Domino Volt

Using JavaScript Libraries

HCL SOFTWARE

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Things we will cover

- secureJS=false review
- Adding JavaScript to your app
- Calling a JavaScript library
- Using JavaScript functions
- Calling multiple libraries
- Examples
- Q & A

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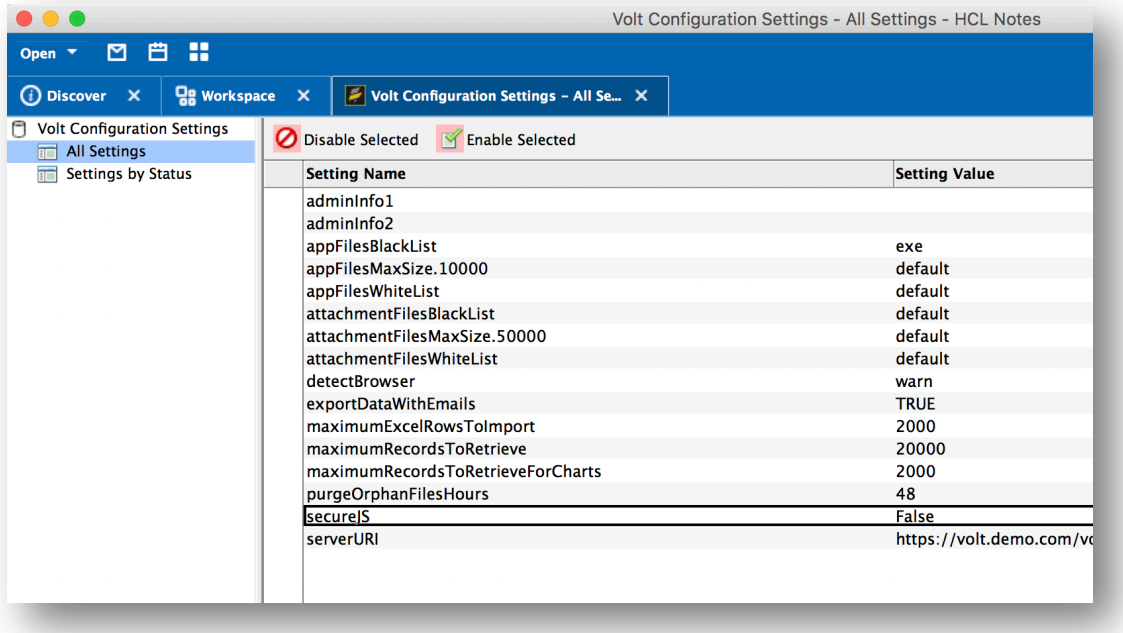
In most cases you will need secureJS=false

- Setting is found in /local/notesdata/volt/VoltConfig.nsf
- Use Notes client with the ID attached to your person document in /local/notesdata/names.nsf



Turns the JS Sandbox off

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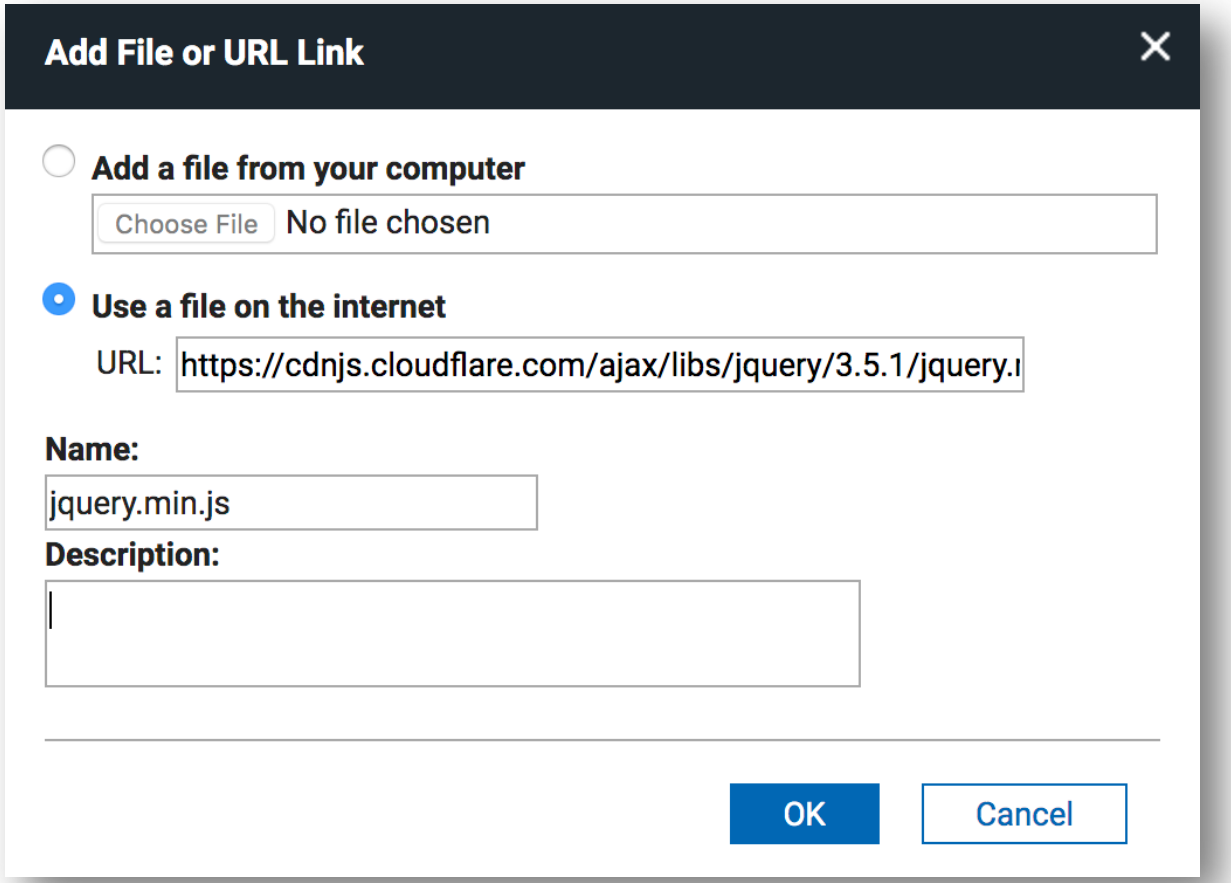
Adding JavaScript to your app

