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AJAX JSON API

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How to read an external JSON file

We already know that JSON (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write. In this example we can see an JSON example:

```
  {
"cast" : "Tim Robbins, Morgan Freeman, Bob Gunton, ",
    "director" : "Frank Darabont",
    "genre" : "Crime Drama ",
    "id" : "0111161",
    "nrVotes" : 968510,
    "plot" : "Two imprisoned men bond over a number of years, finding solace and eventual
redemption through acts of common decency.",
    "rating" : 9.3000000000000007,
    "runtime" : 142,
    "title" : "The Shawshank Redemption",
    "year" : "1994"
  }
```

```
function readFile(file, callback) {
    var rawFile = new XMLHttpRequest();
    rawFile.overrideMimeType("application/json");
    rawFile.open("GET", file, true);
    rawFile.onreadystatechange = function() {
        if (rawFile.readyState === 4 && rawFile.status == "200") {
            callback(rawFile.responseText);
        }
    }
    rawFile.send(null);
}

//usage:
readFile("movie.json", function(text){
    var data = JSON.parse(text);
    console.log(data);
});
```

AJAX/JSON API

Here we want to demonstrate how you can build a remote Github webapp using jQuery and Ajax. You enter a username and using the API you pull out some information about the user and their profile stats. This is very nice API example. Since this requires a remote connection through Ajax you'll need to host this on your web server.

```html
<!doctype html>
<html lang="en-US">
<head>
  <meta charset="utf-8">
  <meta http-equiv="Content-Type" content="text/html">
  <title>Github API Webapp using jQuery</title>
  <link rel="stylesheet" type="text/css" media="all" href="css/styles.css">
  <script
  src="https://code.jquery.com/jquery-1.12.4.js"
  integrity="sha256-Qw82+bXyGq6MydymqBxNPYTaUXXq7c8v3CwiYwLLNXU="
  crossorigin="anonymous"></script>
</head>

<body>
  <div id="w">
    <h1>Simple Github API Webapp</h1>
    <p>Enter a single Github username below and click the button to display profile info via
JSON.</p>

    <input type="text" name="ghusername" id="ghusername" placeholder="Github username...">

    <a href="#" id="ghsubmitbtn">Pull User Data</a>

    <div id="ghapidata" class="clearfix"></div>
  </div>
<script type="text/javascript">
$(function(){
  $('#ghsubmitbtn').on('click', function(e){
```
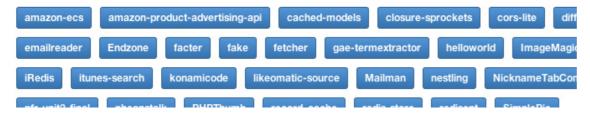
```javascript
    e.preventDefault();
    $('#ghapidata').html('<div id="loader"><img src="css/loader.gif" alt="loading...">
</div>');

    var username = $('#ghusername').val();
    var requri   = 'https://api.github.com/users/'+username;
    var repouri  = 'https://api.github.com/users/'+username+'/repos';

    requestJSON(requri, function(json) {
      if(json.message == "Not Found" || username == '') {
        $('#ghapidata').html("<h2>No User Info Found</h2>");
      }

      else {
        // else we have a user and we display their info
        var fullname   = json.name;
        var username   = json.login;
        var aviurl     = json.avatar_url;
        var profileurl = json.html_url;
        var location   = json.location;
        var followersnum = json.followers;
        var followingnum = json.following;
        var reposnum     = json.public_repos;

        if(fullname == undefined) { fullname = username; }

        var outhtml = '<h2>'+fullname+' <span class="smallname">(@<a href="'+profileurl+'"
target="_blank">'+username+'</a>)</span></h2>';
        outhtml = outhtml + '<div class="ghcontent"><div class="avi"><a href="'+profileurl+'"
target="_blank"><img src="'+aviurl+'" width="80" height="80" alt="'+username+'"></a></div>';
        outhtml = outhtml + '<p>Followers: '+followersnum+' - Following:
'+followingnum+'<br>Repos: '+reposnum+'</p></div>';
        outhtml = outhtml + '<div class="repolist clearfix">';

        var repositories;
        $.getJSON(repouri, function(json){
          repositories = json;
          outputPageContent();
        });

        function outputPageContent() {
          if(repositories.length == 0) { outhtml = outhtml + '<p>No repos!</p></div>'; }
          else {
            outhtml = outhtml + '<p><strong>Repos List:</strong></p> <ul>';
            $.each(repositories, function(index) {
              outhtml = outhtml + '<li><a href="'+repositories[index].html_url+'"
target="_blank">'+repositories[index].name + '</a></li>';
            });
            outhtml = outhtml + '</ul></div>';
          }
          $('#ghapidata').html(outhtml);
        } // end outputPageContent()
      } // end else statement
    }); // end requestJSON Ajax call
  }); // end click event handler
```

```
    function requestJSON(url, callback) {
      $.ajax({
        url: url,
        complete: function(xhr) {
          callback.call(null, xhr.responseJSON);
        }
      });
    }
  });
</script>
</body>
</html>
```

