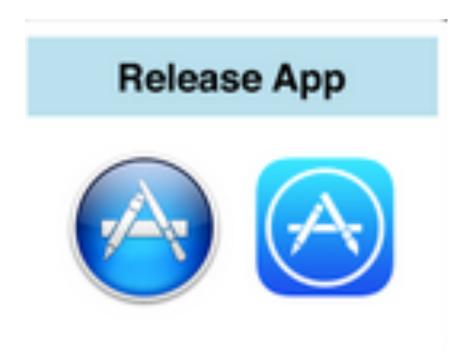
Submit App to App Store

 Verify that you've prepared your app correctly, and submit it to the store



Release App

 release and maintain your app after submission



Choosing an iOS Developer Program



iOS Developer Program (\$99/year)

Select this program if you would like to distribute apps on the App Store as an individual, sole proprietor, company, organization, government entity or educational institution.

Learn more





iOS Developer Enterprise Program (\$299/year)

Select this program if you would like to develop proprietary apps for internal distribution within your company, organization, government entity or educational institution.

Learn more

Enroll Now



iOS Developer University Program (Free)

Select this program if you are a degree granting, higher education institution that would like to introduce iOS development into your curriculum.

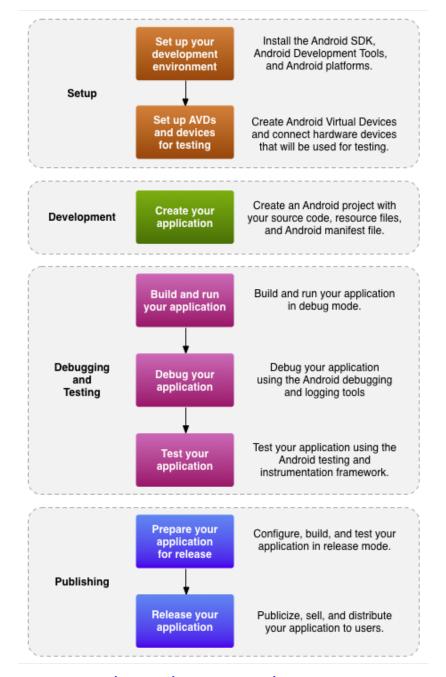
Learn more >

Enroll Now

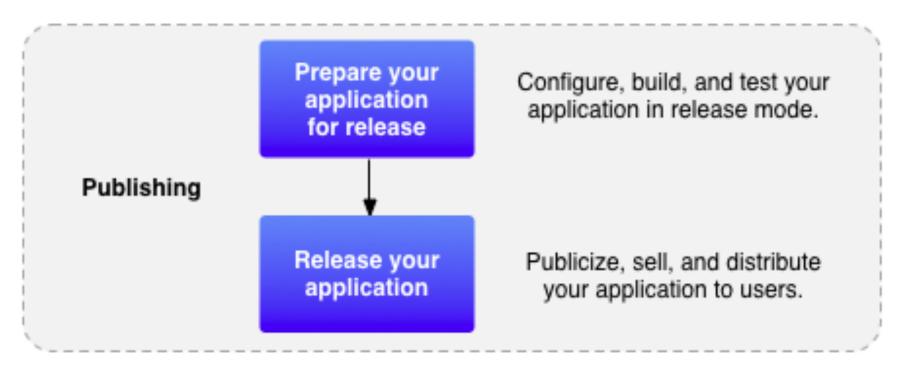
Compare iOS Developer Programs

	iOS Developer For individuals and organizations creating apps for distribution on the App Store. Learn more ▶	iOS Developer Enterprise For companies and organizations distributing proprietary apps for internal use. Learn more ▶	iOS Developer University For higher education institutions introducing iOS app development into their curriculum. Learn more
ios sdk	✓	✓	✓
iOS SDK (Pre-release)	✓	✓	N/A
Test apps on iOS devices	✓	✓	✓
Code-level Technical Support	✓	✓	N/A
Ad Hoc Distribution	✓	✓	N/A
App Store Distribution	✓	N/A	N/A
Custom B2B App Distribution	✓	N/A	N/A
iAd Network	✓	N/A	N/A
In-house Distribution	N/A	✓	N/A
Cost	\$99 year	\$299 year	Free
Requirements	If you're enrolling as an organization, a D-U-N-S Number registered to your legal entity is required.	A D-U-N-S Number registered to your legal entity is required.	The University Program is only available to qualified, degree granting, higher education institutions.

The development process for Android applications

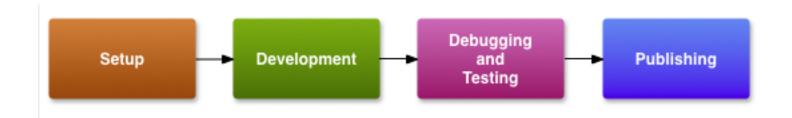


Publishing process for Android applications

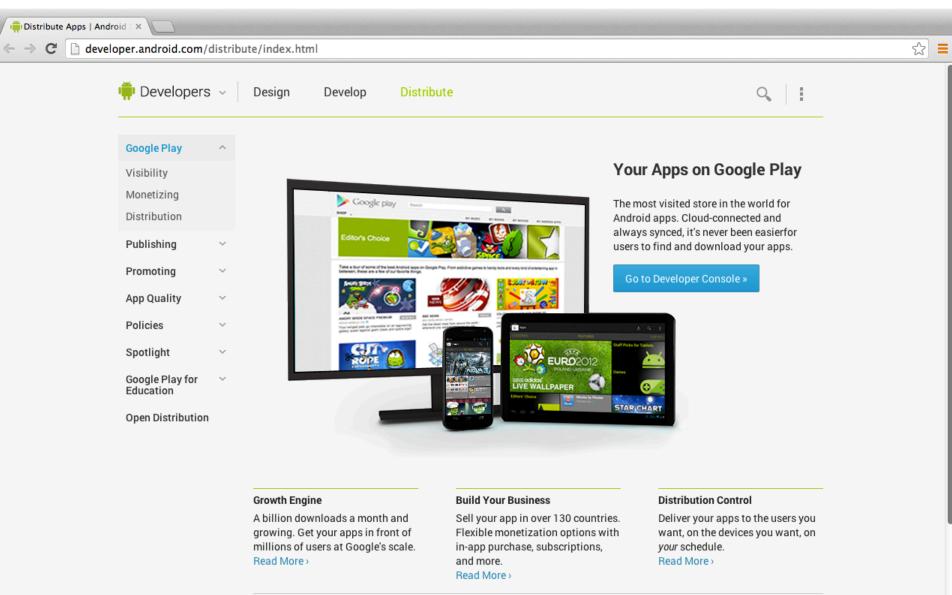




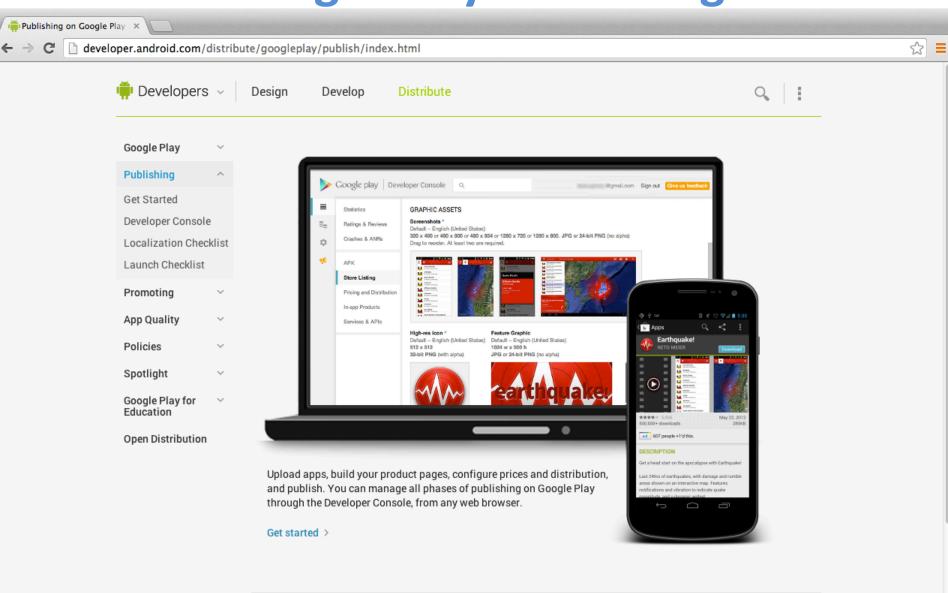
Publishing is the last phase of the Android application development process



Distribute Your Apps on Google Play



Google Play Publishing



Launch Checklist for publish your app on Google Play

- 1. Understand the publishing process
- 2. Understand Google Play policies
- 3. Test for core app quality
- 4. Determine your content rating
- 5. Determine country distribution
- 6. Confirm the app's overall size
- 7. Confirm app compatibility ranges

Launch Checklist for publish your app on Google Play

- 8. Decide on free or priced
- 9. Consider In-app Billing
- 10. Set prices for your apps
- 11. Start localization early
- 12. Prepare promotional graphics
- 13. Build the release-ready APK
- 14. Plan a beta release

Launch Checklist for publish your app on Google Play

- 15. Complete the product details
- 16. Use Google Play badges
- 17. Final checks and publishing
- 18. Support users after launch







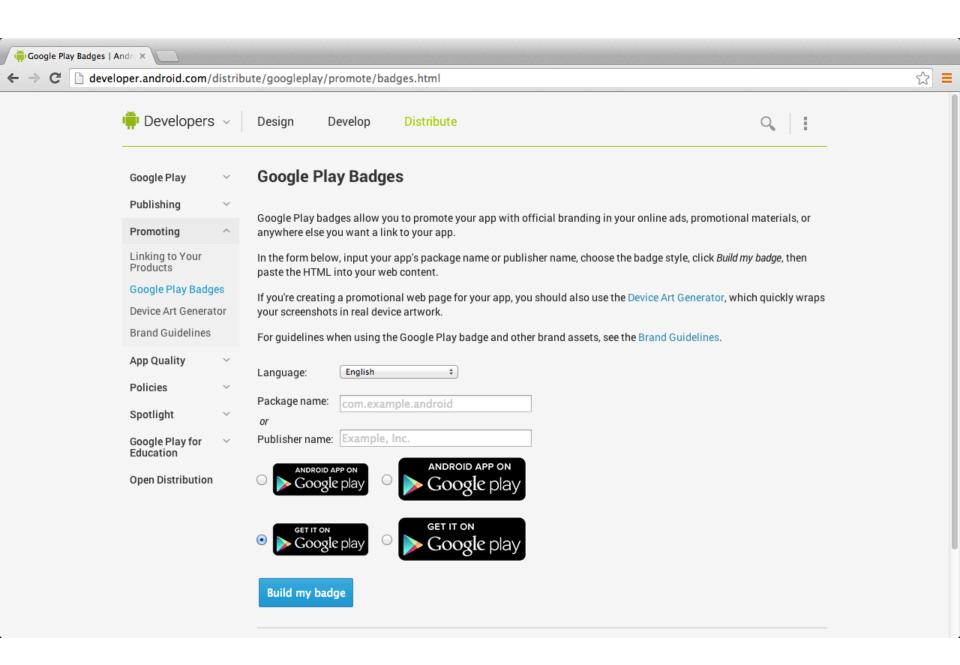
Nexus 5 5" @ XXHDPI 7" @ XHDPI 1080x1920



Nexus 7 1200x1920 67% size output

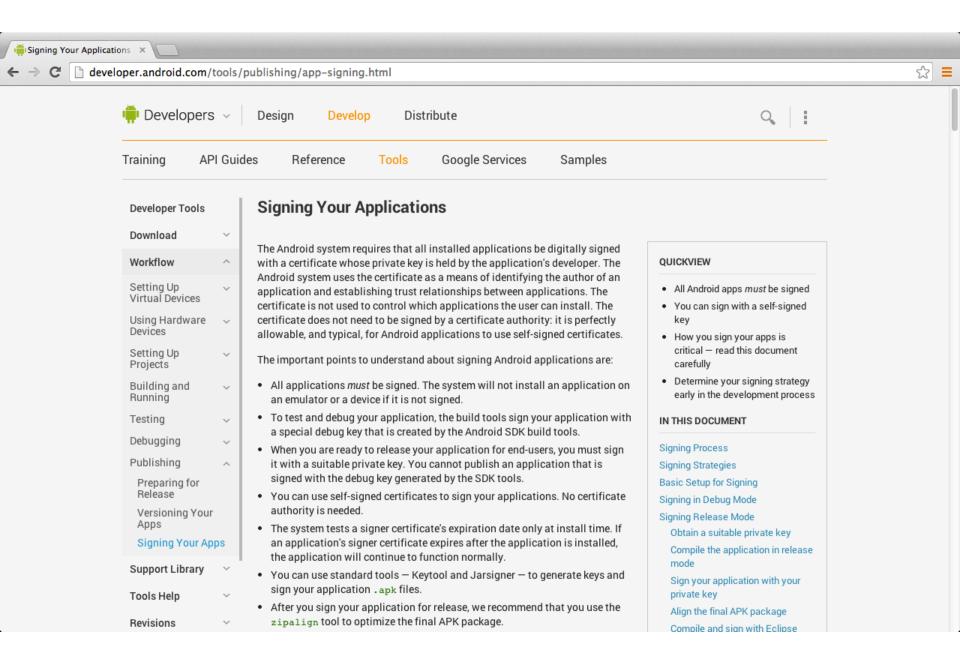


Nexus 10 10" @ XHDPI 1600x2560 50% size output



Keytool

- Keytool
 - To generate a keystore and private key, used to sign your .apk file.
 - Keytool is part of the JDK.
- Jarsigner (or similar signing tool)
 - To sign your .apk file with a private key generated by Keytool.
 - Jarsigner is part of the JDK.



Android: Signing in Release Mode

- 1. Obtain a suitable private key
- 2. Compile the application in release mode
- 3. Sign your application with your private key
- 4. Align the final APK package

```
$ keytool -genkey -v -keystore
my-release-key.keystore
-alias alias_name -keyalg RSA -keysize
2048 -validity 20000
```

Android: Signing in Release Mode

```
keytool -genkey -v -keystore
my_release_key.keystore
-alias my_android -keyalg RSA
-validity 20000
```

```
keytool -genkey -v -keystore
my-release-key.keystore
-alias alias_name -keyalg RSA -keysize
2048 -validity 20000
```

Applications/Utilities/Terminal.app

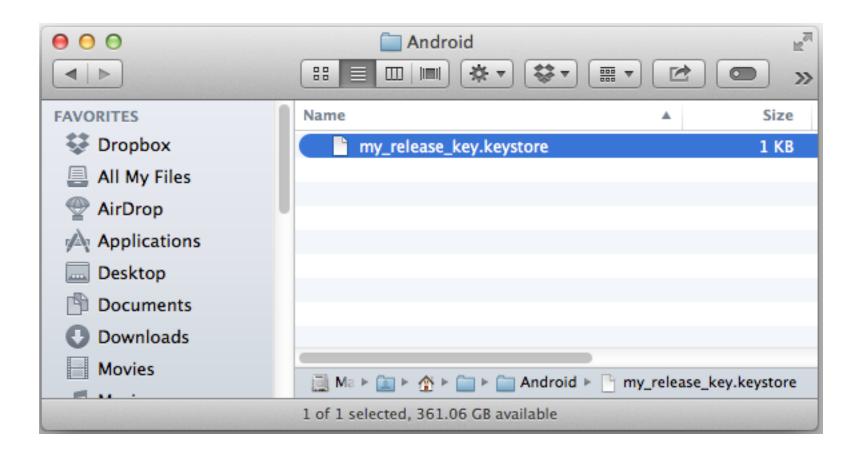
```
Macintosh HD ►  Applications ►  Utilities ►  Terminal.app
```

```
\Theta \Theta \Theta
                                                      ♠ imvdav — bash — 132×24
iMydaytekiMacBook-Pro:~ imyday$ keytool -genkey -v -keystore my_release_key.keystore -alias my_android -keyalg RSA -validity 20000
Enter keystore password:
Re-enter new password:
What is your first and last name?
  [Unknown]: Min-Yuh Day
What is the name of your organizational unit?
  [Unknown]: IMTKU
What is the name of your organization?
  [Unknown]: TKU
What is the name of your City or Locality?
  [Unknown]: Taipei
What is the name of your State or Province?
  [Unknown]: Taiwan
What is the two-letter country code for this unit?
  [Unknown]: TW
Is CN=Min-Yuh Day, OU=IMTKU, O=TKU, L=Taipei, ST=Taiwan, C=TW correct?
  [no]: v
Generating 1,024 bit RSA key pair and self-signed certificate (SHA1withRSA) with a validity of 20,000 days
        for: CN=Min-Yuh Day, OU=IMTKU, O=TKU, L=Taipei, ST=Taiwan, C=TW
Enter key password for <mv_android>
        (RETURN if same as keystore password):
[Storing my_release_key.keystore]
iMydaytekiMacBook-Pro:~ imyday$ ■
```

```
keytool -genkey -v
```

- -keystore my_release_key.keystore
- -alias my_android
- -keyalg RSA -validity 20000

my_release_key.keystore



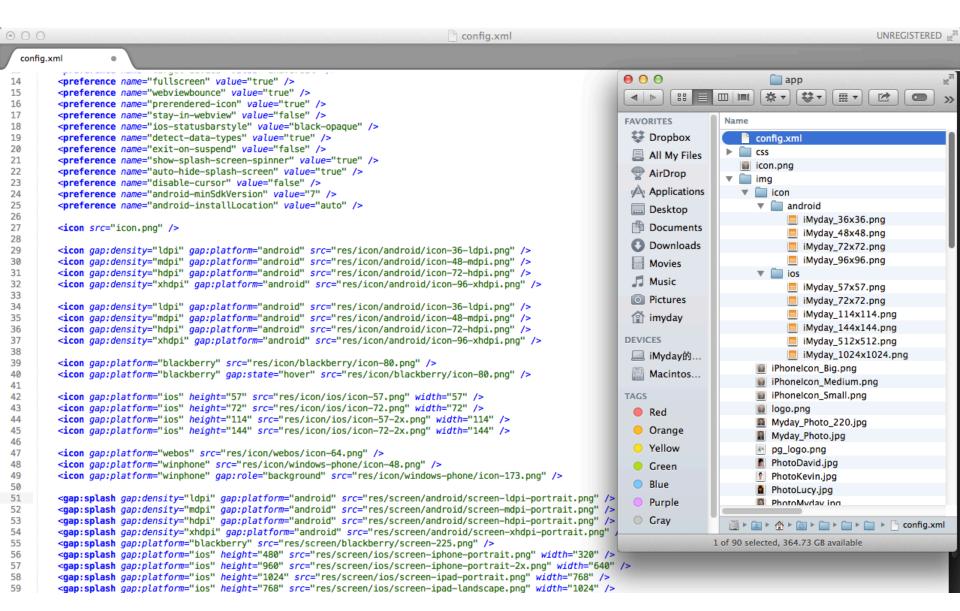
Keytool

- Keytool OptionDescription
- -genkeyGenerate a key pair (public and private keys)
- -v Enable verbose output.
- -alias <alias_name> An alias for the key. Only the first 8 characters of the alias are used.
- -keyalg <alg> The encryption algorithm to use when generating the key. Both DSA and RSA are supported.
- -keysize <size> The size of each generated key (bits). 2048 bits or higher.
- -validity <valdays>The validity period for the key, in days.
 Note: A value of 10000 or greater is recommended.
- -keystore <keystore-name>.keystore A name for the keystore containing the private key.

Keytool Option	Description
-genkey	Generate a key pair (public and private keys)
-v	Enable verbose output.
-alias <alias_name></alias_name>	An alias for the key. Only the first 8 characters of the alias are used.
-keyalg <alg></alg>	The encryption algorithm to use when generating the key. Both DSA and RSA are supported.
-keysize <size></size>	The size of each generated key (bits). If not supplied, Keytool uses a default key size of 1024 bits. In general, we recommend using a key size of 2048 bits or higher.
-dname <name></name>	A Distinguished Name that describes who created the key. The value is used as the issue and subject fields in the self-signed certificate. Note that you do not need to specify this option in the command line. If not supplied, Jarsigner prompts you to enter each of the Distinguished Name fields (CN, OU, and so on).
-keypass <password></password>	The password for the key. As a security precaution, do not include this option in your command line. If not supplied Keytool prompts you to enter the password. In this way, your password is not stored in your shell history.
-validity <valdays></valdays>	The validity period for the key, in days. Note: A value of 10000 or greater is recommended.
- keystore <keystore- name>.keystore</keystore- 	A name for the keystore containing the private key.
-storepass <password></password>	A password for the keystore. As a security precaution, do not include this option in your command line. If not supplied Keytool prompts you to enter the password. In this way, your password is not stored in your shell history.

http://developer.android.com/tools/publishing/app-signing.html

Modify config.xml: icon.png



Modify config.xml: icon.png

```
config.xml
    <?xml version='1.0' encoding='utf-8'?>
    <widget id="com.imtku.smap.mydaymobileapp" version="1.0.0" xmlns="http://www.w3.org/ns/widgets" xmlns:gap="http://phonegap.com/ns/1.0">
        <name>Mvdav Mobile App</name>
        <description>
            Myday Mobile App for Prof. Min-Yuh Day, Department of Information Management, Tamkang University
        <author email="myday@mail.tku.edu.tw" href="http://mail.tku.edu.tw/myday">
8
            Min-Yuh Day
9
        </author>
10
        <feature name="http://api.phonegap.com/1.0/device" />
11
        reference name="permissions" value="none" />
        reference name="orientation" value="default" />
12
13
        <preference name="target-device" value="universal" />
14
        reference name="fullscreen" value="true" />
15
        reference name="webviewbounce" value="true" />
16
        <preference name="prerendered-icon" value="true" />
17
        reference name="stay-in-webview" value="false" />
                                                                                                                000
18
        reference name="ios-statusbarstyle" value="black-opaque" />
19
        reference name="detect-data-types" value="true" />
                                                                                                                                 20
        reference name="exit-on-suspend" value="false" />
21
        Name
                                                                                                                FAVORITES
22
        reference name="auto-hide-splash-screen" value="true" />
                                                                                                                 S Dropbox
                                                                                                                                        config.xml
23
        reference name="disable-cursor" value="false" />
        reference name="android-minSdkVersion" value="7" />
24
                                                                                                                                        CSS
                                                                                                                    All My Files
25
        reference name="android-installLocation" value="auto" />
                                                                                                                                     icon.png
                                                                                                                 AirDrop
26

▼ ima

27
        <icon src="icon.png" />
                                                                                                                 Applications
                                                                                                                                        icon
28

▼ android

29
        <icon gap:density="ldpi" gap:platform="android" src="img/icon/android/iMyday 36x36.png" />
                                                                                                                    Desktop
        <icon gap:density="mdpi" gap:platform="android" src="img/icon/android/iMyday_48x48.png" />
30
                                                                                                                                              iMyday_36x36.png
                                                                                                                 Documents
        <icon gap:density="hdpi" gap:platform="android" src="img/icon/android/iMyday 72x72.png" />
31
                                                                                                                                              iMyday_48x48.png
32
        <icon gap:density="xhdpi" gap:platform="android" src="img/icon/android/iMyday_96x96.png" />
                                                                                                                    Downloads
                                                                                                                                              iMyday_72x72.png
33
                                                                                                                                              iMyday_96x96.png
                                                                                                                    Movies
34
        <icon gap:platform="ios" height="57" src="img/icon/ios/iMyday 57x57.png" width="57" />
35
        <icon gap:platform="ios" height="72" src="img/icon/ios/iMvday 72x72.png" width="72" />
                                                                                                                    Music
36
        <icon gap:platform="ios" height="114" src="img/icon/ios/iMyday_114x114.png" width="114" />
                                                                                                                                              iMyday_57x57.png
37
        <icon gap:platform="ios" height="144" src="img/icon/ios/iMyday 144x144.png" width="144" />
                                                                                                                    Pictures
                                                                                                                                              iMyday_72x72.png
38
                                                                                                                                              iMyday_114x114.png
                                                                                                                 🈭 imyday
39
        <icon gap:platform="blackberry" src="res/icon/blackberry/icon-80.png" />
                                                                                                                                                iMyday_144x144.png
40
        <icon gap:platform="blackberry" gap:state="hover" src="res/icon/blackberry/icon-80.png" />
                                                                                                                DEVICES
                                                                                                                                              iMyday_512x512.png
        <icon gap:platform="webos" src="res/icon/webos/icon-64.png" />
41
                                                                                                                                              iMyday_1024x1024.png
42
        <icon gap:platform="winphone" src="res/icon/windows-phone/icon-48.png" />
                                                                                                                 iMyday的...
        <icon gap:platform="winphone" gap:role="background" src="res/icon/windows-phone/icon-173.png" />
43
                                                                                                                  Macintos...
44
                                                                                                                                   45
        <gap:splash gap:density="ldpi" gap:platform="android" src="img/screen/android/iMyday_200x320.png" />
        <gap:splash gap:density="mdpi" gap:platform="android" src="img/screen/android/iMydav 320x480.png" />
                                                                                                                                1 of 90 selected, 364.73 GB available
```

Modify config.xml: screen.png

```
config.xml
        reference name="fullscreen" value="true" />
14
15
        reference name="webviewbounce" value="true" />
16
        reference name="prerendered-icon" value="true" />
        reference name="stav-in-webview" value="false" />
17
18
        reference name="ios-statusbarstyle" value="black-opaque" />
        reference name="detect-data-types" value="true" />
19
20
        reference name="exit-on-suspend" value="false" />
21
        22
        reference name="auto-hide-splash-screen" value="true" />
23
        reference name="disable-cursor" value="false" />
24
        reference name="android-minSdkVersion" value="7" />
25
        reference name="android-installLocation" value="auto" />
26
27
        <icon src="icon.png" />
28
        <icon gap:density="ldpi" gap:platform="android" src="img/icon/android/iMyday 36x36.png" />
29
30
        <icon gap:density="mdpi" gap:platform="android" src="img/icon/android/iMyday 48x48.png" />
                                                                                                               0 0
                                                                                                                                          app
        <icon gap:density="hdpi" gap:platform="android" src="img/icon/android/iMyday_72x72.pnd" />
31
                                                                                                                                <icon gap:density="xhdpi" gap:platform="android" src="img/icon/android/iMyday 96x96.png" />
32
33
                                                                                                               FAVORITES
34
        <icon gap:platform="ios" height="57" src="img/icon/ios/iMvday 57x57.png" width="57" />
35
        <icon qap:platform="ios" height="72" src="img/icon/ios/iMyday 72x72.png" width="72" />
                                                                                                                                       screen
                                                                                                                 S Dropbox
        <icon gap:platform="ios" height="114" src="img/icon/ios/iMyday 114x114.png" width="114" />
36
                                                                                                                                          android
                                                                                                                 All My Files
        <icon gap:platform="ios" height="144" src="img/icon/ios/iMyday_144x144.png" width="144" />
37
                                                                                                                                             iMyday_200x320.png
38
                                                                                                                    AirDrop
                                                                                                                                                iMyday_320x480.png
39
        <icon gap:platform="blackberry" src="res/icon/blackberry/icon-80.png" />
                                                                                                                                                iMyday_480x800.png
40
        <icon gap:platform="blackberry" gap:state="hover" src="res/icon/blackberry/icon-80.png" />
                                                                                                                 Applications
41
        <icon gap:platform="webos" src="res/icon/webos/icon-64.png" />
                                                                                                                                                iMyday_720x1280.png
                                                                                                                    Desktop
        <icon gap:platform="winphone" src="res/icon/windows-phone/icon-48.png" />
42
        <icon gap:platform="winphone" gap:role="background" src="res/icon/windows-phone/icon-173.png" />
43
                                                                                                                    Documents
                                                                                                                                             iMyday_320x480.png
44
                                                                                                                                             iMyday_640x960.png
                                                                                                                    Downloads
45
        <qap:splash gap:density="ldpi" gap:platform="android" src="img/screen/android/iMyday 200x320.png" />
                                                                                                                                                iMyday_768x1024.png
46
        <gap:splash gap:density="mdpi" gap:platform="android" src="img/screen/android/iMyday_320x480.png" />
                                                                                                                    Movies
        <qap:splash gap:density="hdpi" gap:platform="android" src="img/screen/android/iMyday_480x800.png" />
47
                                                                                                                                             iMyday_1024x768.png
        <gap:splash gap:density="xhdpi" gap:platform="android" src="img/screen/android/iMyday_720x1280.png" />
                                                                                                                 Music
48
                                                                                                                                     index.html
49
                                                                                                                                    is js
                                                                                                                 Pictures
50
        <gap:splash gap:platform="ios" height="480" src="img/screen/ios/iMyday_320x480.png" width="320" />
                                                                                                                                     pg icon.png
        <qap:splash gap:platform="ios" height="960" src="img/screen/ios/iMyday 640x960.png" width="640" />
51
                                                                                                                 imyday 🏗
                                                                                                                                       pg_index.html
        <qap:splash gap:platform="ios" height="1024" src="img/screen/ios/iMyday 768x1024.png" width="768" />
52
53
        <gap:splash gap:platform="ios" height="768" src="img/screen/ios/iMyday_1024x768.png" width="1024" />
                                                                                                                                  ▼ im res
                                                                                                               DEVICES
54

▼ icon

                                                                                                                 iMyday的...
55
        <gap:splash gap:platform="blackberry" src="res/screen/blackberry/screen-225.png" />
                                                                                                                                       <qap:splash gap:platform="winphone" src="res/screen/windows-phone/screen-portrait.ipg" />
56
                                                                                                                    Macintos...
57
        <access origin="http://127.0.0.1*" />
                                                                                                                                  58
    </widget>
                                                                                                                                1 of 80 selected, 364,73 GB available
```