It can be as simple as

- Reference the URL
- Attach the file
- Paste the JS into the App OnStart



View Examples

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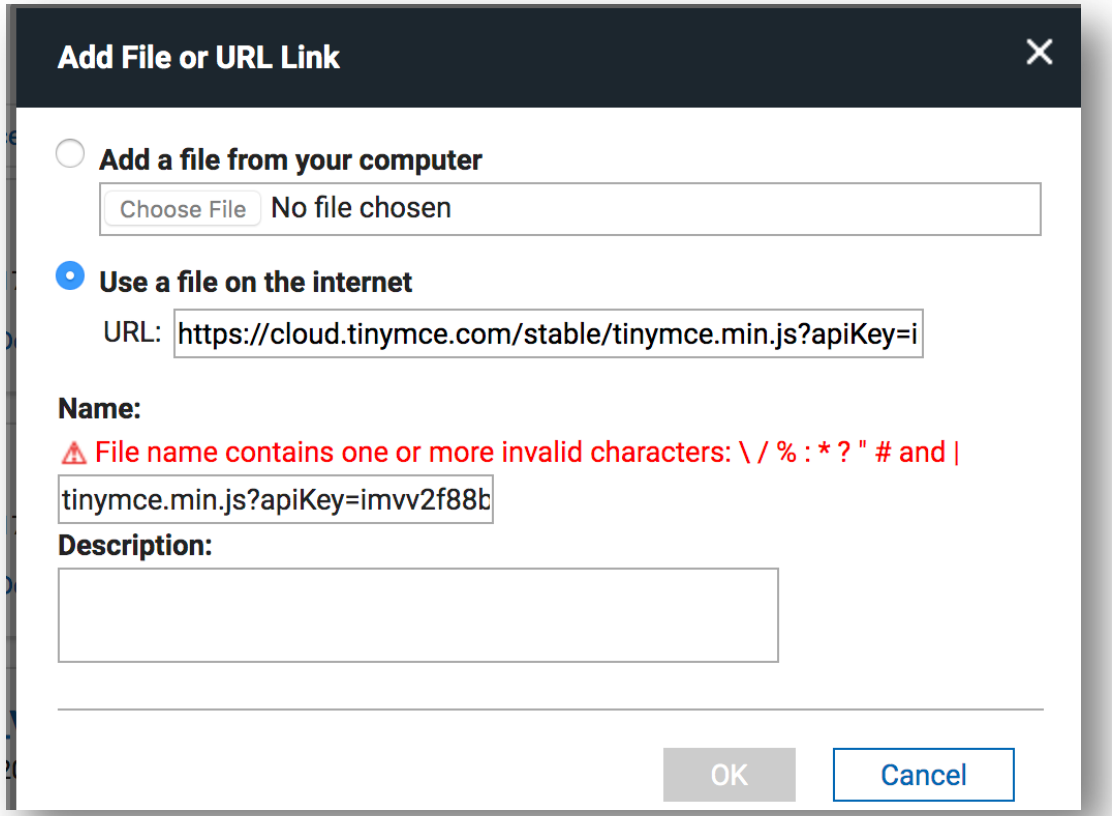
But what happens when?

- You need to load the JS library with an API key?
  - Examples:
    - Google Maps
    - TinyMCE
- Or it does not load correctly?
- Or it does not load in time?



