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Sort a JSON Array Programmatically by a Property

Sibeesh Passion, 16 Jun 2015 CPOL

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Sort a JSON Array Programmatically by a Property

Introduction

In this post, we will learn how to sort a JSON object by its property. We will be using normal jQuery features to do this. I hope you will like it.

Background

Yesterday, I had a situation where I needed to sort my JSON object that I am creating using server data. So I though of sharing that with you all.

Using the Code

First of all, we will add a jQuery reference as in the following:

Hide Copy Code

```
<script src=&ldquo;jquery-2.1.4.min.js&rdquo;></script>
```

Now we need some, data right? Please have a look at the following JSON data.

Hide Copy Code

```
var data = &lsquo;[{&ldquo;name&rdquo;:2014,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;1&Prime;,&rdquo;y&rdquo;:222808746.81}]},
{&ldquo;name&rdquo;:2013,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;2&Prime;,&rdquo;y&rdquo;:289647045.18}]},
{&ldquo;name&rdquo;:2014,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;2&Prime;,&rdquo;y&rdquo;:285136890.07}]},
{&ldquo;name&rdquo;:2013,&rdquo;data&rdquo;:
```

```
[{&ldquo;x&rdquo;:&rdquo;3&Prime;,&rdquo;y&rdquo;:370853178.74}]},
{&ldquo;name&rdquo;:2014,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;3&Prime;,&rdquo;y&rdquo;:403272964.28}]},
{&ldquo;name&rdquo;:2012,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;4&Prime;,&rdquo;y&rdquo;:217294031.36}]},
{&ldquo;name&rdquo;:2013,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;4&Prime;,&rdquo;y&rdquo;:224715039.94}]},
{&ldquo;name&rdquo;:2014,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;4&Prime;,&rdquo;y&rdquo;:249034460.23}]},
{&ldquo;name&rdquo;:2012,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;5&Prime;,&rdquo;y&rdquo;:215978054.15}]},
{&ldquo;name&rdquo;:2013,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;5&Prime;,&rdquo;y&rdquo;:241211810.92}]}]&rsquo;;
```

Next, we need some UI elements. Am I right?

Hide Copy Code

```
<div id=&ldquo;unsorted&rdquo;></div>
    <div id=&ldquo;sorted&rdquo;></div>
    <button id=&ldquo;makemesort&rdquo;>Make Me Sort</button>
```

What next? We need to show this data to our UI, right? For that, I am calling a function in our document ready function.

Hide Copy Code

```
var jsonObject;
        $(function () {
            $(&lsquo;#sorted&rsquo;).hide();
            loadUnsorted();
            $(&lsquo;#makemesort&rsquo;).click(function () {
                loadSorted();
                $(&lsquo;#makemesort&rsquo;).hide();
                $(&lsquo;#sorted&rsquo;).show();
            });
        });
```

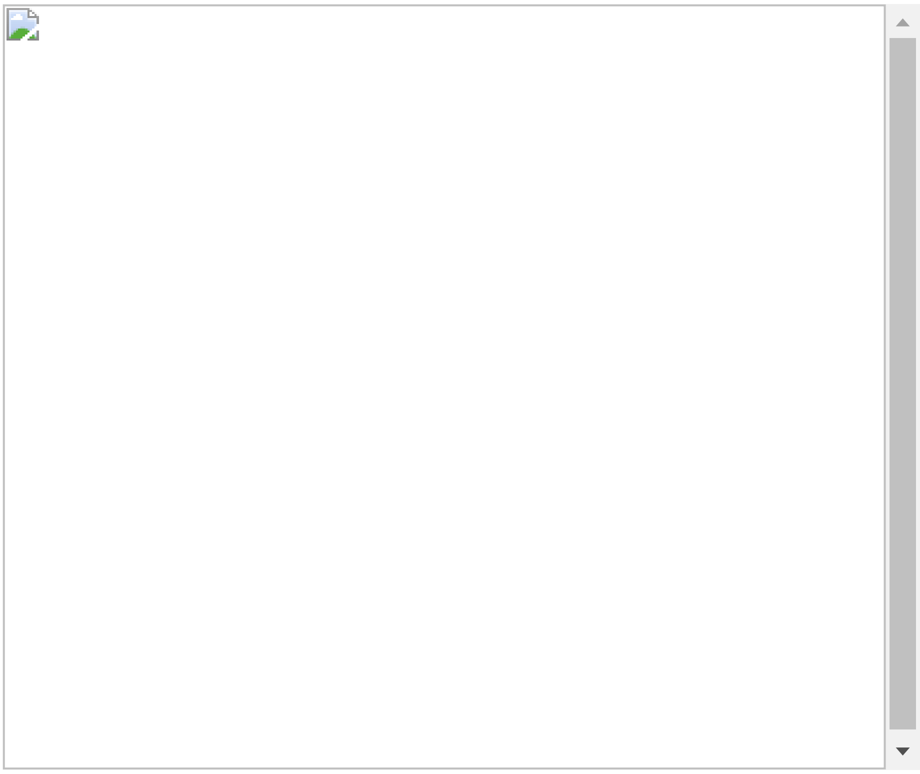
The following is the function definition for the `loadUnsorted()` function.

