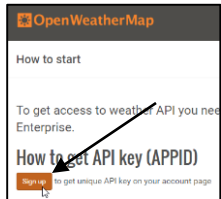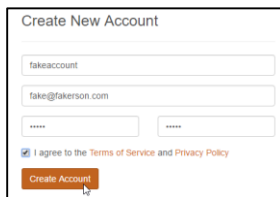# Using an API (with OpenWeatherMap.org as an example)

If the organization providing the API requires it, you will need to sign up as an authorized user to gain access to the API.

For this tutorial, we will be using OpenWeatherMap.org's API to display current weather information.
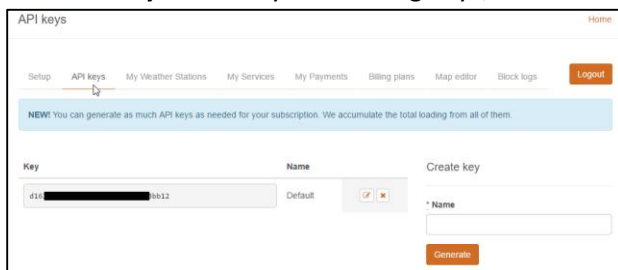
1. Visit http://openweathermap.org/appid and click **Sign Up**.

2. Create a new account by entering the desired information, and then click **Create Account**.

3. Click **API Keys** to view your existing keys, as well as to generate new ones (if needed).

Now that we have a valid API key, we can use it to create the application to display current weather information.

To display the current weather, we use the variable q with the city in which we wish the current weather data. For this example, we'll use Palo Alto:

http://api.openweathermap.org/data/2.5/find?q=Palo+Alto&units=imperial&type=accurate&mode=xml&APPID=api-key

Accessing this using a web browser displays the following:

```xml
▼<cities>
   <calctime>0.0137</calctime>
   <count>1</count>
   <mode>name</mode>
 ▼<list>
   ▼<item>
     ▼<city id="5380748" name="Palo Alto">
         <coord lon="-122.143021" lat="37.441879"/>
         <country>US</country>
         <sun rise="2016-06-07T12:47:19" set="2016-06-08T03:28:03"/>
      </city>
      <temperature value="71.69" min="59" max="81.86" unit="fahrenheit"/>
      <humidity value="73" unit="%"/>
      <pressure value="1013" unit="hPa"/>
    ▼<wind>
        <speed value="17.71" name="Gale"/>
        <direction value="350" code="" name=""/>
     </wind>
     <clouds value="20" name="few clouds"/>
     <precipitation mode="no"/>
     <weather number="801" value="few clouds" icon="02d"/>
     <lastupdate value="2016-06-07T19:53:57" unix="1465329237"/>
   </item>
  </list>
</cities>
```
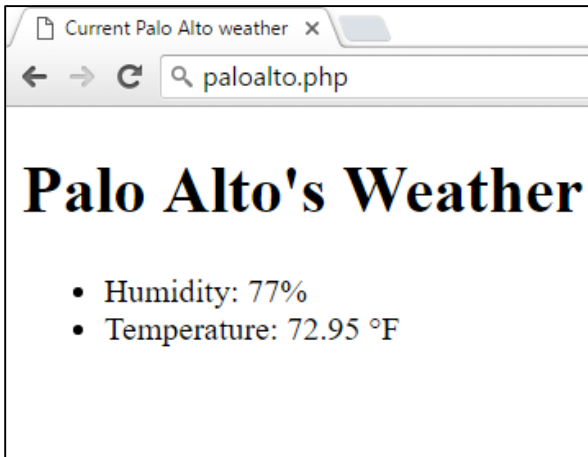
To use this information in an application, we'll need to extract this data using PHP and output it to the screen.

In this example:

- **$url** is the link to the data
- **$getweather** obtains the data
- **$gethumidity** extracts only the humidity value from the data
- **$gettemp** extracts only the temperature from the data

The **echo** statements display the temperature and humidity.

```php
<!doctype html>
<?
$url = "http://api.openweathermap.org/data/2.5/find?q=Palo+Alto&type=accurate&units=imperial&mode=xml&APPID=d1627████████bb12";
$getweather = simplexml_load_file($url);
$gethumidity = $getweather->list->item->humidity['value'];
$gettemp = $getweather->list->item->temperature['value'];
?>
<html lang="en">
<head>
<meta charset="utf-8">
<title>Current Palo Alto weather</title>
</head>

<body>
<h1>Palo Alto's Weather</h1>
<ul>
 <li>Humidity: <? echo($gethumidity); ?>%</li>
 <li>Temperature: <? echo($gettemp); ?> &deg;F</li>
</ul>
</body>
</html>
```

And here is the resultant webpage (browser view and code view):

Current Palo Alto weather
paloalto.php

Palo Alto's Weather

- Humidity: 77%
- Temperature: 72.95 °F

```html
<!doctype html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>Current Palo Alto weather</title>
</head>

<body>
<h1>Palo Alto's Weather</h1>
<ul>
 <li>Humidity: 77%</li>
 <li>Temperature: 72.95 &deg;F</li>
</ul>
</body>
</html>
```