Materi Perkuliahan

BAHASA PEMROGRAMAN

TEKNIK PEMROGRAMAN (LANJUTAN I)

Pembahasan

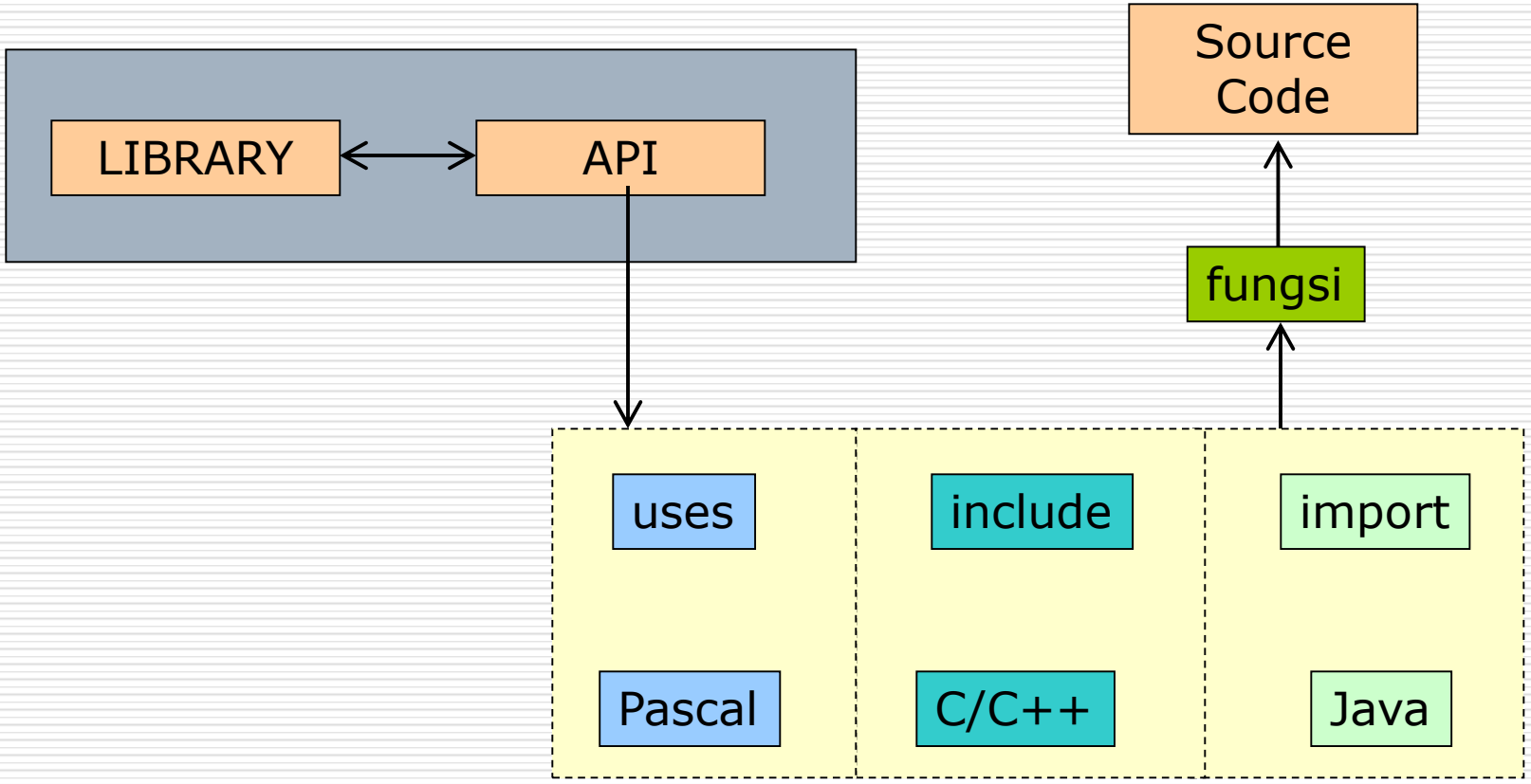
- API (Application Programming Interface)
- Platform Specific API
  - Operating System
  - Graphic
  - Device
  - Database
- Web API