Refine index.css animation:fad

```
index.css
                    ×
      @keyframes fade {
100
101
          from { opacity: 1.0; }
          50% { opacity: 0.4; }
102
          to { opacity: 1.0; }
103
104
105
106
      @-webkit-keyframes fade {
          from { opacity: 1.0; }
107
          50% { opacity: 0.4; }
108
          to { opacity: 1.0; }
109
110
111
112
      .blink {
113
          animation: fade 1000ms infinite;
          -webkit-animation:fade 1000ms infinite;
114
115
```

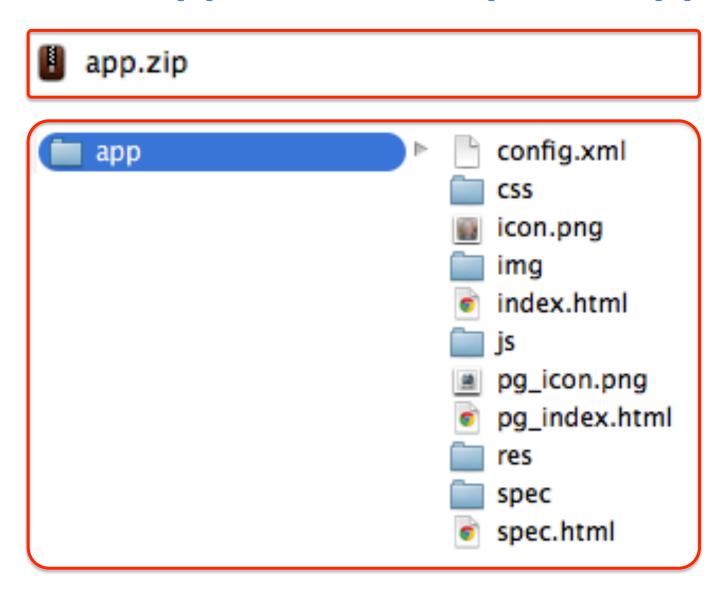
```
.blink {
    animation:fade 3000ms infinite;
    -webkit-animation:fade 3000ms infinite;
}
```

```
.blink {
    animation:fade 1000ms infinite;
    -webkit-animation:fade 1000ms infinite;
}
```

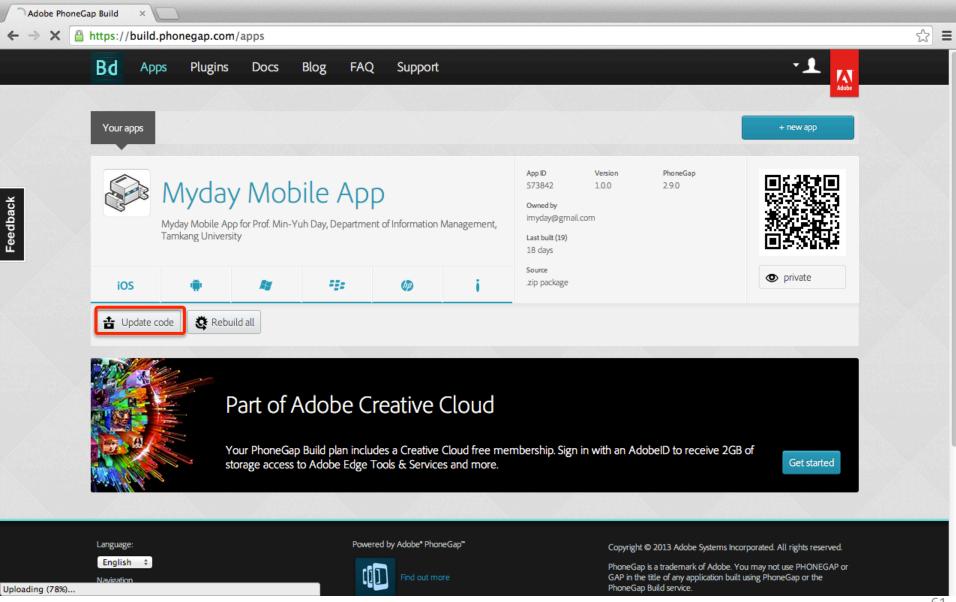
Refine index.css

```
index.css
23
     body {
24
         -webkit-touch-callout: none:
                                                     /* prevent callout to copy image, etc when tap to hold */
         -webkit-text-size-adjust: none;
                                                     /* prevent webkit from resizing text to fit */
25
                                                     /* prevent copy paste, to allow, change 'none' to 'text' */
26
         -webkit-user-select: none:
27
         background-color:#E4E4E4:
         background-image: linear-gradient(top, #A7A7A7 0%, #E4E4E4 51%);
28
29
         background-image:-webkit-linear-gradient(top, #A7A7A7 0%, #E4E4E4 51%);
         background-image:-ms-linear-gradient(top, #A7A7A7 0%, #E4E4E4 51%);
30
31
         background-image:-webkit-gradient(
32
             linear,
33
             left top,
34
             left bottom,
35
             color-stop(0, #A7A7A7),
             color-stop(0.51, #E4E4E4)
36
37
         ):
38
         background-attachment:fixed;
         font-family:'HelveticaNeue-Light', 'HelveticaNeue', Helvetica, Arial, sans-serif;
39
40
         font-size:12px:
         height:100%;
41
         margin:0px;
42
43
         padding:0px;
         text-transform: none;
44
45
         width:100%:
46
    }
47
48
    /* Portrait layout (default) */
49
     .app {
50
         background:url(../img/logo.png) no-repeat center top; /* 170px x 200px */
51
         position:absolute:
                                        /* position in the center of the screen */
52
         left:50%;
53
         top:50%;
54
         height:50px;
                                        /* text area height */
55
         width: 225px;
                                        /* text area width */
56
         text-align:center:
         padding:180px 0px 0px 0px;
57
                                        /* image height is 200px (bottom 20px are overlapped with text) */
         margin:-115px 0px 0px -112px; /* offset vertical: half of image height and text area height */
58
59
                                        /* offset horizontal: half of text area width */
60
```

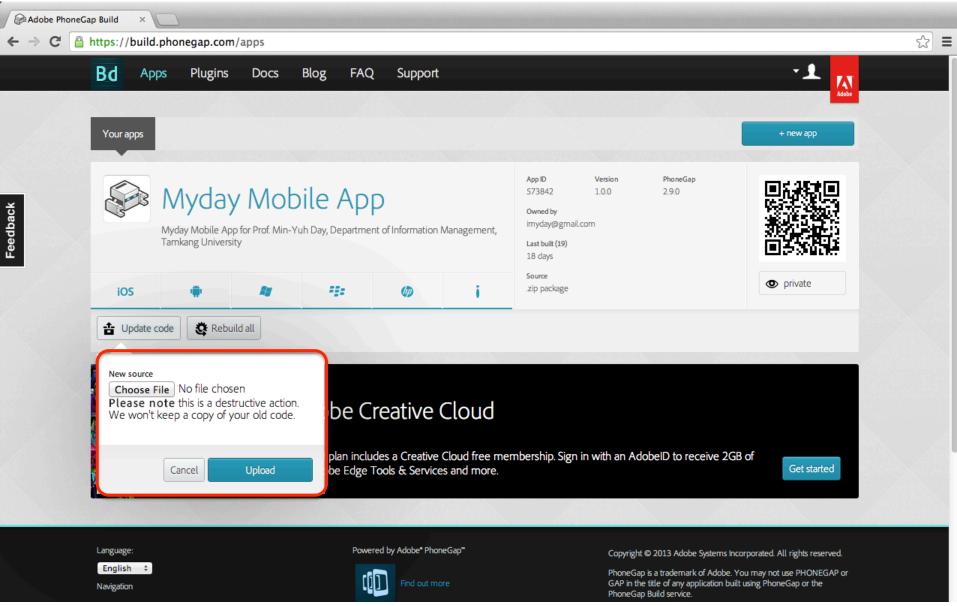
Refine App Files and Update app.zip



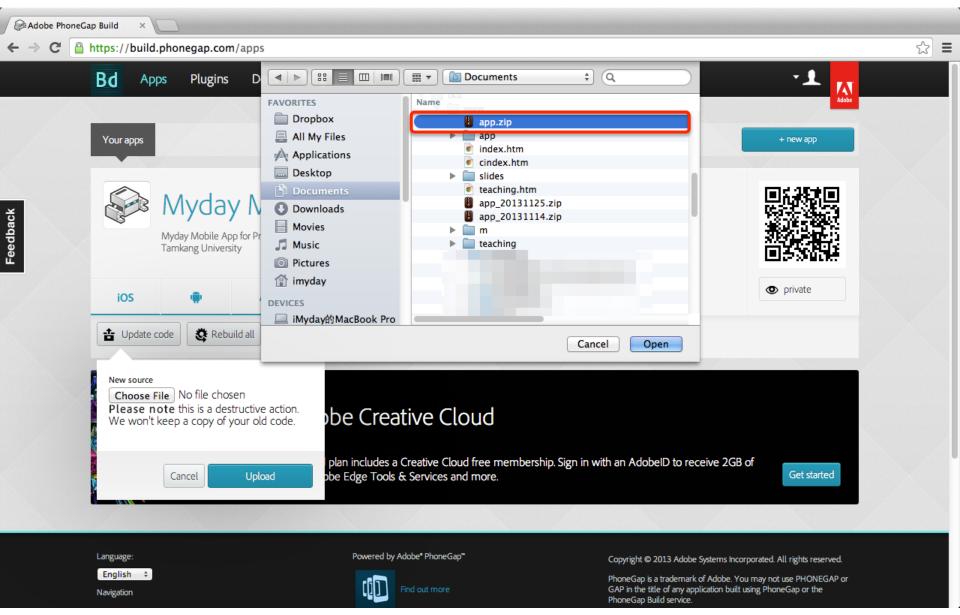
Update code and Rebuild all on PhoneGap Build



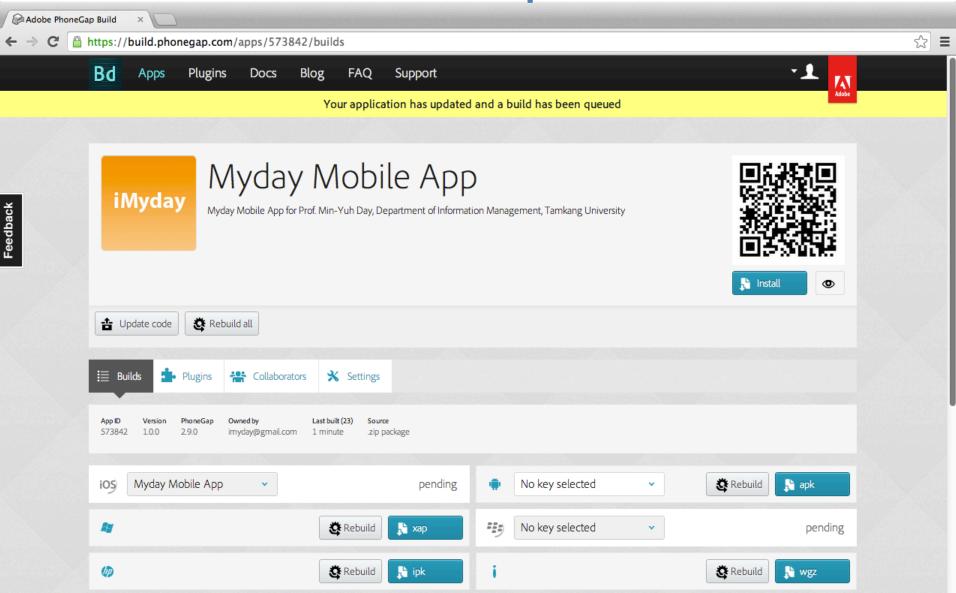
Update code: Upload app.zip



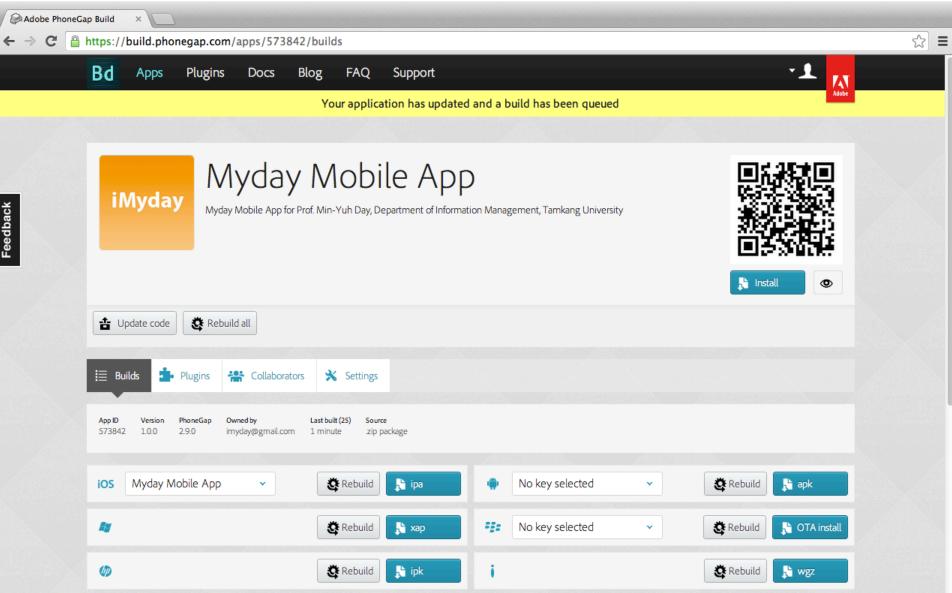
Update code: Upload app.zip



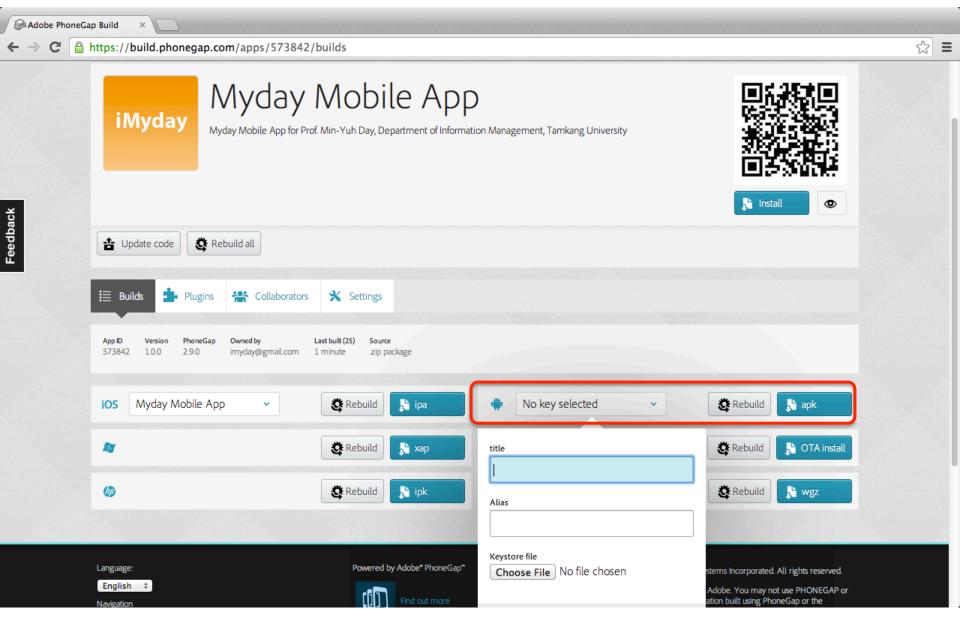
Update code and Rebuild all on PhoneGap Build



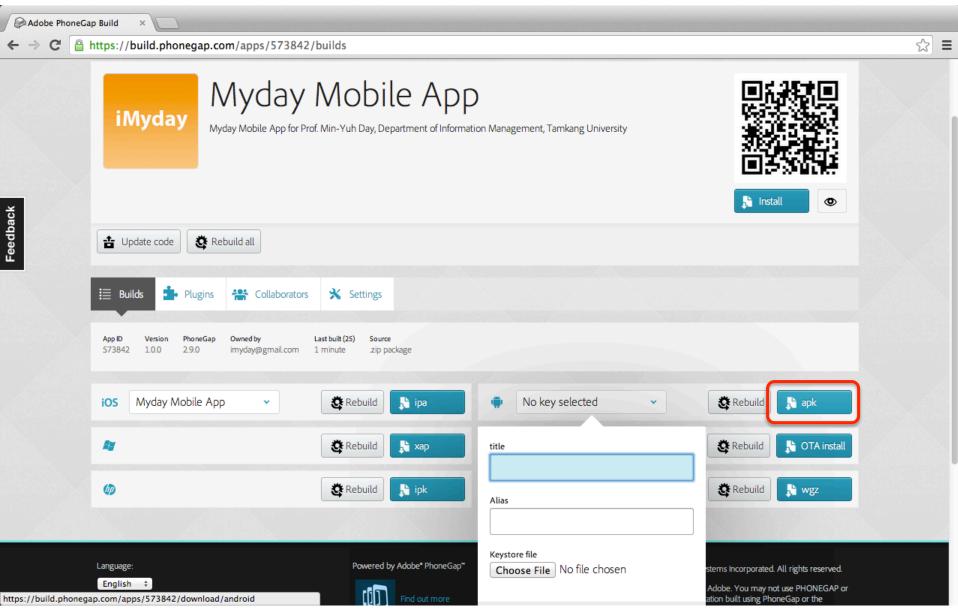
Update code and Rebuild all on PhoneGap Build



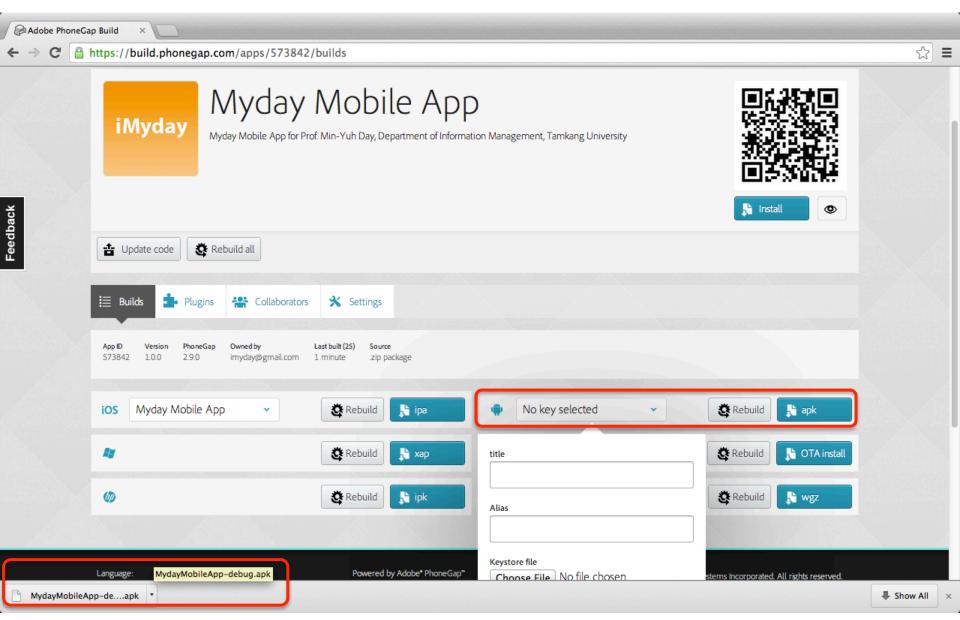
No key selected: debug.apk



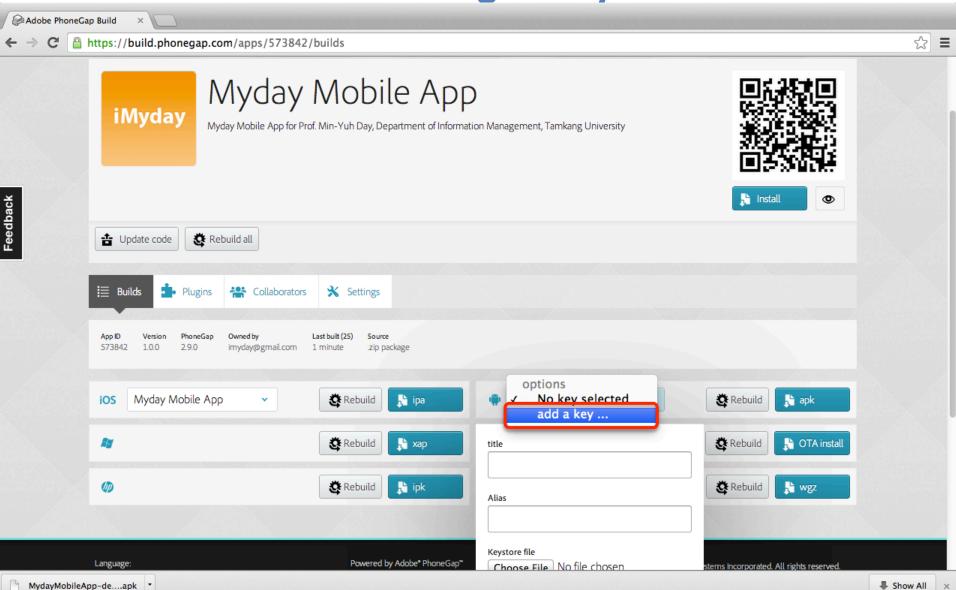
Download debug.apk for Testing



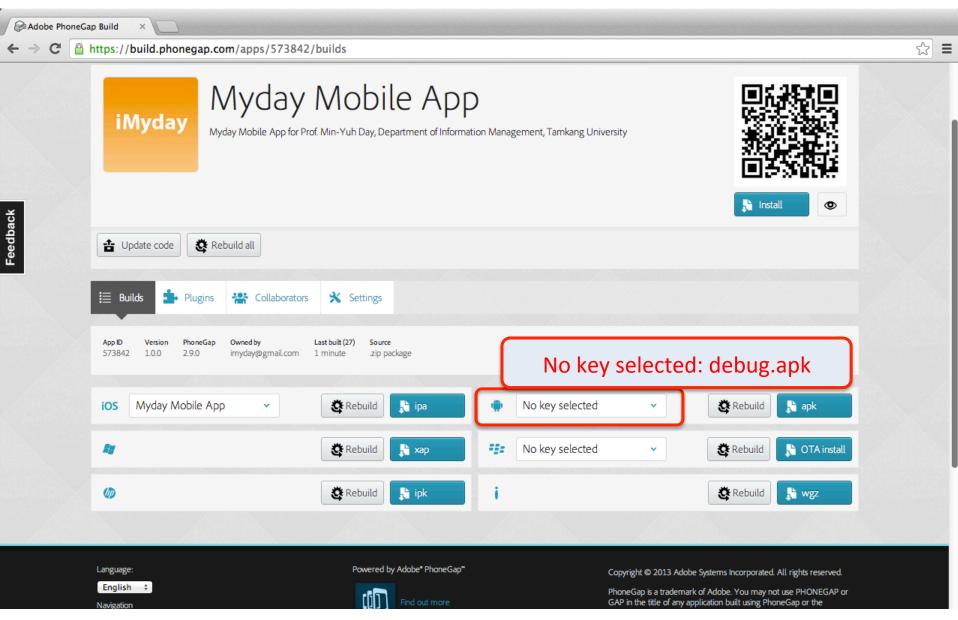
Download debug.apk for Testing



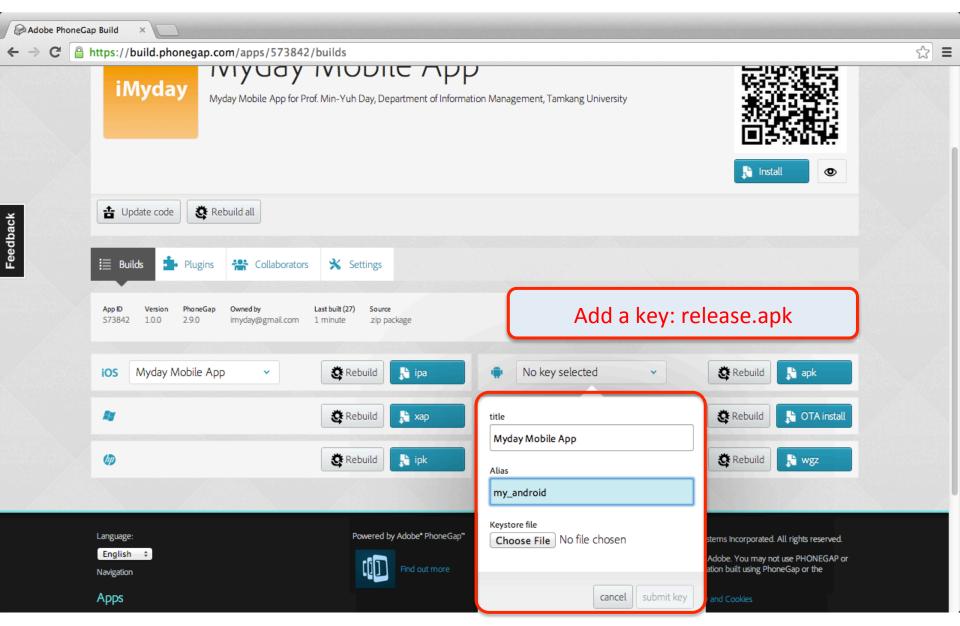
Add a key to Build release.apk for Google Play

