

Social Media Apps Programming Facebook API (Facebook JavaScript SDK)

(Integrate Facebook with iOS/Android Apps)

1061SMAP13

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

<u>Department of Information Management</u>

<u>Tamkang University</u>

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



Course Schedule (1/2)



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)

```
Week Date Subject/Topics
10 2017/11/24 Midterm Project Report
   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)
   2018/01/05 Twitter API
   2018/01/12 Final Project Presentation
18 2018/01/19 Final Exam Week (Final Project Presentation)
```

Outline

- Facebook API
 - Facebook JavaScript SDK
 - Integrate Facebook with iOS/Android Apps
 - Facebook Login
 - Facebook Open Graph API
 - Facebook Graph API



Integrate Facebook with your native iOS apps.



Android

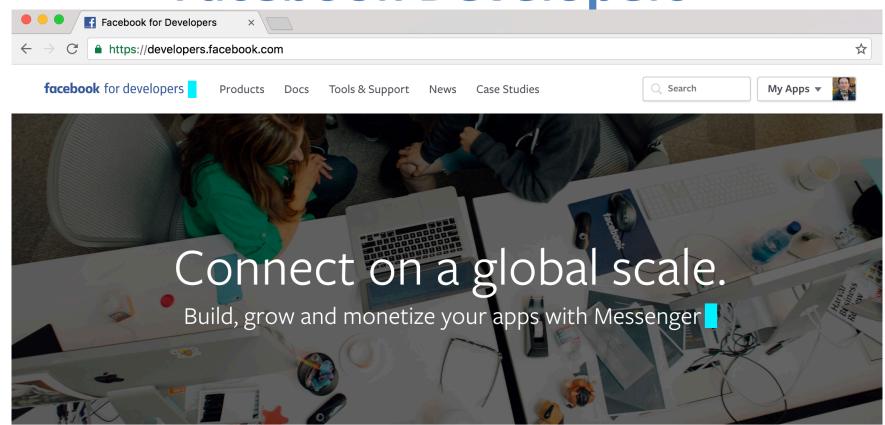
Integrate Facebook with your native Android apps.



Web

Integrate Facebook with your website or host your apps in Facebook.com.

Facebook Developers













Facebook Login

Sharing on Facebook

Facebook Analytics for Apps

Mobile Monetization

Messenger Platform

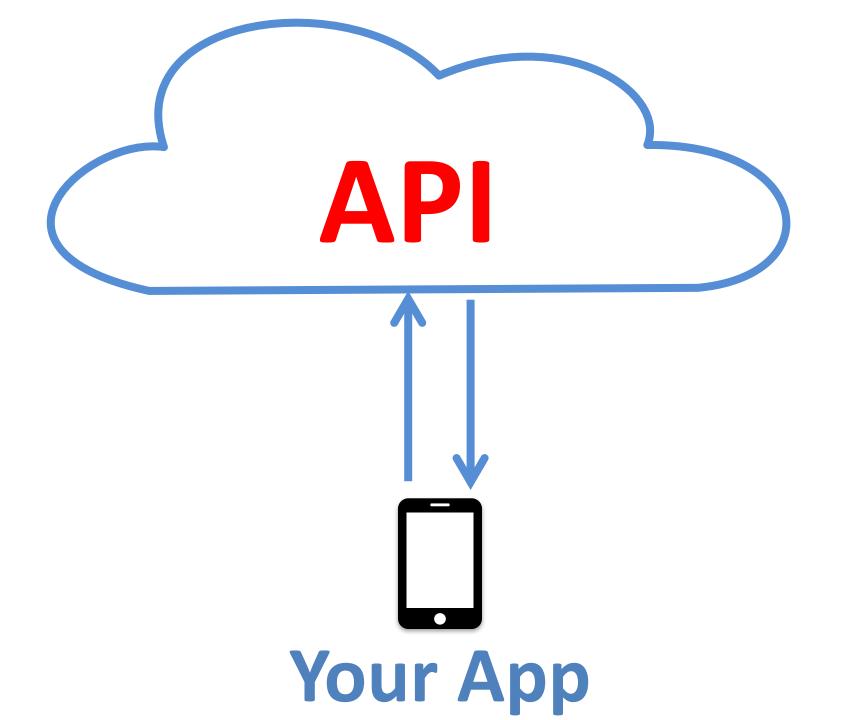
Account Creation in two taps

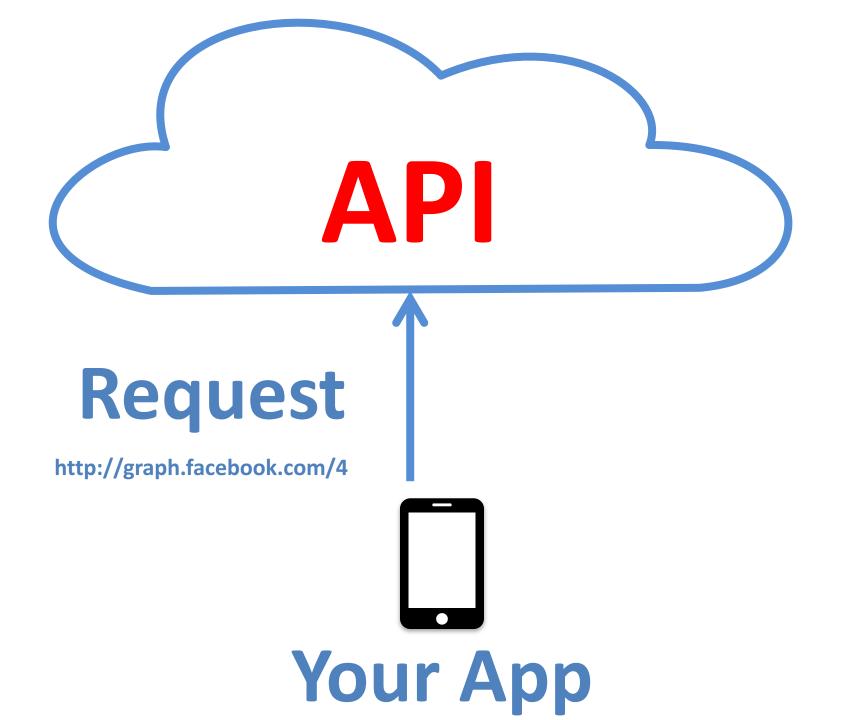
Promote your app or website organically

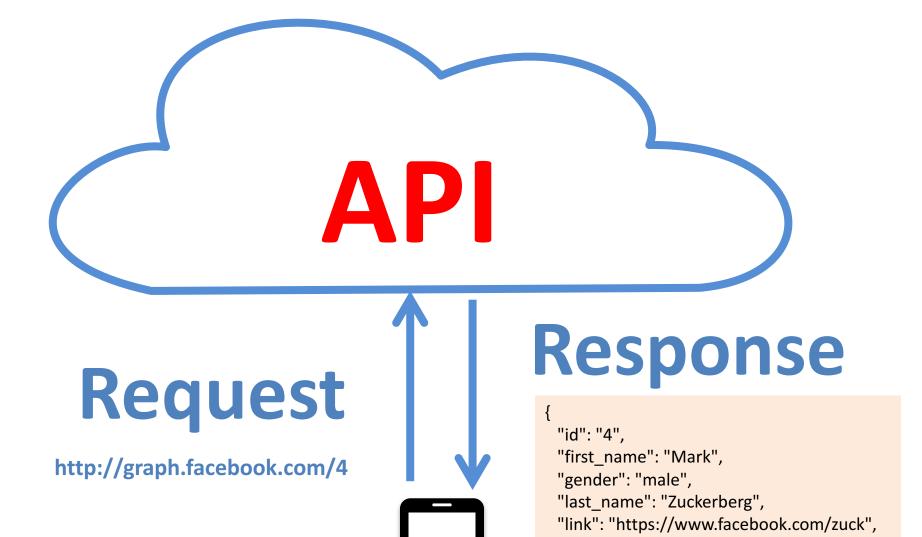
Understand how people use your app

Monetize your mobile app or mobile website with ads

Build your bot to reach 1 billion people







Your App

"locale": "en_US",

"username": "zuck"

"name": "Mark Zuckerberg",

Facebook API

Facebook Developer

facebook for developers

Products

Docs

Tools & Support

News

Success Stories

Search

My Apps ▼

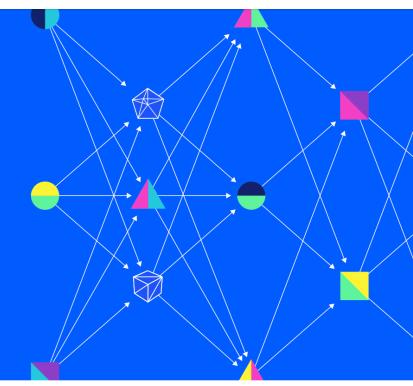




Registration is now open!

APRIL 18 + 19 / SAN JOSE, CA

REGISTER TO ATTEND













Facebook Login

Sharing on Facebook

Facebook Analytics for Apps

Mobile Monetization

Messenger Platform

Account Creation in two taps

Promote your app or website organically

Understand how people use your app

Monetize your mobile app or mobile website with ads

Build your bot to reach 1 billion people

Facebook Graph API Explorer

Secure https://developers.facebook.com/tools/explorer/?method=GET&path=me%3Ffields%3Did%2Cname&version=v2.8 **facebook** for developers My Apps ▼ Search Products Docs **Tools & Support** News Success Stories **Graph API Explorer** Graph API Explorer ▼ Application: [?] EAACEdEose0cBALZCZB4MZA3BpgFl2ZBqrbHcHHC3S6V4f72sPgwi6nm4NPH07BBuCjLWSgFt6DrJFYtvgac9MMKBL6X5GMehvfiv2ucN **与 Get Token** ▼ GET ▼ → /v2.8 ▼/me?fields=id,name **▶** Submit Learn more about the Graph API syntax Node: me "id": "684393172", id "name": "Min-Yuh Dav" name Search for a field

Facebook API

Create a New App ID

Get started integrating Facebook into your app or website

Display Name

iMyPagesApp

Contact Email

imyday@gmail.com

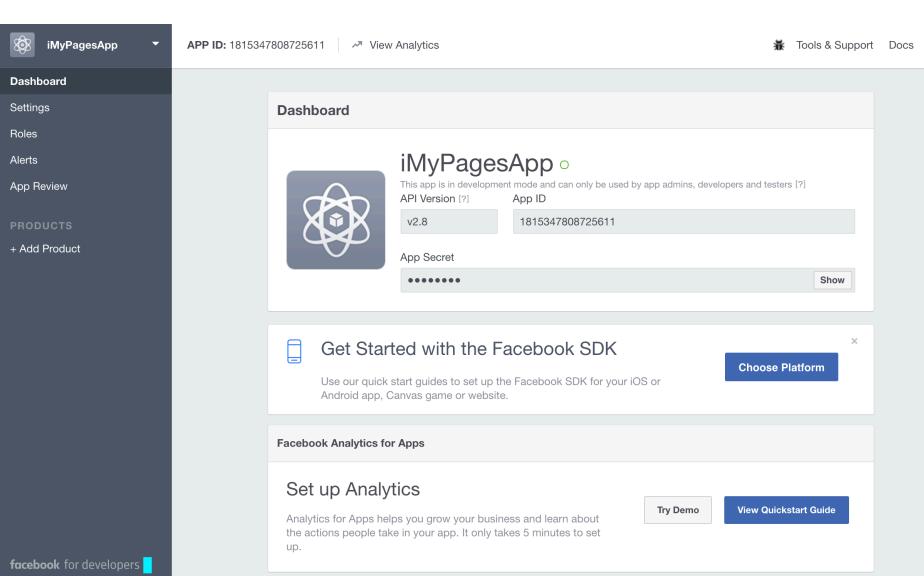
Category

Apps for Pages ▼

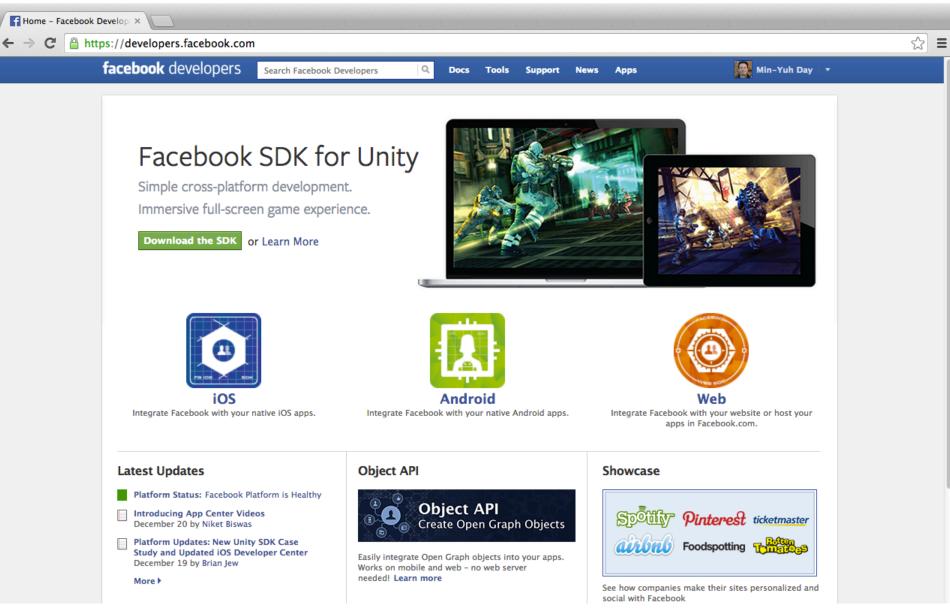
By proceeding, you agree to the Facebook Platform Policies

Cancel Create App ID

Facebook API



Facebook Developers

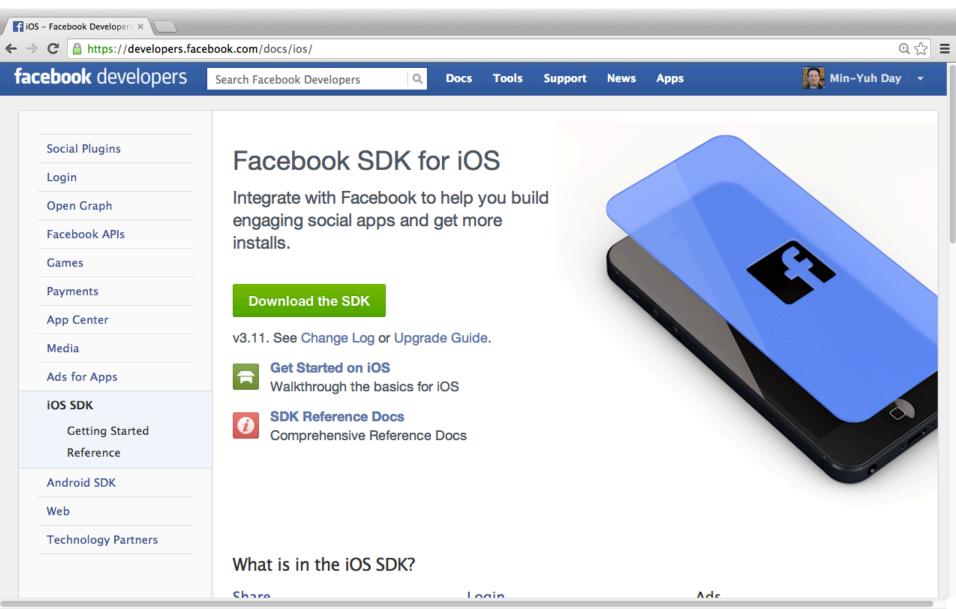


Integrate Facebook with your native iOS apps



Integrate Facebook with your native iOS apps.