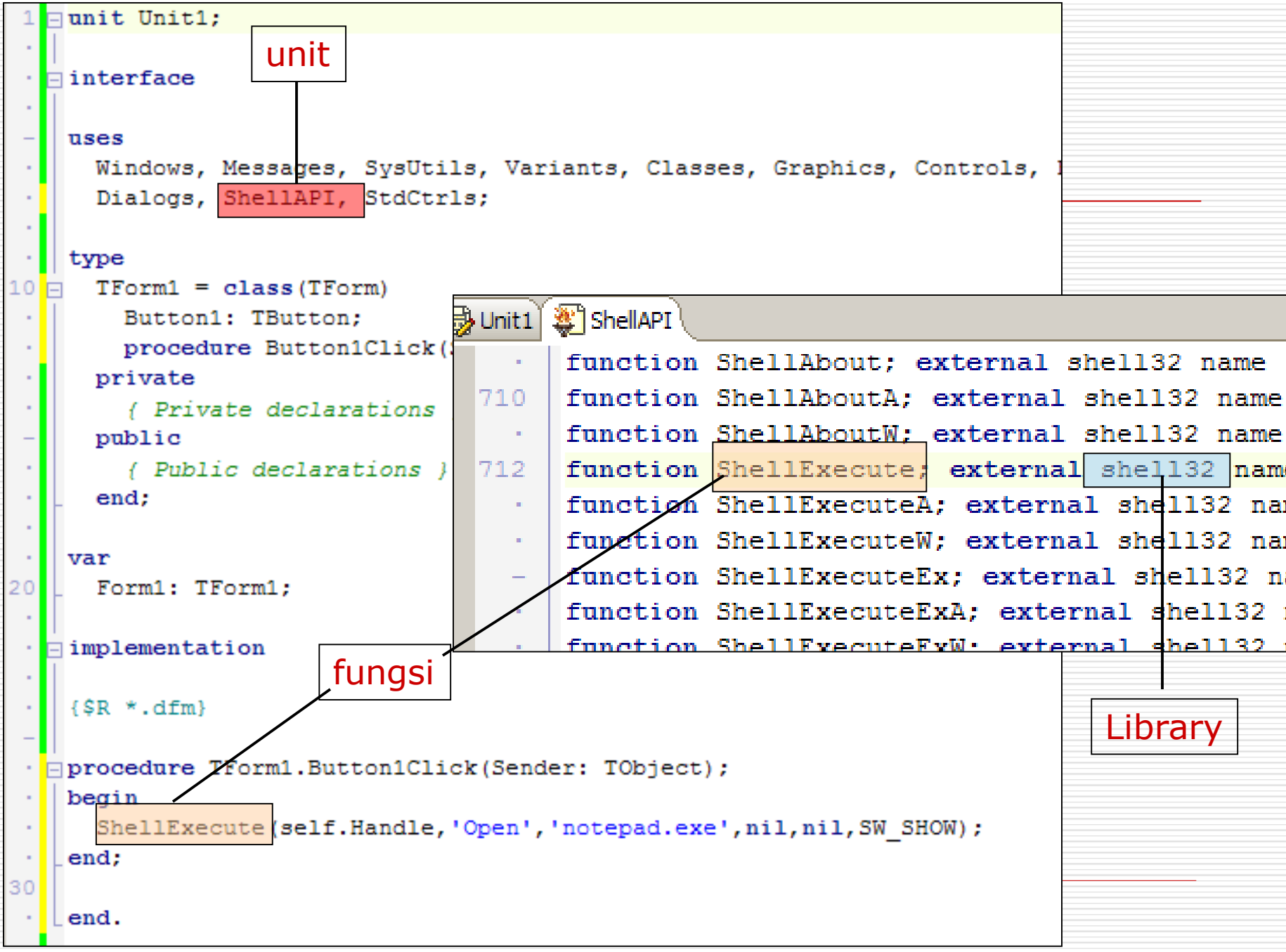
API - Application Programming Interface

- API adalah seperangkat **perintah**, **fungsi**, dan **protokol** yang dapat digunakan oleh programmer saat **membangun perangkat lunak** untuk **sistem operasi** tertentu.

- API memungkinkan programmer untuk menggunakan **fungsi standar** untuk **berinteraksi** dengan **sistem operasi**.

Interaksi dengan API




unit
interface
uses
Windows, Messages, SysUtils, Variants, Classes, Graphics, Controls,
Dialogs, ShellAPI, StdCtrls;
type
TForm1 = class(TForm)
Button1: TButton;
procedure Button1Click(
private
{ Private declarations
public
{ Public declarations }
end;
var
Form1: TForm1;
implementation
{$R *.dfm}
procedure TForm1.Button1Click(Sender: TObject);
begin
ShellExecute(self.Handle,'Open','notepad.exe',nil,nil,SW_SHOW);
end;
end.
Unit1
ShellAPI
function ShellAbout; external shell32 name
function ShellAboutA; external shell32 name
function ShellAboutW; external shell32 name
function ShellExecute; external shell32 nam
function ShellExecuteA; external shell32 na
function ShellExecuteW; external shell32 na
function ShellExecuteEx; external shell32 n
function ShellExecuteExA; external shell32
fungsi
Library

Platform Specific API

- Operating System
  - Windows → WinAPI, ShellAPI, dll
  - Linux/Unix → kernel, socket, dll
  - Mobile device