You can insert this CSS to example above:

```css
@import url('http://fonts.googleapis.com/css?family=Oldenburg');

html, body, div, span, applet, object, iframe, h1, h2, h3, h4, h5, h6, p, blockquote, pre, a, abbr,
acronym, address, big, cite, code, del, dfn, em, img, ins, kbd, q, s, samp, small, strike, strong, sub, sup, tt, var,
 b, u, i, center, dl, dt, dd, ol, ul, li, fieldset, form, label, legend, table, caption, tbody, tfoot, thead, tr, th,
td, article, aside, canvas, details, embed, figure, figcaption, footer, header, hgroup, menu, nav, output, ruby, section,
summary, time, mark, audio, video {
  margin: 0;
  padding: 0;
  border: 0;
  font-size: 100%;
  font: inherit;
  vertical-align: baseline;
  outline: none;
  -webkit-font-smoothing: antialiased;
  -webkit-text-size-adjust: 100%;
  -ms-text-size-adjust: 100%;
  -webkit-box-sizing: border-box;
  -moz-box-sizing: border-box;
  box-sizing: border-box;
}
html { overflow-y: scroll; }
body {
  background: #fafafa url('grey.png'); /* http://subtlepatterns.com/subtle-grey/ */
  font-family: 'Helvetica Neue', Helvetica, Arial, sans-serif;
  font-size: 62.5%;
  line-height: 1;
  color: #616161;
  padding: 35px 0;
}

br { display: block; line-height: 1.6em; }

article, aside, details, figcaption, figure, footer, header, hgroup, menu, nav, section { display: block; }
ol, ul { list-style: none; }

input, textarea {
```

```css
  -webkit-font-smoothing: antialiased;
  -webkit-text-size-adjust: 100%;
  -ms-text-size-adjust: 100%;
  -webkit-box-sizing: border-box;
  -moz-box-sizing: border-box;
  box-sizing: border-box;
  outline: none;
}

blockquote, q { quotes: none; }
blockquote:before, blockquote:after, q:before, q:after { content: ''; content: none; }
strong, b { font-weight: bold; }

table { border-collapse: collapse; border-spacing: 0; }
img { border: 0; max-width: 100%; }

h1 {
  font-family: 'Oldenburg', Arial, sans-serif;
  color: #646464;
  font-size: 4.0em;
  line-height: 1.6em;
  margin-bottom: 10px;
}

h2 {
  font-size: 2.8em;
  line-height: 1.55em;
  margin-bottom: 4px;
  color: #888;
}

p {
  font-size: 1.4em;
  line-height: 1.55em;
  margin-bottom: 12px;
}

a {
  color: #8eadd2;
}
a:hover {
  color: #6e91b9;
}


/* page structure */
#w {
  display: block;
  width: 800px;
  margin: 0 auto;
  background: #fff;
  padding: 15px 25px;
  -webkit-box-shadow: 1px 2px 3px -1px rgba(0,0,0,0.4);
  -moz-box-shadow: 1px 2px 3px -1px rgba(0,0,0,0.4);
  box-shadow: 1px 2px 3px -1px rgba(0,0,0,0.4);
```

```css
  -webkit-border-radius: 4px;
  -moz-border-radius: 4px;
  border-radius: 4px;
}

#ghapidata {
  display: block;
  padding: 25px 0;
}

#loader {
  display: block;
  width: 200px;
  height: 200px;
  margin: 0 auto;
}


/* page content styles */
.smallname {
  font-size: 0.75em;
  color: #a9a9a9;
  font-style: italic;
}

.avi {
  float: left;
  margin-right: 7px;
  margin-bottom: 7px;
}
.avi img {
  border: 1px solid #ccc;
  padding: 3px;
}

.repolist {
  display: block;
  clear: both;
  width: 100%;
}
.repolist ul {
  font-size: 1.2em;
}
.repolist ul li {
  display: block;
}
.repolist ul li a {
  font-weight: bold;
  padding: 6px 9px;
  display: block;
  float: left;
  margin-right: 10px;
  margin-bottom: 10px;
  text-decoration: none;