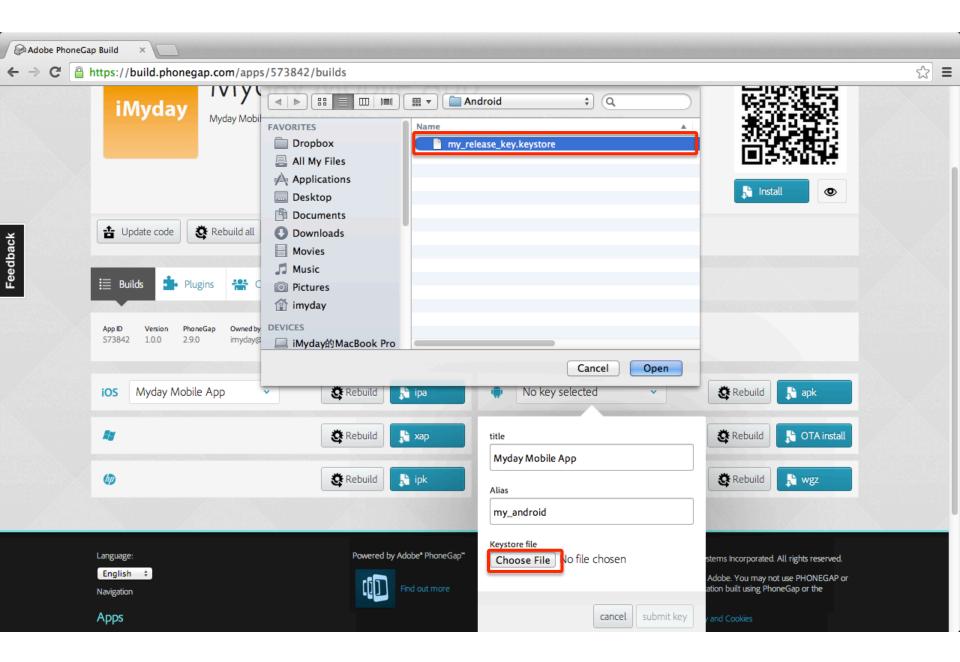


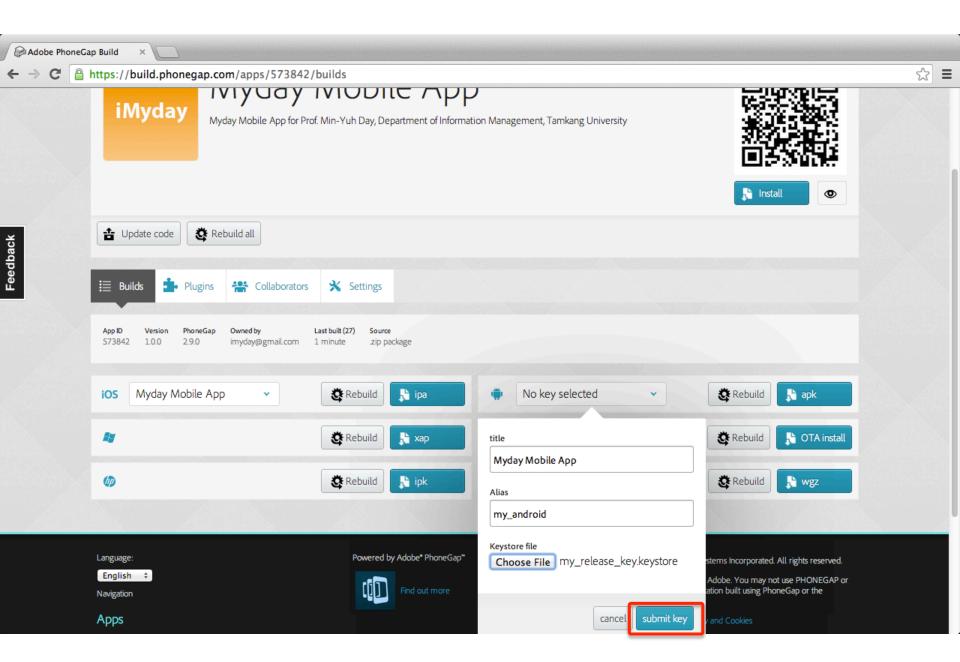
Add a key to Build release.apk

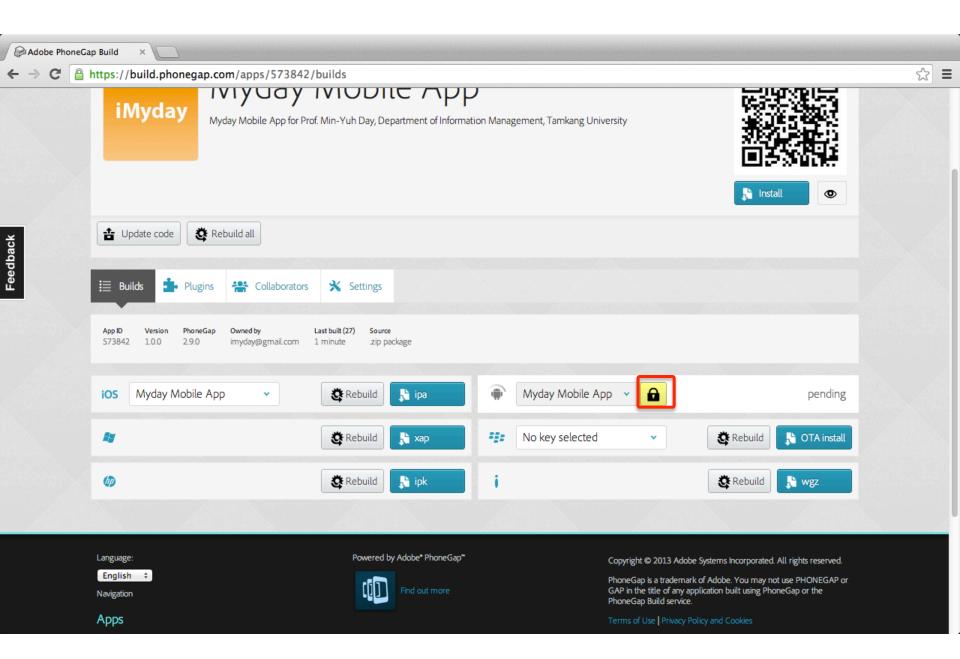


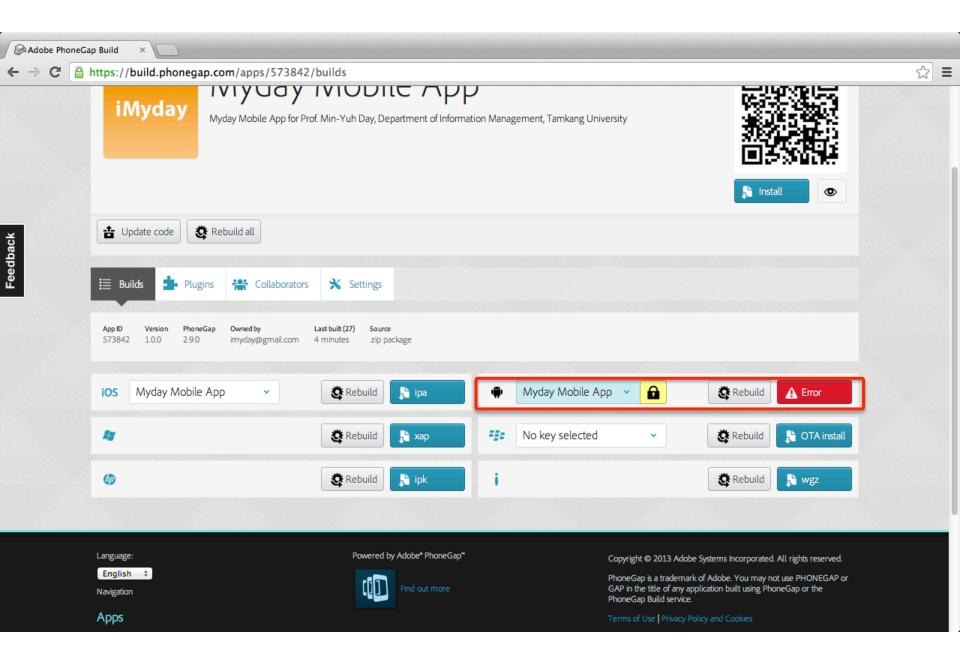
Add a key to Build release.apk

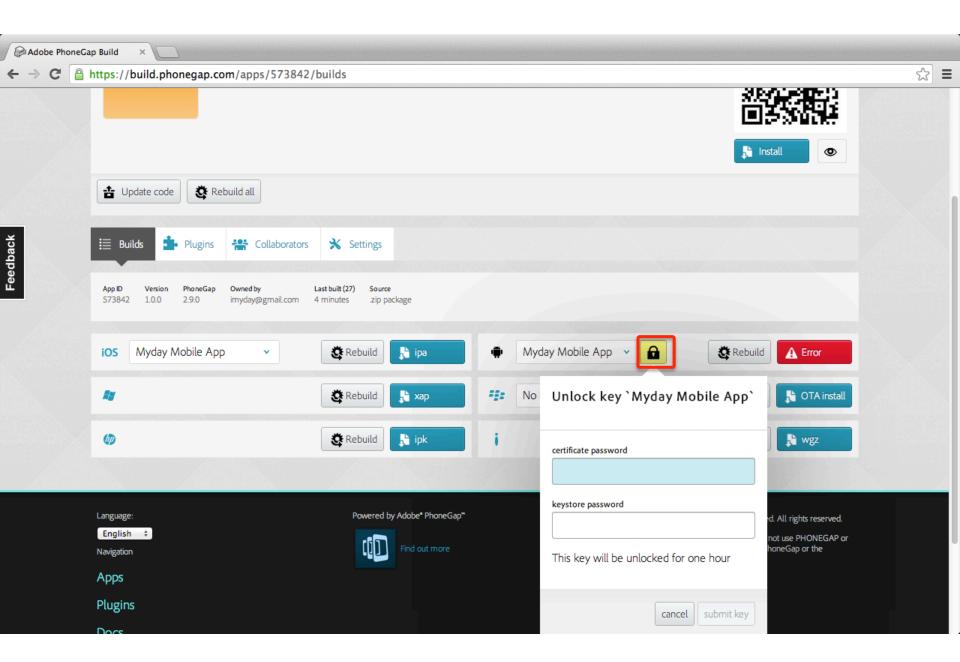


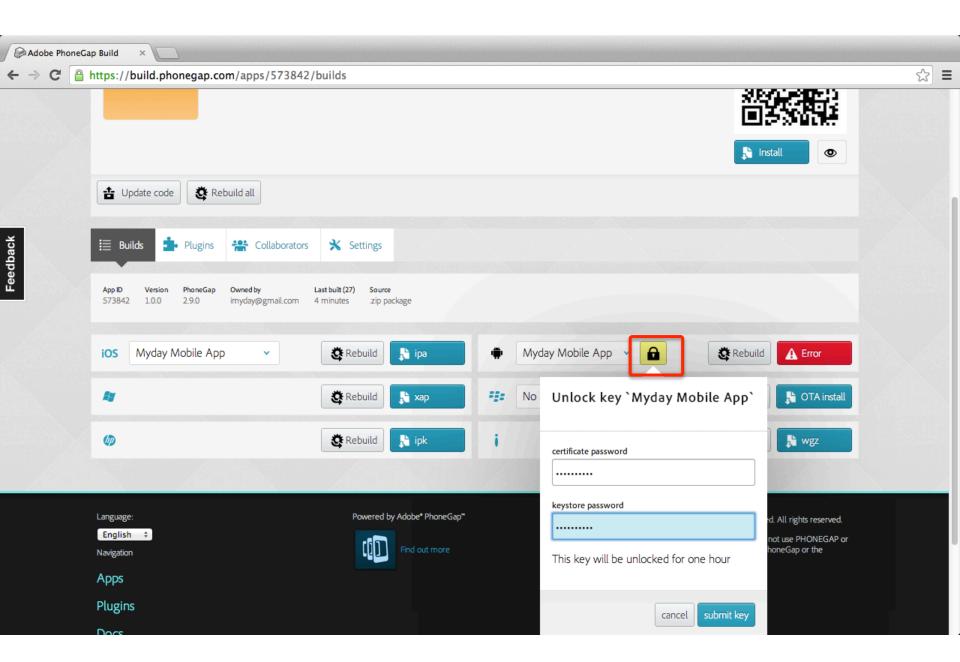


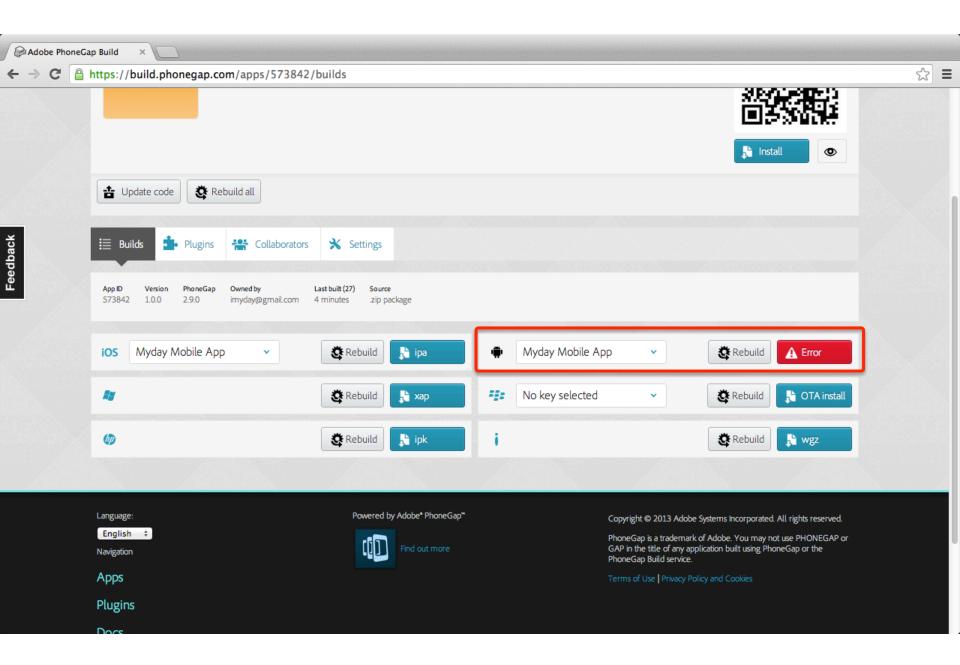


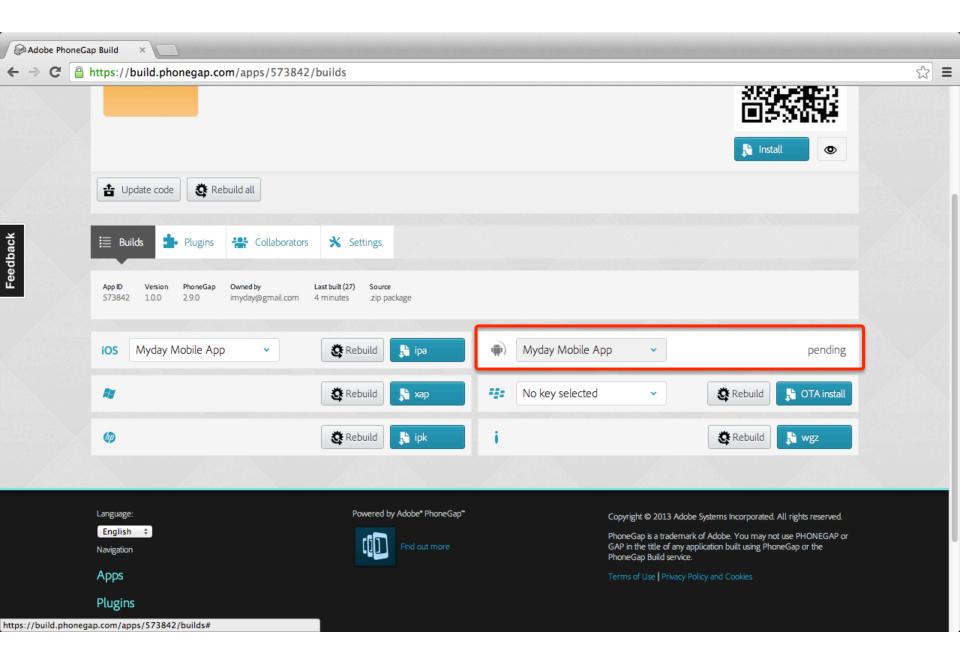




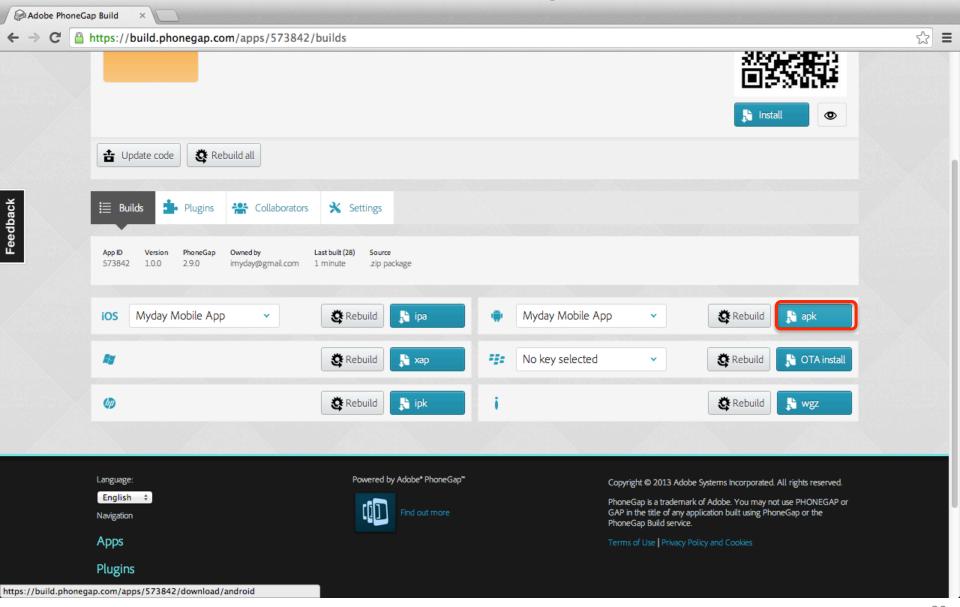




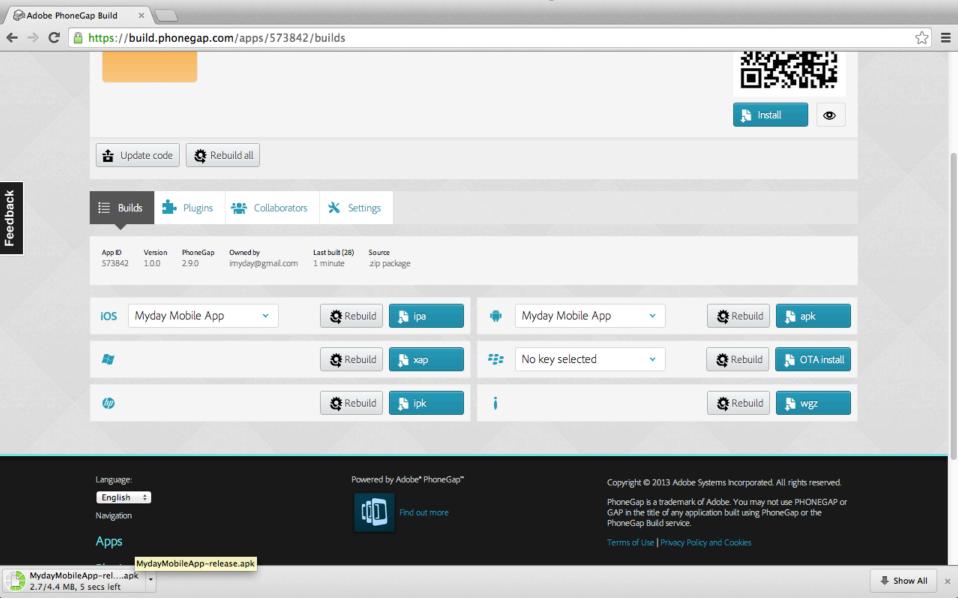




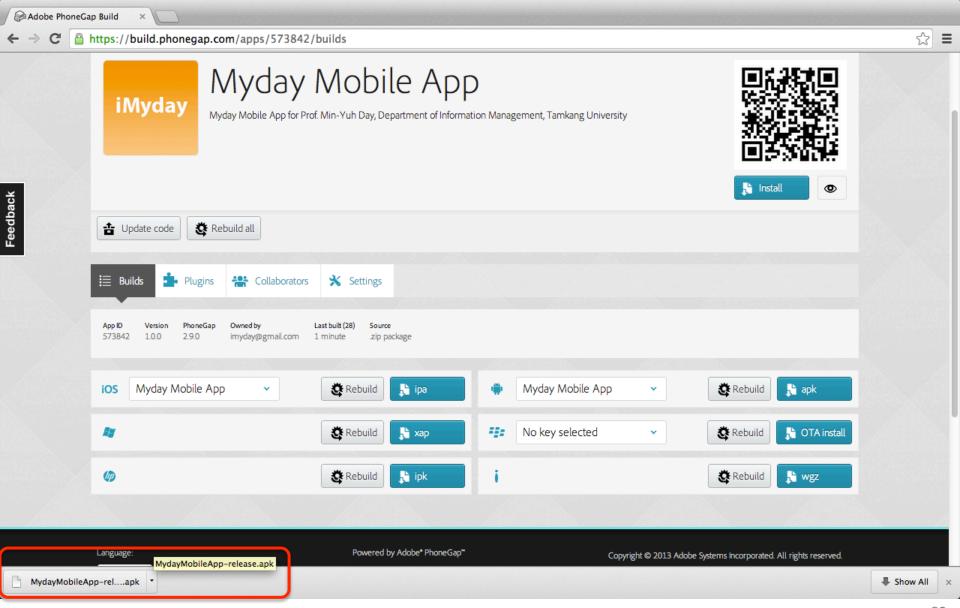
Download MydayMobileApp-release.apk from PhoneGap Build



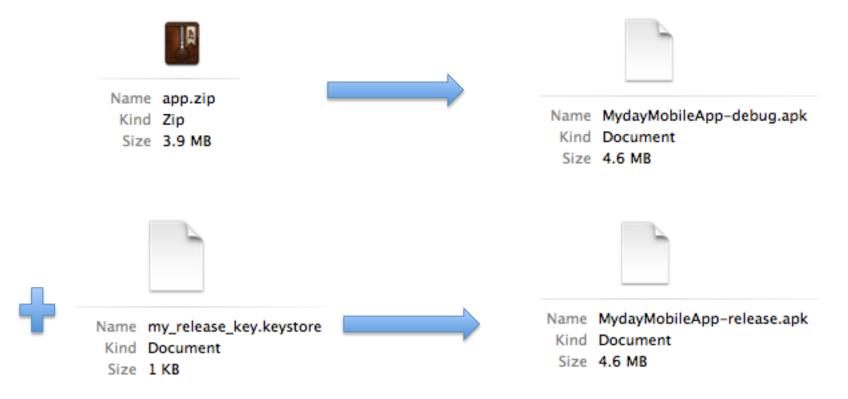
Download MydayMobileApp-release.apk from PhoneGap Build



Download MydayMobileApp-release.apk from PhoneGap Build



app.zip MydayMobileApp-debug.apk my_release_key.keystore MydayMobileApp-release.apk



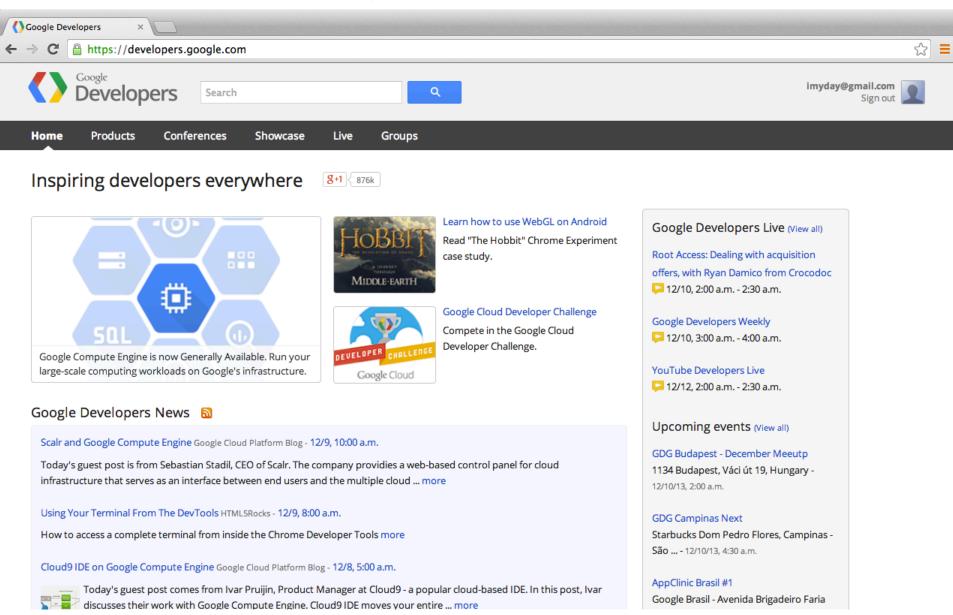
Demo: Publishing App on Google Play



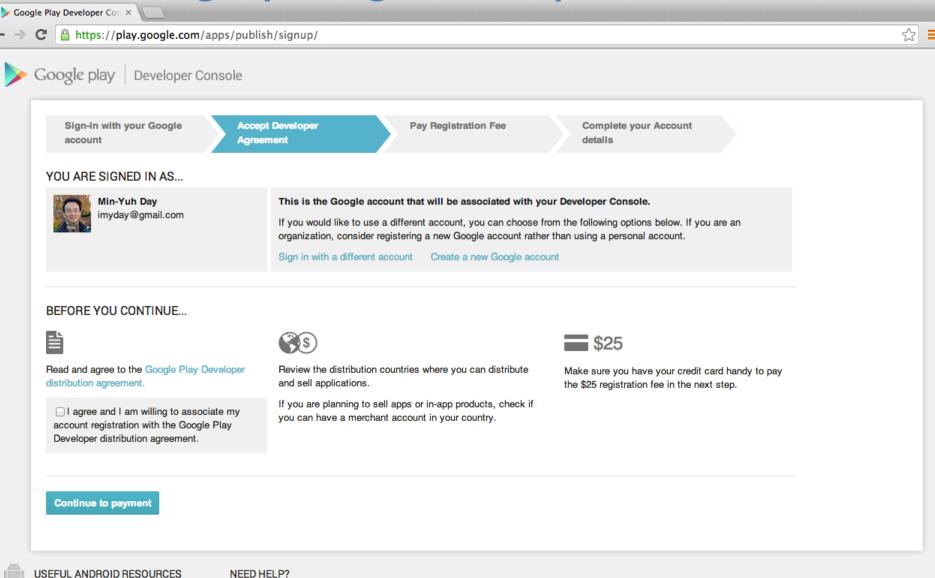
Make sure you have your credit card handy to pay the \$25 registration fee in the next step.



Google Developers



Publish App on Google Play Signup Google Developer Account



NEED HELP?

A 1 11D 1

Google play Developer Distribution Agreement





Developer Distribution Agreement

Definitions

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

Device: Any device that can access the Market, as defined herein.

Products: Software, content and digital materials distributed via the Market.

Market: The marketplace Google has created and operates which allows registered Developers in certain countries to distribute Products directly to users of Devices.

Developer or You: Any person or company who is registered and approved by the Market to distribute Products in accordance with the terms of this Agreement.

Developer Account: A publishing account issued to Developers that enables the distribution of Products via the Market.

Payment Processor(s): Any party authorized by Google to provide payment processing services that enable Developers with optional Payment Accounts to charge Device users for Products distributed via the Market.

Payment Account: A financial account issued by a Payment Processor to a Developer that authorizes the Payment Processor to collect and remit payments on the Developer's behalf for Products sold via the Market. Developers must be approved by a Payment Processor for a Payment Account and maintain their account in good standing to charge for Products distributed in the Market.

Authorized Carrier: A mobile network operator who is authorized to receive a distribution fee for Products that are sold to users of Devices on its network.

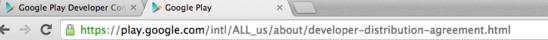
1. Introduction

- 1.1 The Market is a publicly available site on which Android Developers can distribute Products for Devices. In order to distribute Products on the Market, you must acquire and maintain a valid Developer Account.
- 1.2 If you want to charge a fee for your Products, you must also acquire and maintain a valid Payment Account from an authorized Payment Processor.

2. Accepting this Agreement

2.1 This agreement ("Agreement") forms a legally binding contract between you and Google in relation to your use of the Market to distribute Products. In order to use the Market to distribute Products, you must first agree to this Agreement by clicking to accept where this option is made available to you. You may not distribute Products on the Market if you do not accept this Agreement.

Google play Developer Distribution Agreement



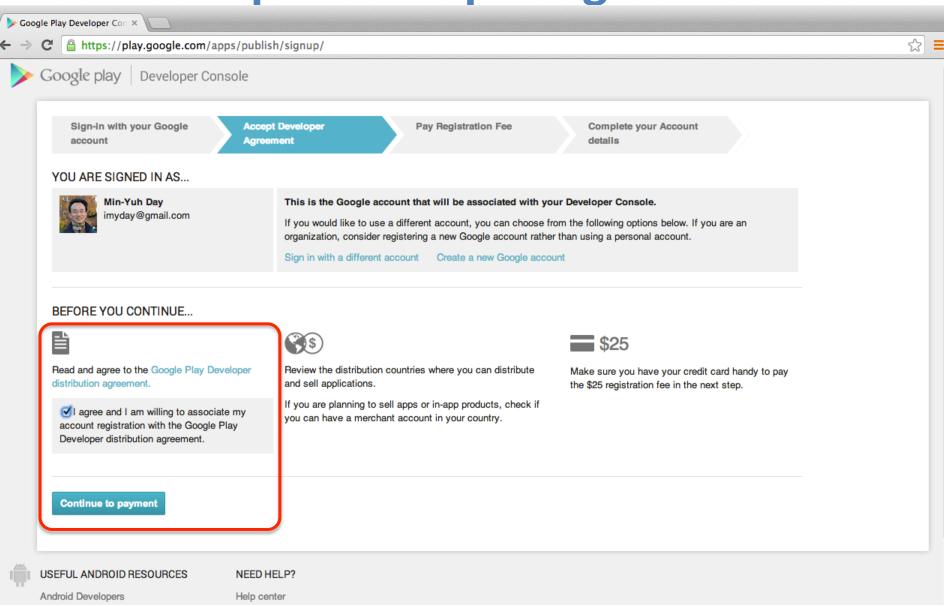


14.1 Google may make changes to this Agreement at any time by sending the Developer notice by email describing the modifications made. Google will also post a notification on the Market site describing the modifications made. The changes will become effective, and will be deemed accepted by Developer, (a) immediately for those who become Developers after the notification is posted, or (b) for pre-existing Developers, the modified Agreement will become effective upon Developer's acceptance of the modified Agreement (except changes required by law which will be effective immediately). Pre-existing Developers will show their acceptance of the modified Agreement by going to the Market site and accepting the modified Agreement. In the event that Developer does not agree with the modifications to the Agreement within thirty (30) days after the date the email is sent, then Google will suspend the distribution of your Products until Developer agrees to the modified Agreement. In the event that You do not agree with the modifications within ninety (90) days after the date the email is sent, then You must terminate your use of the Market, which will be your sole and exclusive remedy.