Hide Copy Code

```
function loadUnsorted() {
           jsonObject = $.parseJSON(data);
           var html = &lsquo;<table><th>Year</th>
```

What we are doing here is parsing our data and appending the data to our UI element using a `for` loop.

Now if you run it, you will get output as follows:



Now we have successfully formatted our data and shown it to our UI. Cool, right?
So shall we go and sort our data? I guess you said “Yes”. Awesome.
Now, we will create a click event for our “Make me sort” button as in the following:

Hide Copy Code

```
$(&lsquo;#makemesort&rsquo;).click(function () {
                loadSorted();
                $(&lsquo;#makemesort&rsquo;).hide();
                $(&lsquo;#sorted&rsquo;).show();
            });
```

So here is the definition for the `loadSorted()` function.

Hide Copy Code

```
function loadSorted() {
           jsonObject.sort(SortMe);
           var html = &lsquo;<table><th>Year</th>
```

Now, I guess you could determine the difference of both the `loadSorted()` and `loadUnsorted()` functions. Yeah, you are right. I am calling a sort function “`sortMe`” there.

Hide Copy Code

```
function SortMe(a, b) {
           if (b.name != null && b.name != undefined && a.name != null && a.name != undefined) {
               var First = a.name.toString().toLowerCase();
               var Second = b.name.toString().toLowerCase();
               return ((First < Second) ? -1 : ((First > Second) ? 1 : 0));
           }
       }
```

What our “`sortMe`” function does is, it will take two objects at a time and compare those by the property “`name`” of each object.

Hide Copy Code

```
(First < Second) ? -1 : ((First > Second) ? 1 : 0)
```

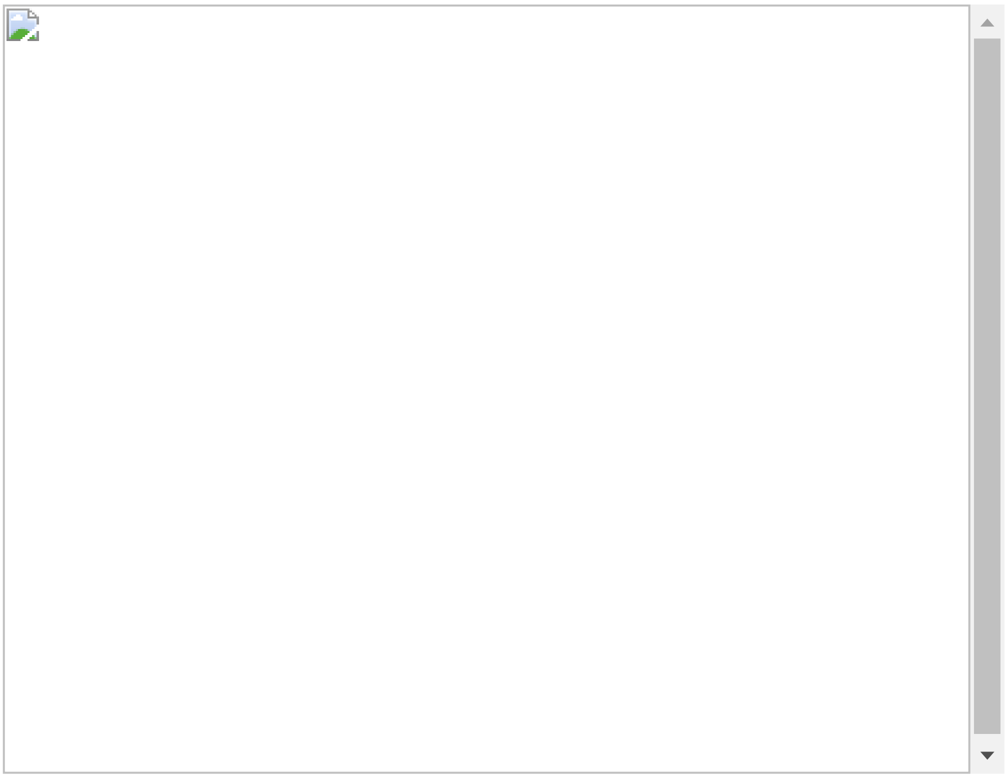
Now, shall we look into the complete code? We have done everything folks.

