How to Display the Current Time and Date and Have it Update Dynamically

Objective: To get and display the current time and date in the browser of your HTML page, and have the time update dynamically every second.

This guide will explain how to get the current time and date, and display it in the browser of your HTML page. The first part will go over how to get the current time and date using <u>Moment.js</u>. The second part will explain how to display the current time and date in the browser, and have it update dynamically every second in real time, like this:

Saturday, June 27th 2020, 3:14:36 pm

Getting the Current Time and Date

 The first thing we need to do is to get the CDN, so that we will be able to use Moment.js in our file. If we look at the <u>docs</u> for Moment.js, we see a number of ways to bring Moment.js into our application. We're going to be using the CDN. In the docs, scroll down to the Browser section. You'll see that Moment.js is available on CDNJS and on jsDelivr. This is where we can find the CDN.

Browser

edit

```
<script src="moment.js"></script>
<script>
    moment().format();
</script>
```

Moment.js is available on <u>cdnjs.com</u> and on jsDelivr.

You can choose either. Let's click on <u>jsDelivr</u>. This will bring us to jsDelivr, where we can find the CDN for Moment.js. Scroll down to the first one and click on where it says "Copy to Clipboard".

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You can either copy the URL or the HTML. Let's go ahead and copy the HTML. We're going to be pasting this CDN into our HTML code.

npm CDN Files

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2. Let's go to our text editor now, to our HTML page. And we just have a very simple HTML page. And to keep it simple, we just have the <head> section with a <title>. And in the <body> we just have an <h1> with the text, "Current Time".



And this is what it looks like in the browser:

Current Time

So, now let's bring in the CDN that we copied from jsDelivr up above and paste it into our code in the <head> section of our code (line 7).



3. Next, we're going to create a separate JavaScript file for the JavaScript code that we'll be adding. And this is going to go in a separate folder. So, let's create a folder called **assets**. And inside this folder, let's create another folder and call it **javascript**. And inside the **javascript** folder, let's create a file and call it app.js. This is where we'll be putting our JavaScript code.

Next, we need to connect our HTML file to our app.js file. So, we need to add the following line to our HTML file. And we'll add it down at the bottom before the closing <body> tag (line 5). So, we have an **assets** folder, and inside that is the **javascript** folder, and inside that is our app.js file, and so we get: **src="assets/javascript/app.js"**.



And just to make sure our connection is working properly, let's got to our app.js file and add a quick alert to test and see if we correctly linked our two files. So, let's go ahead and add a quick alert, and then save it:

```
alert('Hello from app.js');
```

And if we refresh the browser, we see our alert message, which means that we have our HTML and app.js correctly hooked up. So, we're good to go.

Current Time

This page says	
Hello from app.js	
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Alternatively, rather than creating a separate file for your JavaScript, you can put your JavaScript code in your HTML code using the <script> tags down at the bottom before the closing <body> tag (lines 4-6), and it will work the same. As we go forward, we will continue to use a separate app.js file.



4. We are now ready to use Moment.js. If we go to <u>Moment.js</u>, and scroll down a bit, we'll see a number of different formats that we can use for time and date.

Format Dates

<pre>moment().format('MMMM Do YYYY, h:mm:ss a');</pre>	// June 25th 2020, 8:48:37 pm
<pre>moment().format('dddd');</pre>	// Thursday
<pre>moment().format("MMM Do YY");</pre>	// Jun 25th 20
<pre>moment().format('YYYY [escaped] YYYY');</pre>	// 2020 escaped 2020
<pre>moment().format();</pre>	// 2020-06-25T20:48:37-07:00

Relative Time

<pre>moment("20111031", "YYYYMMDD").fromNow();</pre>	// 9 years ago
<pre>moment("20120620", "YYYYMMDD").fromNow();</pre>	// 8 years ago
<pre>moment().startOf('day').fromNow();</pre>	// 21 hours ago
<pre>moment().endOf('day').fromNow();</pre>	// in 3 hours
<pre>moment().startOf('hour').fromNow();</pre>	// an hour ago