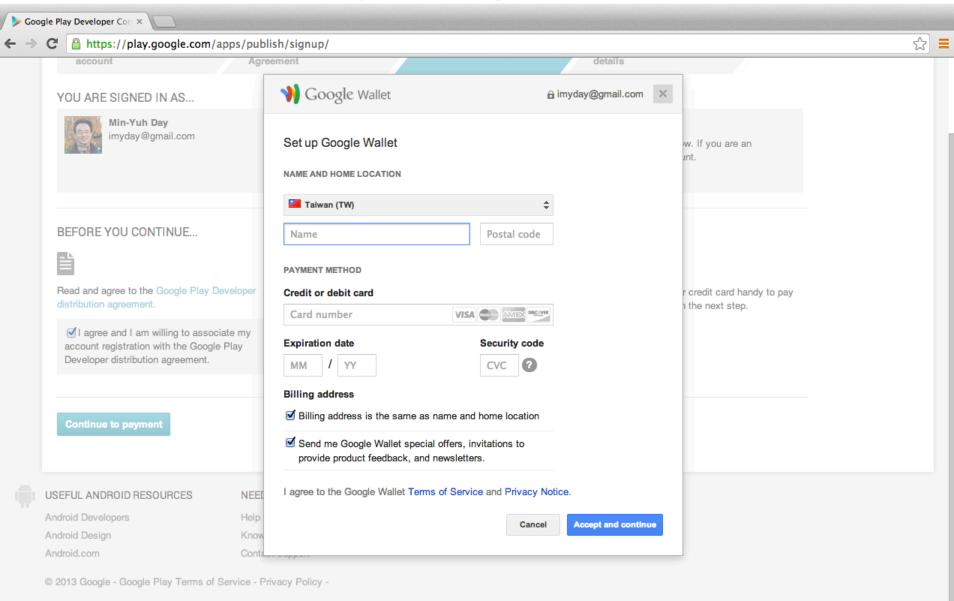
15. General Legal Terms

- 15.1 This Agreement constitutes the whole legal agreement between you and Google and governs your use of the Market, and completely replaces any prior agreements between you and Google in relation to the Market.
- 15.2 You agree that if Google does not exercise or enforce any legal right or remedy which is contained in this Agreement (or which Google has the benefit of under any applicable law), this will not be taken to be a formal waiver of Google's rights and that those rights or remedies will still be available to Google.
- 15.3 If any court of law, having the jurisdiction to decide on this matter, rules that any provision of this Agreement is invalid, then that provision will be removed from this Agreement without affecting the rest of this Agreement. The remaining provisions of this Agreement will continue to be valid and enforceable.
- 15.4 You acknowledge and agree that each member of the group of companies of which Google is the parent shall be third party beneficiaries to this Agreement and that such other companies shall be entitled to directly enforce, and rely upon, any provision of this Agreement that confers a benefit on (or rights in favor of) them. Other than this, no other person or company shall be third party beneficiaries to this Agreement.
- 15.5 EXPORT RESTRICTIONS. PRODUCTS ON THE MARKET MAY BE SUBJECT TO UNITED STATES EXPORT LAWS AND REGULATIONS. YOU MUST COMPLY WITH ALL DOMESTIC AND INTERNATIONAL EXPORT LAWS AND REGULATIONS THAT APPLY TO YOUR DISTRIBUTION OR USE OF PRODUCTS. THESE LAWS INCLUDE RESTRICTIONS ON DESTINATIONS. USERS AND END USE.
- 15.6 The rights granted in this Agreement may not be assigned or transferred by either you or Google without the prior written approval of the other party. Neither you nor Google shall be permitted to delegate their responsibilities or obligations under this Agreement without the prior written approval of the other party.
- 15.7 This Agreement, and your relationship with Google under this Agreement, shall be governed by the laws of the State of California without regard to its conflict of laws provisions. You and Google agree to submit to the exclusive jurisdiction of the courts located within the county of Santa Clara, California to resolve any legal matter arising from this Agreement. Notwithstanding this, you agree that Google shall still be allowed to apply for injunctive remedies (or an equivalent type of urgent legal relief) in any jurisdiction.
- 15.8 The obligations in Sections 5, 6.2 (solely as necessary to permit Google to effectuate Section 3.6), 7, 11, 12, 13, and 15 will survive any expiration or termination of this Agreement.

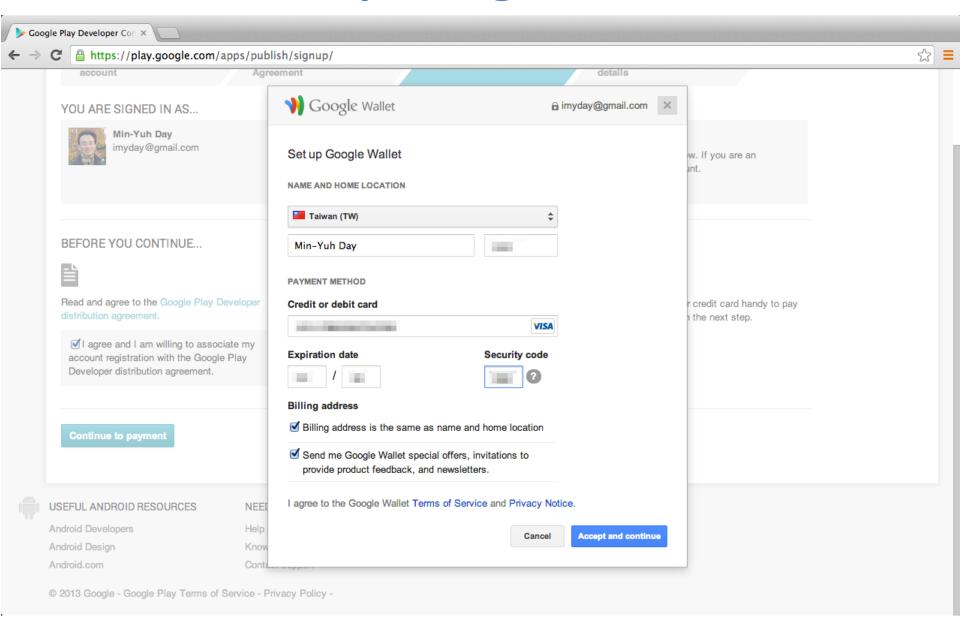
Accept Developer Agreement



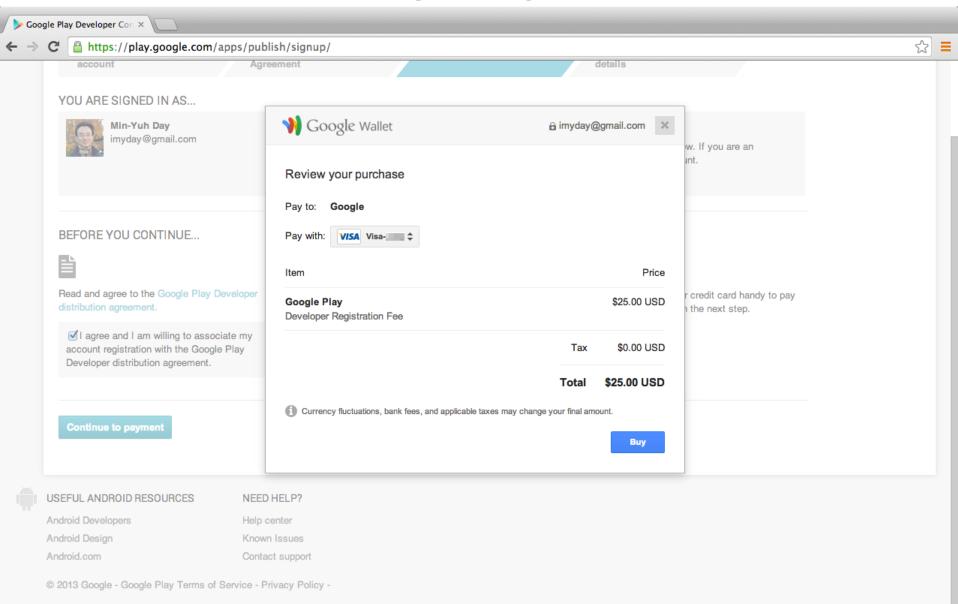
Set up Google Wallet



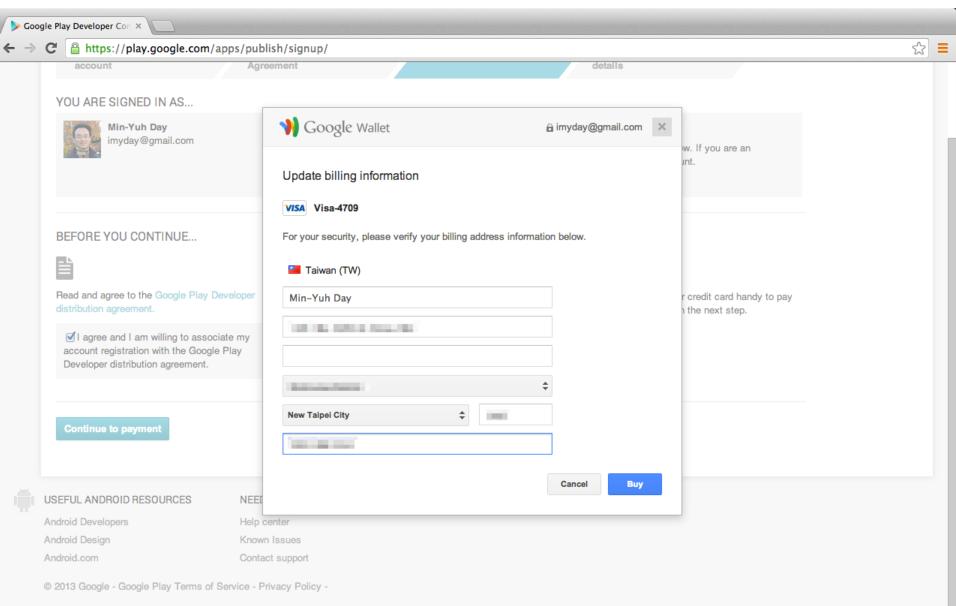
Set up Google Wallet



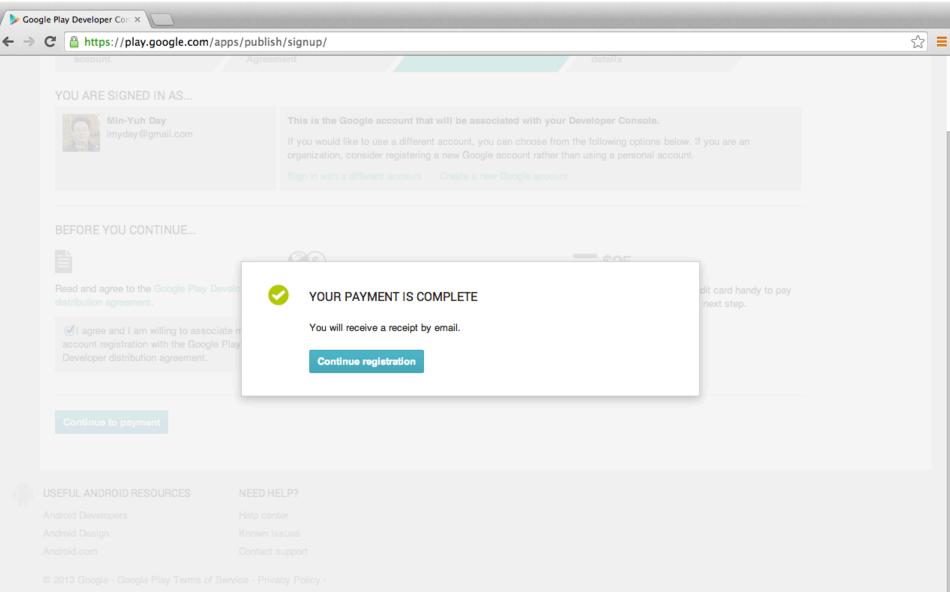
Review your purchase



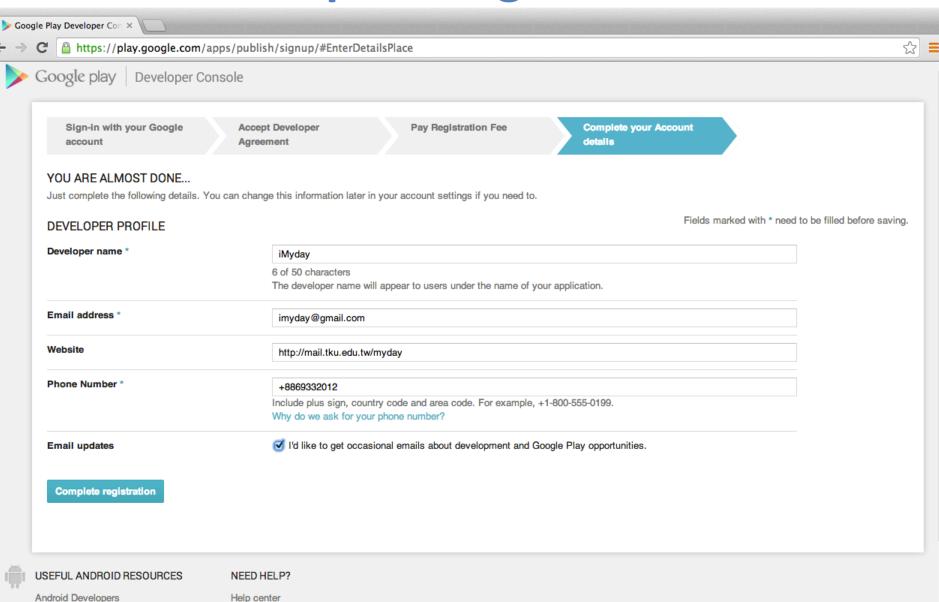
Update billing information



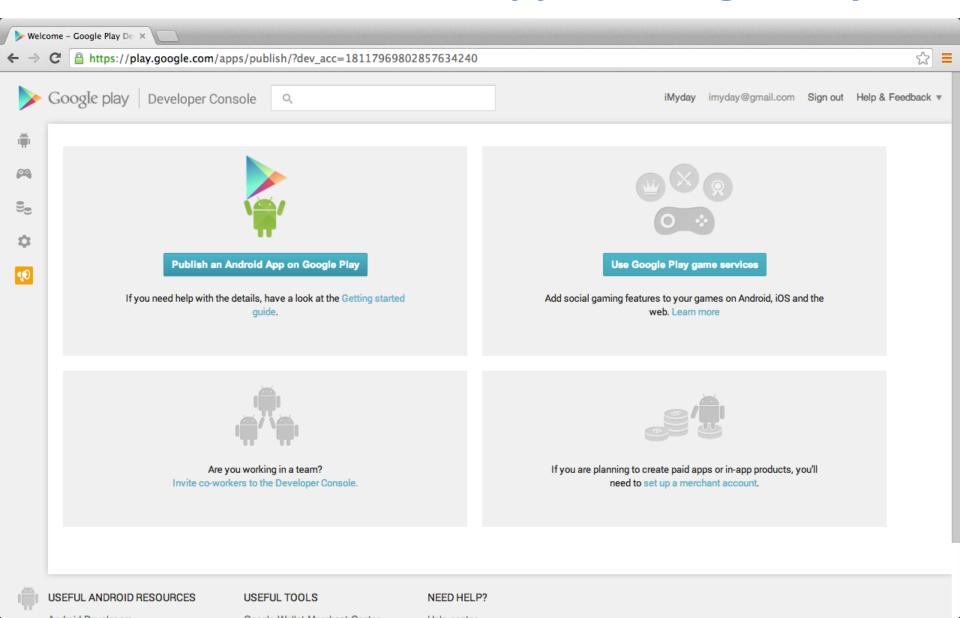
Your Payment is Complete



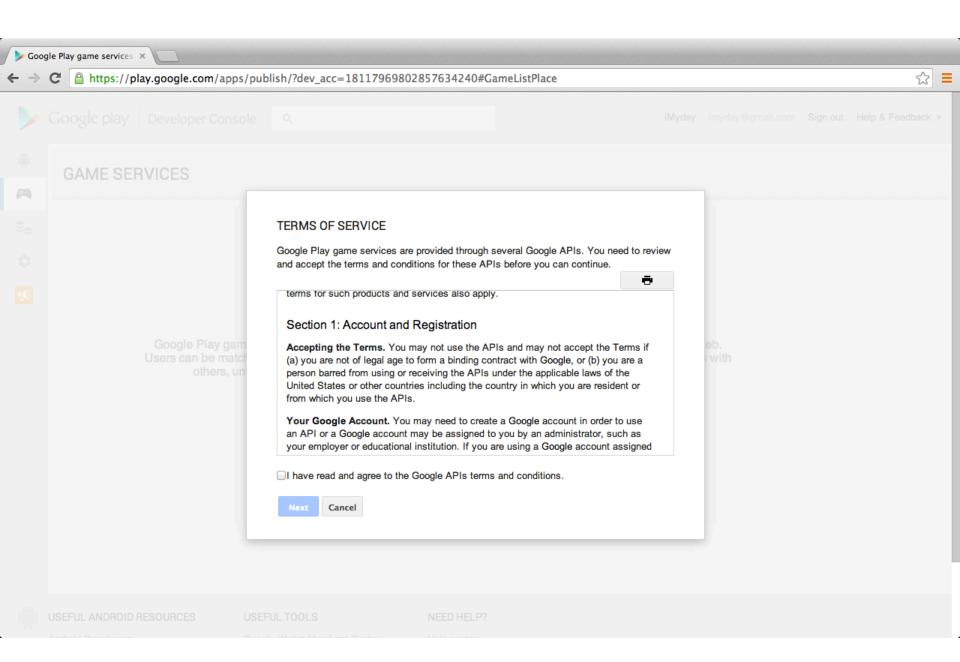
Complete registration

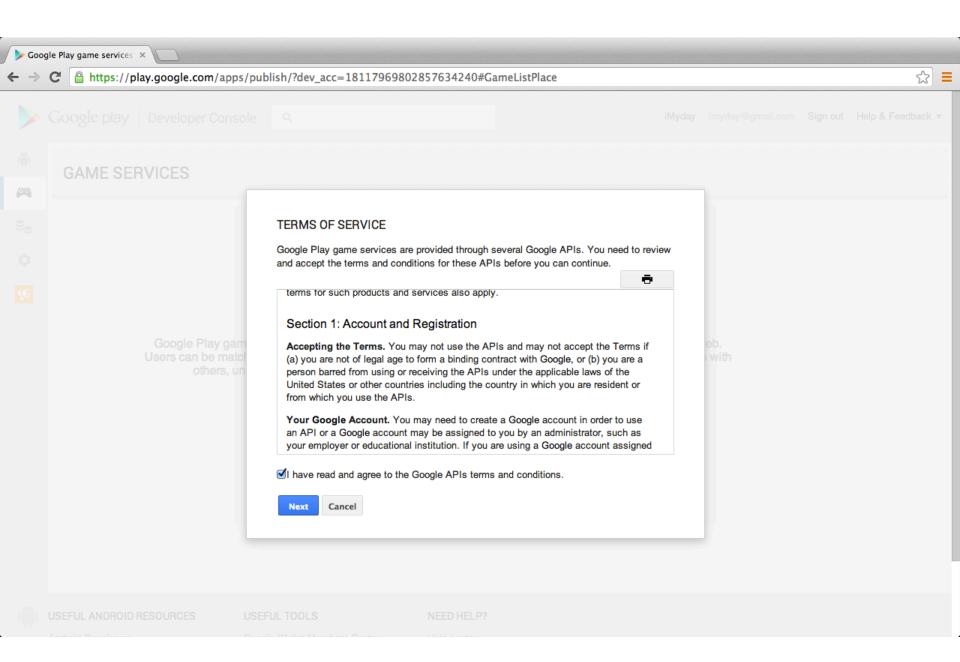


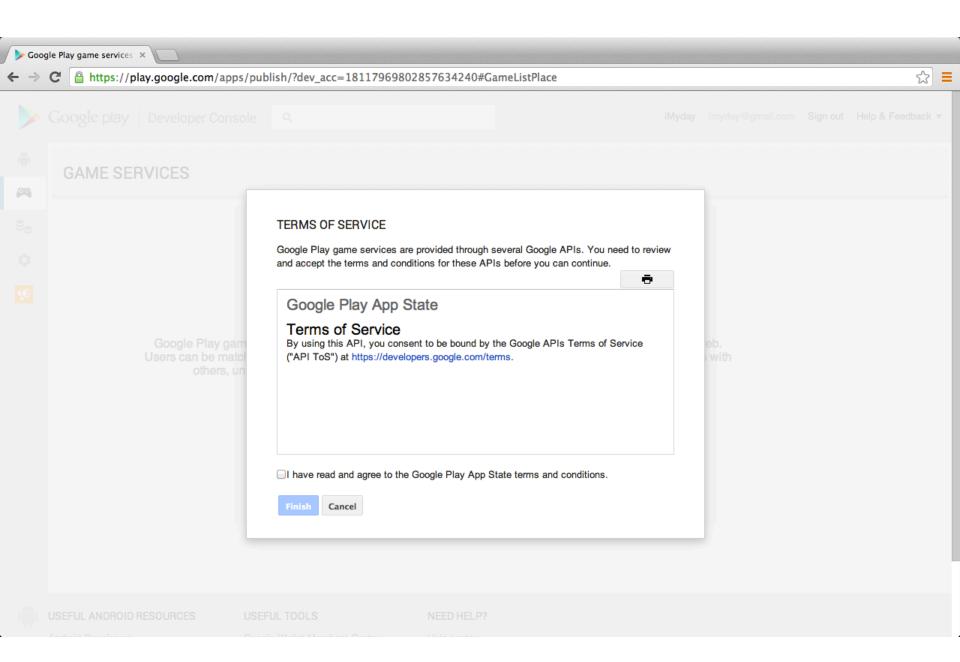
Publish an Android App on Google Play

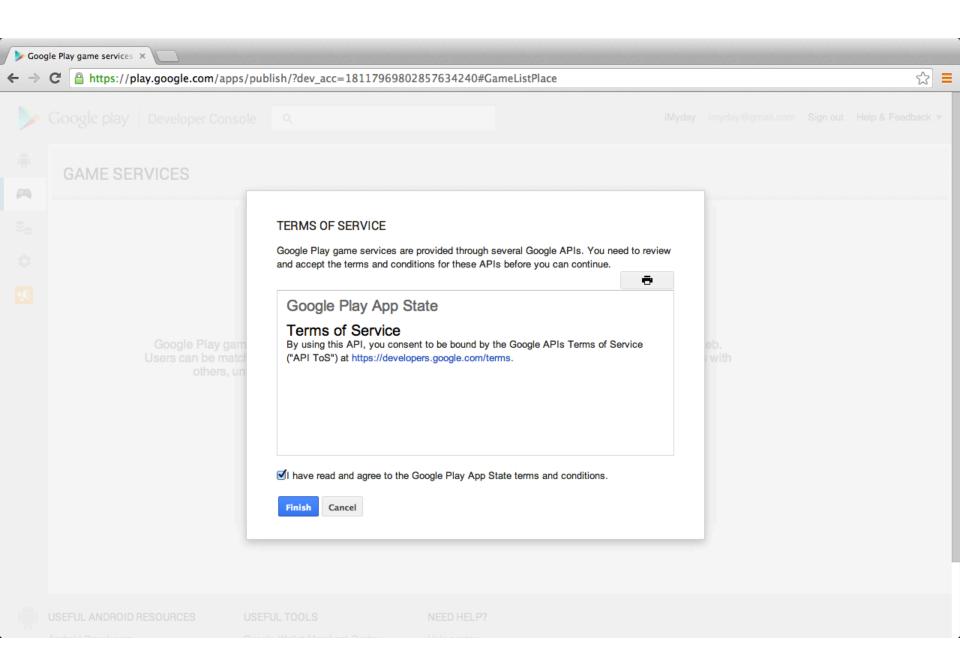


A - destal Description

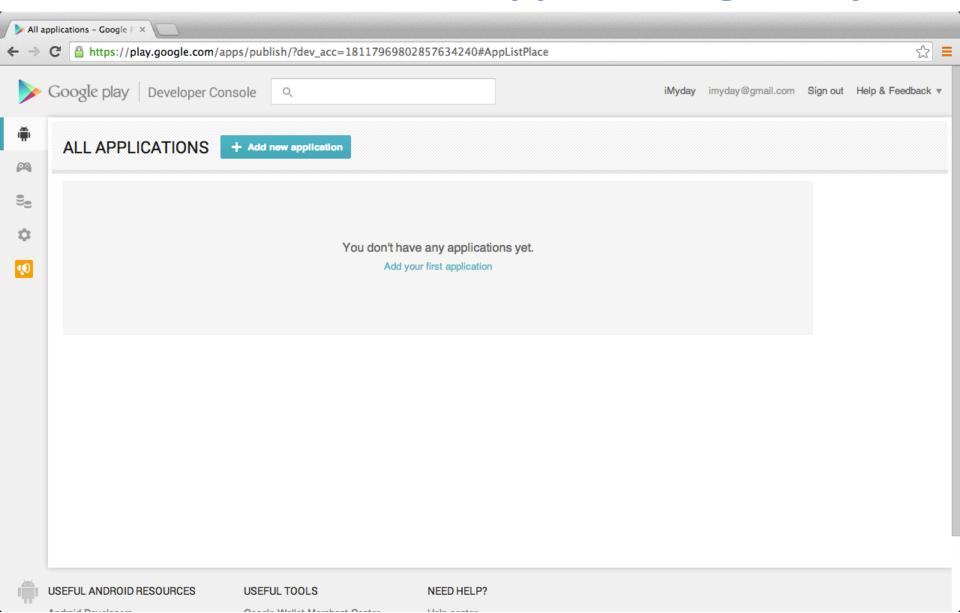








Publish an Android App on Google Play



Receipt of Google Play Developer Registration Fee

-

Google Wallet <noreply@wallet.google.com>

23:54 (10 分鐘前) ☆







Hello Min-Yuh Day,

Thanks for buying from Google using Google Wallet! Google will charge your order soon.

How do I check on this order?

Get up-to-date information about order #05912476870148976978.token.1434555839845198

Problems with this order?

