Developing Facebook Applications
By
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Objective

• A very basic introduction to developing applications with Facebook using PHP.
• Keep it simple.
• Goal is learning.
• Level: Basic
Agenda

- Presentation [M.ALI] 20 mins
- Demonstration [Amir Latif] 15 mins
- Question/Answer 10 mins
What is Facebook?

• Facebook is a web application that provides a kind of social networking with people near you.

• Facebook was founded by Mark Zuckerberg in 2004.

• Originally designed to connect different colleges and universities.

• Facebook name has origin in magazine that was distributed to new students.
Facebook facts

- World largest social network with over 350 million users.
- An average teen spends about 20 mins daily.
- More than 65 million active users at a time.
- Consists of more than 500,000 active applications.
- 6.5 millions users access FB from mobile
Facebook application

• Developing facebook application mean it is accessible from FB.

• Application is exposed to millions of users worldwide.

• There is a chance for the application to become a popular one in FB.

• Applications can be social applications like super wall, games like crazy taxi and quizzes.
Facebook Applications

Facebook Application Breakdown

Of the 23,160 Facebook applications for your person profile, split up into 22 categories, fun-based applications clearly dominate.

Source: Facebook

FlowingData
Some Popular Facebook applications
Farm Ville

FarmVille Season's Greetings Farmers! New Limited Edition Winter Holiday items have made their way to FarmVille! Don't forget, the time to open your presents is also arriving soon! These gifts can be opened from Dec. 7th and contain some special surprises. Happy Farming everyone!

8 hours ago

14,775 people like this.
View all 15,009 comments

FarmVille We're proud to announce a new Mystery Box this week! It gives you the chance to get great Limited Edition Winter Holiday gifts for a fraction of the cost! The time to open your presents is also arriving! These gifts can be opened from Dec. 24th to Jan. 7th and contain some special surprises. Happy Farming everyone!

Wed at 11:42am

17,833 people like this.
View all 55,810 comments

FarmVille This holiday season we want to see your farms at their very best! Submit photos of your winter themed farms from Dec. 15th - Dec. 22nd.

Chat (5)
Facebook Platform

• Facebook platform is a framework for developers to interact with the core features of the Facebook site.

• Anyone can develop an application in Facebook by pointing their URL to developers.facebook.com

• The idea was to enable everyone to provide content to the Facebook site.

• Provides web services
Standard web application
Facebook Application Platform

- Platform components:

1. Users’ machine
2. Facebook Server(s)
3. Application Server
Client/Server Interaction

1. Browser makes request
2. FB server calls App Server through callback URL
3. App calls FB API
4. App server returns FBML
5. Facebook renders FBML to HTML
How Facebook application works?

1. Request Sent

2. Request received by Facebook

3. Request is processed and forwarded to Game server

4. User request received

5. Response to User Request

6. Response received by Facebook

7. Response processed and forwarded to User

8. Request received by User

Facebook Server(s)

Application Server

INTERNET

INTERNET
Creating your first Facebook application
Before you begin

- A PHP editor available in Netbeans or Eclipse
- A php enabled web server to host your application
Step-by-step Guide to Creating Facebook App

Extract data with your App

http://developers.facebook.com/documentation.php

Documentation

The Facebook Platform is a standards-based web service with methods for accessing and contributing Facebook data. We've made the methods as easy to understand as possible, and included full documentation to help you learn more.

Facebook Developers Wiki

A deep resource for anyone developing on the Facebook Platform.

Interface (API)

The Facebook API uses a REST-based interface. This means that our Facebook method calls are made over the internet by sending HTTP GET or POST requests to our REST server. With the API, you can add social context to your application by utilizing profile, friend, photo, and event data.

Query (FQL)

Facebook Query Language, or FQL, allows you to use a SQL-style interface to more easily query the same data that you can access through other Facebook API methods.

Markup (FBML)

Facebook Markup enables you to build full Facebook Platform applications that deeply integrate into a user's Facebook experience. You can hook into several Facebook integration points, including the Profile, Profile Actions, Canvas, News Feed and Mini-Feed.
The Facebook Platform Elements

- There are three elements to the Facebook Platform:
  - The Facebook API (Application Programming Interface).
  - FBML—Facebook Markup Language
  - FQL—Facebook Query Language
Facebook APIs

http://wiki.developers.facebook.com/index.php/API#API_Methods

• A lot of handy functions provided with a Facebook Object.