  border: 1px solid #356492;
```

```css
  -webkit-border-radius: 3px;
  -moz-border-radius: 3px;
  border-radius: 3px;
  color: #fff;
  background-color: #3673af;
  background-image: -webkit-gradient(linear, left top, left bottom, from(#5597d8), to(#3673af));
  background-image: -webkit-linear-gradient(top, #5597d8, #3673af);
  background-image: -moz-linear-gradient(top, #5597d8, #3673af);
  background-image: -ms-linear-gradient(top, #5597d8, #3673af);
  background-image: -o-linear-gradient(top, #5597d8, #3673af);
  background-image: linear-gradient(top, #5597d8, #3673af);
}
.repolist ul li a:hover {
  background-color: #396895;
  background-image: -webkit-gradient(linear, left top, left bottom, from(#4b87c2), to(#396895));
  background-image: -webkit-linear-gradient(top, #4b87c2, #396895);
  background-image: -moz-linear-gradient(top, #4b87c2, #396895);
  background-image: -ms-linear-gradient(top, #4b87c2, #396895);
  background-image: -o-linear-gradient(top, #4b87c2, #396895);
  background-image: linear-gradient(top, #4b87c2, #396895);
}
.repolist ul li a:active {
  -webkit-box-shadow: inset 0 3px 5px rgba(0,0,0,0.25);
  -moz-box-shadow: inset 0 3px 5px rgba(0,0,0,0.25);
  box-shadow: inset 0 3px 5px rgba(0,0,0,0.25);
}

.repolist ul li a span {
  font-family: "Courier New", Courier, "Lucida Typewriter", monospace;
  font-size: 0.9em;
}

/* input field */
#ghusername {
  display: block;
  padding: 5px 8px;
  font-size: 1.4em;
  color: #666;
  width: 550px;
  margin-bottom: 15px;
}

#ghsubmitbtn {
  display: inline-block;
  padding: 8px 18px;
  font-size: 14px;
  font-weight: bold;
  color: #444;
  text-decoration: none;
  text-shadow: 0 1px 0 rgba(255,255,255,0.8);
  background-color: #eaeaea;
  background-image: -webkit-linear-gradient(#fafafa, #eaeaea);
  background-image: -moz-linear-gradient(#fafafa, #eaeaea);
  background-image: -ms-linear-gradient(top, #fafafa, #eaeaea);
  background-image: -o-linear-gradient(top, #fafafa, #eaeaea);
```

```css
    background-image: linear-gradient(#fafafa, #eaeaea);
    border-radius: 3px;
    border: 1px solid #ddd;
    border-bottom-color: #c5c5c5;
    -webkit-box-shadow: 0 1px 3px rgba(0,0,0,0.05);
    -moz-box-shadow: 0 1px 3px rgba(0,0,0,0.05);
    box-shadow: 0 1px 3px rgba(0,0,0,0.05);
}
#ghsubmitbtn:hover {
    background-color: #dadada;
    background-image: -webkit-linear-gradient(#eaeaea, #dadada);
    background-image: -moz-linear-gradient(#eaeaea, #dadada);
    background-image: -ms-linear-gradient(top, #eaeaea, #dadada);
    background-image: -o-linear-gradient(top, #eaeaea, #dadada);
    background-image: linear-gradient(#eaeaea, #dadada);
    border-color: #ccc #ccc #b5b5b5;
}
#ghsubmitbtn:active {
    background-color:#dadada;
    background-image: none;
    border-color: #b5b5b5;
    -webkit-box-shadow: inset 0 3px 5px rgba(0,0,0,0.25);
    -moz-box-shadow: inset 0 3px 5px rgba(0,0,0,0.25);
    box-shadow: inset 0 3px 5px rgba(0,0,0,0.25);
}

/* clearfix */
.clearfix:after { content: "."; display: block; clear: both; visibility: hidden; line-height: 0; height: 0; }
.clearfix { display: inline-block; }

html[xmlns] .clearfix { display: block; }
* html .clearfix { height: 1%; }
```

Last modified: Monday, 12 February 2018, 8:10 PM