Contact Google

Order date: December 9, 2013 7:53:52 AM PST Google order number: 05912476870148976978.token.1434555839845198			
Qty	Item	Price	
1	Google Play - Developer Registration Fee	\$25.00 USD	
	Tax Total :	\$0.00 USD	
	Total:	Total: \$25.00 USD	

Paid with: Visa-4709

Keytool

```
\Theta \Theta \Theta

↑ imyday — bash — 132×24

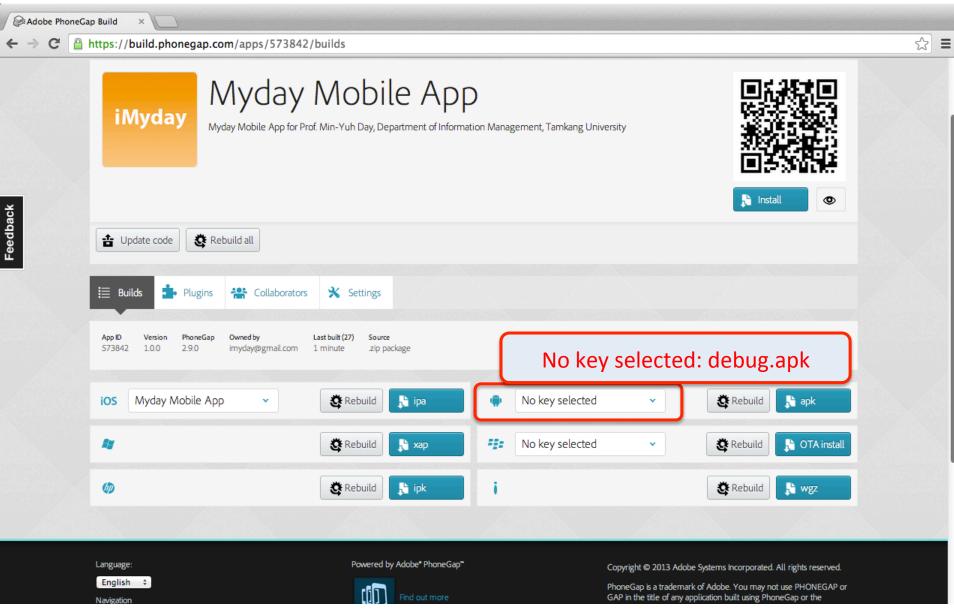
iMydaytekiMacBook-Pro:∼ imyday$ keytool -genkey -v -keystore my_release_key.keystore -alias my_android -keyalg RSA -validity 20000
Enter keystore password:
Re-enter new password:
What is your first and last name?
  [Unknown]: Min-Yuh Day
What is the name of your organizational unit?
  [Unknown]: IMTKU
What is the name of your organization?
  [Unknown]: TKU
What is the name of your City or Locality?
  [Unknown]: Taipei
What is the name of your State or Province?
  [Unknown]: Taiwan
What is the two-letter country code for this unit?
  [Unknown]: TW
Is CN=Min-Yuh Day, OU=IMTKU, O=TKU, L=Taipei, ST=Taiwan, C=TW correct?
  [no]: y
Generating 1,024 bit RSA key pair and self-signed certificate (SHA1withRSA) with a validity of 20,000 days
        for: CN=Min-Yuh Day, OU=IMTKU, O=TKU, L=Taipei, ST=Taiwan, C=TW
Enter key password for <mv_android>
        (RETURN if same as keystore password):
[Storing my_release_key.keystore]
iMydaytekiMacBook-Pro:~ imyday$ 

■
```

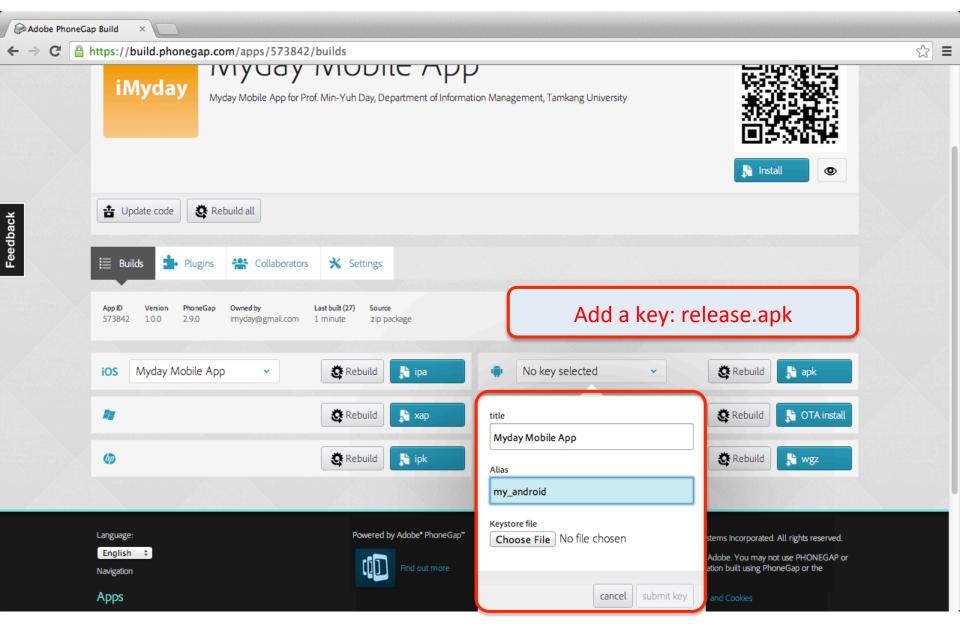
keytool -genkey -v

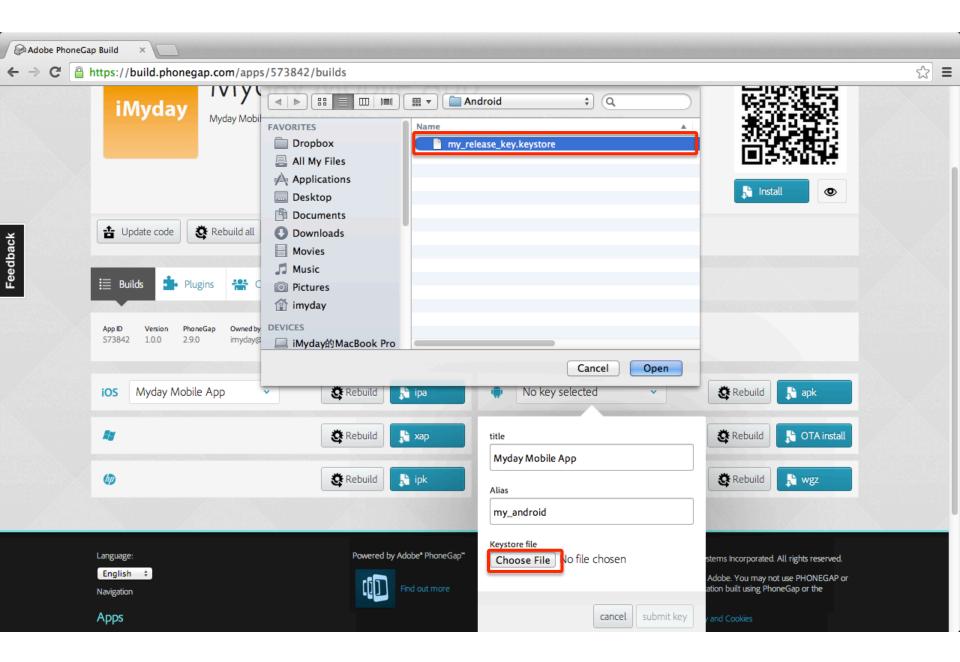
- -keystore my_release_key.keystore
- -alias my_android
- -keyalg RSA -validity 20000

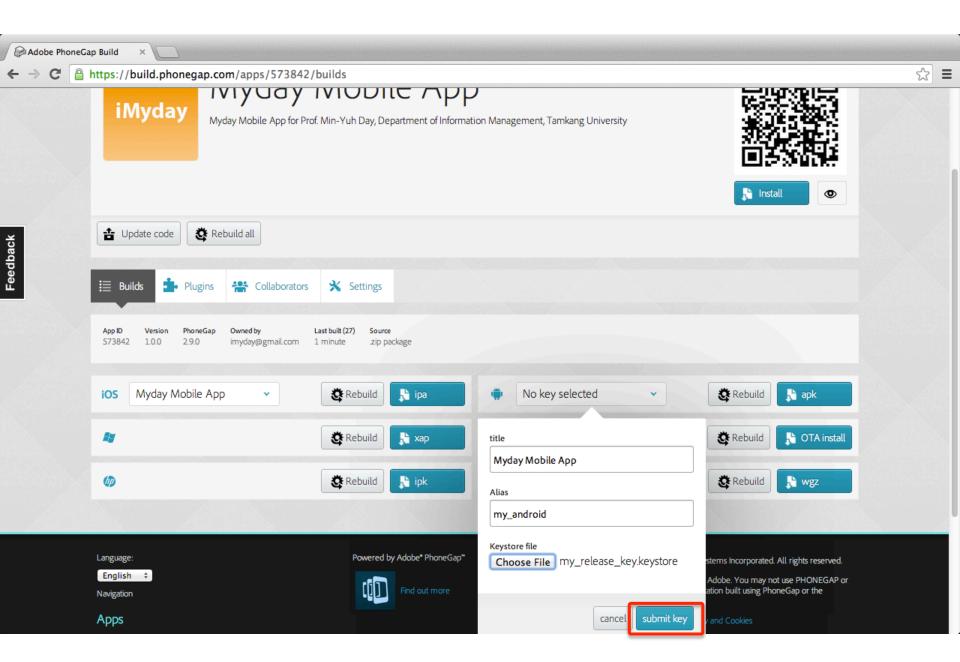
Add a key to Build release.apk

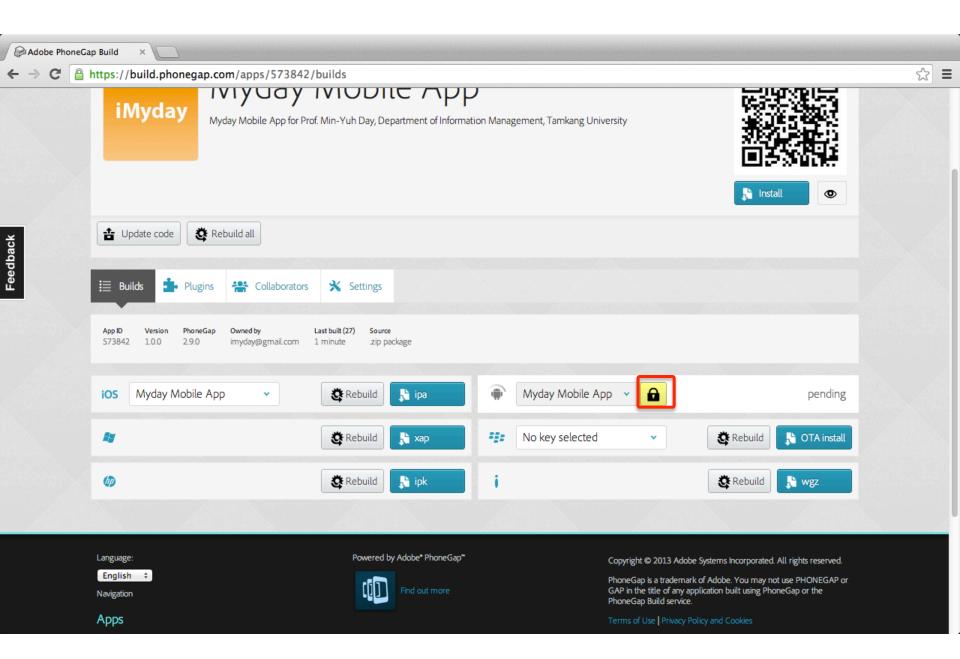


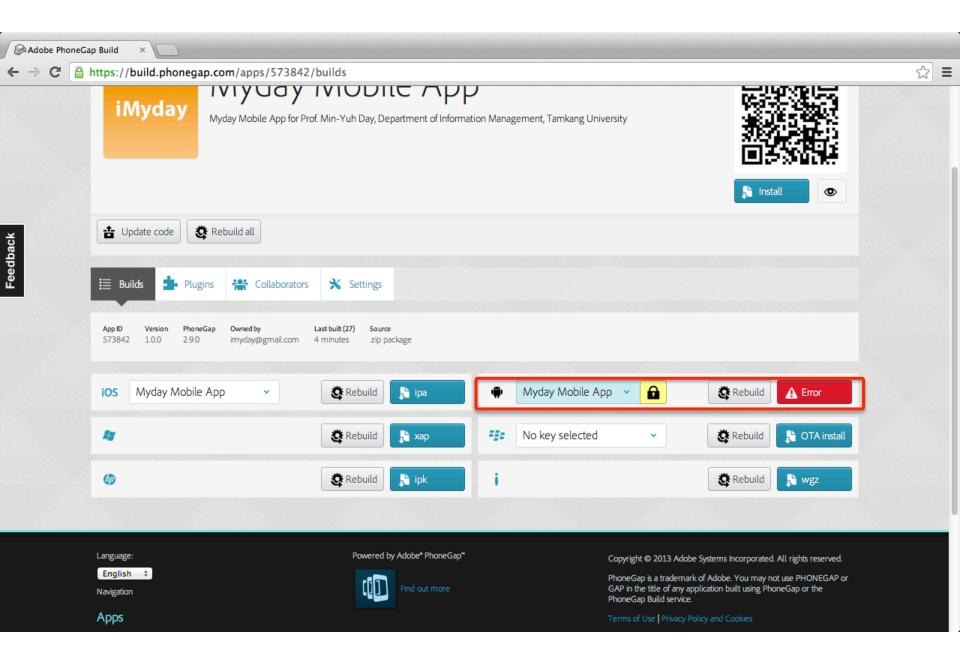
Add a key to Build release.apk

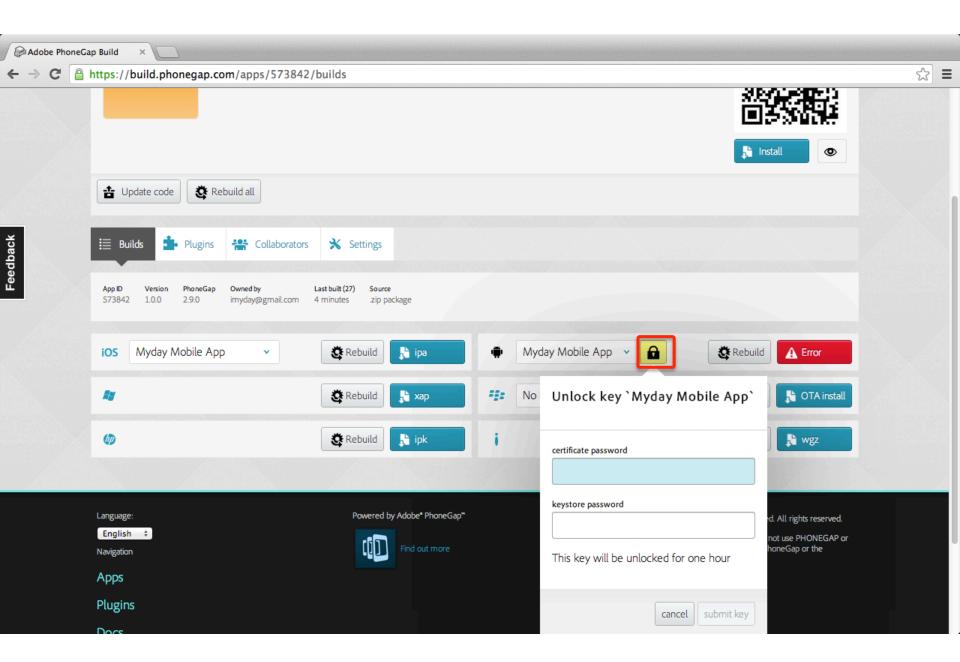


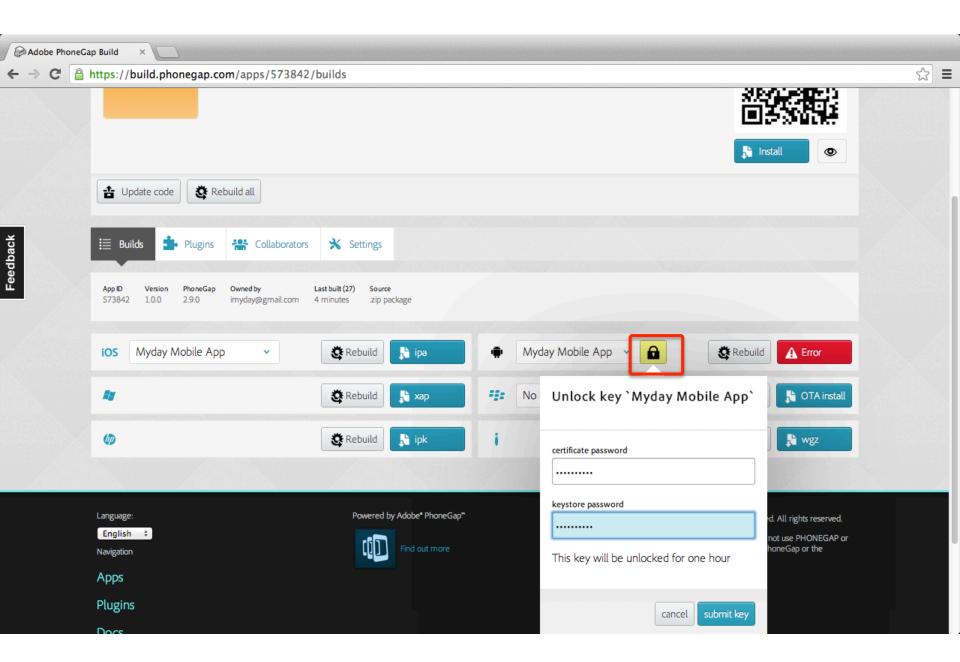


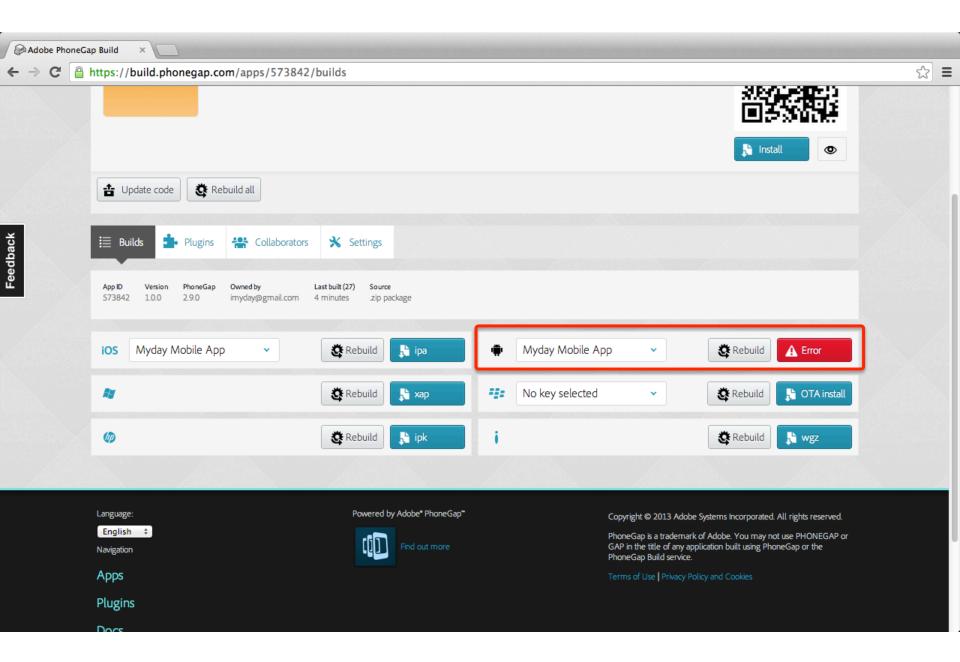


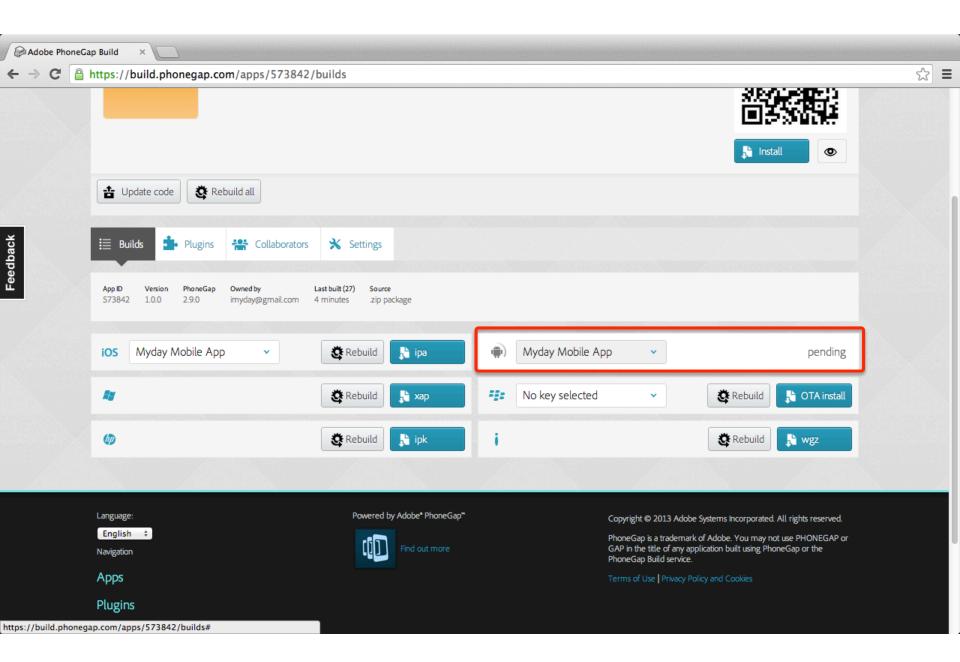




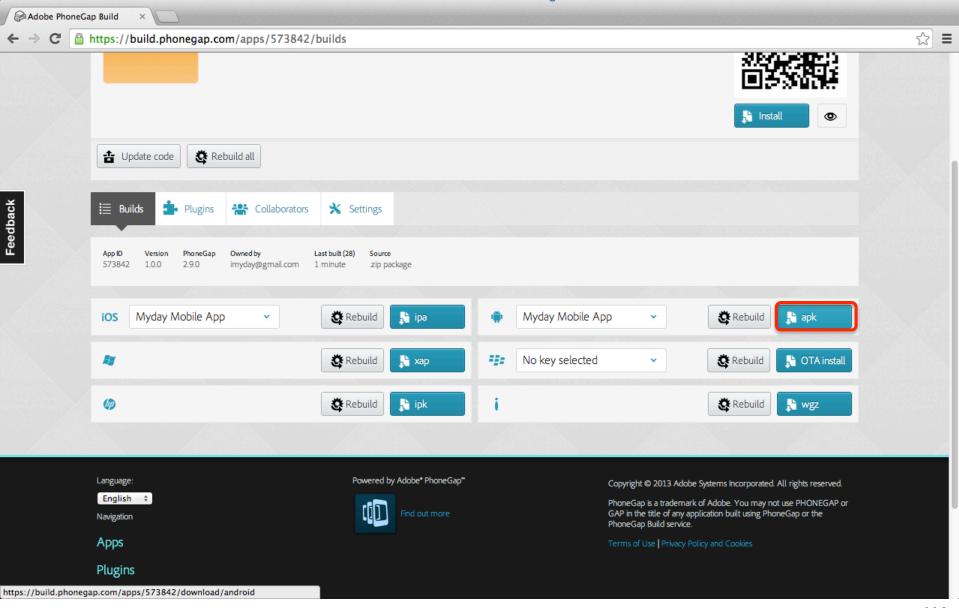




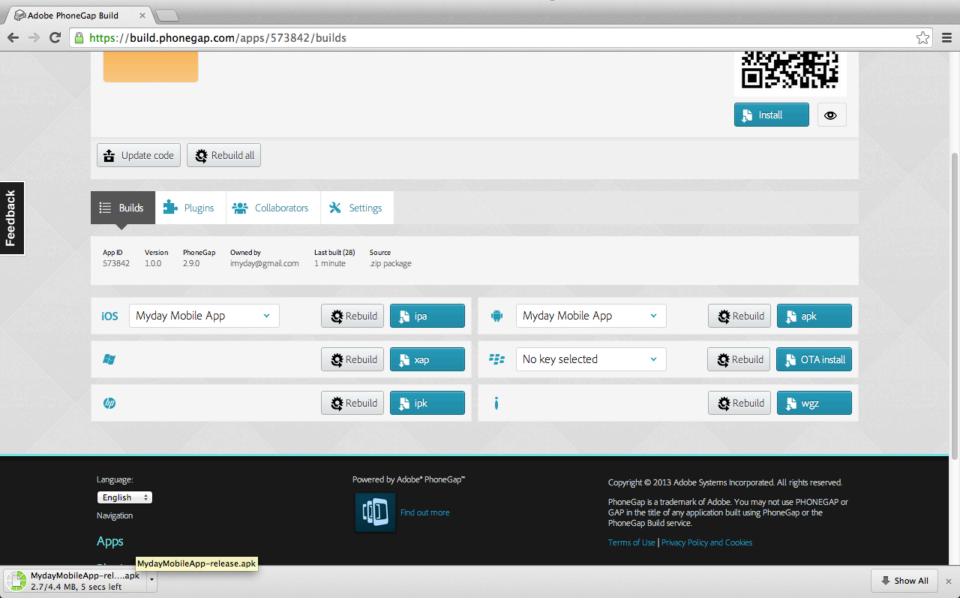




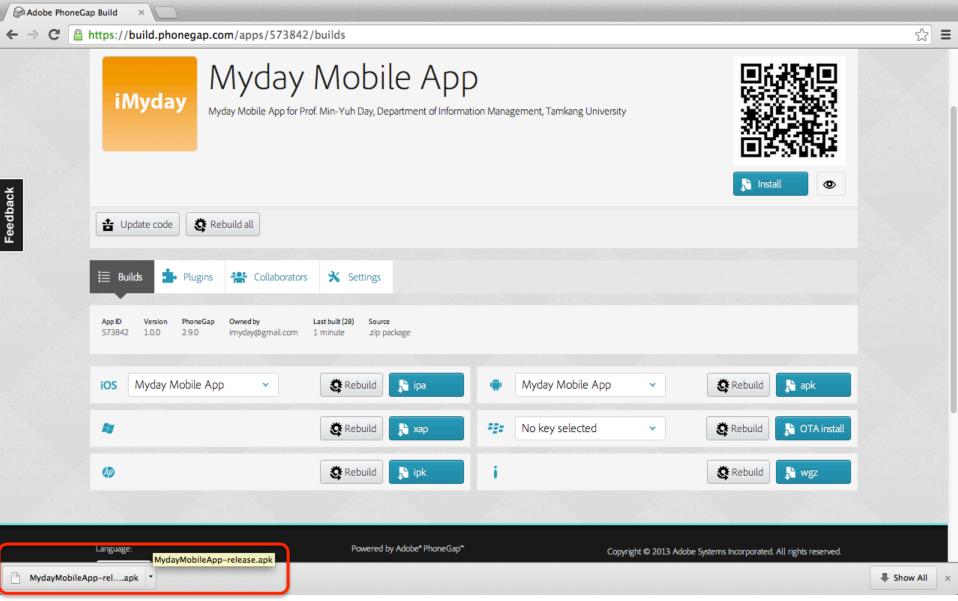
Download MydayMobileApp-release.apk from PhoneGap Build



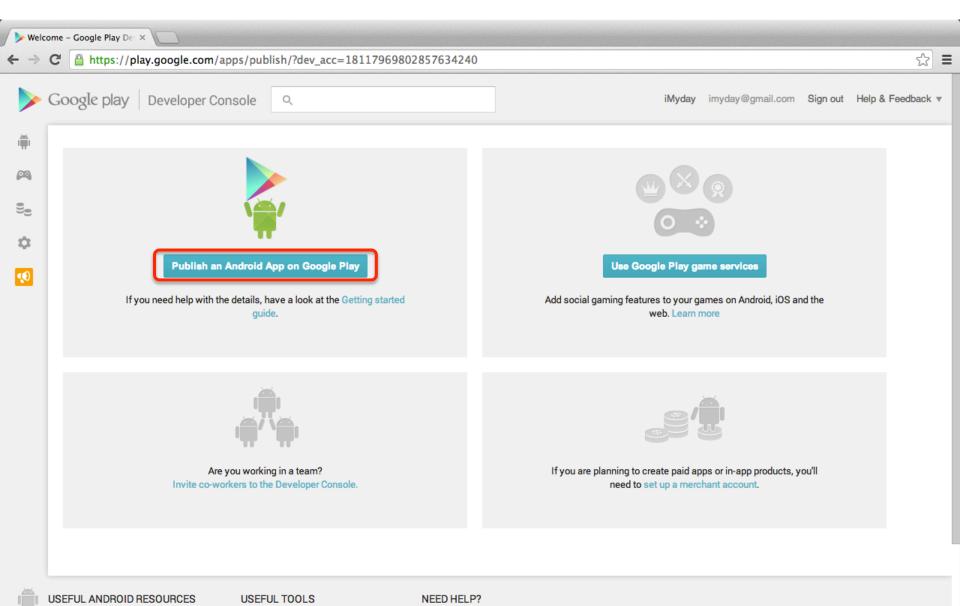
Download MydayMobileApp-release.apk from PhoneGap Build