Facebook SDK for iOS



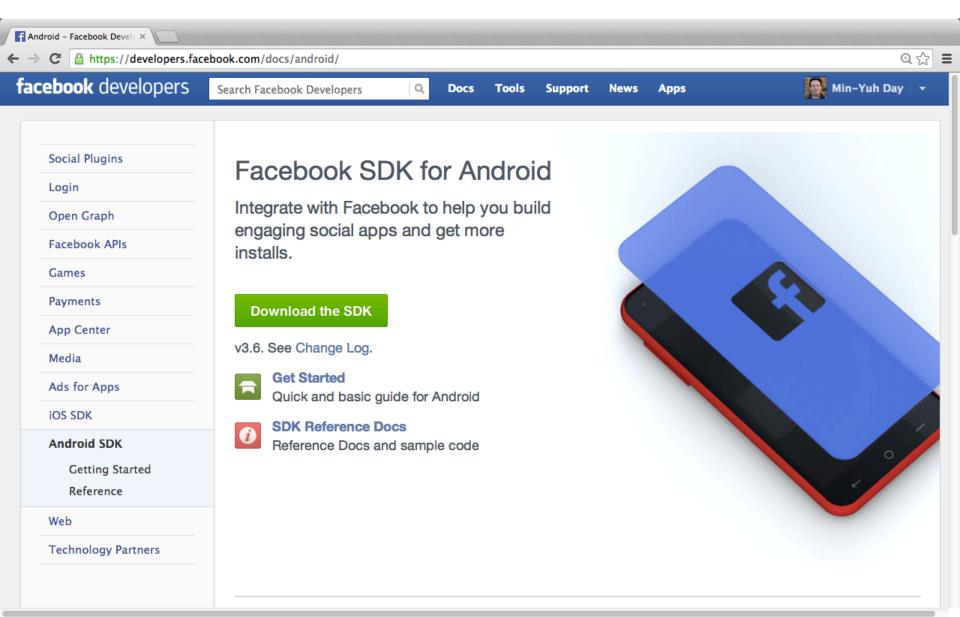
Integrate Facebook with your native Android apps.



Android

Integrate Facebook with your native Android apps.

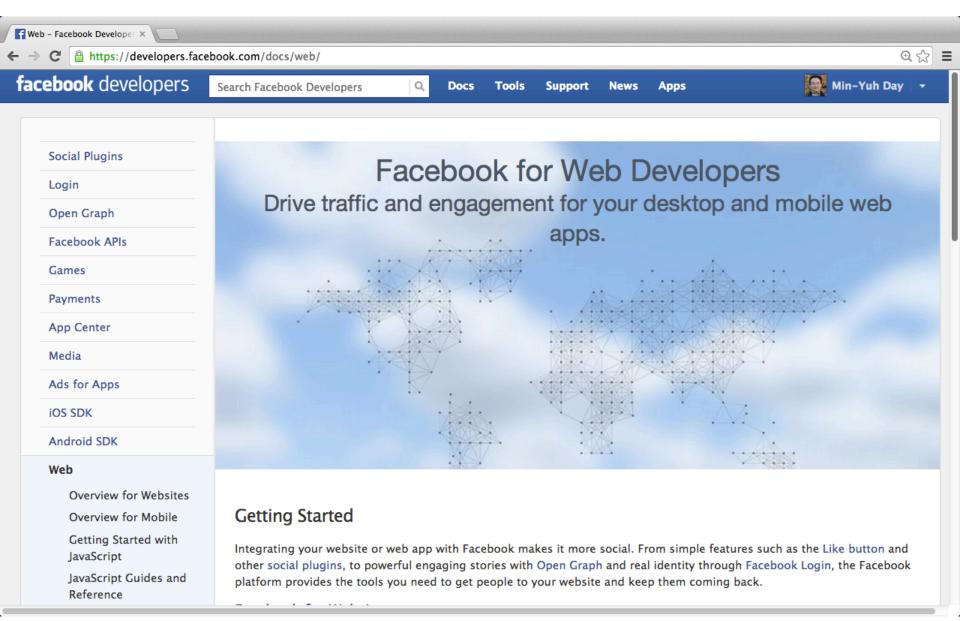
Facebook SDK for Android

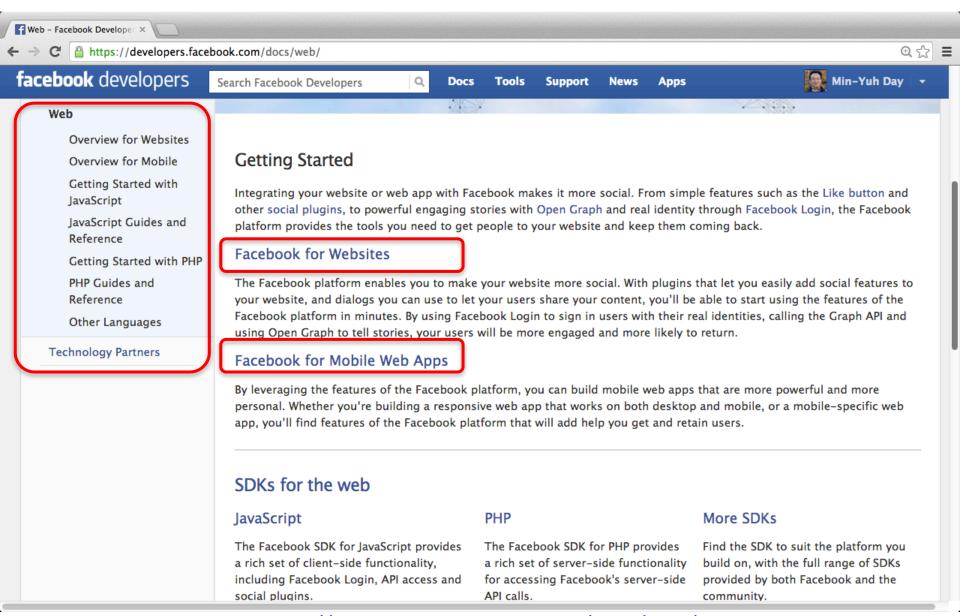


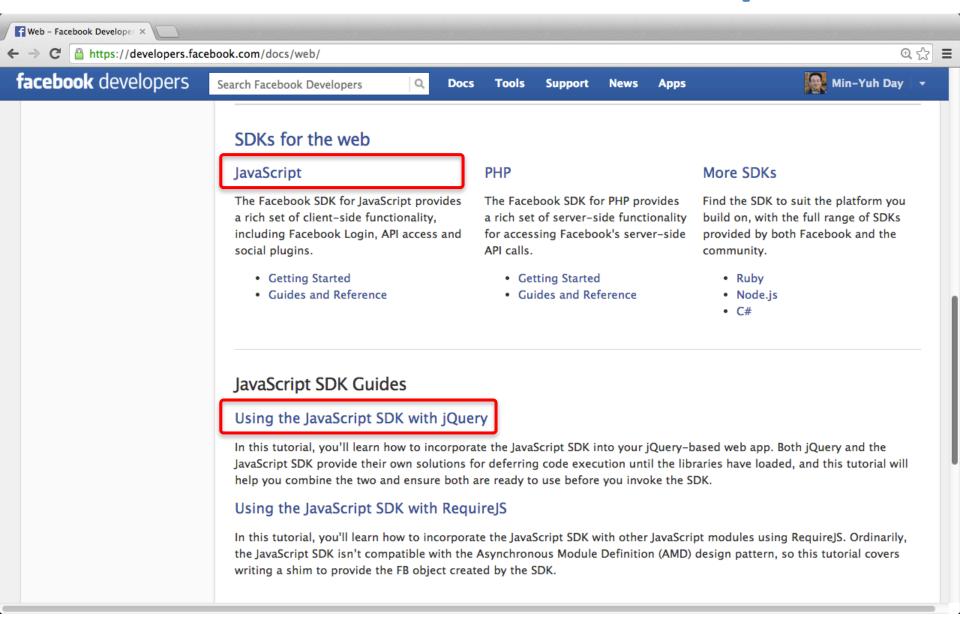
Integrate Facebook with your Web Apps

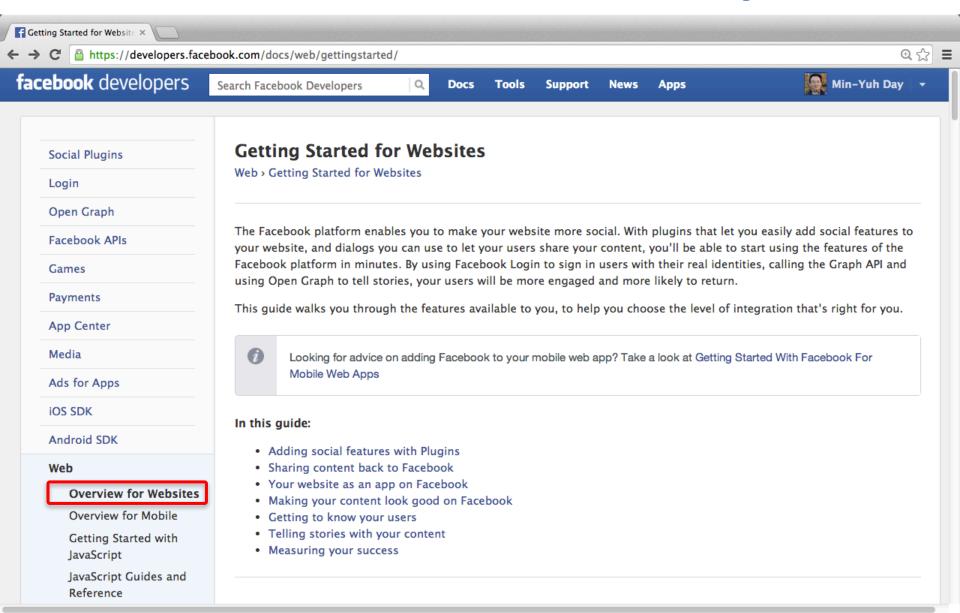


Integrate Facebook with your website or host your apps in Facebook.com.

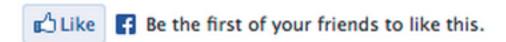








Adding social features with Plugins



Like Button



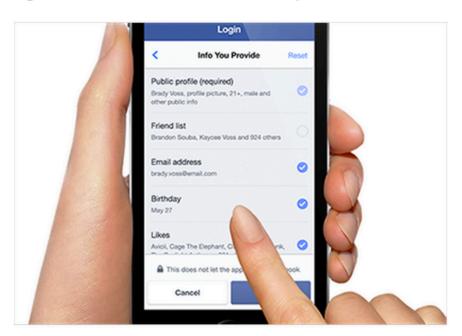
Comments Box

The new Facebook Login

Hen

The new Facebook Login

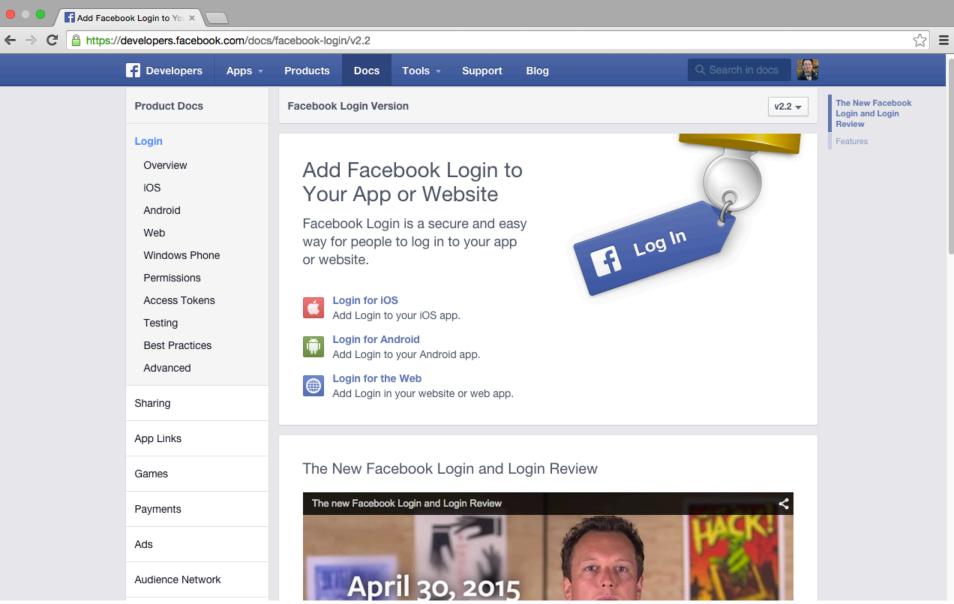
The fast, convenient way for people to log into your app while giving them control over what they share. Learn More