• For example: Users.getInfo
  – Returns a **wide array** of user-specific information for each user identifier passed, **limited by the view of the current user.**
FBML


• Facebook Markup Language (FBML)
• Subset of HTML
• Br, div, h1, li, pre, span etc
• Facebook specific tags
• Fb: create-button, fb:dashboard, fb:error, fb:message, fb:name etc
• Used in application which use canvas user profile, mini feed etc
API Test Console

You can experiment with functions and responses, and see what content Facebook Platform makes available. Select the method you wish want to call and the format of the return values.

You need to be logged in to use the console. Log in here.

User ID
Not logged in

Response Format
XML

Callback

Method
friends.get

The results of your method call will show up here.
### FBML Tools

- **API Test Console**
- **FBML Test Console**
- **Facebook Connect Playground**
- **Feed Template Console**
- **Registered Templates Console**

### Example FBML Code

```html
<fb:fbml>
  <fb:table cols="3">
    <fb:user-item uid="614902533"/>
    <fb:user-item uid="286602790"/>
    <fb:user-item uid="505543152"/>
    <fb:user-item uid="515482742"/>
    <fb:user-item uid="517311956"/>
    <fb:user-item uid="521240370"/>
  </fb:table>
</fb:fbml>
```

### Preview Area

- **Facebook FBML Test Console**

  - Mark Alexander
  - Simon Bash
  - Michael Ban

  - Mathew
  - Kyrie Bodekett
  - David Bonos
  - Tripi Anil

### HTML Source

```html
<table class="fbmTable" cellspacing="0" cellpadding="0" border="0" height="100%">
  <tr>
    <td style="height:100%;" colspan="3" style="vertical-align: middle;">
      <a href="http://www.facebook.com/profile.php?id=614902533" target="_blank">
        <img src="http://profile.ak.fbcdn.net/v224/2490164902533_2277.jpg" alt="" />
      </a>
    </td>
  </tr>
</table>
```
Facebook Query Language (FQL)

• FQL = subset of SQL
  – Only select-statements, no updates/deletes

• Exposed Facebook data/tables:
  – User, Friend, Group, Group_member, Event, Event_member, Photo, AlbumPhoto_tag

• SELECT name, affiliations
  FROM user
  WHERE uid IN (SELECT uid2
                 FROM friend
                 WHERE uid1=211031)
# Facebook Database tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>album</td>
<td>Application</td>
</tr>
<tr>
<td>Comment</td>
<td>Event</td>
</tr>
<tr>
<td>connection</td>
<td>Family</td>
</tr>
<tr>
<td>friend</td>
<td>group</td>
</tr>
<tr>
<td>photo</td>
<td>user</td>
</tr>
</tbody>
</table>

Understanding FBML and IFRAMES
FBML – Facebook Markup Language

- Subset of HTML + Facebook elements
- Functionalities:
  - Implementing privacy designs: e.g., restrict the content to be only visible to the current viewer.
- Syntax just like well-formed HTML/XML.
Understanding the Types of FBML Tags

- The goal of FBML is to support a versatile tag set in order to help developers target these different settings.
  - Social data tags e.g. \texttt{fb:name}.
  - Sanitization tags e.g. \texttt{fb:swf}
  - Design tags e.g. \texttt{fb:tabs}
  - Component tags e.g. \texttt{fb:comments}
  - Control tags e.g. \texttt{fb:visible-to-owner}

URL: http://developers.facebook.com/specification.php
• `<fb:editor action="?do-it" labelwidth="100">
  `<fb:editor-text label="Title" name="title" value=""/>
  `<fb:editor-text label="Author" name="author" value=""/>
  `<fb:editor-custom label="Status">
    `<select name="state">
      `<option value="0" selected>have read</option>
      `<option value="1">am reading</option>
      `<option value="2">want to read</option>
    </select>
  </fb:editor-custom>
  `<fb:editor-textarea label="Comment" name="comment"/>
  `<fb:editor-buttonset>
    `<fb:editor-button value="Add"/>
    `<fb:editor-button value="Recommend"/>
    `<fb:editor-cancel />
  </fb:editor-buttonset>
</fb:editor>`
• <fb:tabs>
  <fb:tab-item href='http://apps.facebook.com/yourapp/myphotos.php' title='My Photos' selected='true'/>
  <fb:tab-item href='http://apps.facebook.com/yourapp/recentalbums.php' title='Recent Albums' />
</fb:tabs>

• <fb:success>
  <fb:message>Success message</fb:message>
  This is the success message text.
</fb:success>
FBML vs IFrames

FBML
- Is Quick; suitable for beginners
- Ease of access to the facebook elements
- Pages have nice URLs

IFrames
- Easier and faster for existing applications
- Faster experience for users over the long run and faster for AJAX
- Let you use the JavaScript, HTML, and standard
Facebook Connect

URL: http://wiki.developers.facebook.com/index.php/Facebook_Connect
Demonstration
Q/A session