Download MydayMobileApp-release.apk from PhoneGap Build



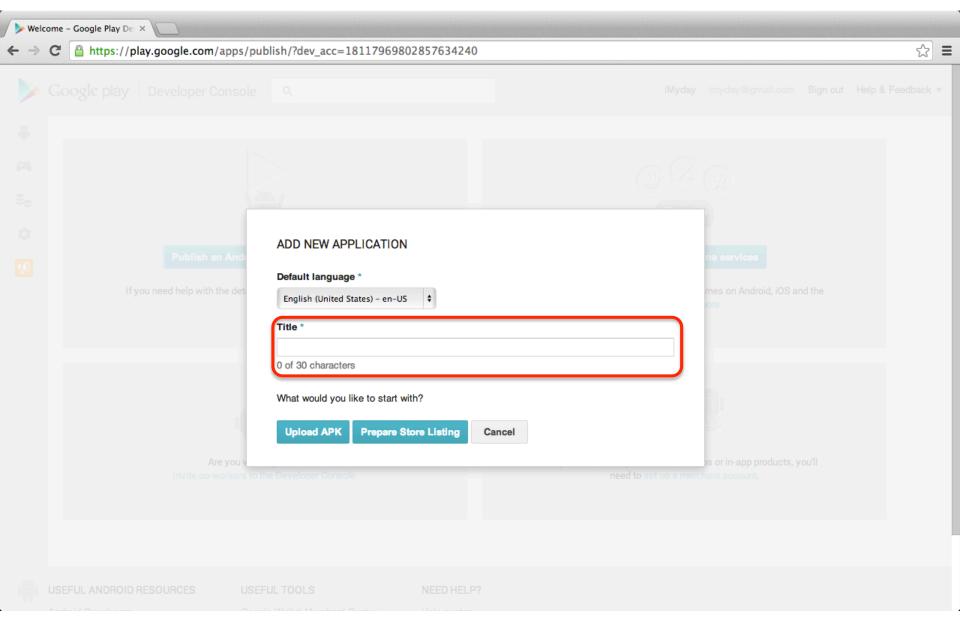
Publish an Android App on Google Play



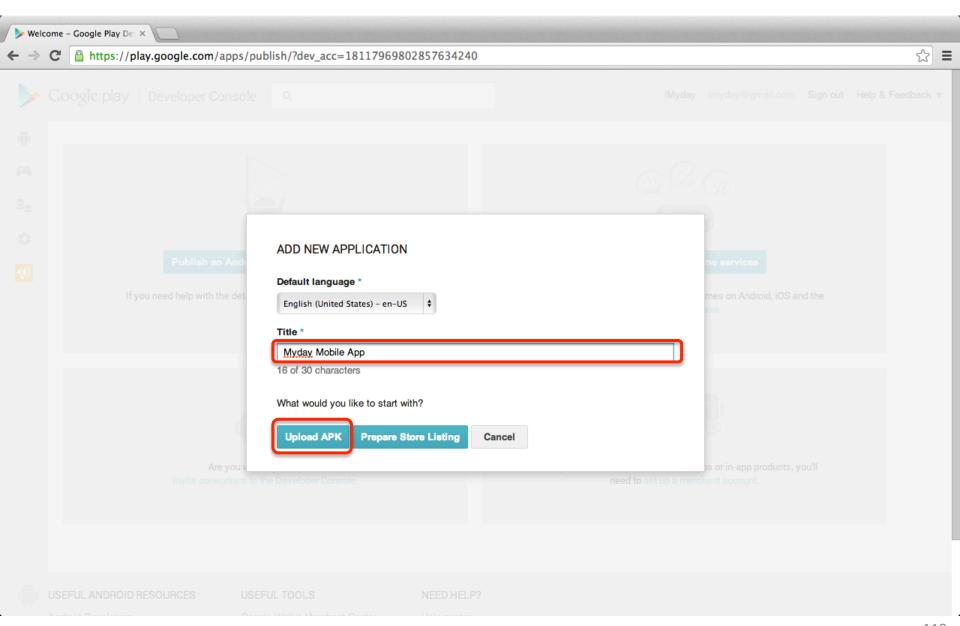
Andreid Developmen

One of a Ministration of Control

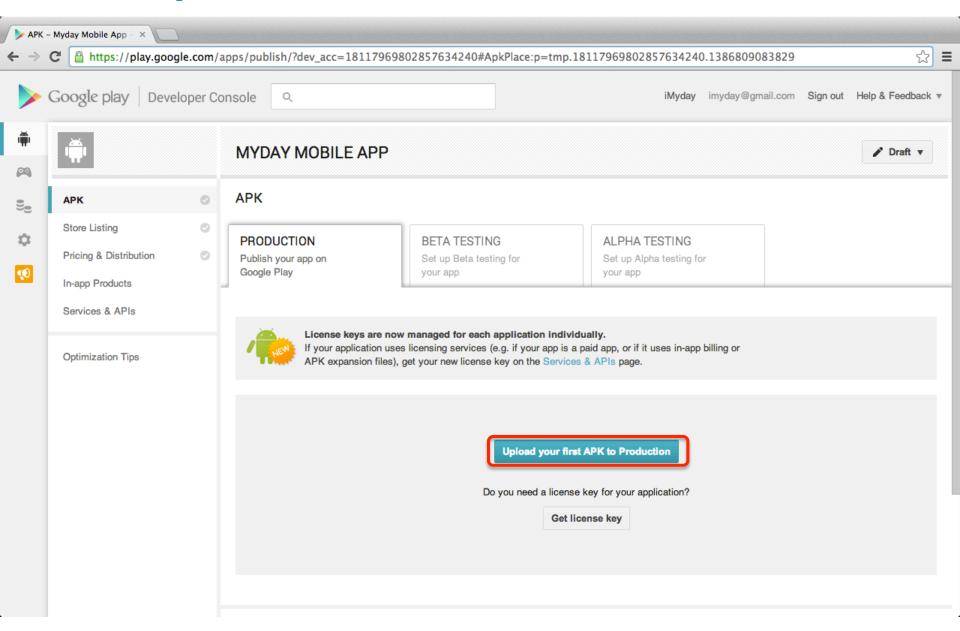
Publish an Android App on Google Play



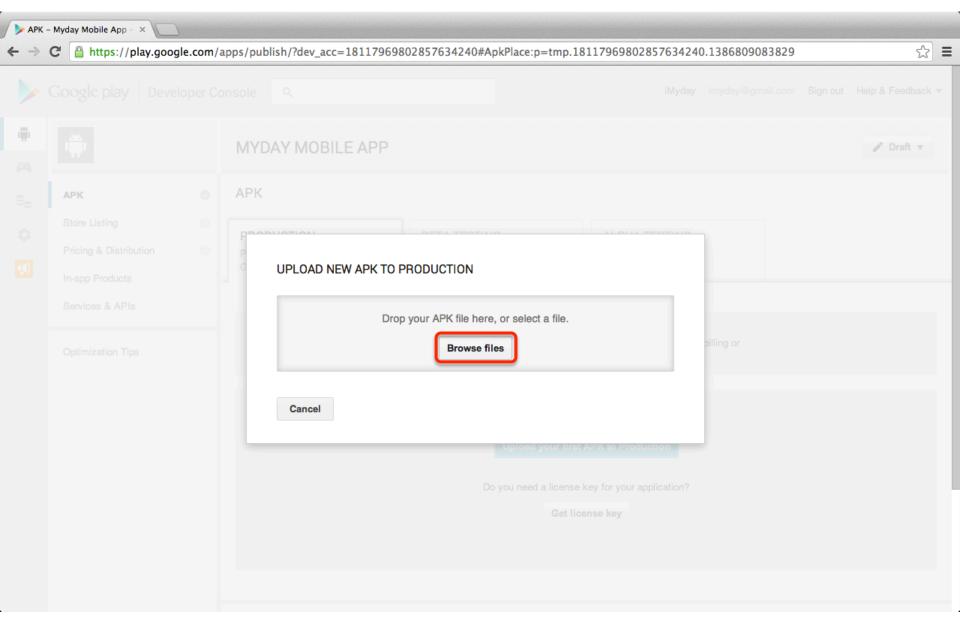
Publish an Android App on Google Play



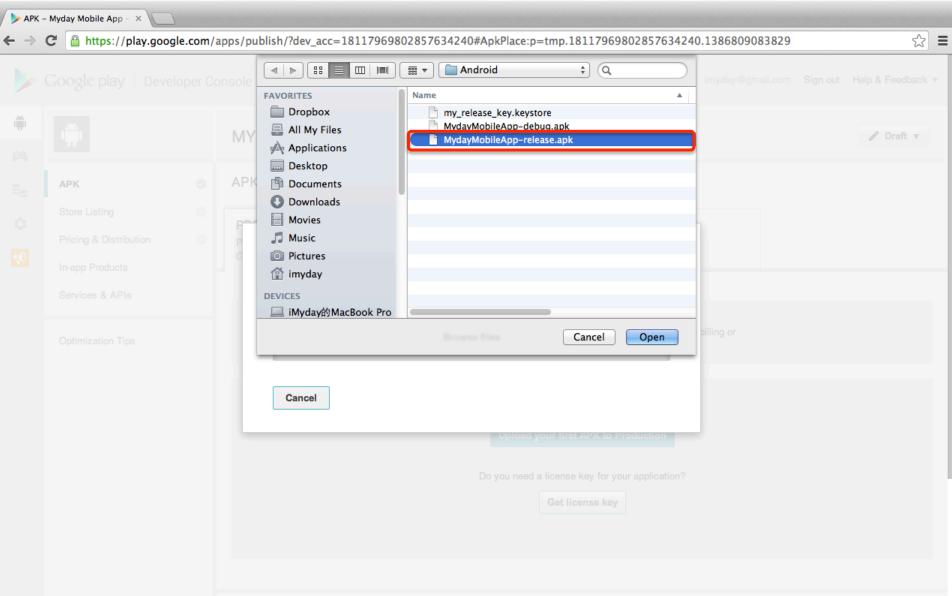
Upload new APK to Production



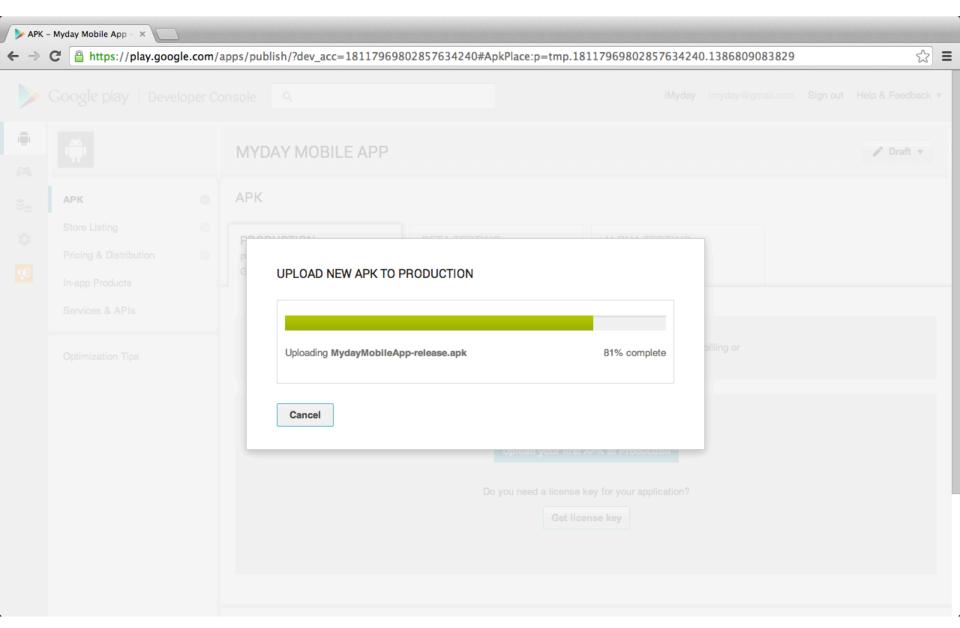
Upload new APK to Production



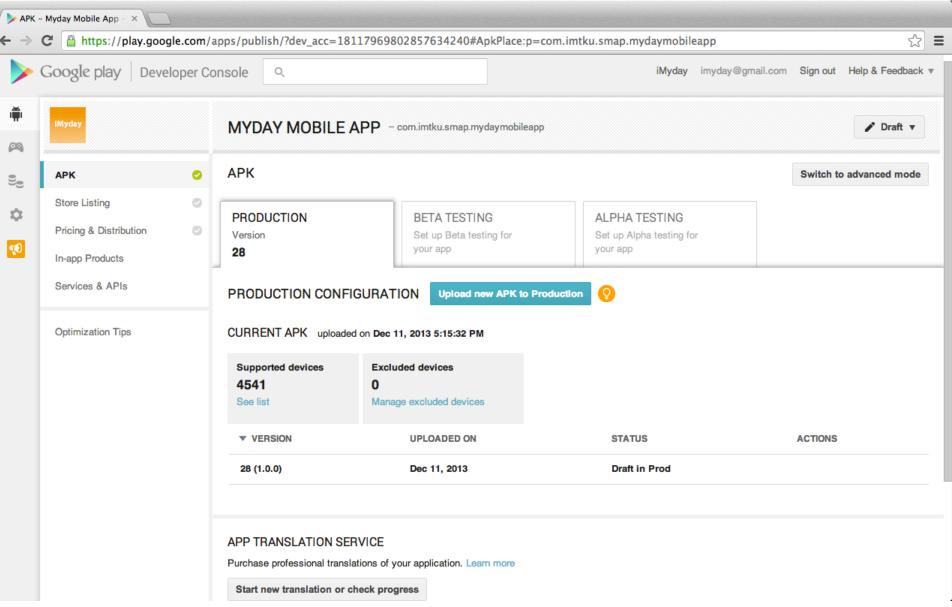
MydayMobileApp-release.apk



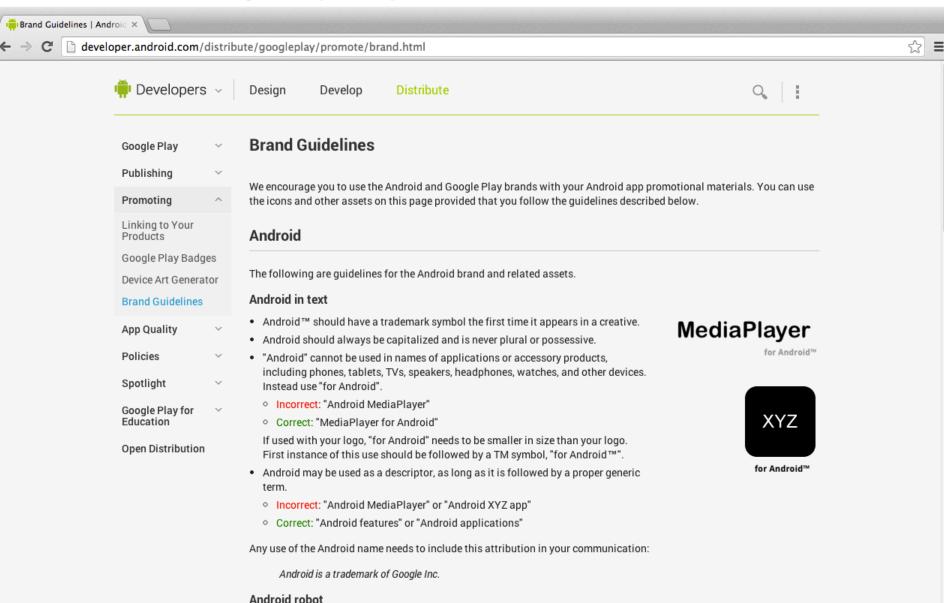
Upload new APK to Production



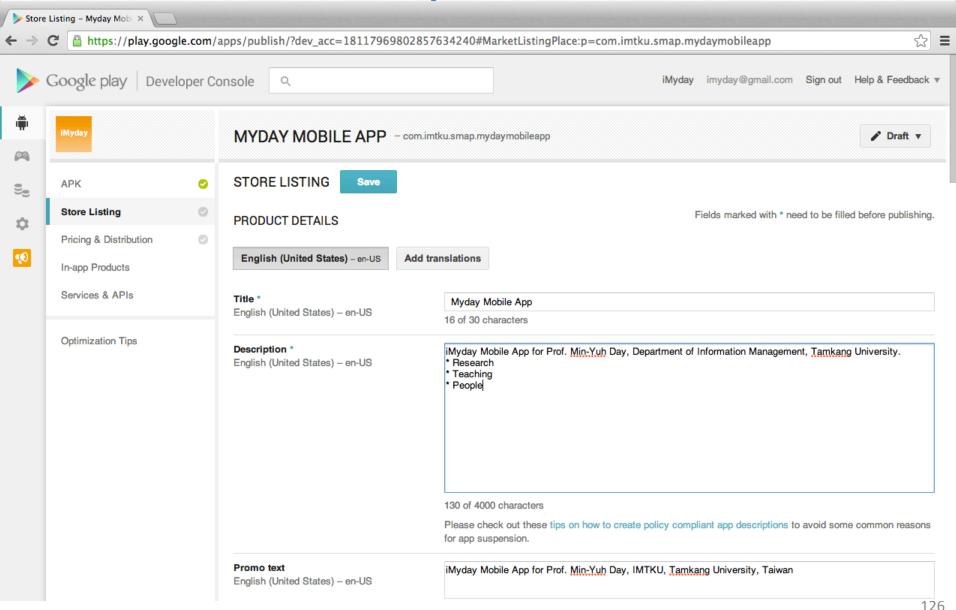
Release APK Uploaded to Production

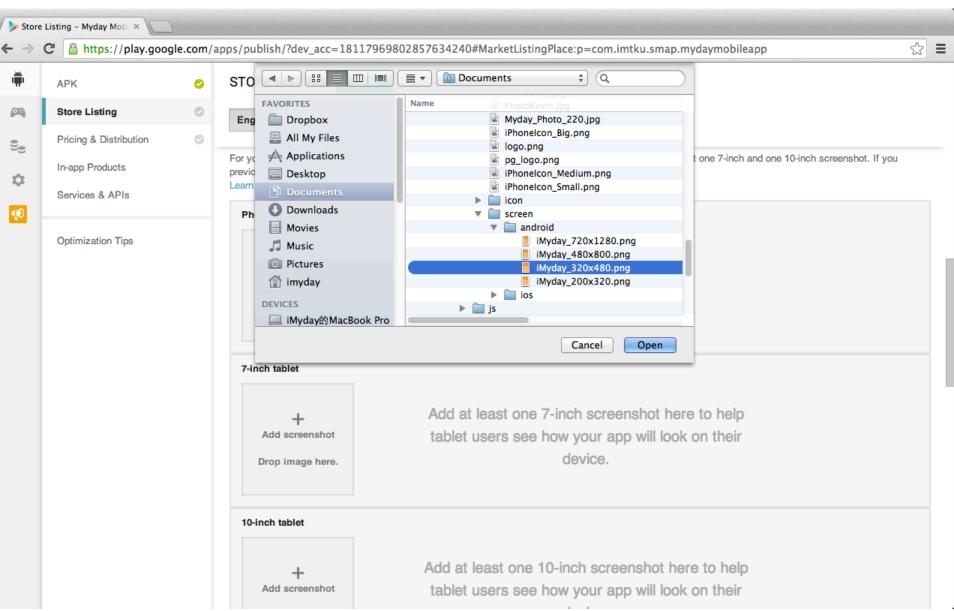


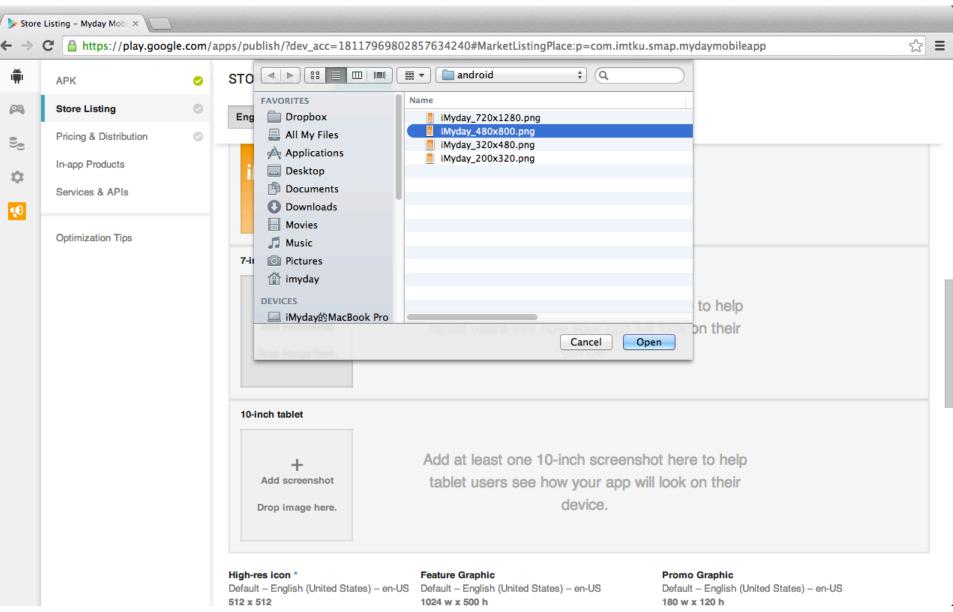
Google play Brand Guidelines

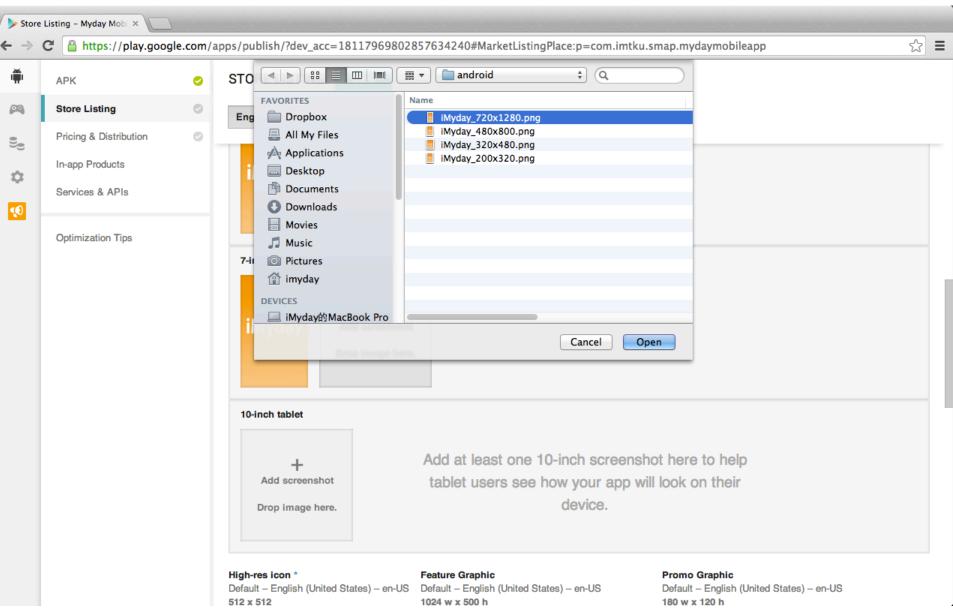


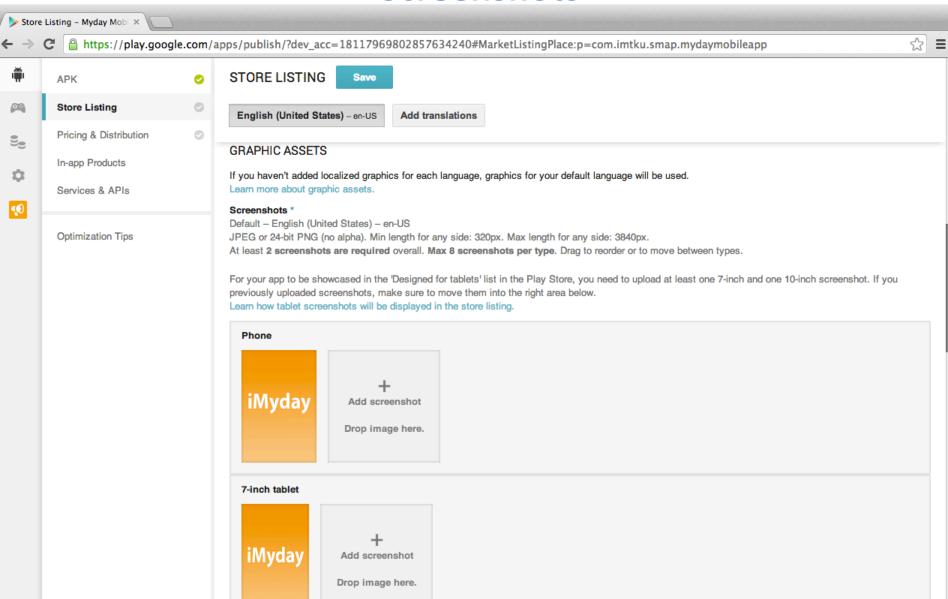
Store Listing: Product Details Title, Description, Promo Text

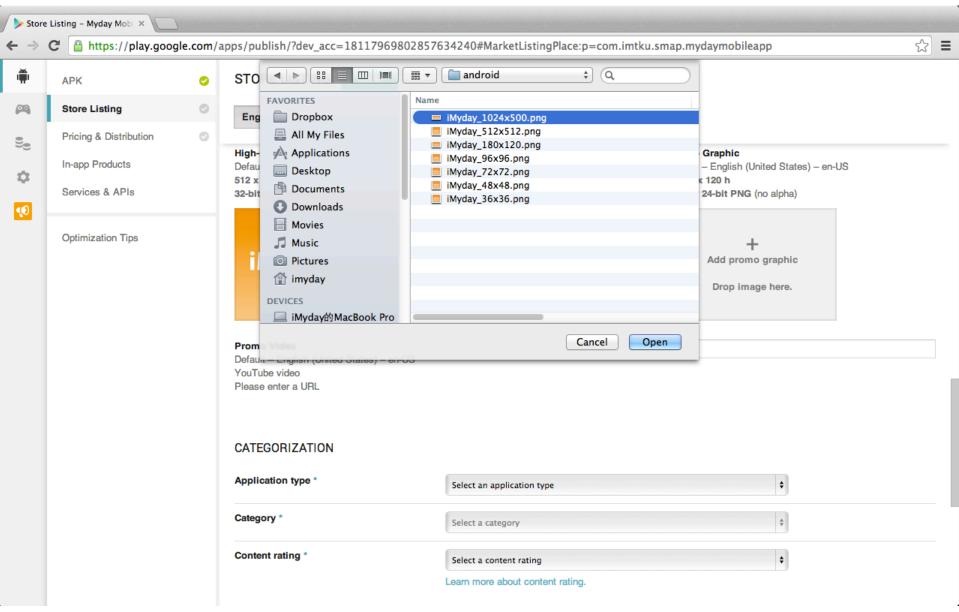




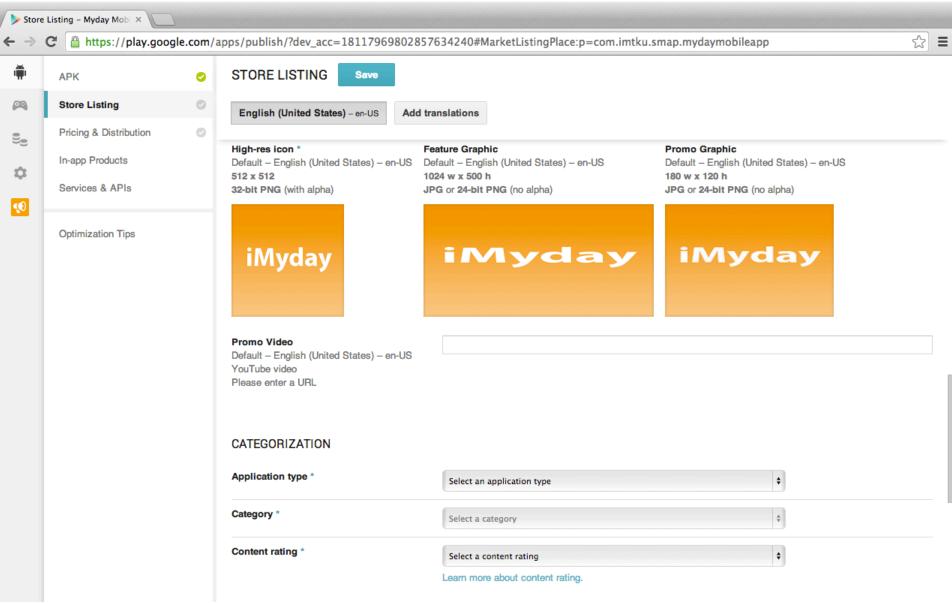




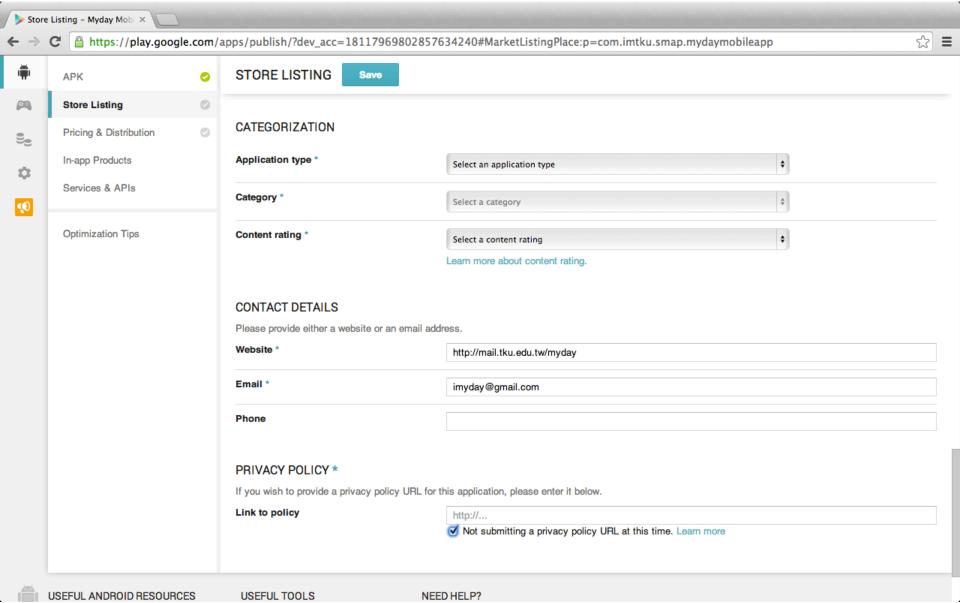




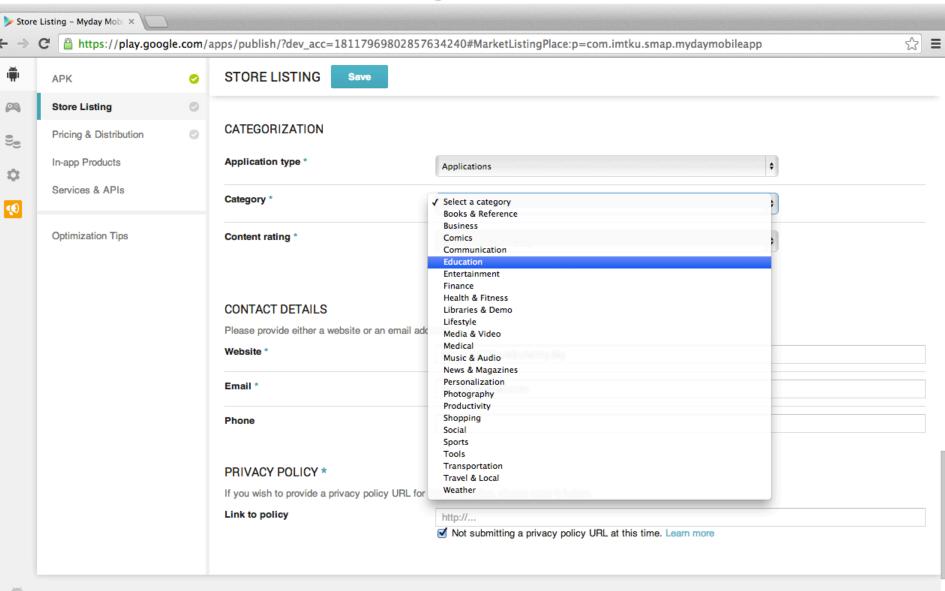
Store Listing: High-res icon, Feature Graphic, Promo Graphic



Store Listing: Categorization, Contact Details, Privacy Policy



Store Listing: Categorization

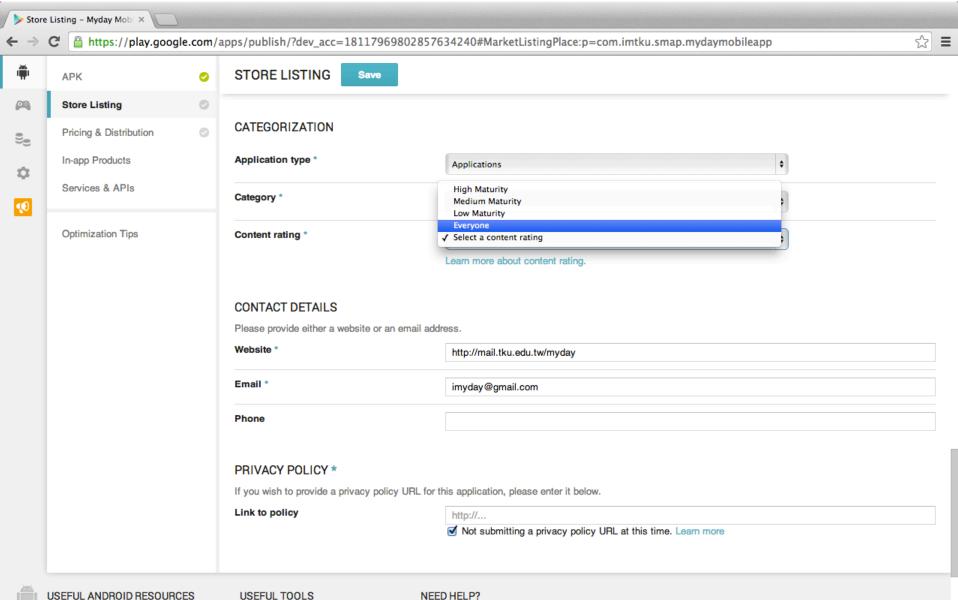


NEED HELP?