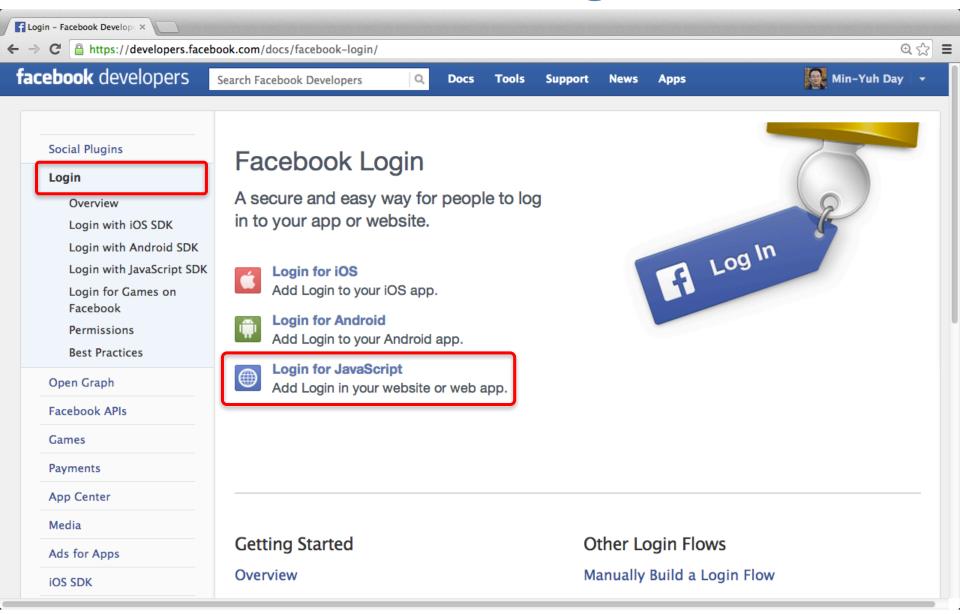


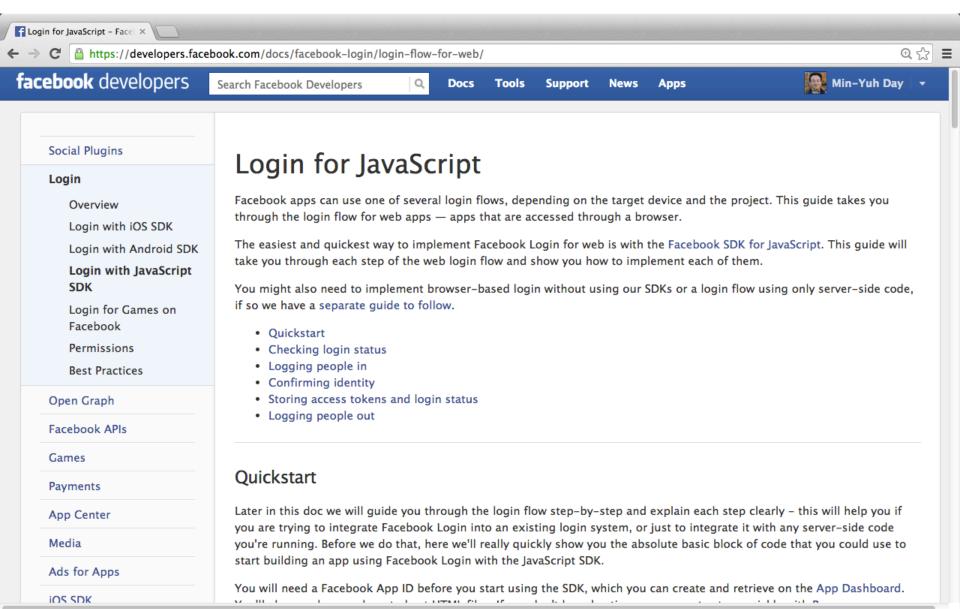
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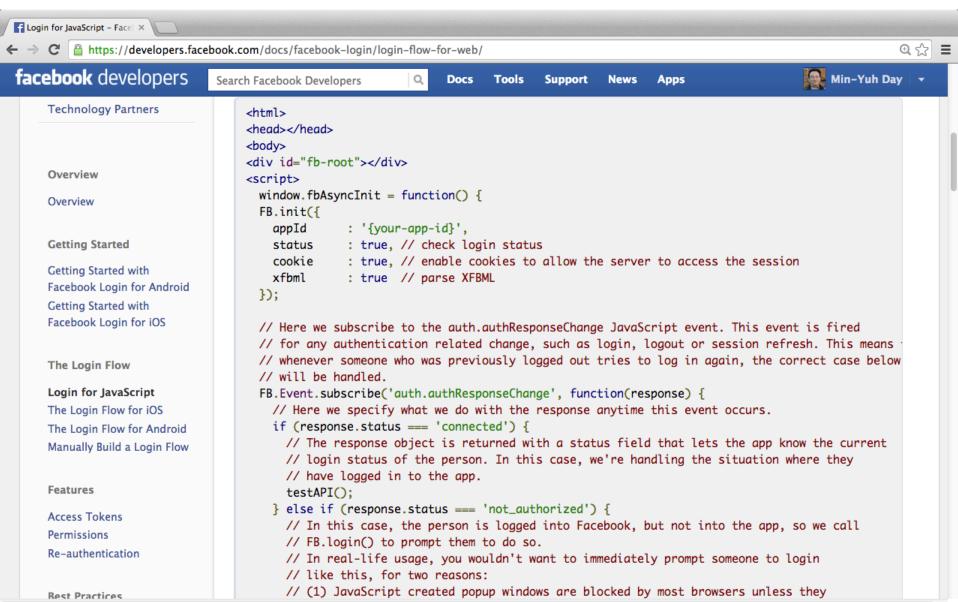
The new Facebook Login (April 30, 2015)



Facebook Login









```
<html>
<head></head>
<body>
<div id="fb-root"></div>
<script>
 window.fbAsyncInit = function() {
 FB.init({
               : '{your-app-id}',
    appId
    status
               : true, // check login status
               : true, // enable cookies to allow the server to access the session
    cookie
   xfbml
               : true // parse XFBML
 });
```



```
// Here we subscribe to the auth.authResponseChange JavaScript event. This event is fired
// for any authentication related change, such as login, logout or session refresh. This means
// whenever someone who was previously logged out tries to log in again, the correct case below
// will be handled.
FB.Event.subscribe('auth.authResponseChange', function(response) {
  // Here we specify what we do with the response anytime this event occurs.
  if (response.status === 'connected') {
    // The response object is returned with a status field that lets the app know the current
    // login status of the person. In this case, we're handling the situation where they
    // have logged in to the app.
    testAPI();
  } else if (response.status === 'not_authorized') {
    // In this case, the person is logged into Facebook, but not into the app, so we call
    // FB.login() to prompt them to do so.
    // In real-life usage, you wouldn't want to immediately prompt someone to login
    // like this, for two reasons:
    // (1) JavaScript created popup windows are blocked by most browsers unless they
    // result from direct interaction from people using the app (such as a mouse click)
    // (2) it is a bad experience to be continually prompted to login upon page load.
    FB.login();
  } else {
    // In this case, the person is not logged into Facebook, so we call the login()
    // function to prompt them to do so. Note that at this stage there is no indication
    // of whether they are logged into the app. If they aren't then they'll see the Login
    // dialog right after they log in to Facebook.
    // The same caveats as above apply to the FB.login() call here.
    FB.login();
});
https://developers.facebook.com/docs/facebook-login/login-flow-for-web/
```

31

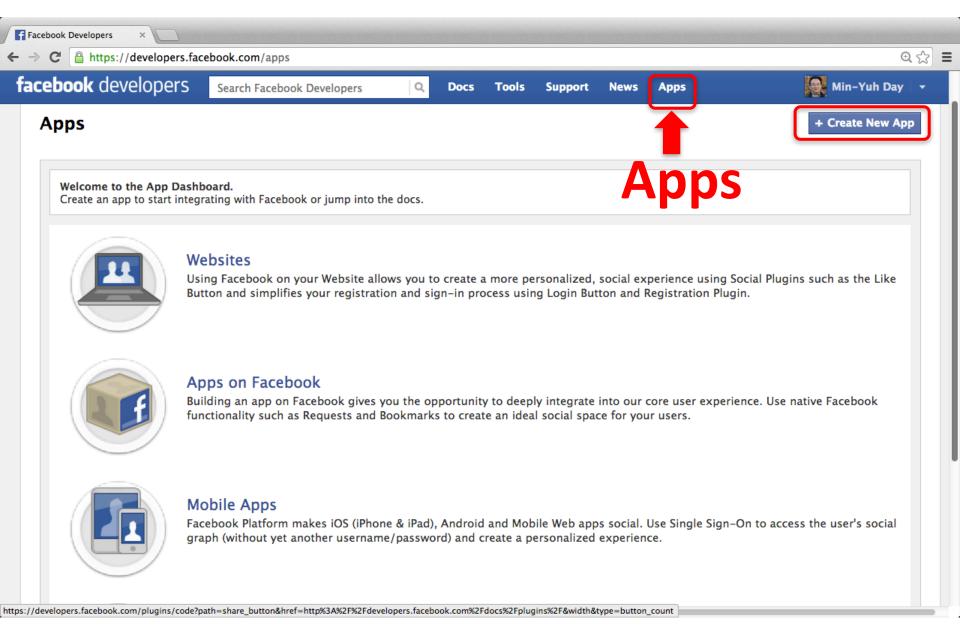


```
// Load the SDK asynchronously
  (function(d){
   var js, id = 'facebook-jssdk', ref = d.getElementsByTagName('script')[0];
  if (d.getElementById(id)) {return;}
   js = d.createElement('script'); js.id = id; js.async = true;
  is.src = "//connect.facebook.net/en_US/all.js";
   ref.parentNode.insertBefore(js, ref);
  }(document));
  // Here we run a very simple test of the Graph API after login is successful.
  // This testAPI() function is only called in those cases.
  function testAPI() {
    console.log('Welcome! Fetching your information....');
   FB.api('/me', function(response) {
      console.log('Good to see you, ' + response.name + '.');
   });
  }
</script>
<!--
  Below we include the Login Button social plugin. This button uses the JavaScript SDK to
  present a graphical Login button that triggers the FB.login() function when clicked. -->
<fb:login-button show-faces="true" width="200" max-rows="1"></fb:login-button>
</body>
</html>
```