Complete Code

Hide Shrink ▲ Copy Code

```
<!DOCTYPE html>
<html>
<head>
    <title>Sort JSON Object by its property and show demo &ndash; Sibeesh Passion</title>
    <script src=&ldquo;jquery-2.1.4.min.js&rdquo;></script>
    <style>
        #unsorted {
            border: 1px solid #999;
            width:220px;
            padding:10px;
            float:left;
        }
        #sorted {
            border: 1px solid #999;
            width:220px;
            padding:10px;
            float:left;
        }
         td {
            border: 1px solid #ccc;
            padding: 5px;
            text-align: center;
        }
    </style>
    <script>
        var data = &lsquo;[{&ldquo;name&rdquo;:2014,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;1&Prime;,&rdquo;y&rdquo;:222808746.81}]},
                   {&ldquo;name&rdquo;:2013,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;2&Prime;,&rdquo;y&rdquo;:289647045.18}]},
                   {&ldquo;name&rdquo;:2014,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;2&Prime;,&rdquo;y&rdquo;:285136890.07}]},
                   {&ldquo;name&rdquo;:2013,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;3&Prime;,&rdquo;y&rdquo;:370853178.74}]},
                   {&ldquo;name&rdquo;:2014,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;3&Prime;,&rdquo;y&rdquo;:403272964.28}]},
                   {&ldquo;name&rdquo;:2012,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;4&Prime;,&rdquo;y&rdquo;:217294031.36}]},
                   {&ldquo;name&rdquo;:2013,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;4&Prime;,&rdquo;y&rdquo;:224715039.94}]},
                   {&ldquo;name&rdquo;:2014,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;4&Prime;,&rdquo;y&rdquo;:249034460.23}]},
                   {&ldquo;name&rdquo;:2012,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;5&Prime;,&rdquo;y&rdquo;:215978054.15}]},
                   {&ldquo;name&rdquo;:2013,&rdquo;data&rdquo;:
[{&ldquo;x&rdquo;:&rdquo;5&Prime;,&rdquo;y&rdquo;:241211810.92}]}]&rsquo;;
        var jsonObject;
        $(function () {
            $(&lsquo;#sorted&rsquo;).hide();
            loadUnsorted();
            $(&lsquo;#makemesort&rsquo;).click(function () {
                loadSorted();
                $(&lsquo;#makemesort&rsquo;).hide();
                $(&lsquo;#sorted&rsquo;).show();
            });
        });
        function loadUnsorted() {
            jsonObject = $.parseJSON(data);
            var html = &lsquo;<table><th>Year</th>
            <th>X Value</th><th>Y Value</th>&rsquo;;
            for (i = 0; i < jsonObject.length; i++) {
                html += &lsquo;<tr><td>&rsquo; + jsonObject[i].name +
                &lsquo;</td><td>&rsquo; +
                jsonObject[i].data[0].x + &lsquo;</td><td>&rsquo; +
                jsonObject[i].data[0].y + &lsquo;</td></tr>&rsquo;;
            }
            html += &lsquo;</table>&rsquo;;
            $(&lsquo;#unsorted&rsquo;).append(html);
        }
        function loadSorted() {
            jsonObject.sort(SortMe);
            var html = &lsquo;<table><th>Year</th>
            <th>X Value</th><th>Y Value</th>&rsquo;;
            for (i = 0; i < jsonObject.length; i++) {
                html += &lsquo;<tr><td>&rsquo; +
                jsonObject[i].name + &lsquo;</td><td>&rsquo; +
                jsonObject[i].data[0].x + &lsquo;</td><td>&rsquo; +
                jsonObject[i].data[0].y + &lsquo;</td></tr>&rsquo;;
            }
            html += &lsquo;</table>&rsquo;;
            $(&lsquo;#sorted&rsquo;).append(html);
        }
        function SortMe(a, b) {
            if (b.name != null && b.name != undefined &&
            a.name != null && a.name != undefined) {
                var First = a.name.toString().toLowerCase();
                var Second = b.name.toString().toLowerCase();
                return ((First < Second) ? -1 : ((First > Second) ? 1 : 0));
            }
        }
    </script>
</head>
<body>
    <div id=&ldquo;unsorted&rdquo;></div>
    <div id=&ldquo;sorted&rdquo;></div>
    <button id=&ldquo;makemesort&rdquo;>Make Me Sort</button>
</body>
</html>
```

So now, it is time to see our output. I am eager to see it.



You can find we have sorted our object and shown it in a separate table. Cool.
That is all for the day. I will return with another article soon.

Conclusion

I hope you liked this article. Please share your valuable thoughts and comments. Your feedback is always welcome. Thanks in advance. Happy coding!.

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Mahsa Hassankashi **19-Jun-15 15:15**

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Re: My vote of 5

Sibeesh Passion **19-Jun-15 21:39**

Thanks a lot dear ☺

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