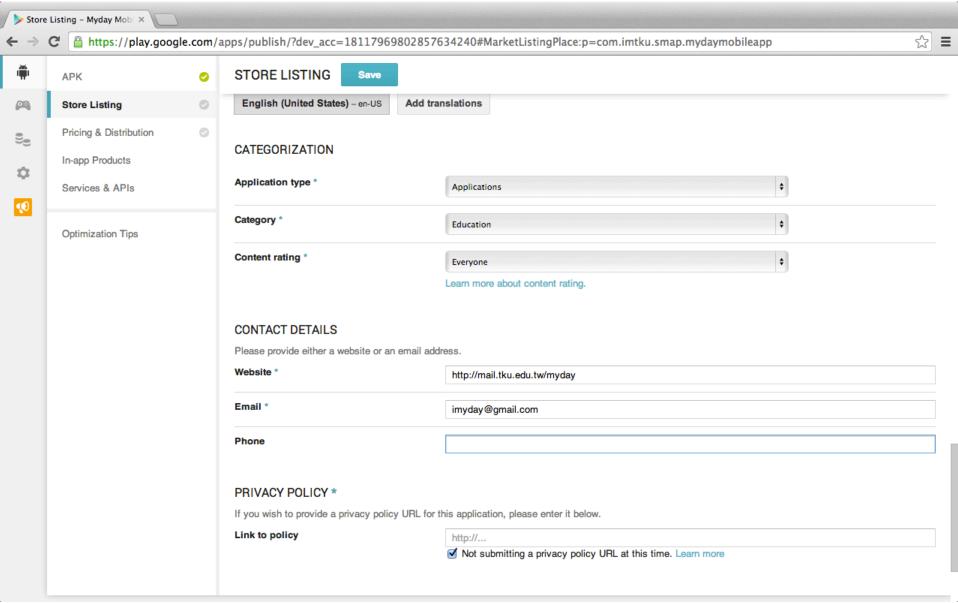
USEFUL ANDROID RESOURCES

USEFUL TOOLS

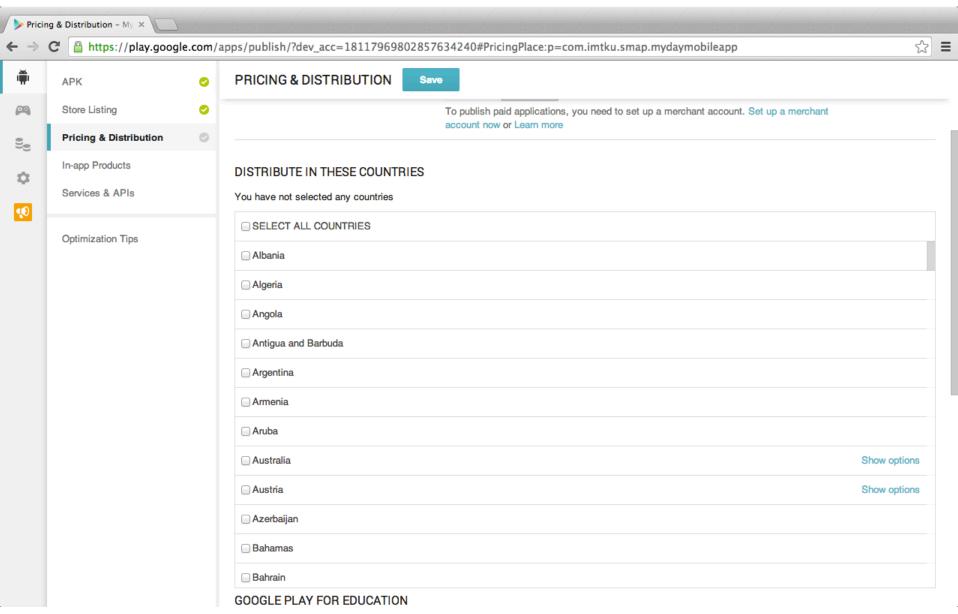
Store Listing: Categorization



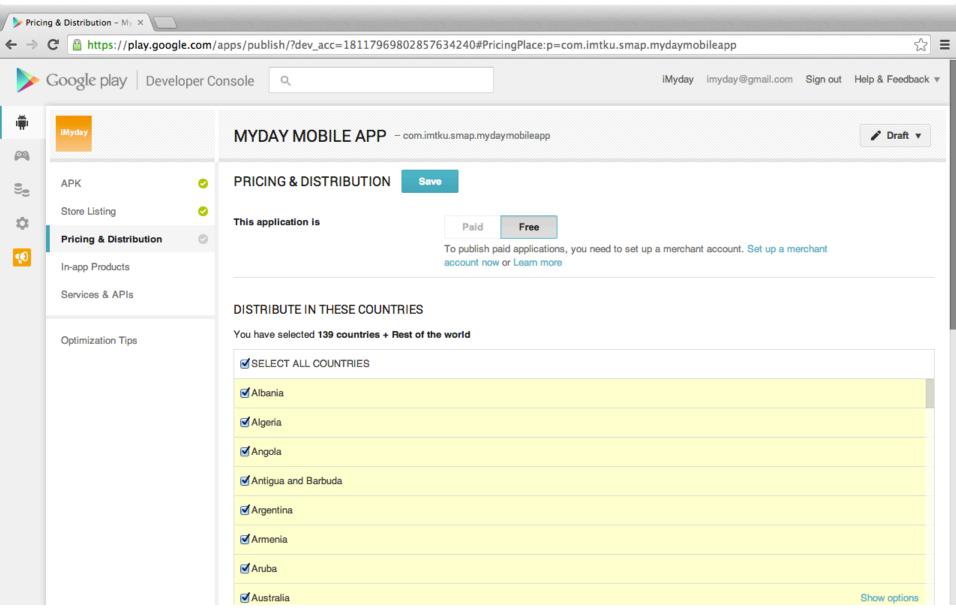
Store Listing: Categorization, Contact Details, Privacy Policy