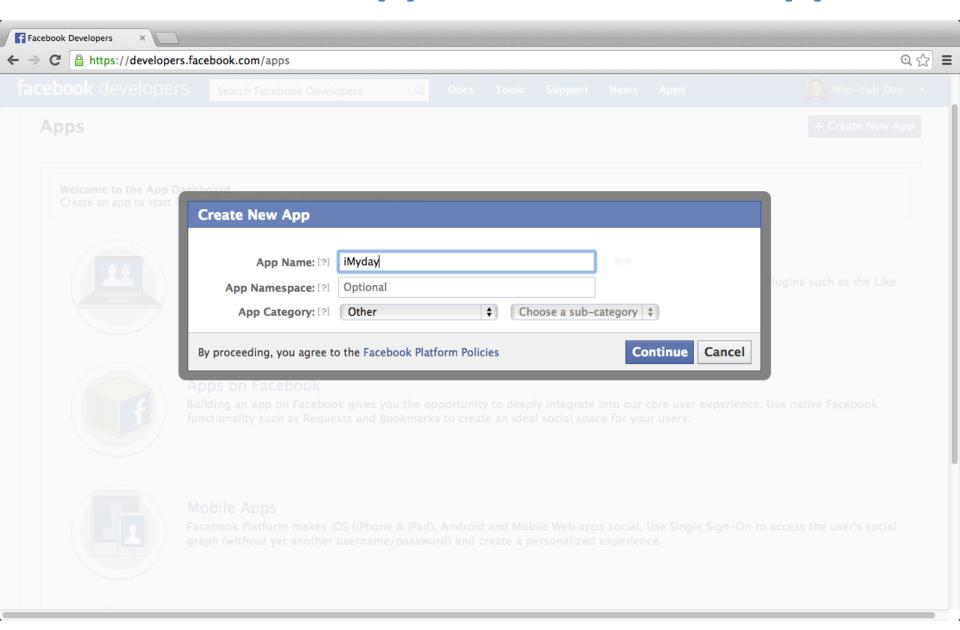


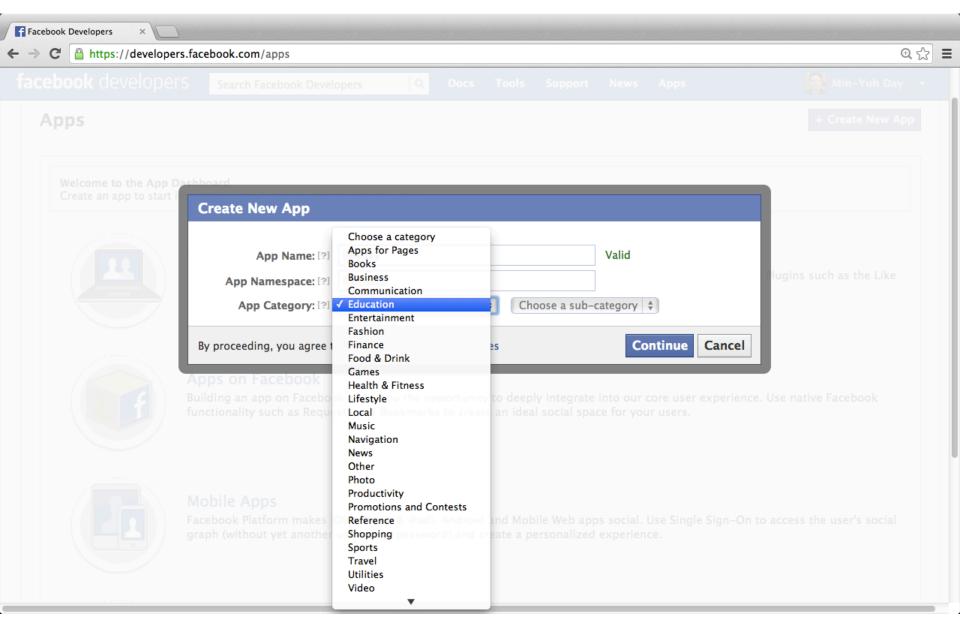
Demo: Facebook Apps Create New App

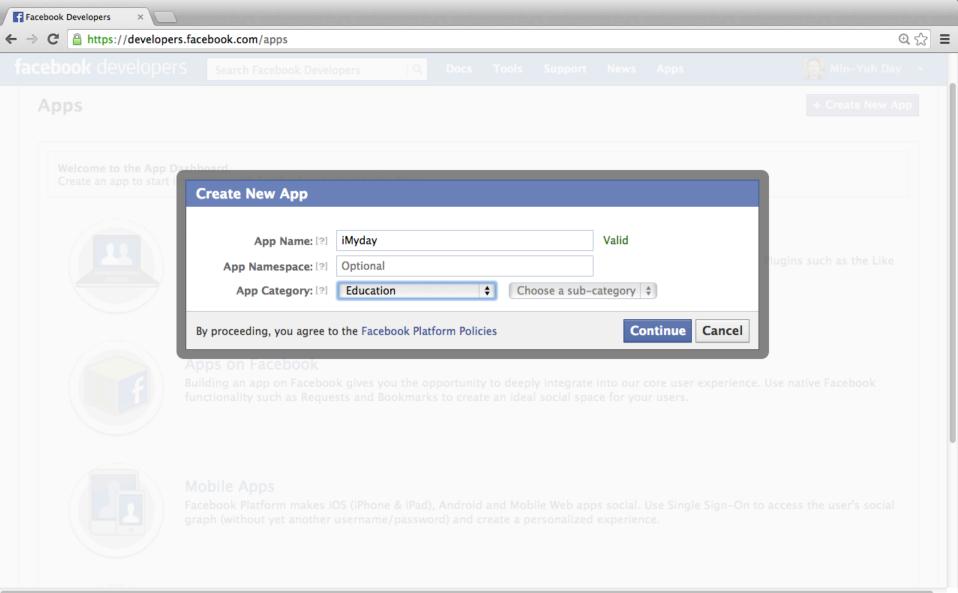
Facebook Apps: Create New App

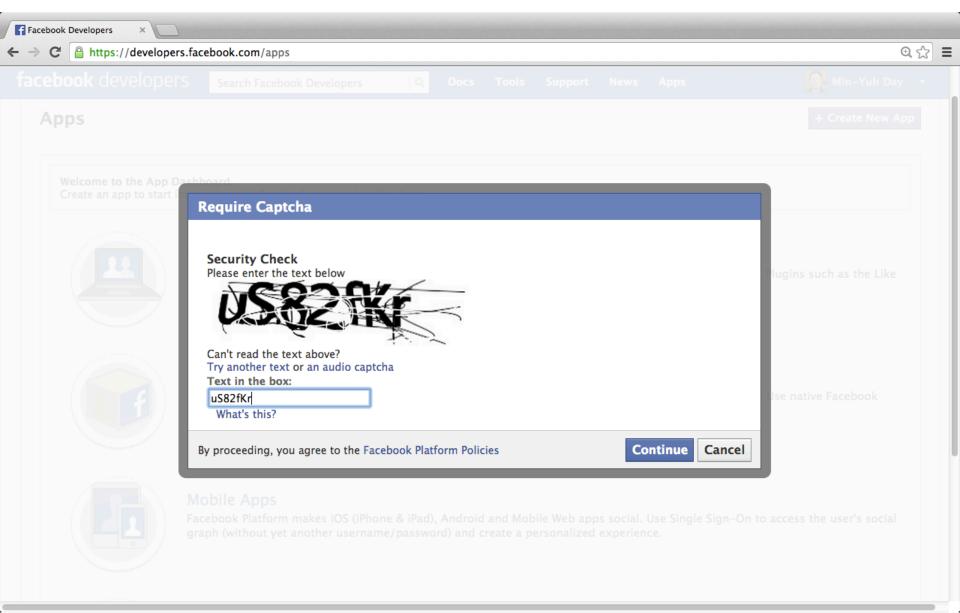


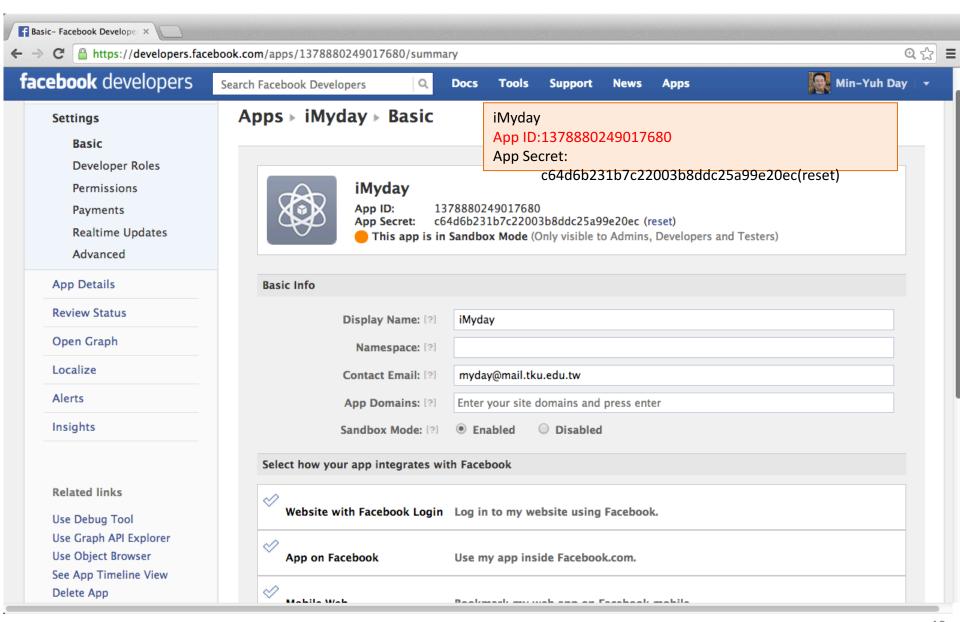
Facebook Apps: Create New App

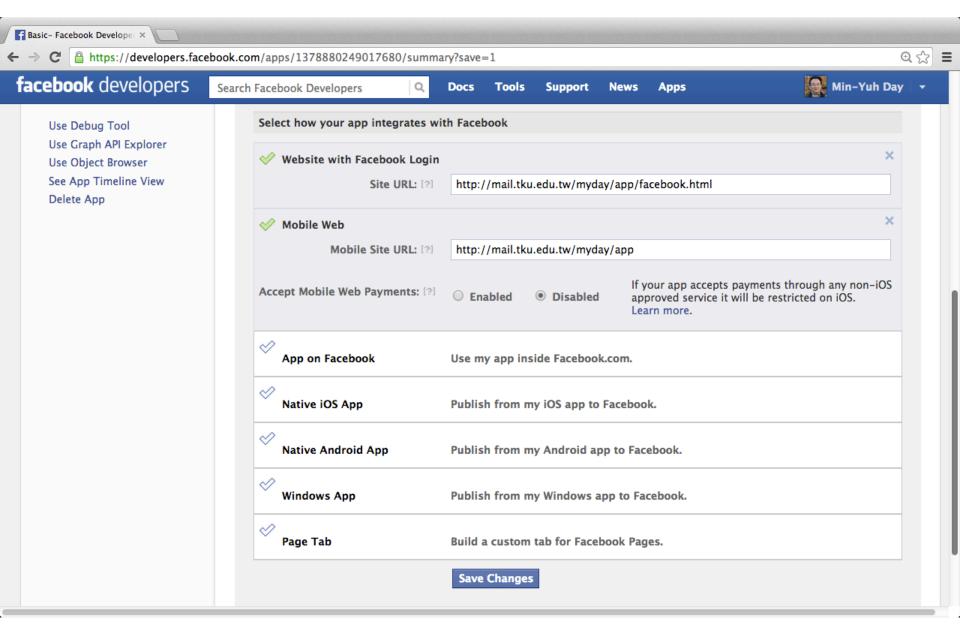










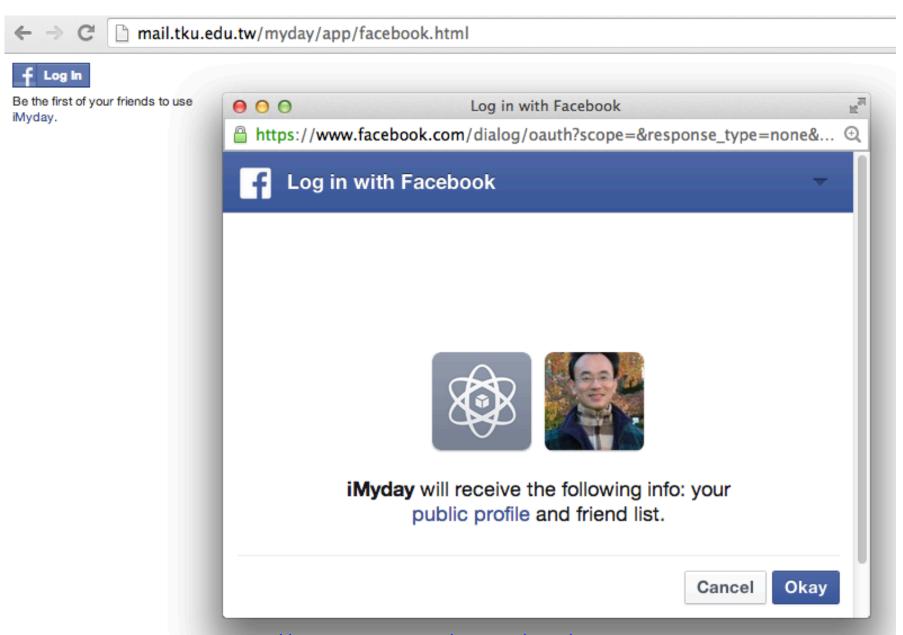


```
facebook.html
     <html>
     <head></head>
     <body>
     <div id="fb-root"></div>
     <script>
       window.fbAsyncInit = function() {
 7
       FB.init({
         appId
                    : '1378880249017680',
 9
         status
                    : true, // check login status
10
         cookie
                    : true, // enable cookies to allow the server to access the session
11
        xfbml
                    : true // parse XFBML
12
      });
13
14
       FB.Event.subscribe('auth.authResponseChange', function(response) {
15
16
         if (response.status === 'connected') {
17
18
           testAPI():
19
         } else if (response.status === 'not_authorized') {
20
21
           FB.login();
22
         } else {
23
24
           FB.login();
25
26
      });
27
      };
28
29
      // Load the SDK asynchronously
30
       (function(d){
       var js, id = 'facebook-jssdk', ref = d.getElementsByTagName('script')[0];
31
32
        if (d.getElementById(id)) {return;}
33
        js = d.createElement('script'); js.id = id; js.async = true;
34
        js.src = "//connect.facebook.net/en_US/all.js";
35
        ref.parentNode.insertBefore(js, ref);
36
      }(document));
37
38
       function testAPI() {
39
         console.log('Welcome! Fetching your information....');
         FB.api('/me', function(response) {
40
           console.log('Good to see you, ' + response.name + '.');
41
42
        });
43
44
     </script>
45
     <fb:login-button show-faces="true" width="200" max-rows="1"></fb:login-button>
47
     </body>
     </html>
```

Facebook.html Facebook Login appID

Facebook Login appID

Facebook Login



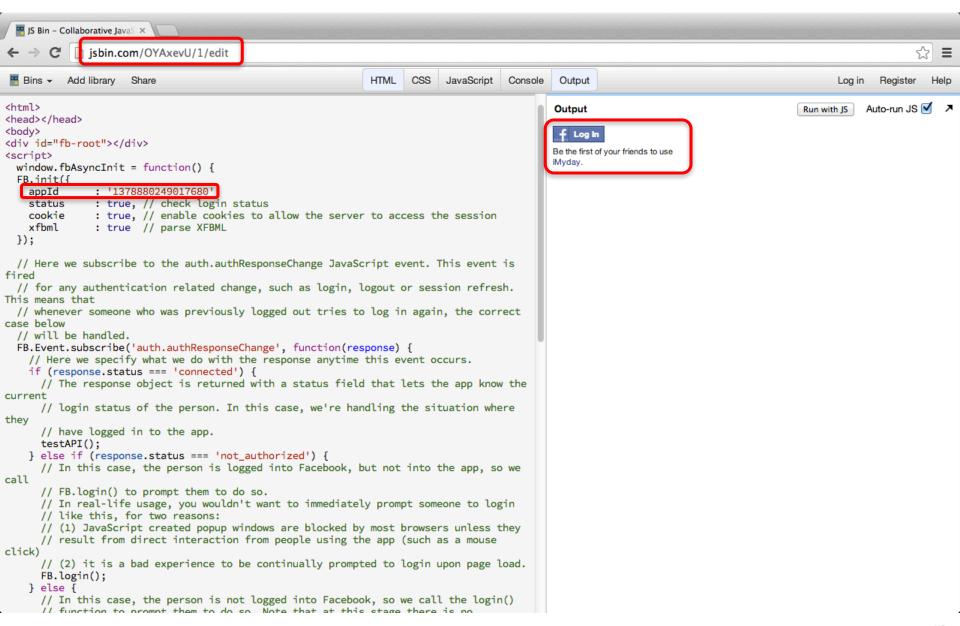
Facebook Login



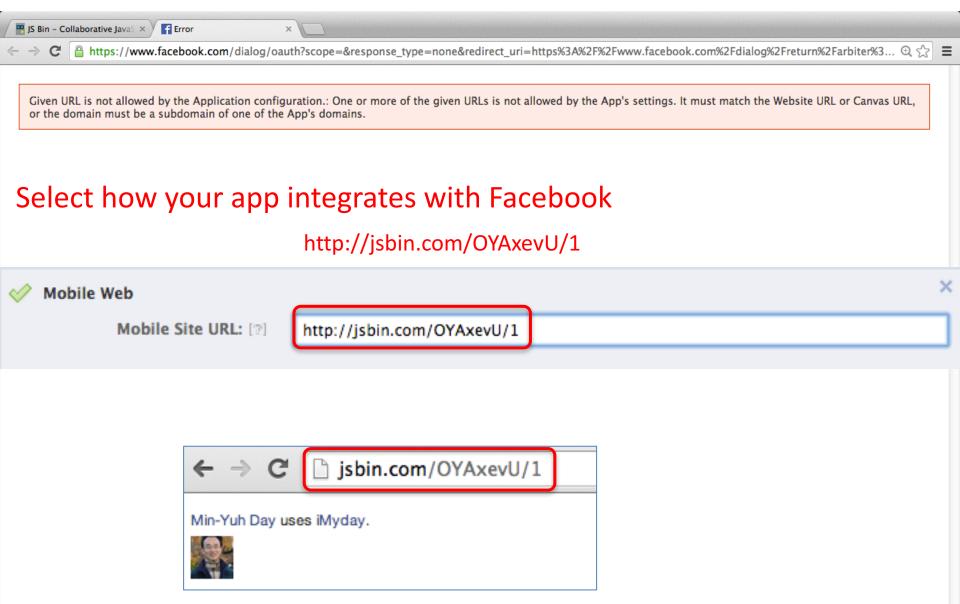
Min-Yuh Day uses iMyday.

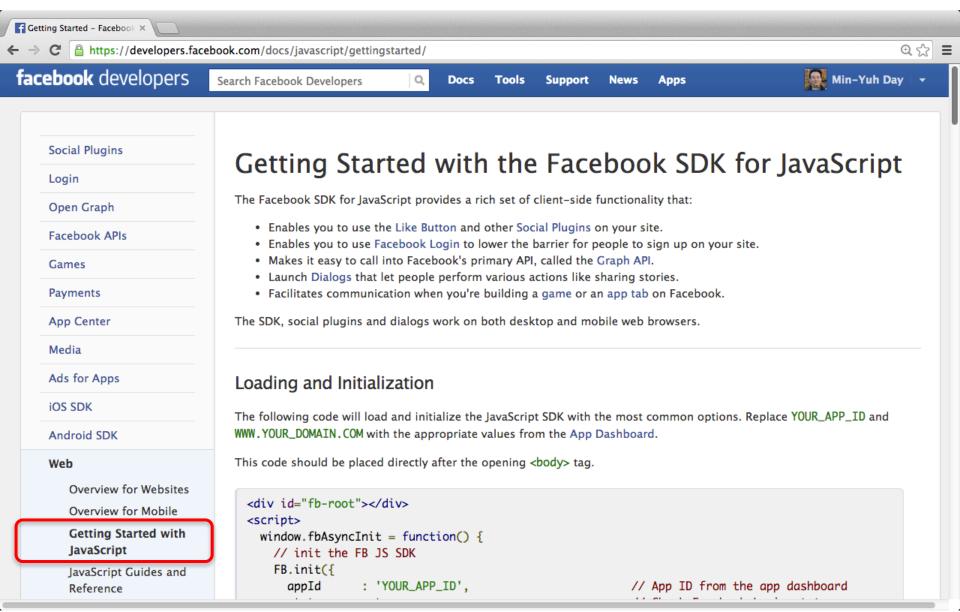


Test Facebook Login on jsbin.com

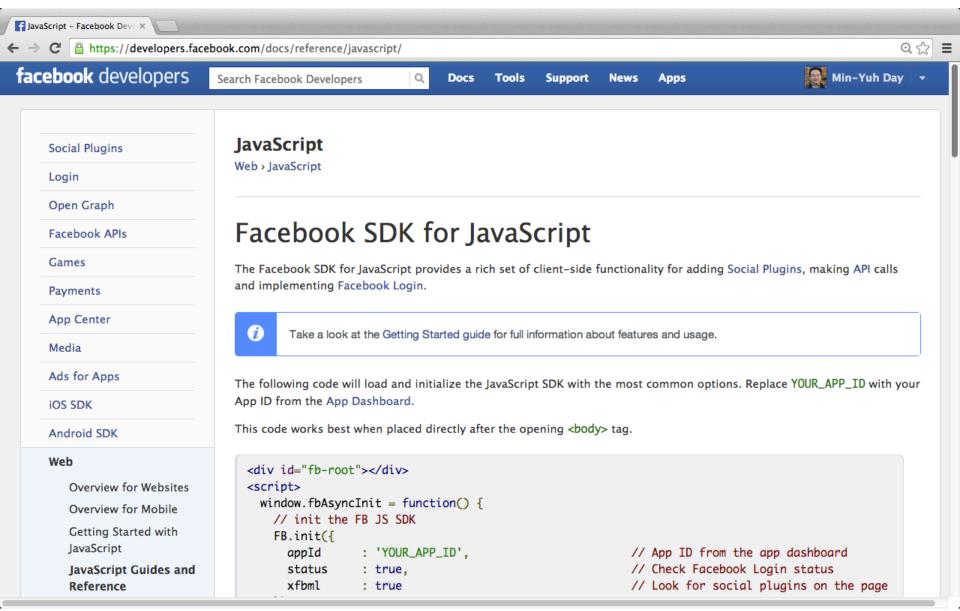


Test Facbook Login on jsbin.com



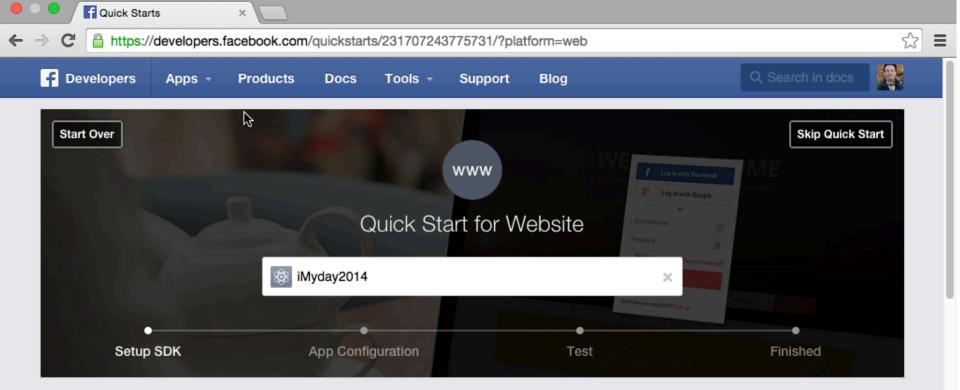


```
<div id="fb-root"></div>
<script>
 window.fbAsyncInit = function() {
   // init the FB JS SDK
   FB.init({
                : 'YOUR_APP_ID',
     appId
                                                         // App ID from the app dashboard
                                                         // Check Facebook Login status
     status
                 : true.
     xfbml
                 : true
                                                         // Look for social plugins on the page
   });
   // Additional initialization code such as adding Event Listeners goes here
 };
 // Load the SDK asynchronously
  (function(d, s, id){
    var js, fjs = d.getElementsByTagName(s)[0];
    if (d.getElementById(id)) {return;}
    js = d.createElement(s); js.id = id;
    js.src = "//connect.facebook.net/en_US/all.js";
    fjs.parentNode.insertBefore(js, fjs);
  }(document, 'script', 'facebook-jssdk'));
</script>
```