Calendar Time

<pre>moment().subtract(10, 'days').calendar();</pre>	// 06/15/2020
<pre>moment().subtract(6, 'days').calendar();</pre>	// Last Friday at 8:48 PM
<pre>moment().subtract(3, 'days').calendar();</pre>	// Last Monday at 8:48 PM
<pre>moment().subtract(1, 'days').calendar();</pre>	// Yesterday at 8:48 PM
<pre>moment().calendar();</pre>	// Today at 8:48 PM
<pre>moment().add(1, 'days').calendar();</pre>	// Tomorrow at 8:48 PM
<pre>moment().add(3, 'days').calendar();</pre>	// Sunday at 8:48 PM
<pre>moment().add(10, 'days').calendar();</pre>	// 07/05/2020

Let's take the most basic example below: file: moment().format();

Format Dates

```
moment().format('MMMM Do YYYY, h:mm:ss a'); // June 26th 2020, 9:49:38 am
moment().format('dddd'); // Friday
moment().format("MMM Do YY"); // Jun 26th 20
moment().format('YYYY [escaped] YYYY'); // 2020 escaped 2020
moment().format(); // 2020-06-26T09:49:38-07:00
```

And let's grab this line of code and put it in our app.js file.

moment().format();

And we can't really do anything with this yet, because we won't be able to see the time and date with just this. So for now, let's **console.log** this to make sure it's working.

```
console.log(moment().format());
```

And now if we refresh the browser and check the Console in the DevTools (using the keyboard shortcut Control + Shift + J on Windows, then clicking in the Console tab), we get the current time and date, so we know it's working.

Current Time

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Let's go back to the docs and choose a different format, for example, the first one.

Format Dates



And let's **console.log** this in app.js. And let's add some text too.



And if we refresh the browser and check the Console, we get our new format with the text we added.

Current Time

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And that's all there is to it. So, now we know how to get the current time and date using Moment.js. But right now, we can only access it in the Console. The next step is to display it in the browser.

Displaying the Time and Date in the Browser

 We're going to be using some jQuery, so the first thing we need to do is to grab the CDN so that we'll be able to use it in our code. So, let's grab the CDN <u>here</u>. And we're going to use the minified version, so let's copy the second one.

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And we're going to put this in our HTML in <script> tags, down below before the closing <body> tag (lines 5-7).



2. Next, in our app.js file, we're going to create a function so that we'll be able to grab the current time and date from Moment.js, and display it in the browser. We're going to call it **update** (line 1), and we'll be using it in the next step to have the time update dynamically every second. We'll use the variable, **date** (line 2), to get the current time and date from Moment.js; and **dateAndTime** (line 3) is what we'll be using to display the time and date in the browser. Finally, we'll use the format we used above from the Moment.js docs for the time and date (line 3).

```
var update = function () {
    date = moment();
    dateAndTime.html(date.format('dddd, MMMM Do YYYY, h:mm:ss a'));
    };
```

3. The next step is to write the logic so that we can display the time and date in the browser. And we're going to add these lines of code after the function we wrote above. This is where call the update() function (line 3) we created above, and which gets the current time from Moment.js. We use the setInterval() method to call this update() function and update it (i.e. the current time) every 1000 milliseconds (every second) (lines 3-4). In line 2, we're using jQuery to select an element with the ID of "date-and-time", which we haven't created yet, and setting it to a variable, dateAndTime.

```
1 $(document).ready(function () {
2 dateAndTime = $('#date-and-time');
3 update();
4 setInterval(update, 1000);
5 });
```

4. So, let's go to our HTML now and create an element with an ID of "date-and-time". And we'll just create an empty <div> with the ID (line 3).



And that's it. We should be all set now. If we go back to app.js and review our entire code, we can see that the empty <div> that we just created is selected and set to the variable, **dateAndTime** (line 7). And this variable is used to display the time and date in the browser using the **html()** method (line 3), with the time and date format that we specified (line 3).

```
var update = function () {
    date = moment();
    dateAndTime.html(date.format('dddd, MMMM Do YYYY, h:mm:ss a'));
    };

    {
        (document).ready(function () {
            dateAndTime = $('#date-and-time');
            update();
            setInterval(update, 1000);
        });
```

And if we go to the browser and refresh the page, we get our current time and date in the browser. And you can't see it here in this still image, but the time is actually being updated every second.

Current Time

Friday, June 26th 2020, 11:48:32 am



5. Lastly, let's add a little bit of our own text to show in the browser (lines 4-6).



And there we go. We now have the current time and date in the browser, and the time updates dynamically every second in real time. And we also get our own text that we added: "The current time and date is".

Current Time

The current time and date is Friday, June 26th 2020, 11:54:05 am

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