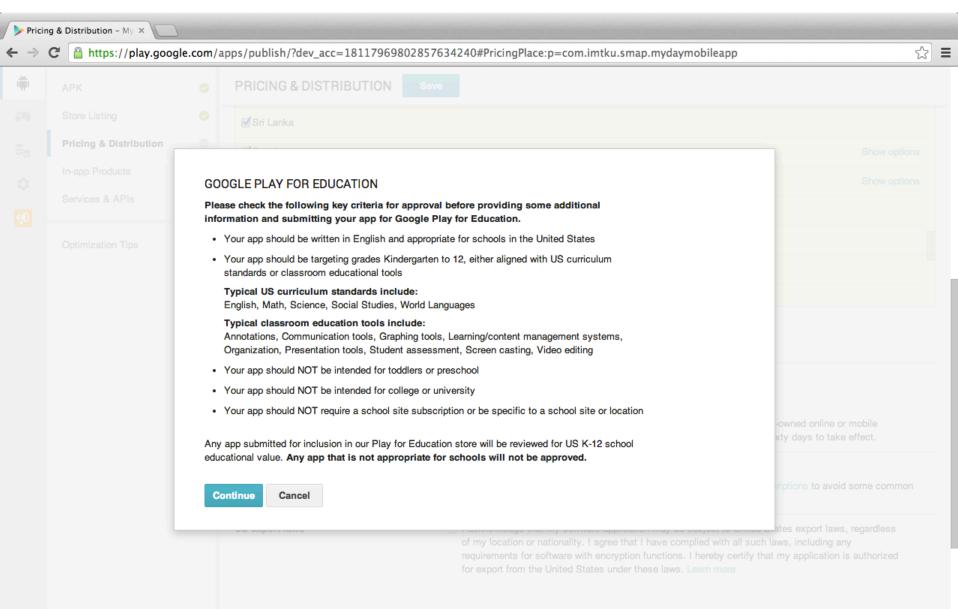
Pricing & Distribution



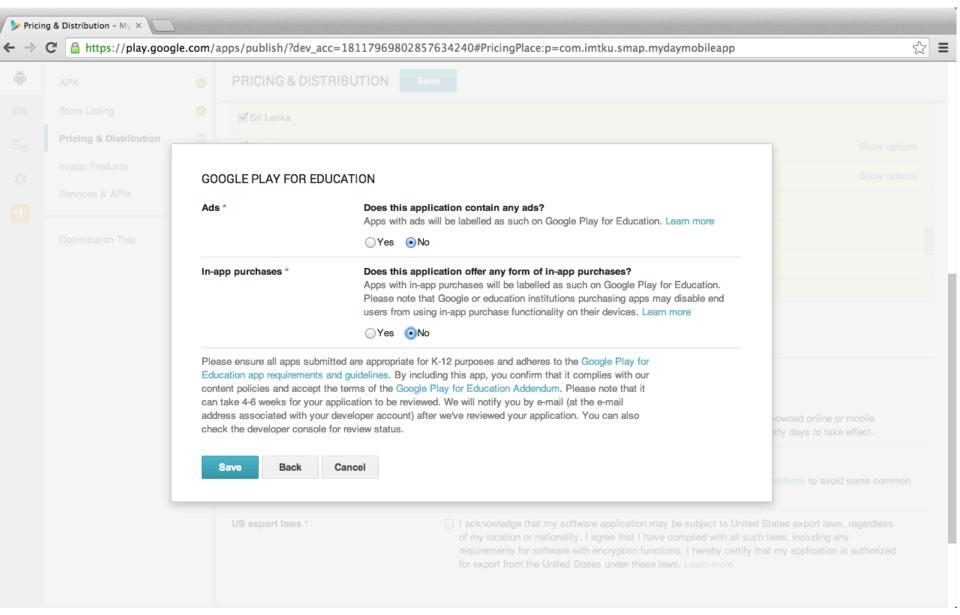
Pricing & Distribution



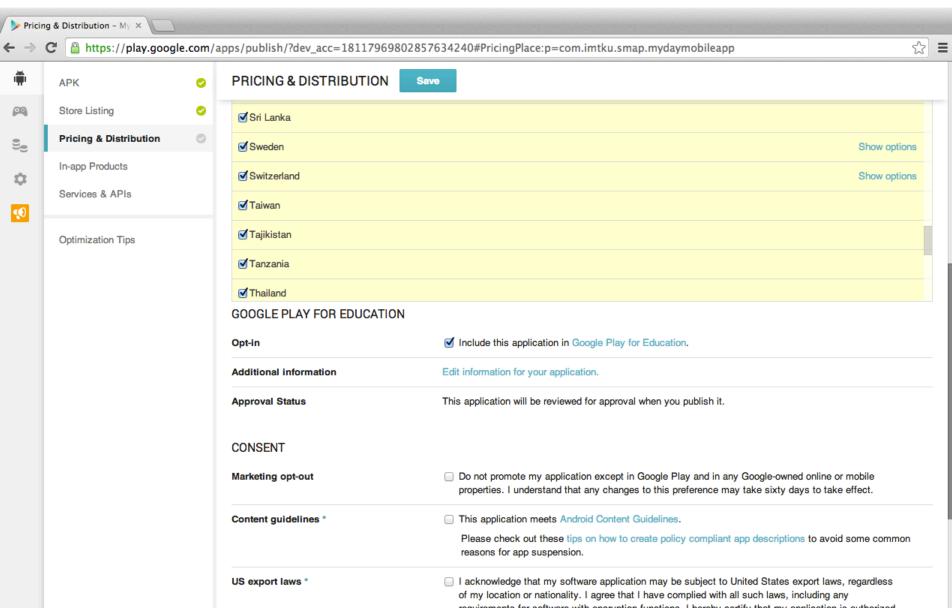
Google play for Education



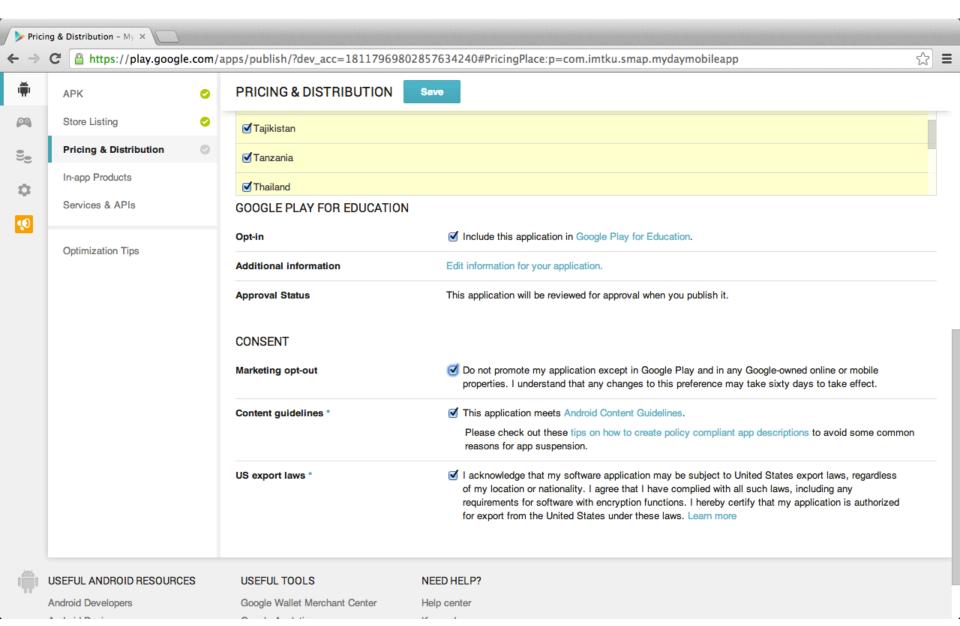
Google play for Education



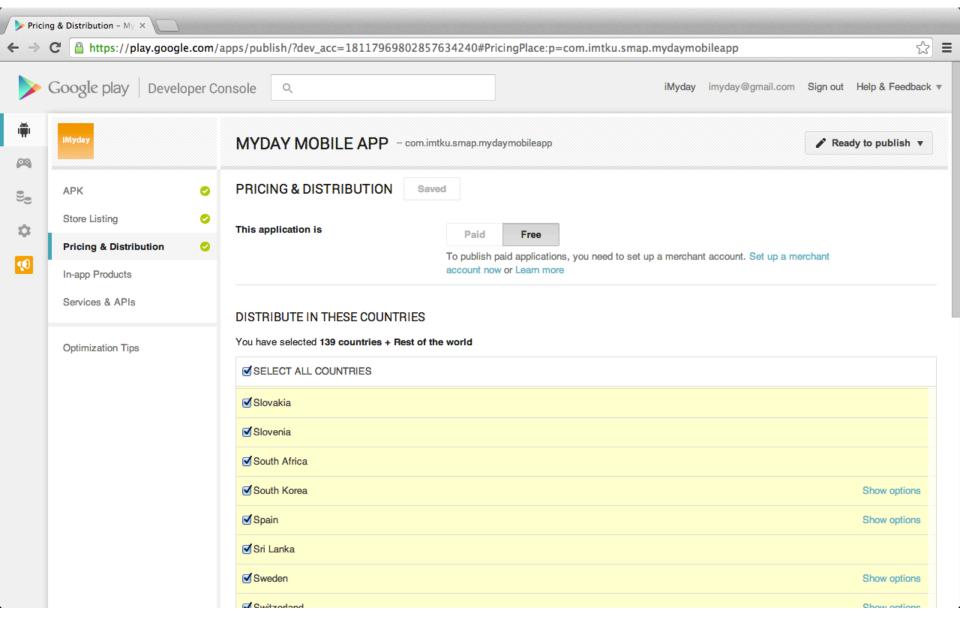
Google play for Education



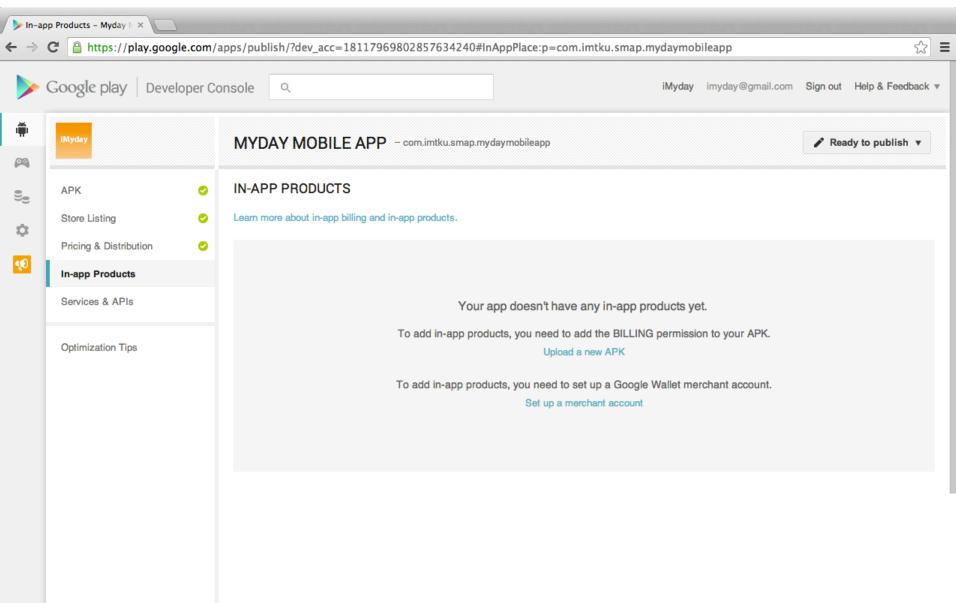
Consent



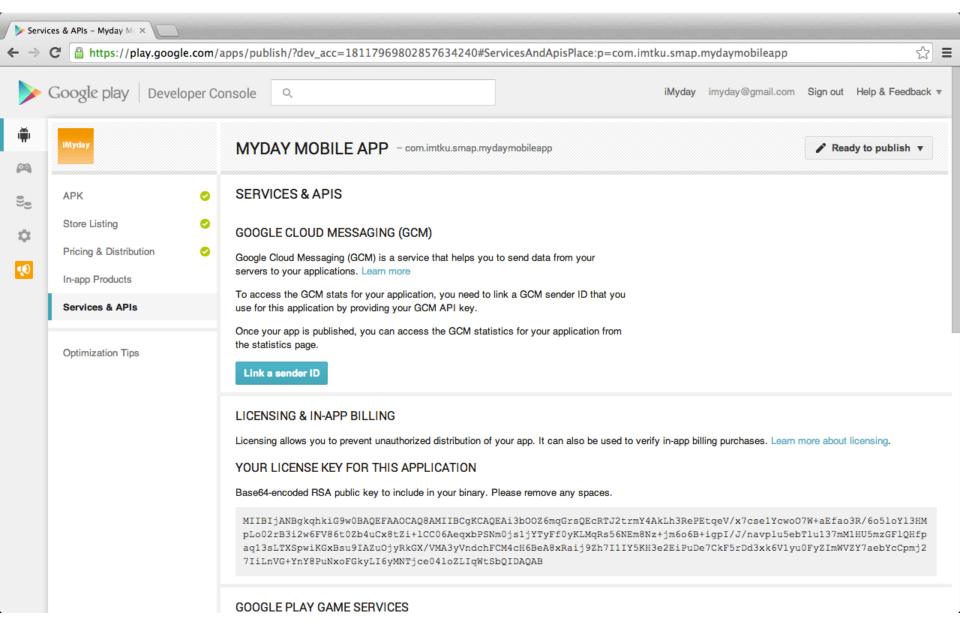
Ready to publish



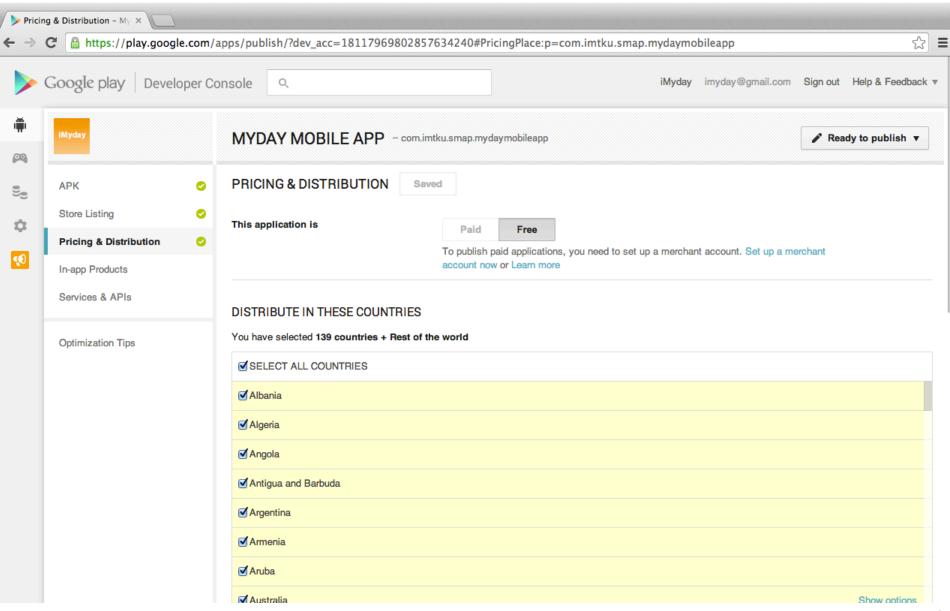
Ready to publish



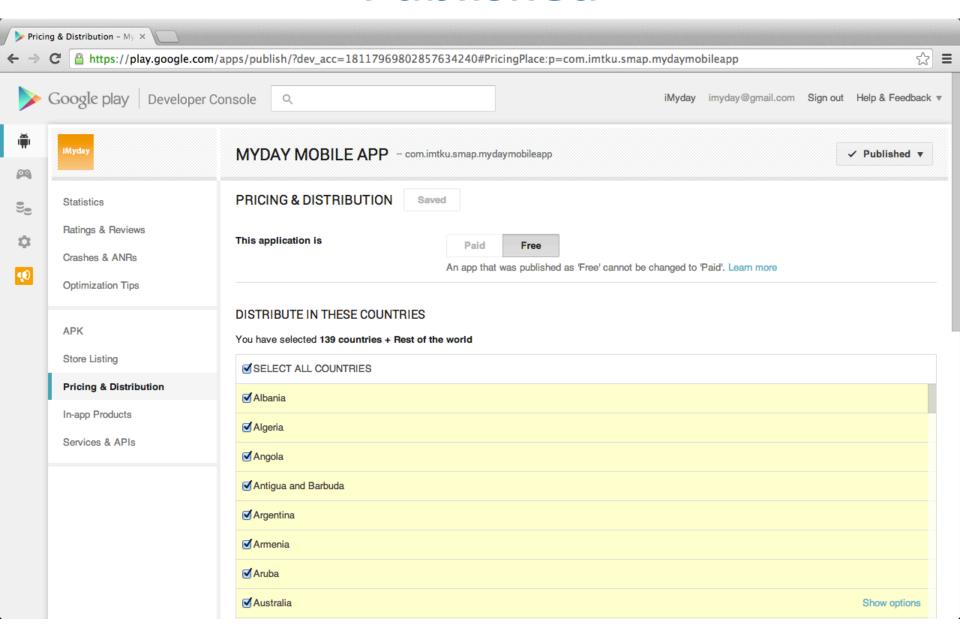
Ready to publish



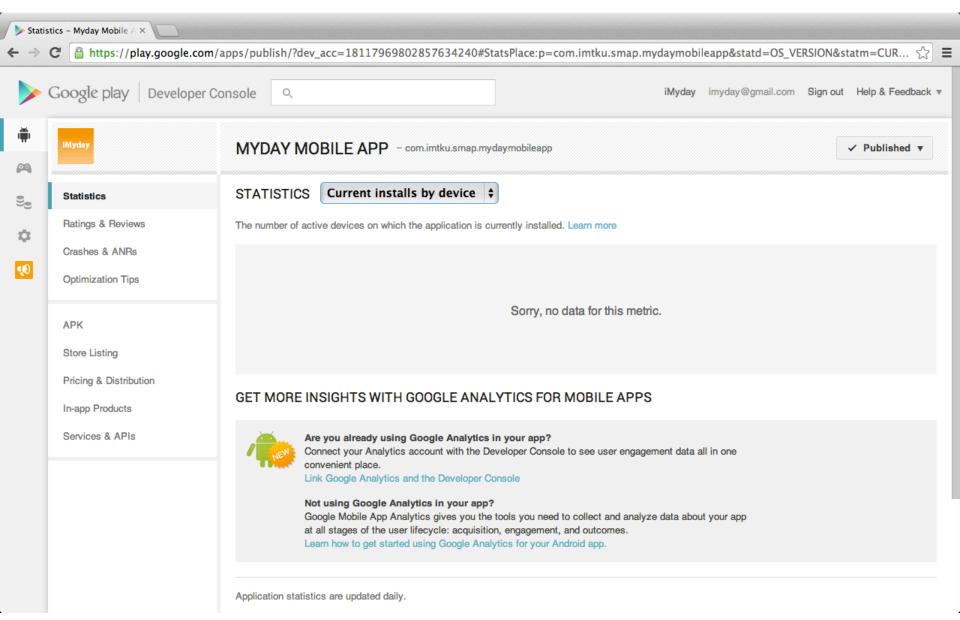
Ready to publish



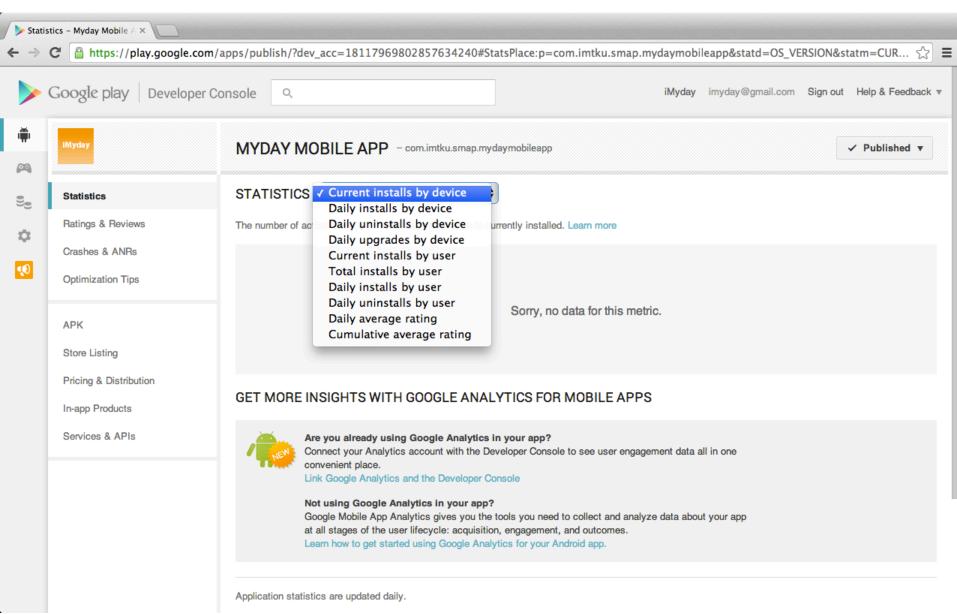
Published



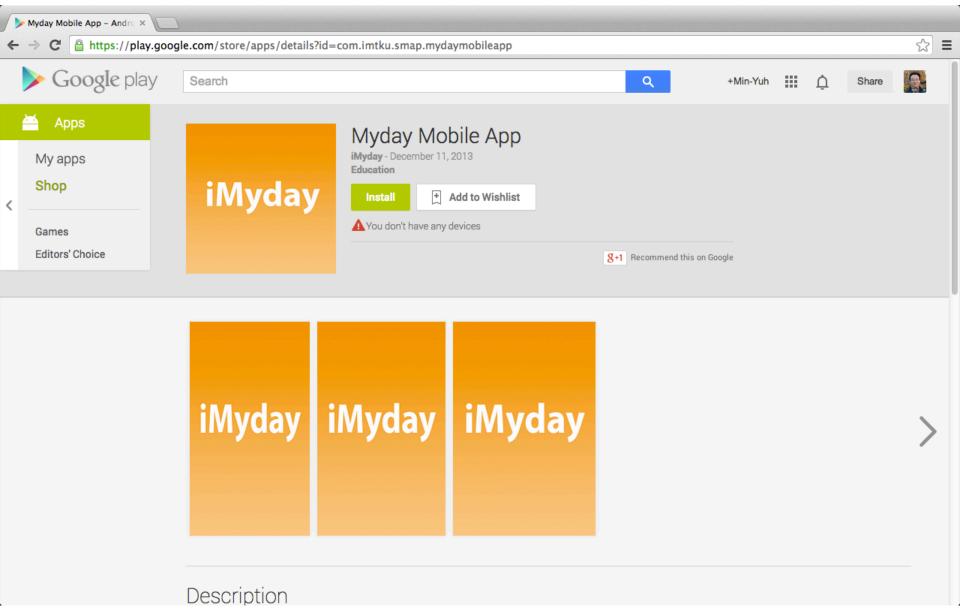
Myday Mobile App Statistics



Myday Mobile App Statistics



Myday Mobile App on Google play

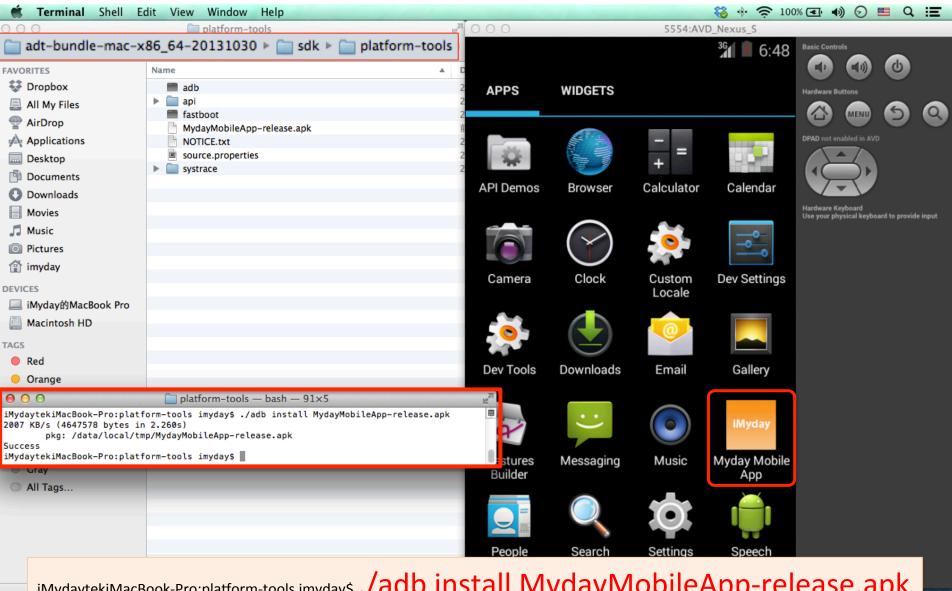


Update Android App Screenshots

- Download Android App on Google play
 - Capture Screenshot from Android Device
- Install app-release.apk on Android Emulator
 - Android SDK platform tools: abd
 - abd install myapp-release.apk
 - Capture Screenshot from Android Emulator



adb install MydayMobileApp-release.apk

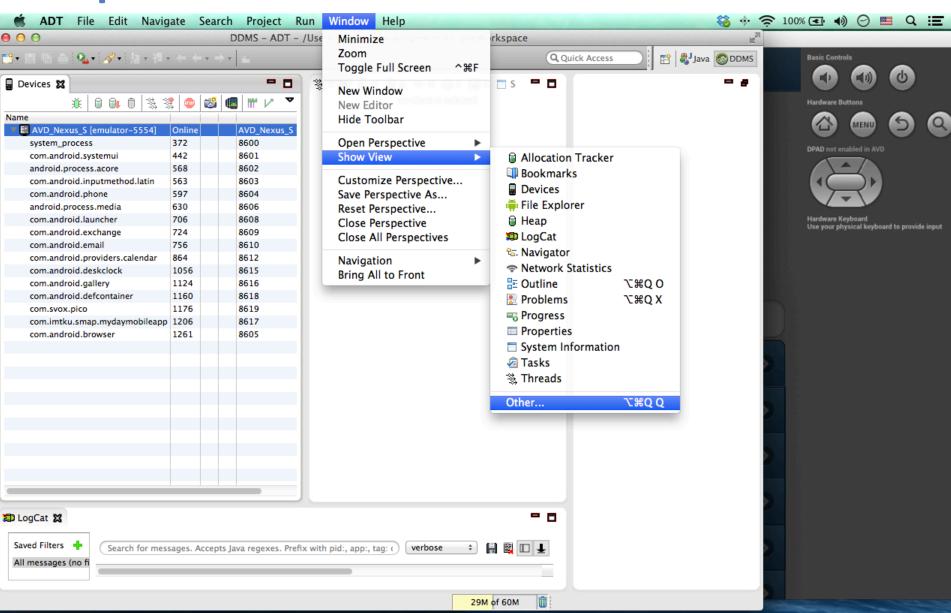


iMydaytekiMacBook-Pro:platform-tools imyday\$./adb install MydayMobileApp-release.apk 2007 KB/s (4647578 bytes in 2.260s)

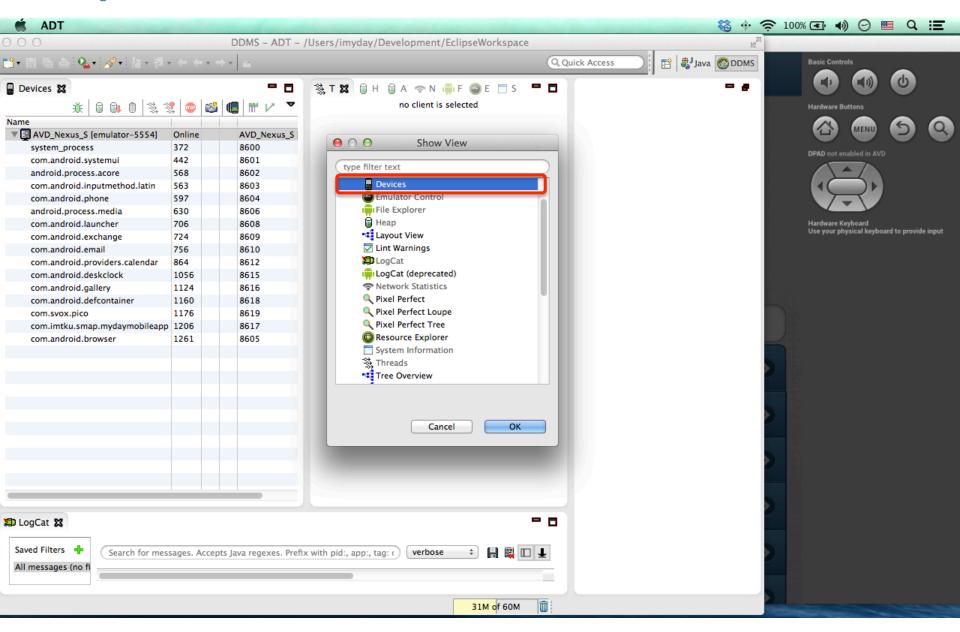
pkg: /data/local/tmp/MydayMobileApp-release.apk

Success

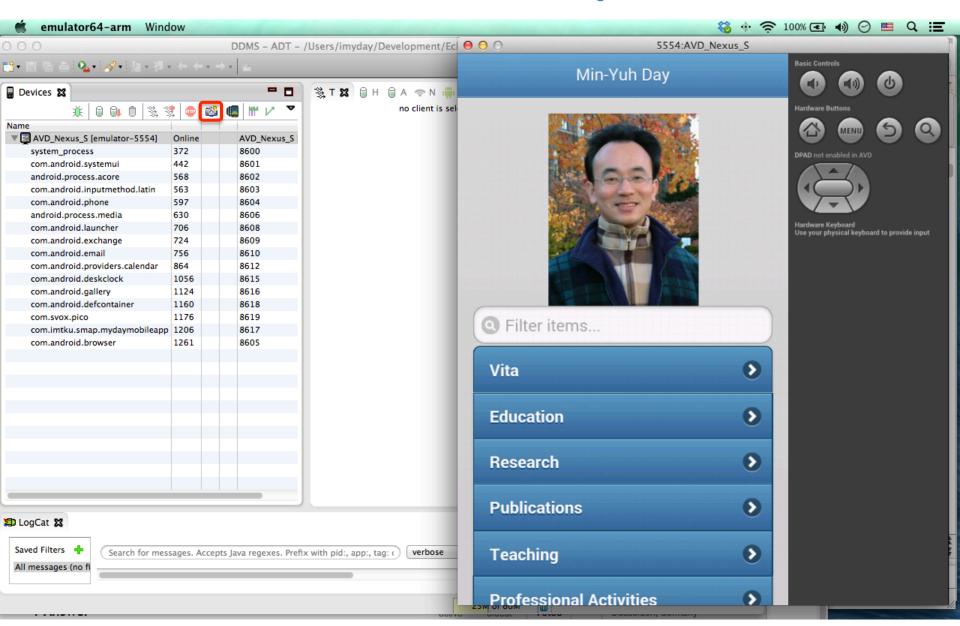
Capture Screenshot from Android Emulator



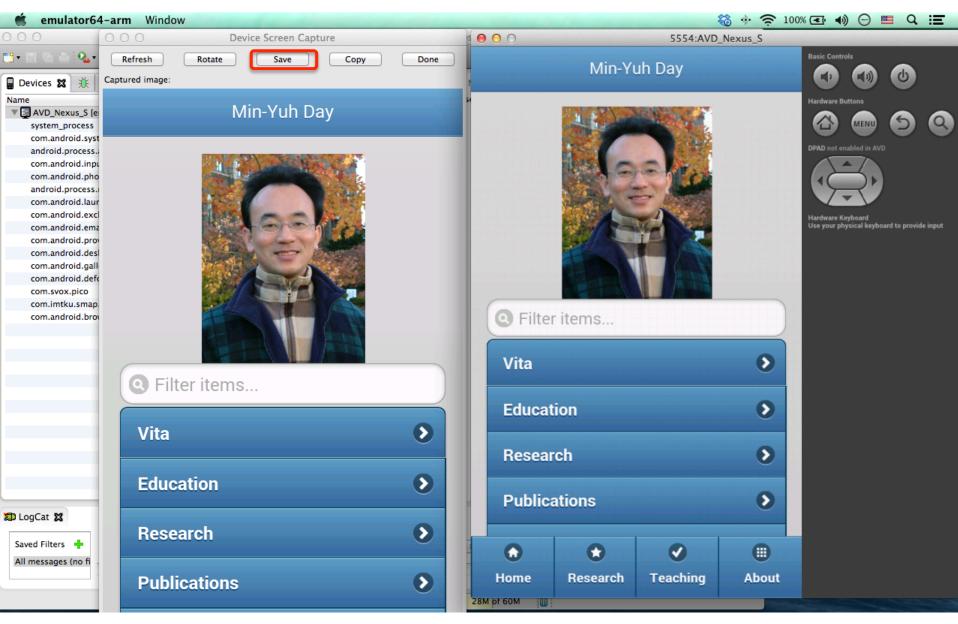
Capture Screenshot from Android Emulator



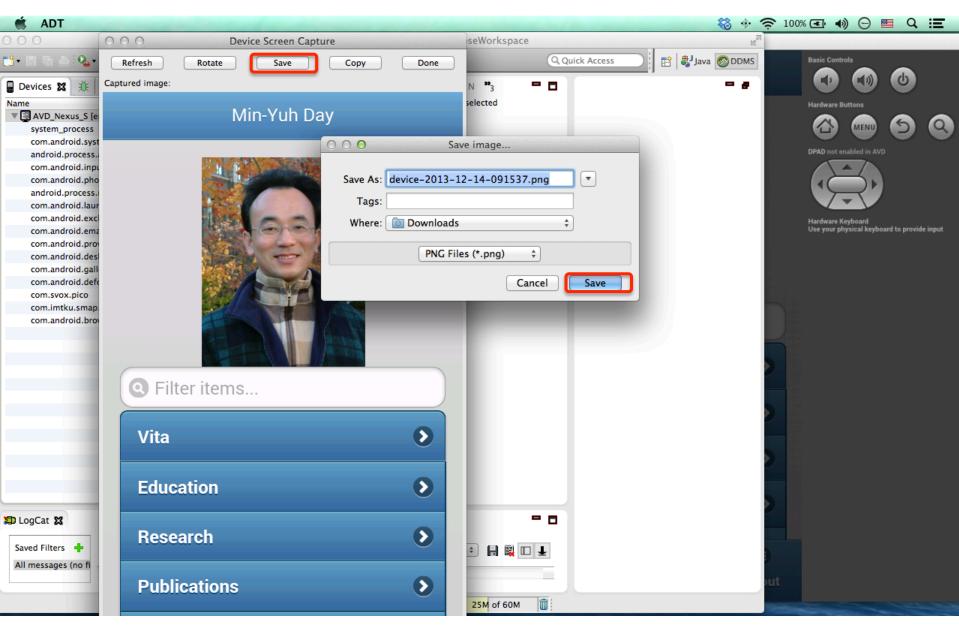
Device Screen Capture



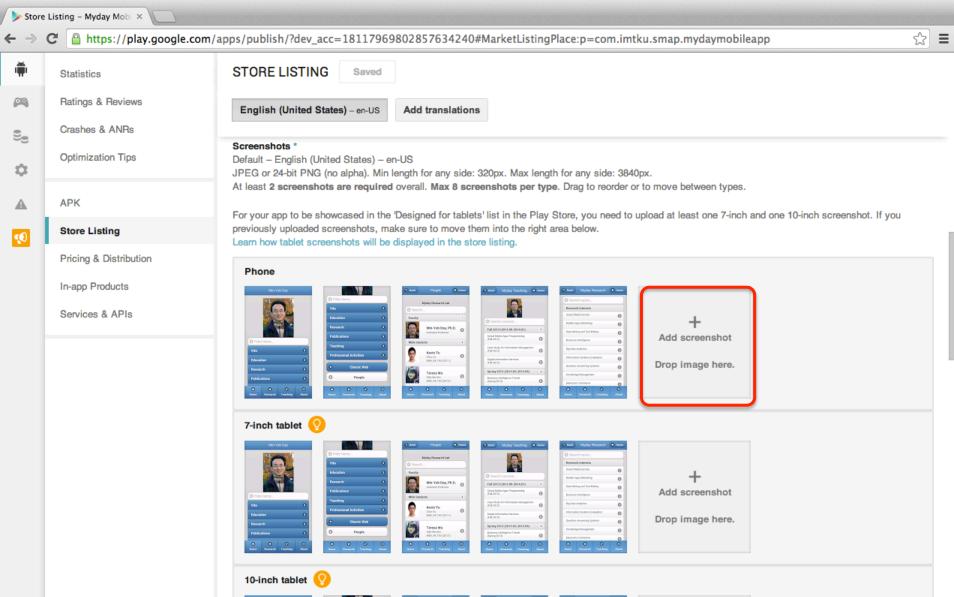
Device Screen Capture



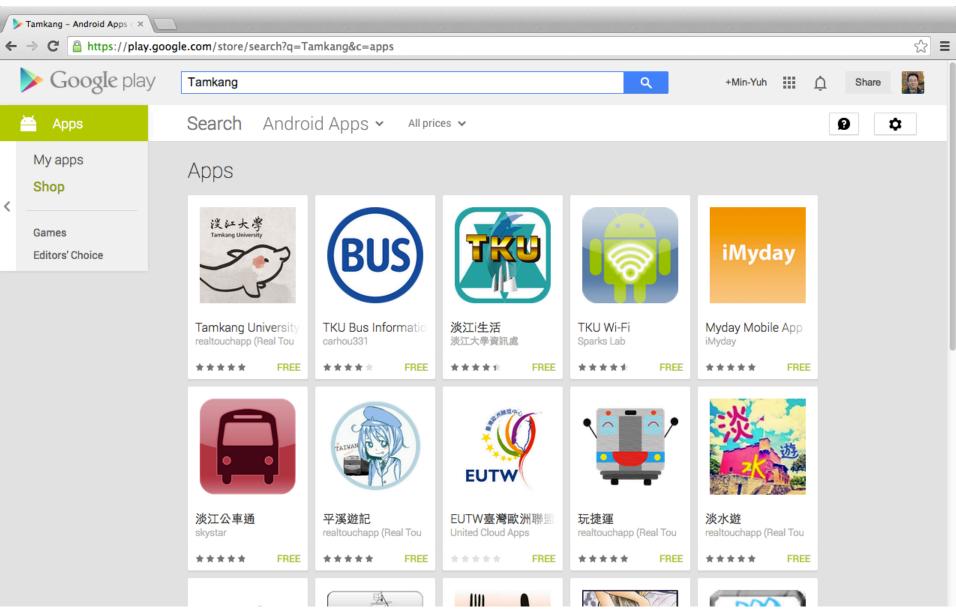
Device Screen Capture (screenshot.png)



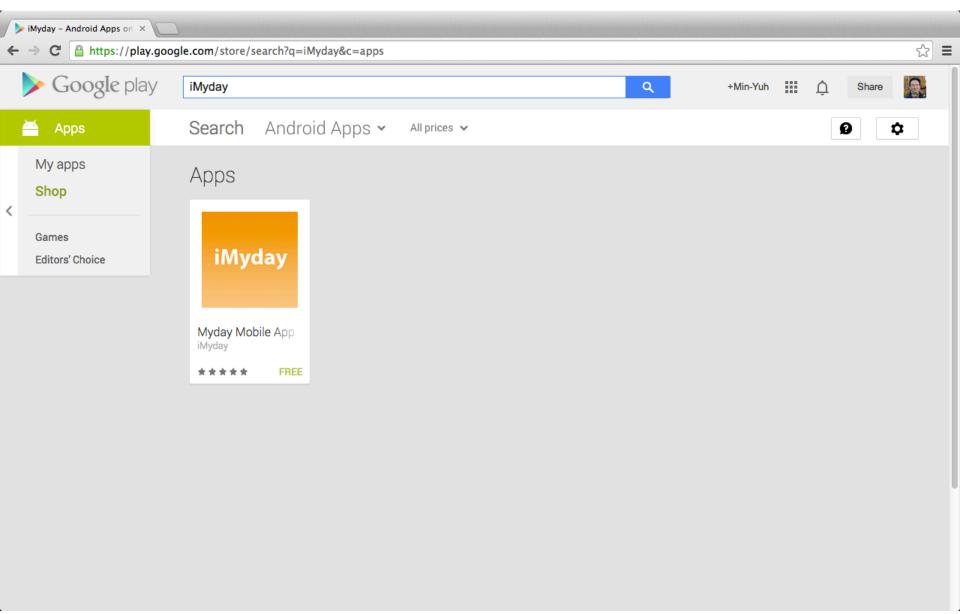
Update Screenshots on Google playStore Listing



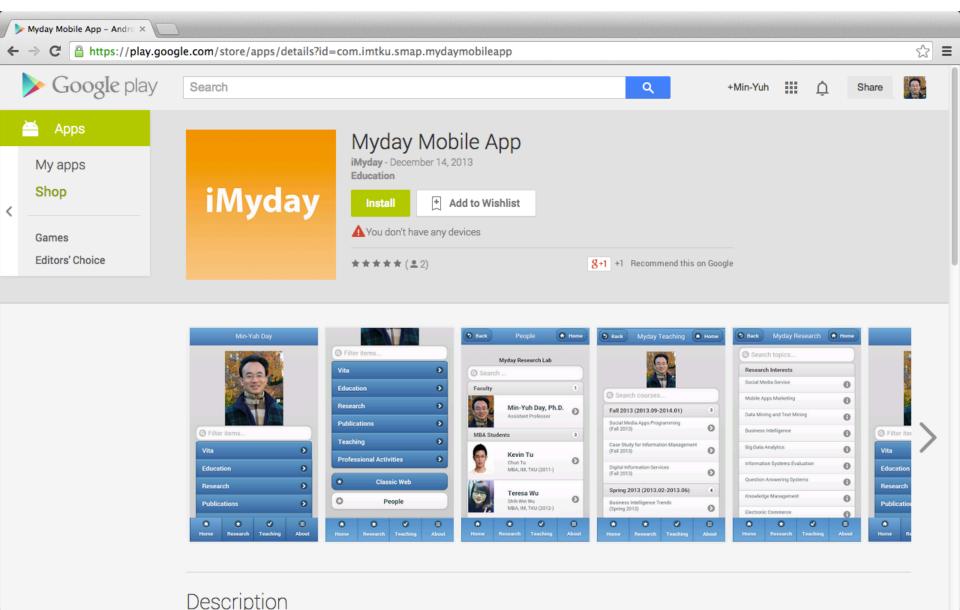
Search Tamkang on Google play



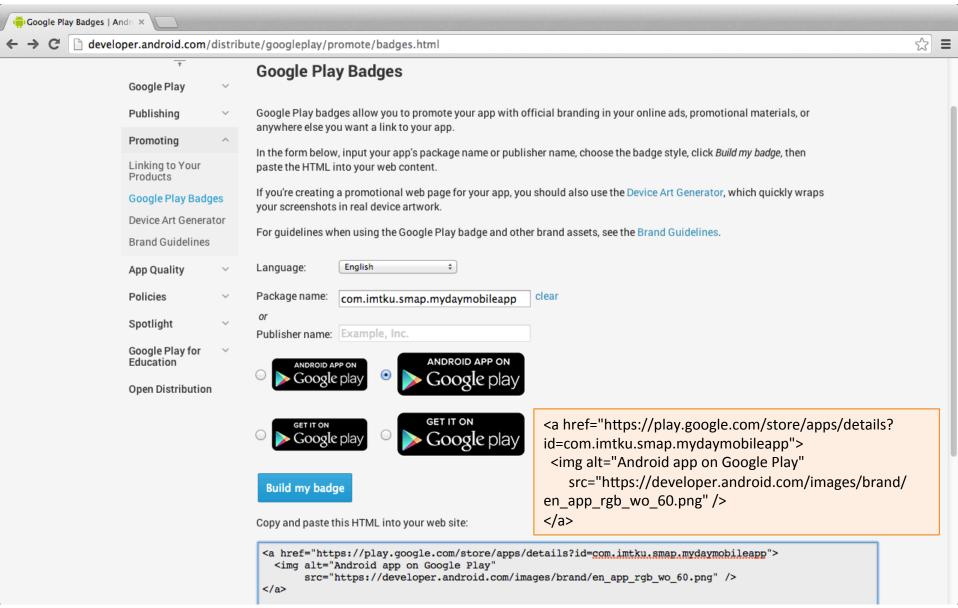
Search iMyday on Google play



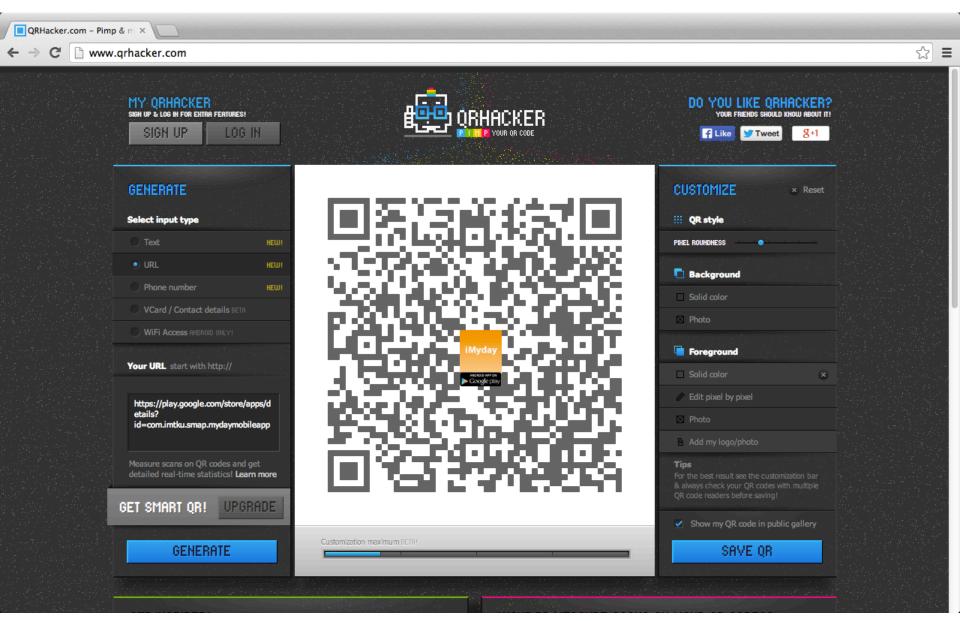
Myday Mobile App on Google play



Google Play Badges



Generate and Customize QR Code



Summary

- Case Study on Social Media Apps
 Programming and Marketing in Google Play and App Store
- MOROID APP ON Google play

Business Model



- Apps Development Life Cycle
- Programming
- Marketing

References

- Beginning PhoneGap: Mobile Web Framework for JavaScript and HTML5, Rohit Ghatol & Yogesh Patel, Apress, 2012
- Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Scott Preston, Apress, 2012
- PhoneGap
 - http://phonegap.com/
- PhoneGap Build
 - https://build.phonegap.com/
- jQuery Mobile
 - http://jquerymobile.com/
- Introduction to PhoneGap Build
 - http://tv.adobe.com/watch/building-mobile-apps-with-phonegap-build/introduction-to-phonegap-build-building-your-first-app/