Facebook SDK for JavaScript <div id="fb-root"></div> <script> window.fbAsyncInit = function() { // init the FB JS SDK FB.init({ appId : 'YOUR_APP_ID', // App ID from the app dashboard status : true, // Check Facebook Login status xfbml : true // Look for social plugins on the page }); // Additional initialization code such as adding Event Listeners goes here }; // Load the SDK asynchronously (function(){ // If we've already installed the SDK, we're done if (document.getElementById('facebook-jssdk')) {return;} // Get the first script element, which we'll use to find the parent node var firstScriptElement = document.getElementsByTagName('script')[0]; // Create a new script element and set its id var facebookJS = document.createElement('script'); facebookJS.id = 'facebook-jssdk'; // Set the new script's source to the source of the Facebook JS SDK facebookJS.src = '//connect.facebook.net/en_US/all.js'; // Insert the Facebook JS SDK into the DOM firstScriptElement.parentNode.insertBefore(facebookJS, firstScriptElement); }()); </script> https://developers.facebook.com/docs/reference/javascript/

```
<div id="fb-root"></div>
<script>
 window.fbAsyncInit = function() {
  // init the FB JS SDK
  FB.init({
            : 'YOUR_APP_ID',
                                          // App ID from the app dashboard
   appld
                               // Check Facebook Login status
   status
           : true,
   xfbml
            : true
                                    // Look for social plugins on the page
  });
  // Additional initialization code such as adding Event Listeners goes here
// Load the SDK asynchronously
 (function(){
  // If we've already installed the SDK, we're done
  if (document.getElementById('facebook-jssdk')) {return;}
  // Get the first script element, which we'll use to find the parent node
  var firstScriptElement = document.getElementsByTagName('script')[0];
  // Create a new script element and set its id
  var facebookJS = document.createElement('script');
  facebookJS.id = 'facebook-jssdk';
  // Set the new script's source to the source of the Facebook JS SDK
  facebookJS.src = '//connect.facebook.net/en US/all.js';
  // Insert the Facebook JS SDK into the DOM
  firstScriptElement.parentNode.insertBefore(facebookJS, firstScriptElement);
 }());
</script>
```



Setup the Facebook SDK for JavaScript

(function(d c id)(

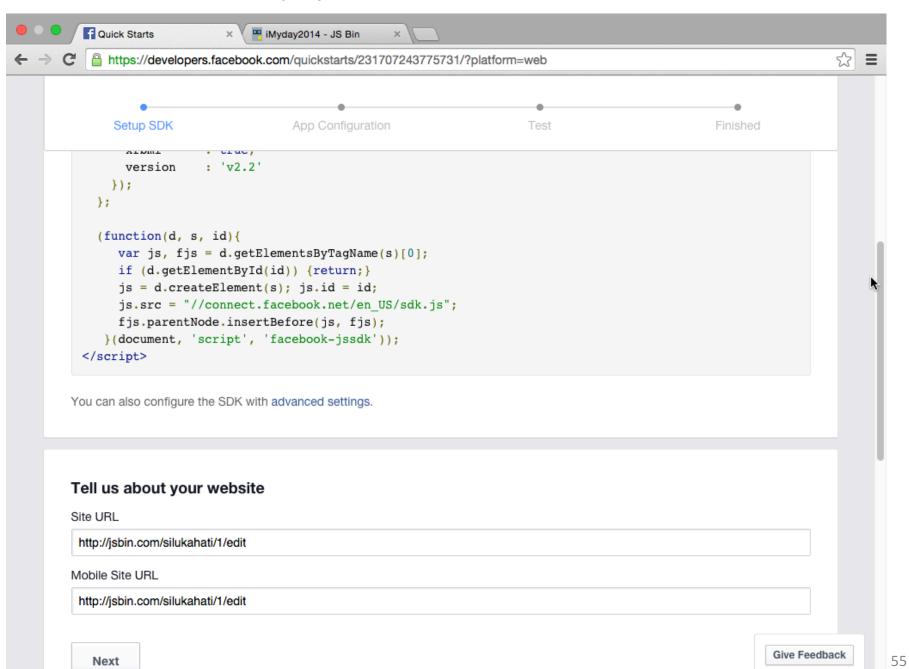
The following snippet of code will give the basic version of the SDK where the options are set to their most common defaults. You should insert it directly after the opening <body> tag on each page you want to load it:

```
<script>
  window.fbAsyncInit = function() {
    FB.init({
        appId : '231707243775731',
        xfbml : true,
        version : 'v2.2'
    });
};

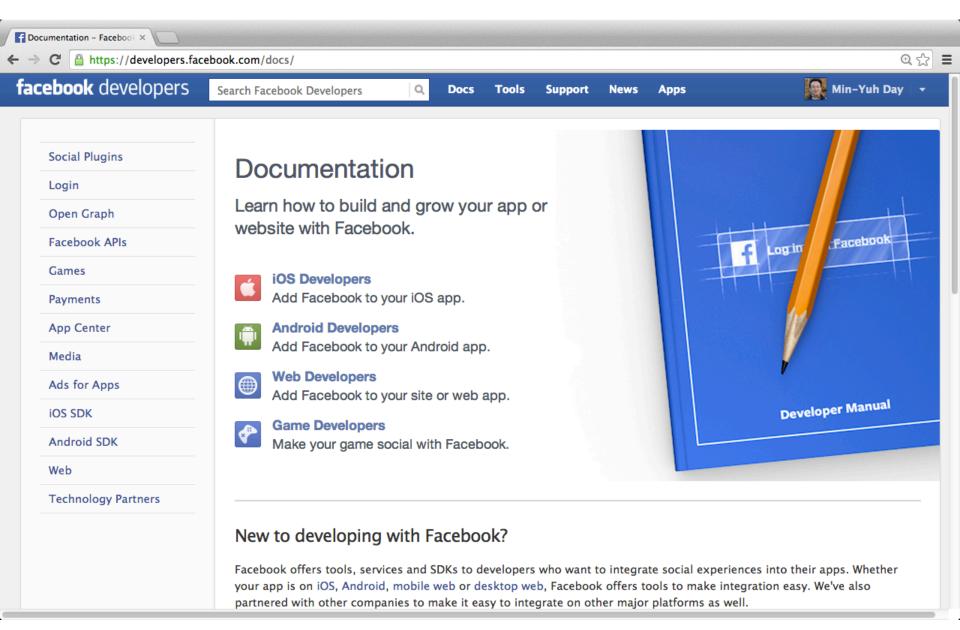
Give Feedback
```

```
<script>
 window.fbAsyncInit = function() {
   FB.init({
     appId : '231707243775731',
     xfbml : true,
     version : 'v2.2'
   });
  };
  (function(d, s, id){
    var js, fjs = d.getElementsByTagName(s)[0];
     if (d.getElementById(id)) {return;}
     js = d.createElement(s); js.id = id;
     js.src = "//connect.facebook.net/en US/sdk.js";
     fjs.parentNode.insertBefore(js, fjs);
  }(document, 'script', 'facebook-jssdk'));
</script>
```

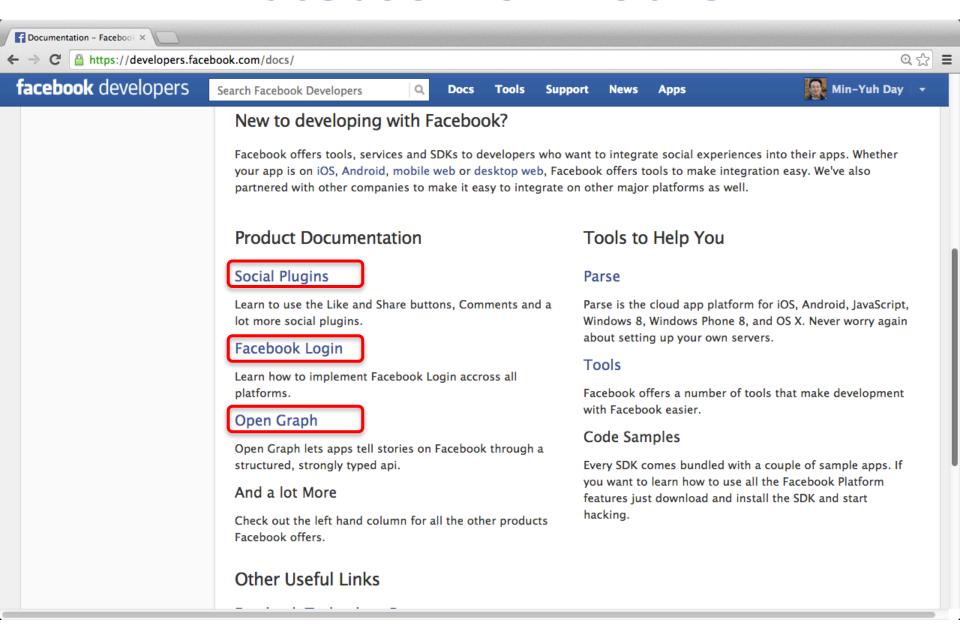
http://jsbin.com/silukahati/1/edit



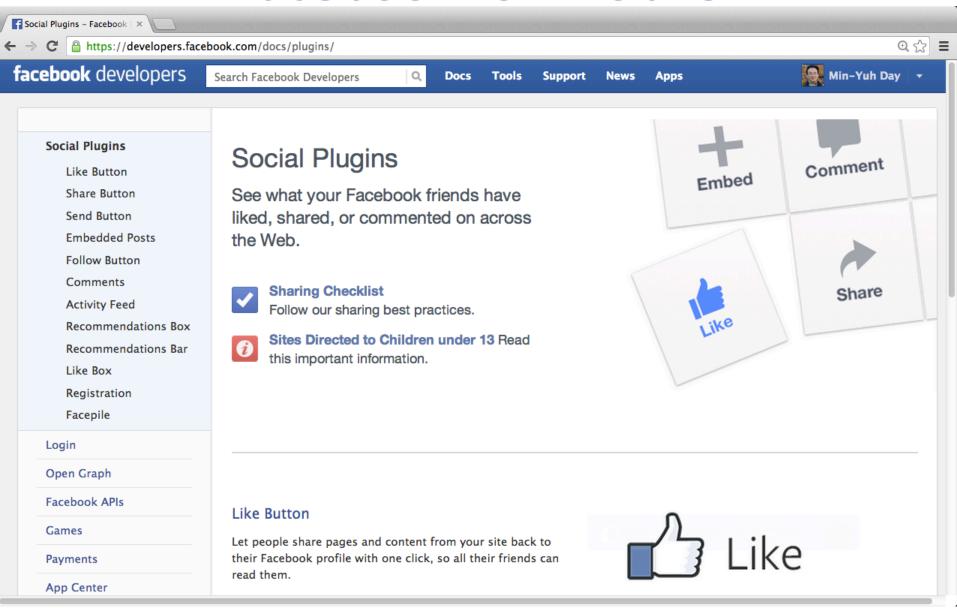
Facebook for Mobile



Facebook for Mobile

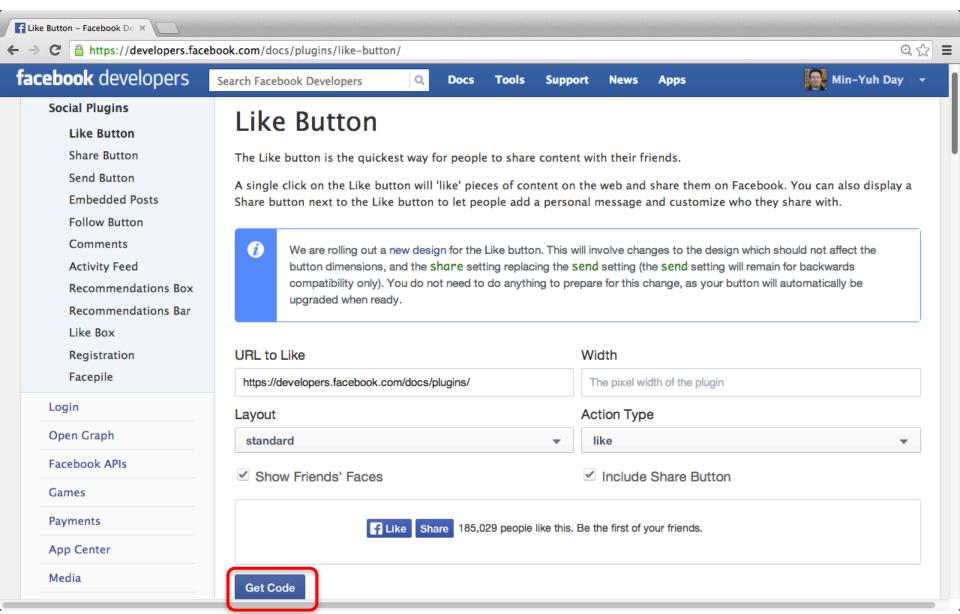


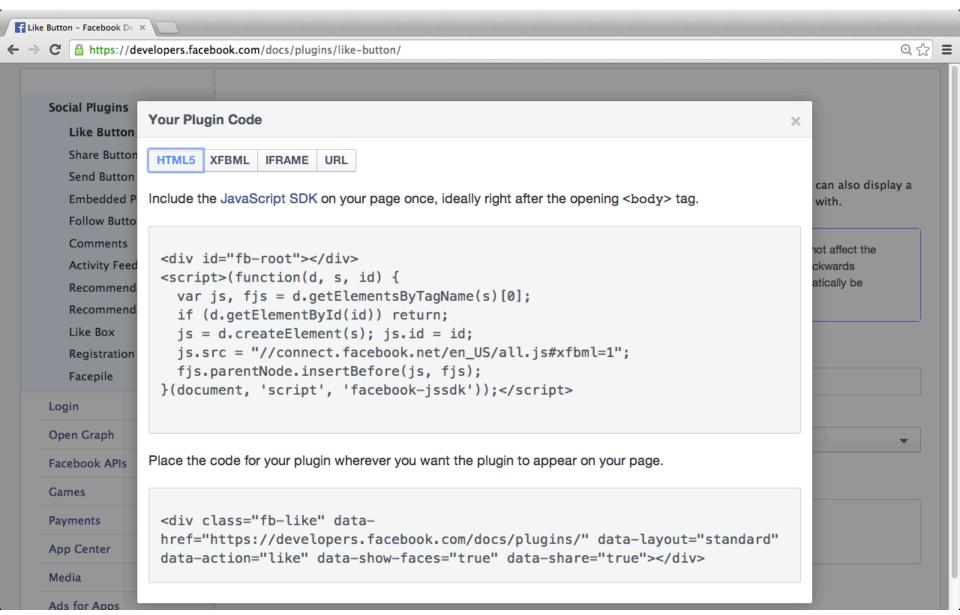
Facebook for Mobile





Let people share pages and content from your site back to their Facebook profile with one click, so all their friends can read them.