    Disediakan melalui SDK

    (*Software Development Kit*)
    - Nokia → Symbian OS SDK, UIQ
    - Windows CE / Pocket PC → winceos core
    - Blackberry → Blackberry SDK, Blackberry JDE
    - Java Based → J2ME SDK
    - Droid → Google Android SDK

Platform Specific API

- Graphic API
  - DirectX → game, multimedia streaming
  - OpenGL → fractal, 3D modeling
- Modem → TAPI (Telephony API)

Platform Specific API

- Database connector
  - ADODB → via ODBC
  - OLEDB → via provider library
  - Direct Connection
    - MySQL
    - PostgreSQL
    - SQLite

Web API

- Kumpulan fungsi-fungsi JavaScript
- JSON, REST, SOAP, XML-RPC
- Contoh :
  - Google Map API
    - http://code.google.com/apis/maps/
  - Yahoo! UI
    - http://developer.yahoo.com/yui/
  - Facebook API
    - http://wiki.developers.facebook.com/index.php/API

Google Map API

- Membutuhkan registrasi API Key

```
<script
    src="http://maps.google.com/maps?file=api&amp;amp;v=2&amp;amp;s
    ensor=true&amp;amp;key=ABQIAAAAthBjGlYbXLrfb5mNDpkcEhRzV
    Qiegrv9Bgh9WedCcpHQXJmGYxRtOg65xLdASrGUYTn9MYbI2h
    mivw" type="text/javascript"></script>
```

```
18  function initGMap(){
19    if (GBrowserIsCompatible()) {
20      map = new GMap2(document.getElementById("map"));
21      map.setCenter(new GLatLng(cLat,cLon), iZoom);
22      map.setUIToDefault();
23      GEvent.addListener(map, "click", getAddress);
24      geocoder = new GClientGeocoder();
25
26      icon = new GIcon();
27      icon.image = "themes/default/images/home.png";
28      icon.iconSize = new GSize(30, 26);
29      icon.iconAnchor = new GPoint(0,0);
30      icon.infoWindowAnchor = new GPoint(9, 2);
31    }
32  }
33
34  function addPoints(lon, lat) {
35    var point = new GPoint(lon, lat);
36    var popuphtml = 'Sample Description';
37    var marker = createMarker(point,icon,popuphtml);
38    map.addOverlay(marker);
39  }
40
41  function createMarker(point, icon, popuphtml) {
42    var popuphtml = "<div id=\"popup\">" + popuphtml + "<\/div>";
43    var marker = new GMarker(point, icon);
44    GEvent.addListener(marker, "click", function() {
45      marker.openInfoWindowHtml(popuphtml);
46    });
47    return marker;
48  }
```

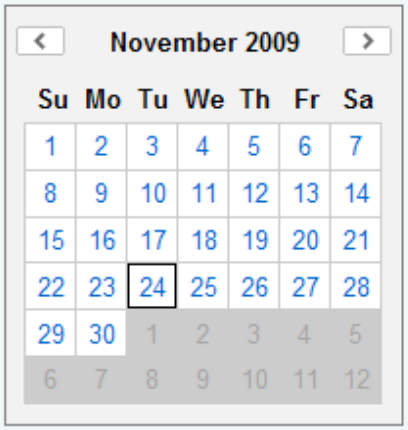
Yahoo! UI

- Kebutuhan User Interface untuk Web
- Kumpulan object GUI
- Dapat diakses langsung melalui webserver http://yui.yahooapis.com

Calendar Control: Multi-Select Calendar

By default the Calendar control is setup for single-select mode, allowing only a single date to be selected at a time. This example shows how you can easily configure the Calendar to support multiple date selections.

View example in new window.



Setting up the Calendar

The markup for our multi-select Calendar example looks indentical to the basic single-select Calendar:

view plain | print | ?

```
1 <div id="callContainer"></div>
```

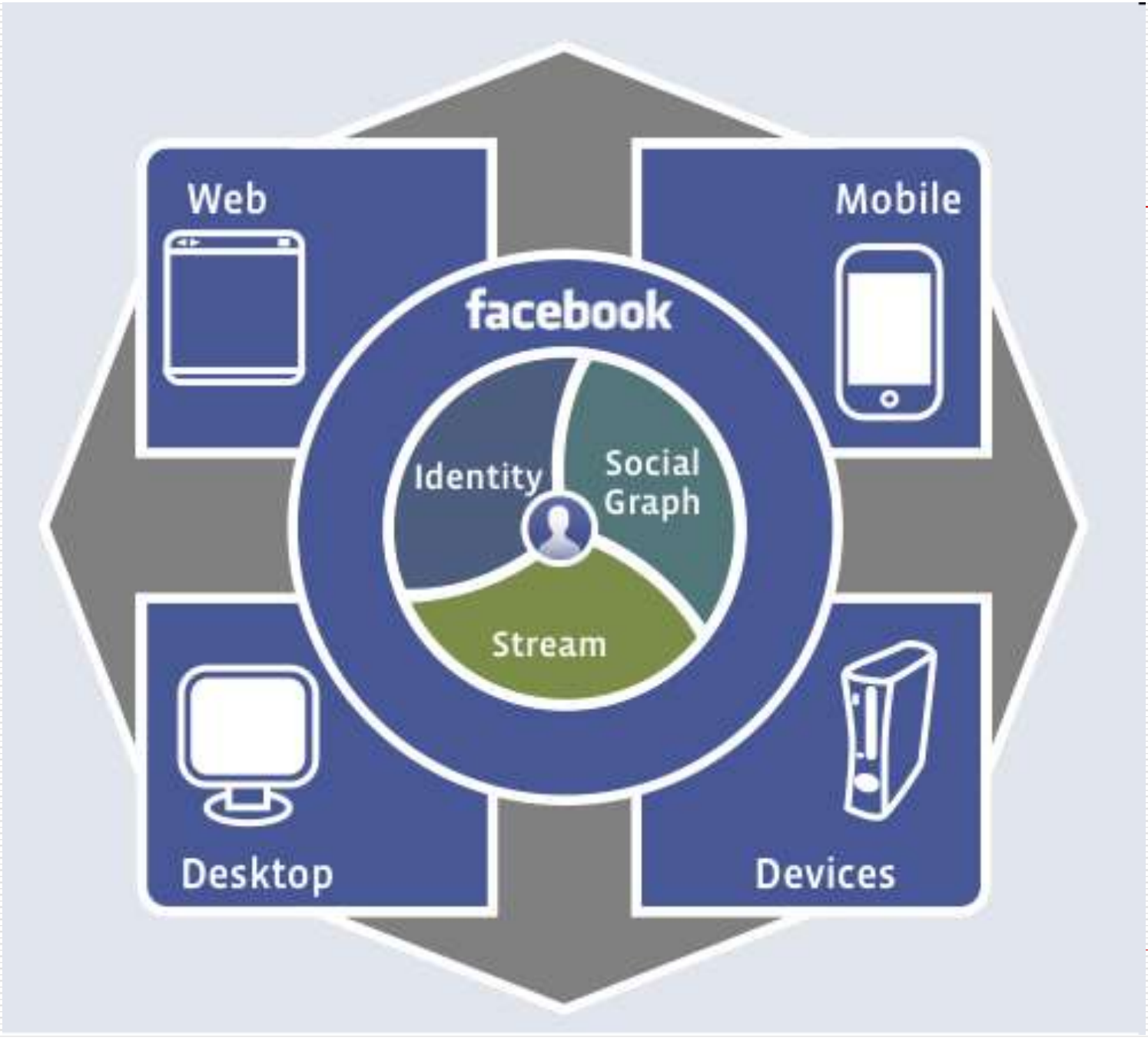
Instantiating a multi-select Calendar is similar to instantiating a single-select Calendar; however, to specify the multi-select configuration we pass a configuration object into the constructor. The configuration object is a JavaScript object literal which can be passed to the Calendar constructor in the form of key/value pairs for the purpose of setting the Calendar's various configuration properties. In this case, we'll specify that the "MULTI-SELECT" option has a value of true in line 6 below.

view plain | print | ?

```
1 <script>
2         YAHOO.namespace("example.calendar");
3
4         YAHOO.example.calendar.init = function() {
5             YAHOO.example.calendar.cal1 =
```

Facebook API

- Integrasi facebook dengan website
- Pengembangan aplikasi yang dapat dijalankan pada facebook
- Pengembangan aplikasi facebook untuk iPhone
- API yang disediakan:
  - FBML, FQL, FBJS, XFBML, REST API


Web
Mobile
facebook
Identity
Social Graph
Stream
Desktop
Devices

```php
<?php
// Copyright 2007 Facebook Corp. All Rights Reserved.
//
// Application: Do You Think T.J. Clax Is Hot?
// File: 'index.php'
// This is a sample skeleton for your application.
//

require_once 'facebook.php';

$appapikey = 'c1c38f4f6e132e489fad4f296f54d6b7';
$appsecret = '85bdb971ab266851a482117ceb530f12';
$facebook = new Facebook($appapikey, $appsecret);
$user_id = $facebook->require_login();

// Greet the currently logged-in user!
echo "Hello, <fb:name uid=\"$user_id\" useyou=\"false\" />!";

// Print out at most 25 of the logged-in user's friends,
// using the friends.get API method
echo "Friends:";
$friends = $facebook->api_client->friends_get();
$friends = array_slice($friends, 0, 25);
foreach ($friends as $friend) {
   echo "$friend";
}
```