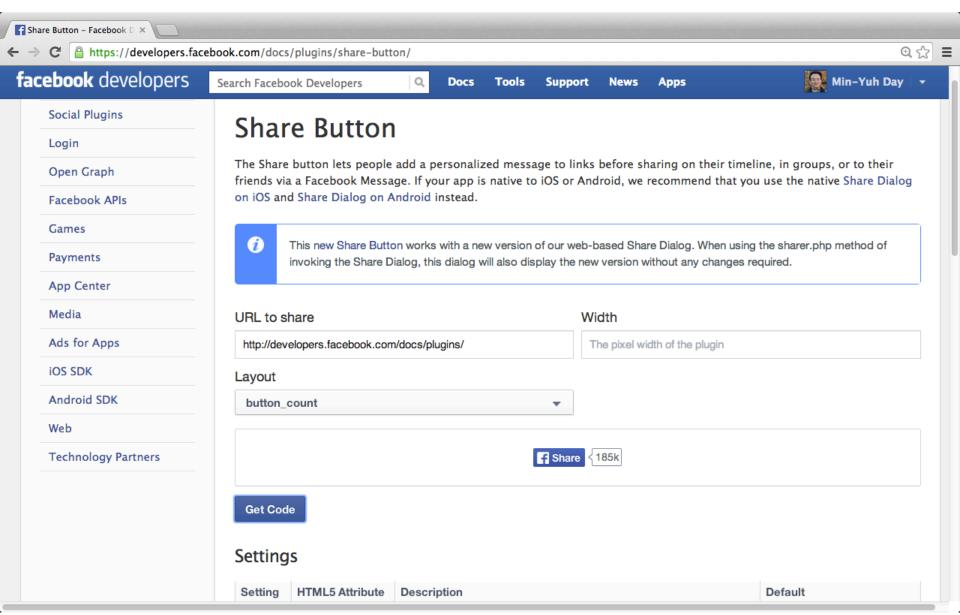




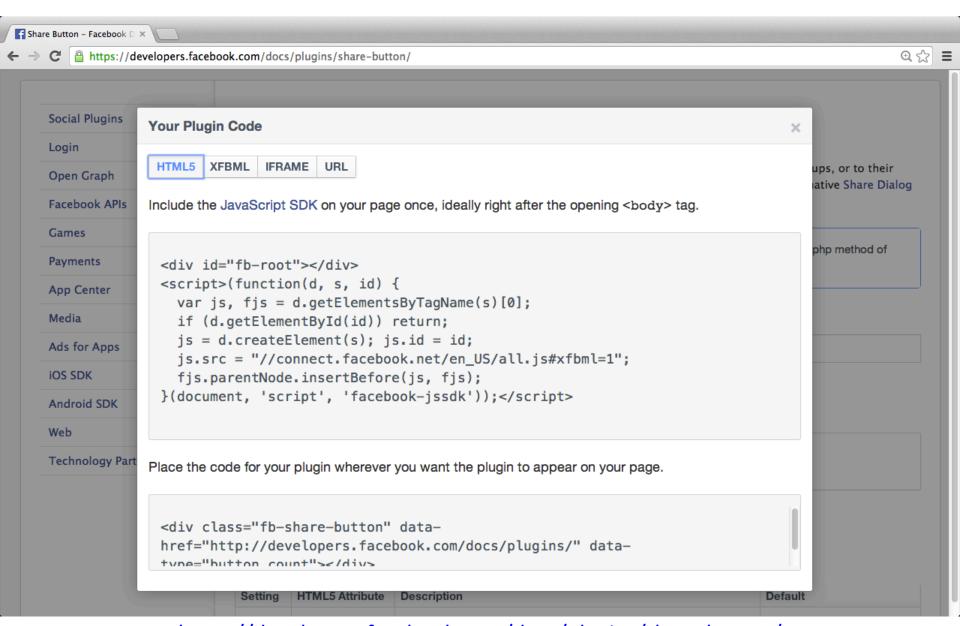
```
<div id="fb-root"></div>
<script>(function(d, s, id) {
  var js, fjs = d.getElementsByTagName(s)[0];
  if (d.getElementById(id)) return;
  js = d.createElement(s); js.id = id;
  js.src = "//connect.facebook.net/en_US/all.js#xfbml=1";
  fjs.parentNode.insertBefore(js, fjs);
}(document, 'script', 'facebook-jssdk'));</script>
```

```
<div class="fb-like" data-href="https://developers.facebook.com/docs/plugins/"
data-layout="standard" data-action="like" data-show-faces="true" data-
share="true"></div>
```

Facebook Share Button

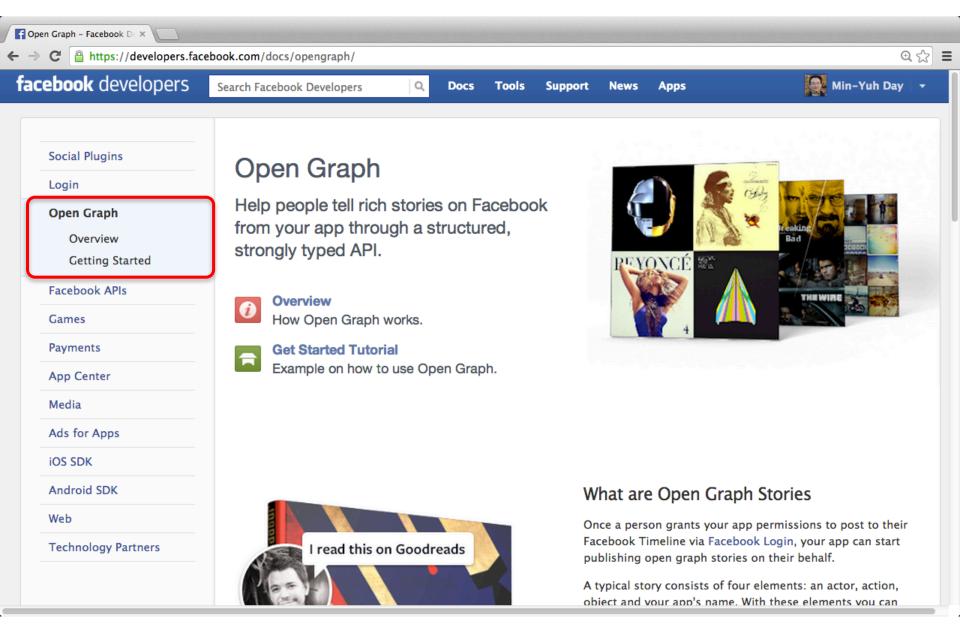


Facebook Share Button



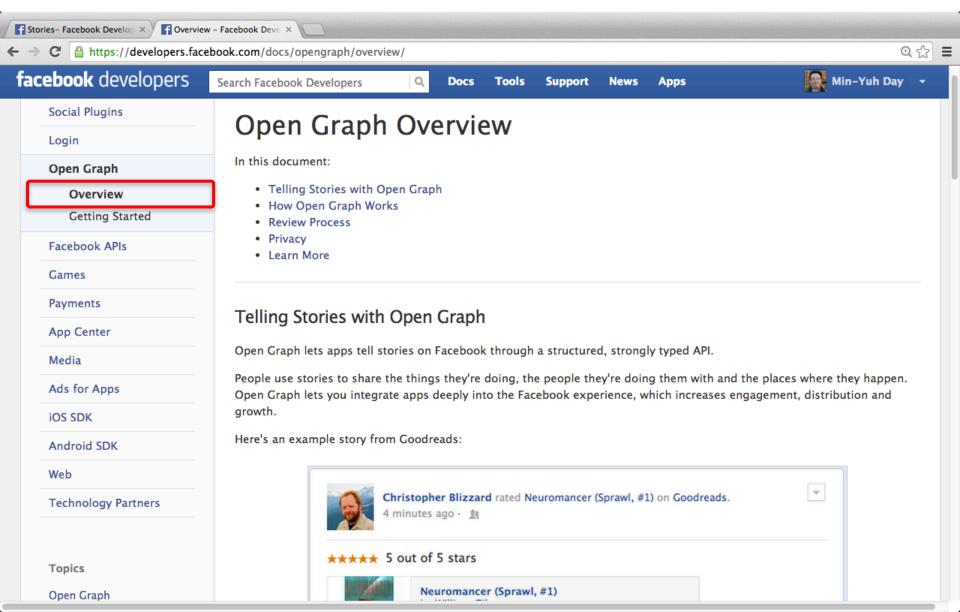


Facebook Open Graph API



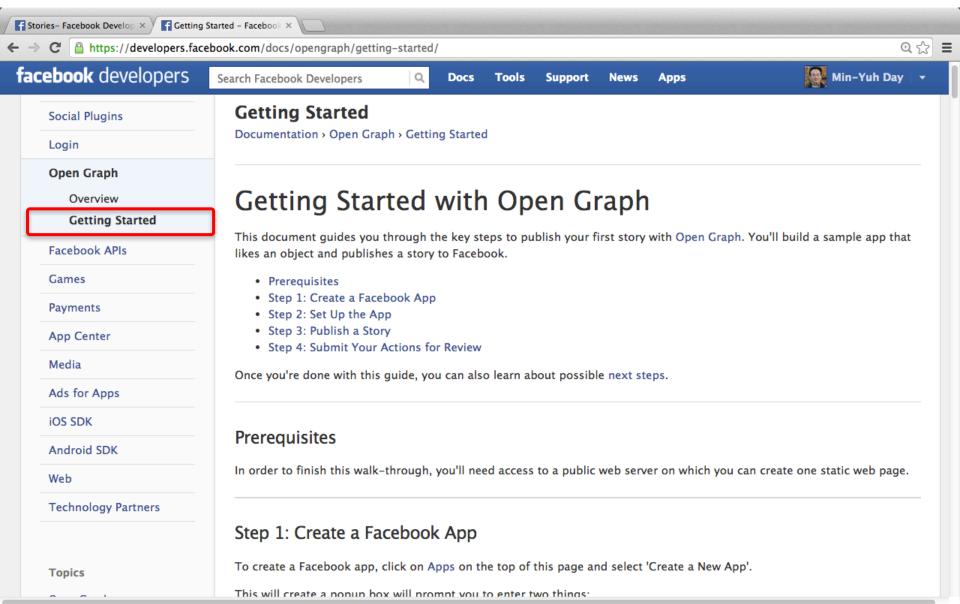


Open Graph Overview



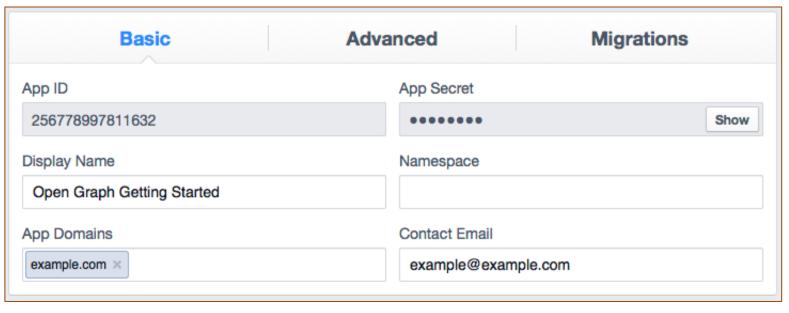


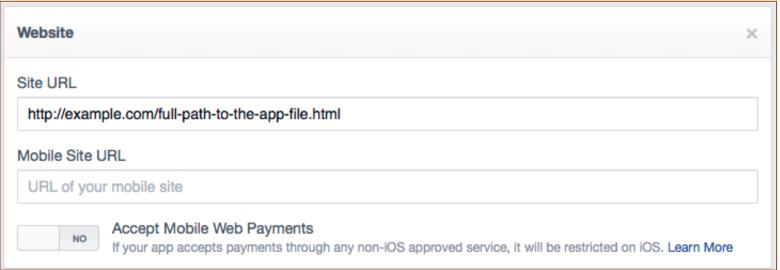
Getting Started with Open Graph





Step 1: Create a Facebook App







Step 2: Set Up the App

```
<html>
<head>
<title>Open Graph Getting Started App - og.likes</title>
<style type="text/css">
div { padding: 10px; }
</style>
<meta charset="UTF-8">
</head>
<body>
<div id="fb-root"></div>
<script type="text/javascript">
 // You probably don't want to use globals, but this is just example code
 var fbAppId = 'replace me';
 var objectToLike = 'http://techcrunch.com/2013/02/06/facebook-launches-developers-live-video-chann
 // This check is just here to make sure you set your app ID. You don't
 // need to use it in production.
 if (fbAppId === 'replace me') {
   alert('Please set the fbAppId in the sample.');
 }
  * This is boilerplate code that is used to initialize
  * the Facebook JS SDK. You would normally set your
  * App ID in this code.
  */
 // Additional JS functions here
 window.fbAsyncInit = function() {
   FB.init({
     appId
                : fbAppId, // App ID
                : true, // check login status
     status
                : true, // enable cookies to allow the
     cookie
                           // server to access the session
     xfbml
                : true
                           // parse page for xfbml or html5
                           // social plugins like login button below
   });
```



Step 2: Set Up the App

```
// Load the SDK Asynchronously
(function(d, s, id){
  var js, fjs = d.getElementsByTagName(s)[0];
  if (d.getElementById(id)) {return;}
  js = d.createElement(s); js.id = id;
  js.src = "//connect.facebook.net/en_US/all.js";
  fjs.parentNode.insertBefore(js, fjs);
}(document, 'script', 'facebook-jssdk'));
```

```
function postLike() {
    FB.api(
       'https://graph.facebook.com/me/og.likes',
       'post',
       { object: objectToLike,
         privacy: {'value': 'SELF'} },
       function(response) {
         if (!response) {
           alert('Error occurred.');
         } else if (response.error) {
           document.getElementById('result').innerHTML =
             'Error: ' + response.error.message;
         } else {
           document.getElementById('result').innerHTML =
             '<a href=\"https://www.facebook.com/me/activity/' +</pre>
             response.id + '\">' +
             'Story created. ID is ' +
             response.id + '</a>';
   );
</script>
```



Step 2: Set Up the App

```
<div
  class="fb-login-button"
  data-show-faces="true"
  data-width="200"
  data-max-rows="1"
  data-scope="publish_actions">
</div>
<div>
This example creates a story on Facebook using the
<a href="https://developers.facebook.com/docs/reference/ogaction/og.likes">
<code>og.likes</code></a> API. That story will just say
that you like an
<a href="http://techcrunch.com/2013/02/06/facebook-launches-developers-live-video-channel-to-keep-it">http://techcrunch.com/2013/02/06/facebook-launches-developers-live-video-channel-to-keep-it
article on TechCrunch</a>. The story should only
be visible to you.
</div>
<div>
<input
  type="button"
  value="Create a story with an og.likes action"
  onclick="postLike();">
</div>
<div id="result"></div>
</body>
</html>
```



Step 3: Publish a Story



Be the first of your friends to use Open Graph Getting Started.

This example creates a story on Facebook using the og.likes API. That story will just say that you like an article on TechCrunch. The story should only be visible to you.

Create a story with an og.likes action

Christopher Blizzard uses Open Graph Getting Started.



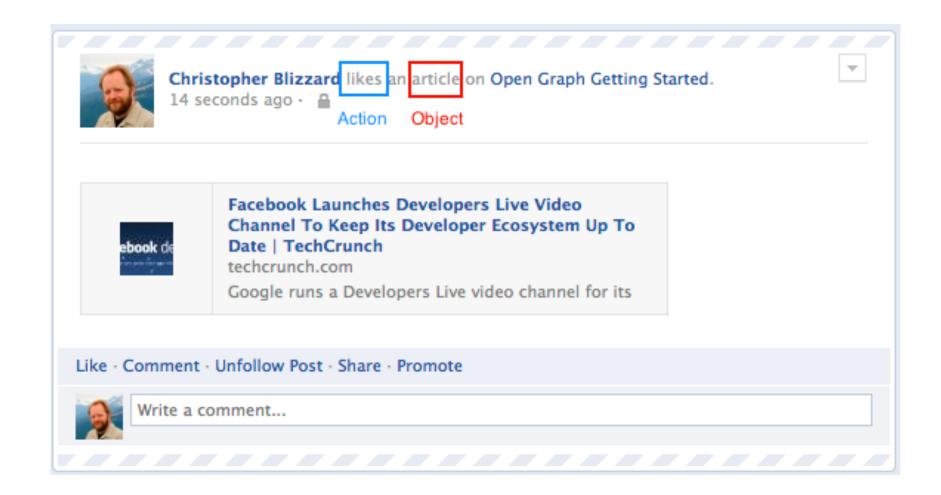
This example creates a story on Facebook using the og.likes API. That story will just say that you like an article on TechCrunch. The story should only be visible to you.

Create a story with an og.likes action

Story created. ID is 10152558341620483

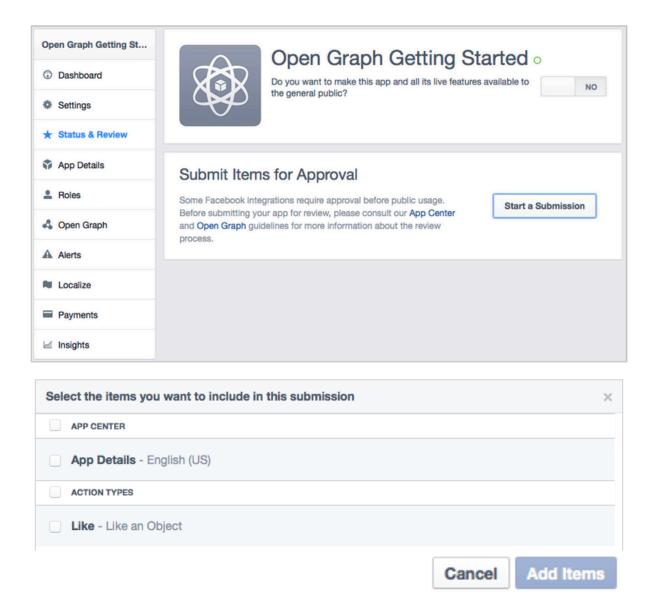


Step 3: Publish a Story





Step 4: Submit Your Actions For Review



https://developers.facebook.com/docs/opengraph/getting-started/



Open Graph

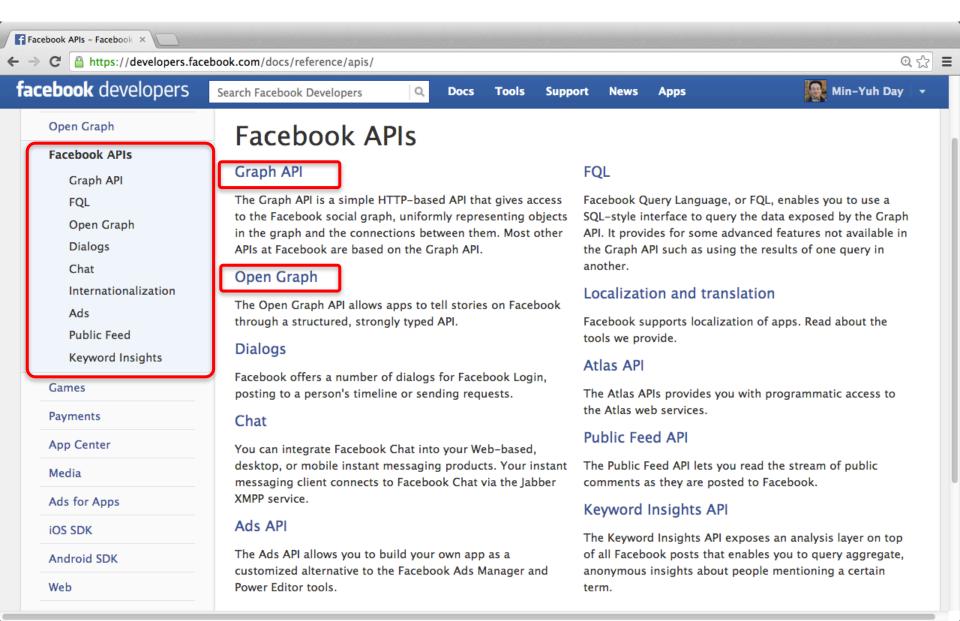




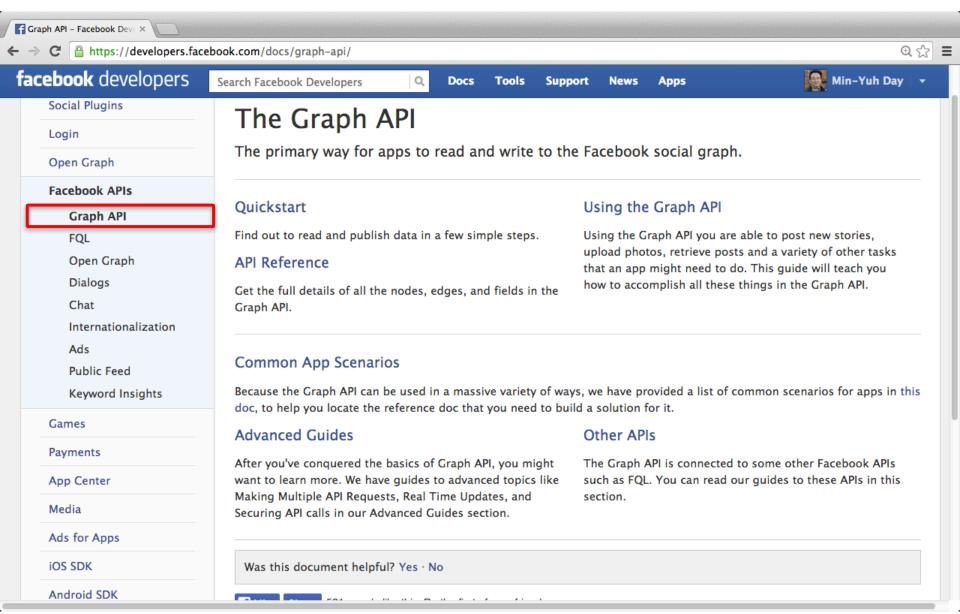
Facebook Open Graph API

- A Facebook API to share information
 - From your app
 - To Facebook
- Ex
 - Pinterest

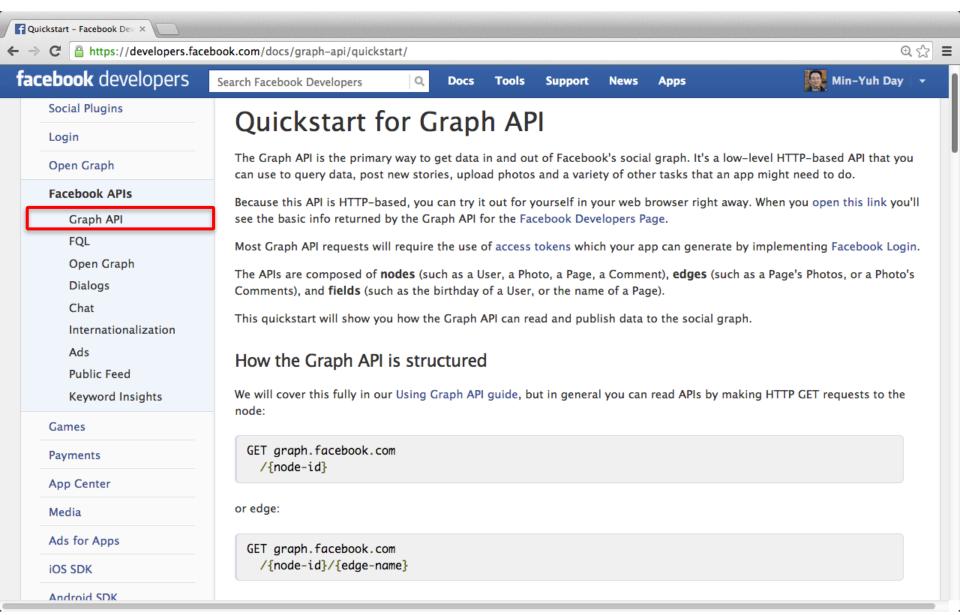
Facebook APIs



Facebook Graph API



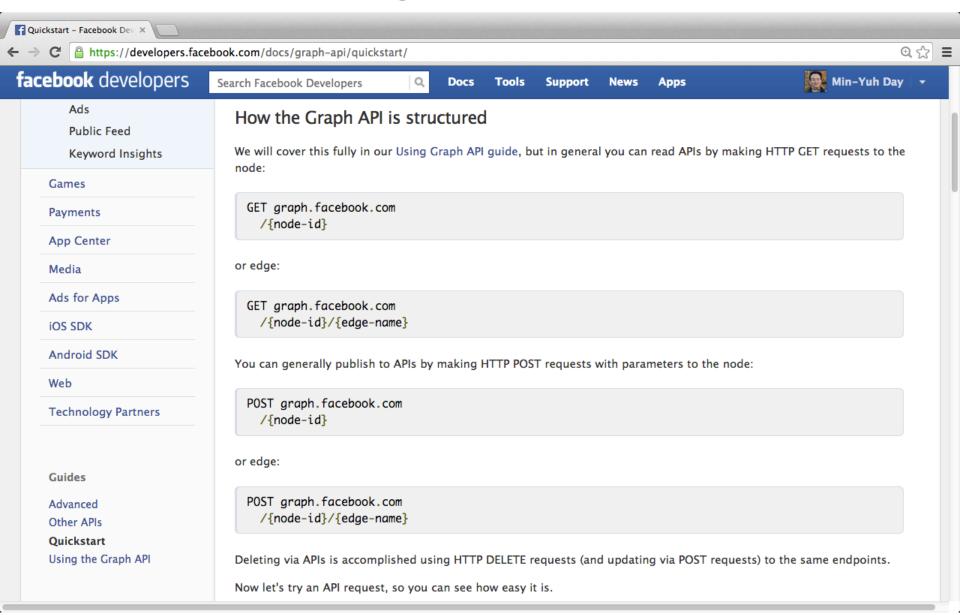
Quickstart for Graph API



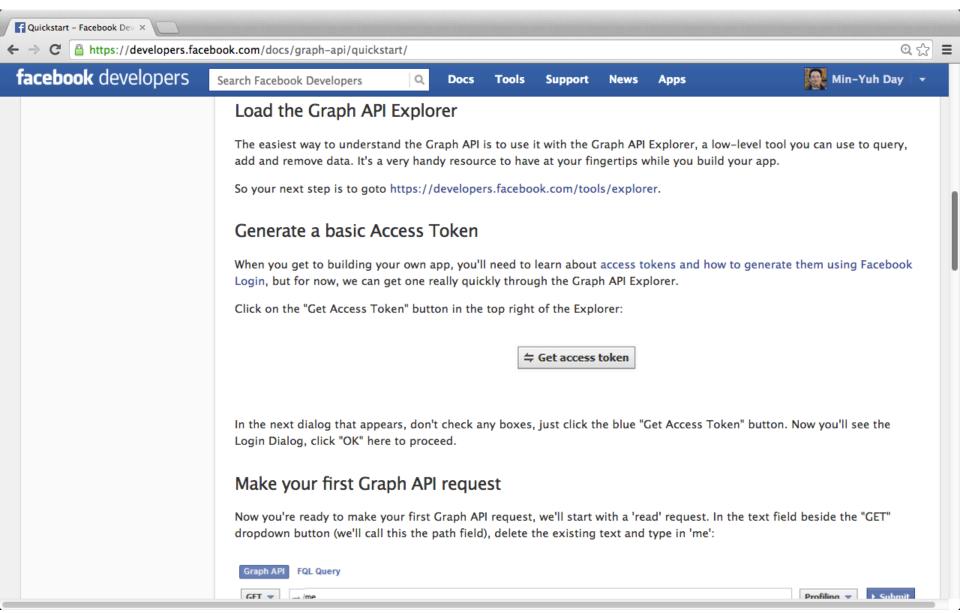
Getting Started with the Graph API

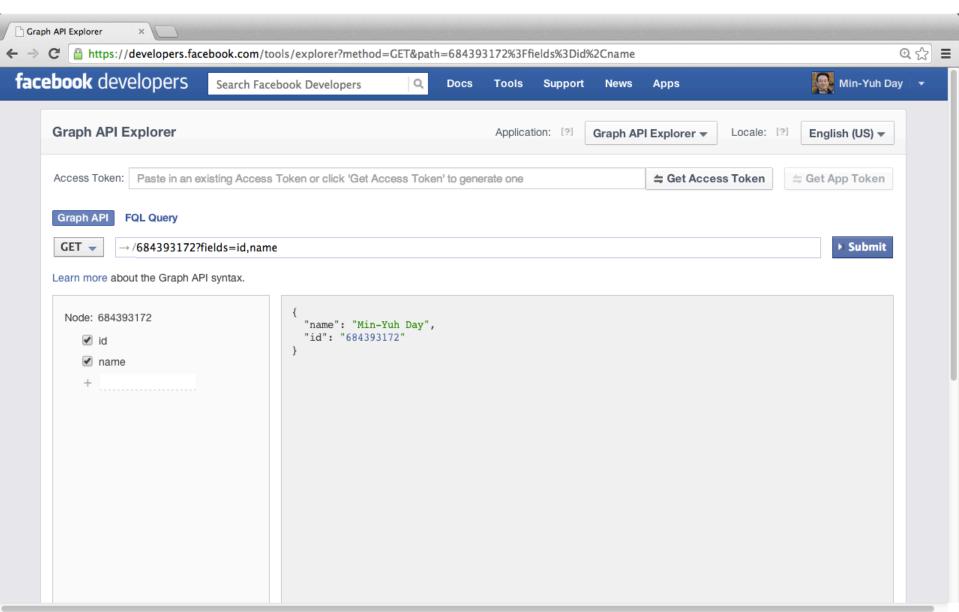


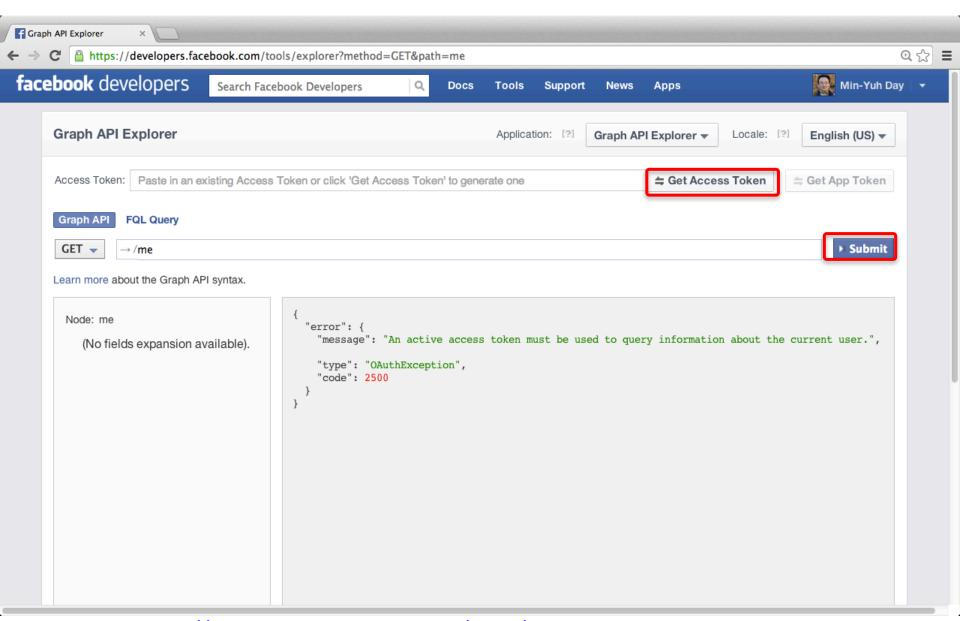
How the Graph API is structured

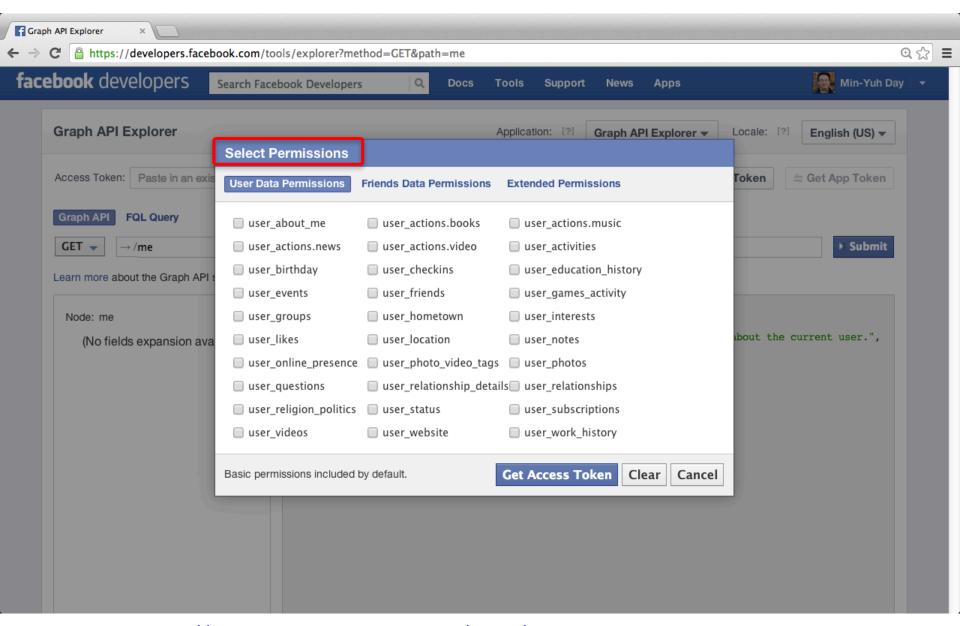


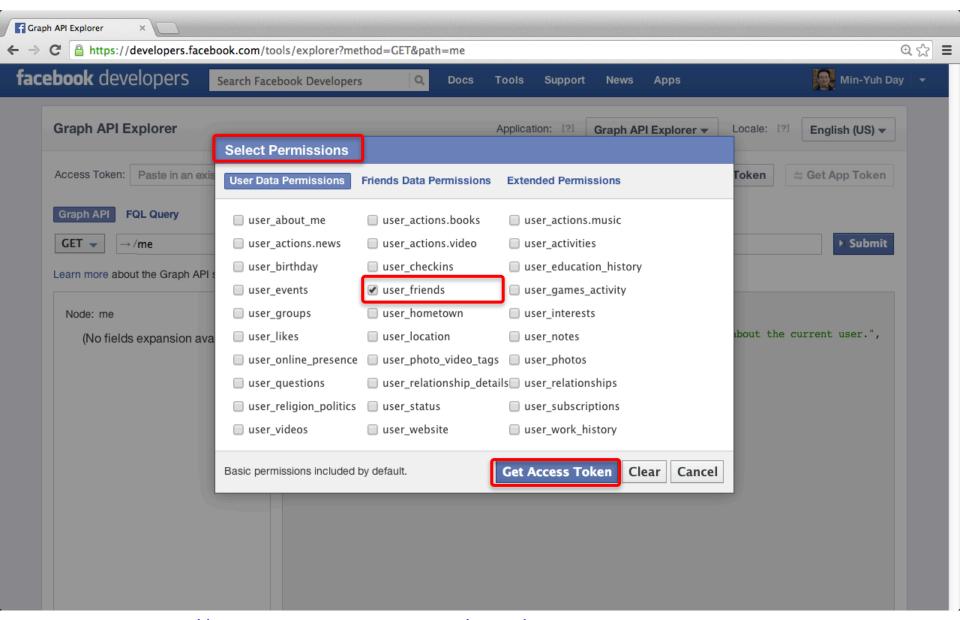
Load the Graph API Explorer









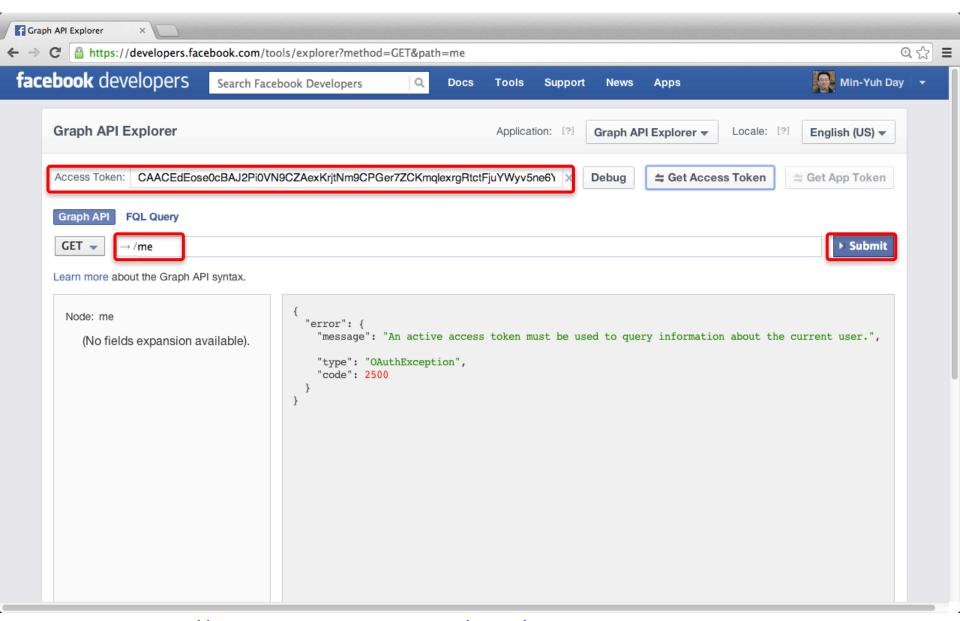


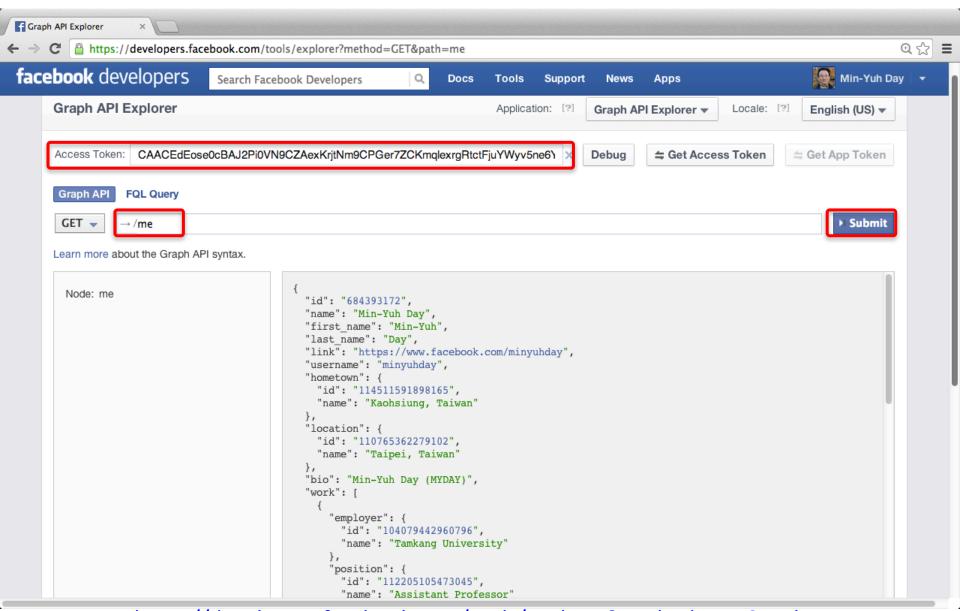


Graph API Explorer will receive the following info: your public profile and friend list.

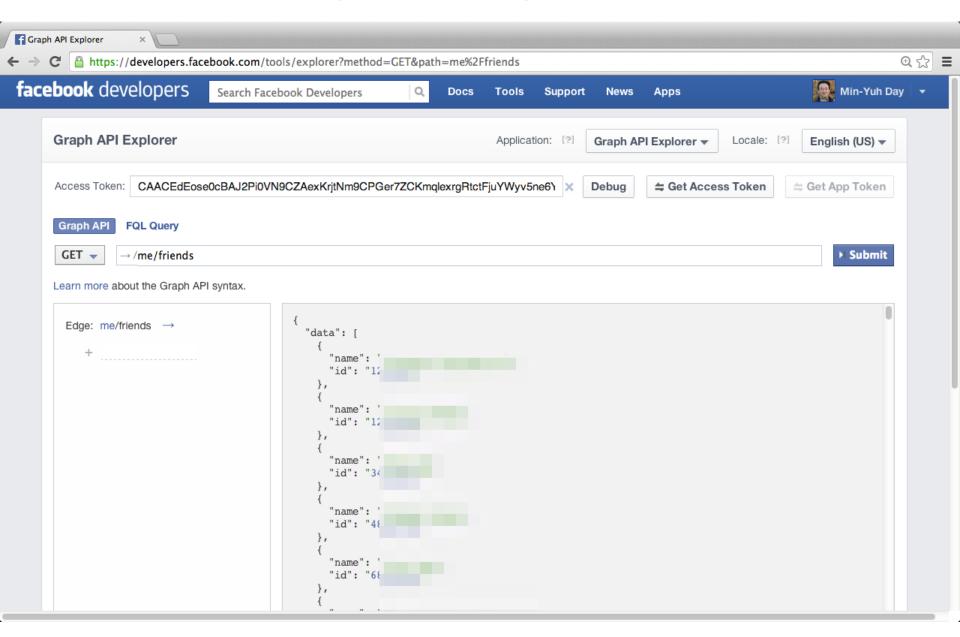
App Terms · Privacy Policy

Cancel

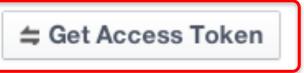




Facebook Graph API Explorer /me/friends

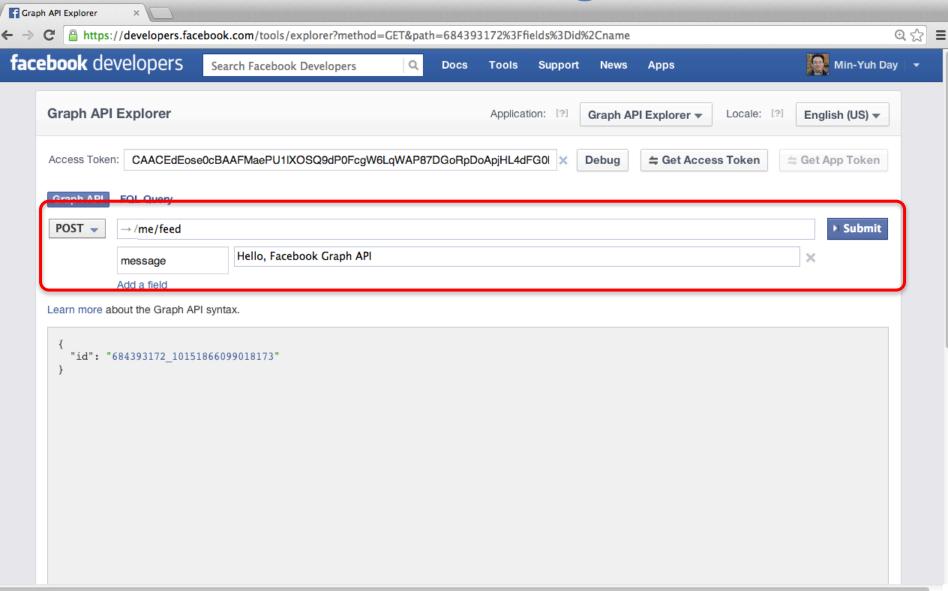


Facebook Graph API Explorer Publish actions



Select Permissions		
User Data Permissions	Friends Data Permissi	ons Extended Permissions
ads_management	ads_read	create_event
	<pre>email</pre>	export_stream
manage_friendlists	manage_notification	s manage_pages
		publish_checkins
	read_friendlists	read_insights
read_mailbox	read_page_mailboxe	es read_requests
read_stream	rsvp_event	
sms		video_upload
xmpp_login		
Basic permissions included by default.		Get Access Token Clear Cancel

Facebook Graph API Explorer Post Message



Facebook Graph API Explorer Post Message



Summary

- Facebook API
 - Facebook JavaScript SDK
 - Integrate Facebook with iOS/Android Apps
 - Facebook Login
 - Facebook Open Graph API
 - Facebook Graph API



Integrate Facebook with your native iOS apps.



Android

Integrate Facebook with your native Android apps.



Web

Integrate Facebook with your website or host your apps in Facebook.com.

References

Facebook Developers, https://developers.facebook.com/