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Use of Require in a function

```
var url = 'URL_to_JS_library';

require([url], function() {

// JS code you need to execute

});
```

require is a dojo command for loading libraries

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Use of Require with TinyMCE

```
var url = 'https://cloud.tinymce.com/stable/tinymce.min.js?apiKey=imvv2f

require([url], function() {

  tinymce.init({
    mode : "specific_textareas",
    editor_selector : "mceEditor",
    selector: ".editableDiv",

    plugins: [
      "advlist autolink lists link image charmap print preview anchor",
      "searchreplace visualblocks code fullscreen",
      "insertdatetime media table contextmenu paste",
                        "textcolor colorpicker"
      ],
    toolbar: "insertfile undo redo | styleselect | bold italic | alignle
  });

});
```

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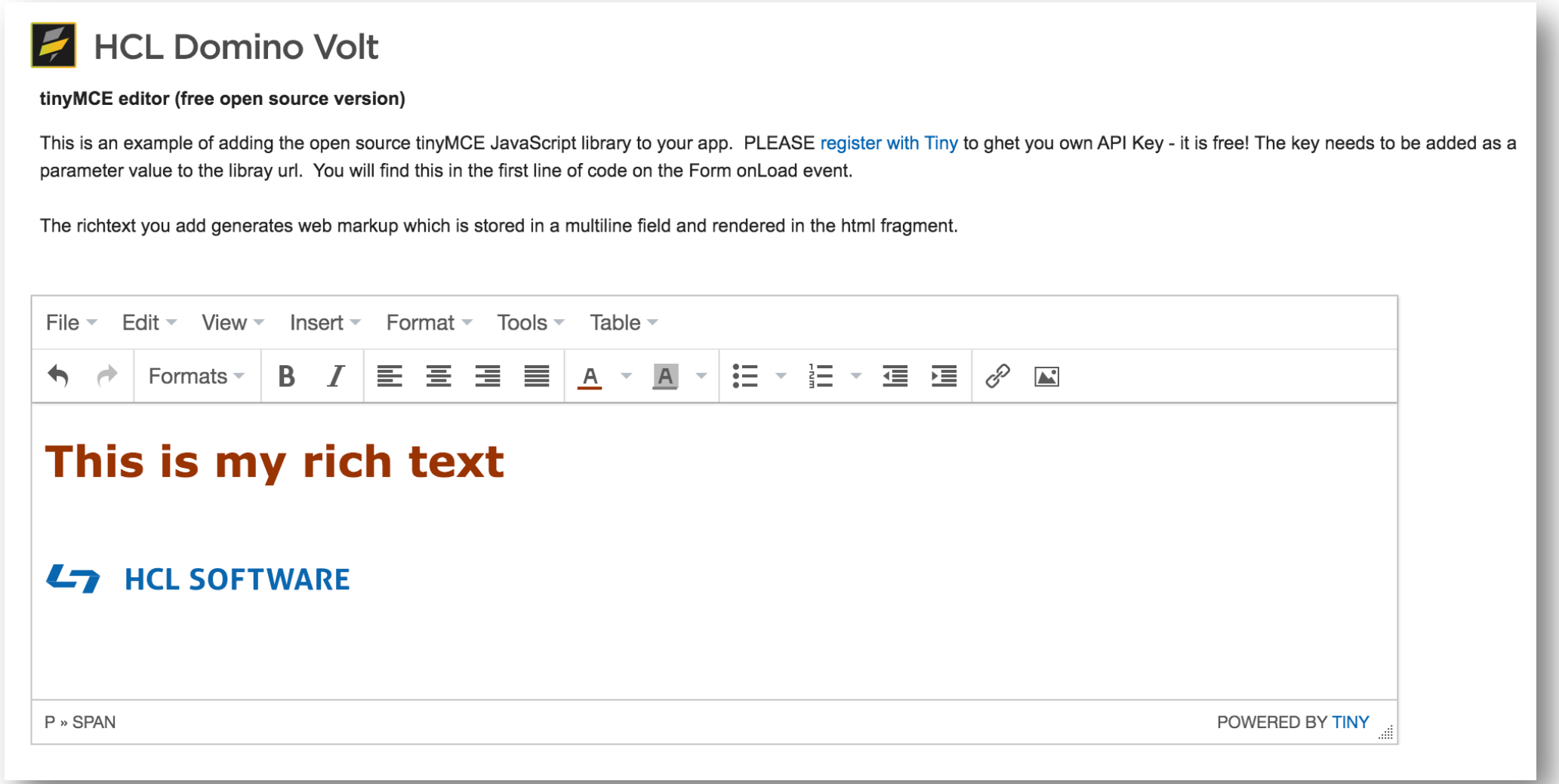
TinyMCE example

https://www.tiny.cloud/



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Use of Require with Signature-Pad

```
var url = 'https://cdnjs.cloudflare.com/ajax/libs/signature_pad/1.5.3/signature_pad.min.js'

require([url],
function rendersignature() {
var signaturePad = new SignaturePad(document.getElementById('signature-pad'),
{
  backgroundColor: 'white',
  penColor: '#000066',
  minWidth: .5,
  maxWidth: 1.75
})});
```

View signature-pad example

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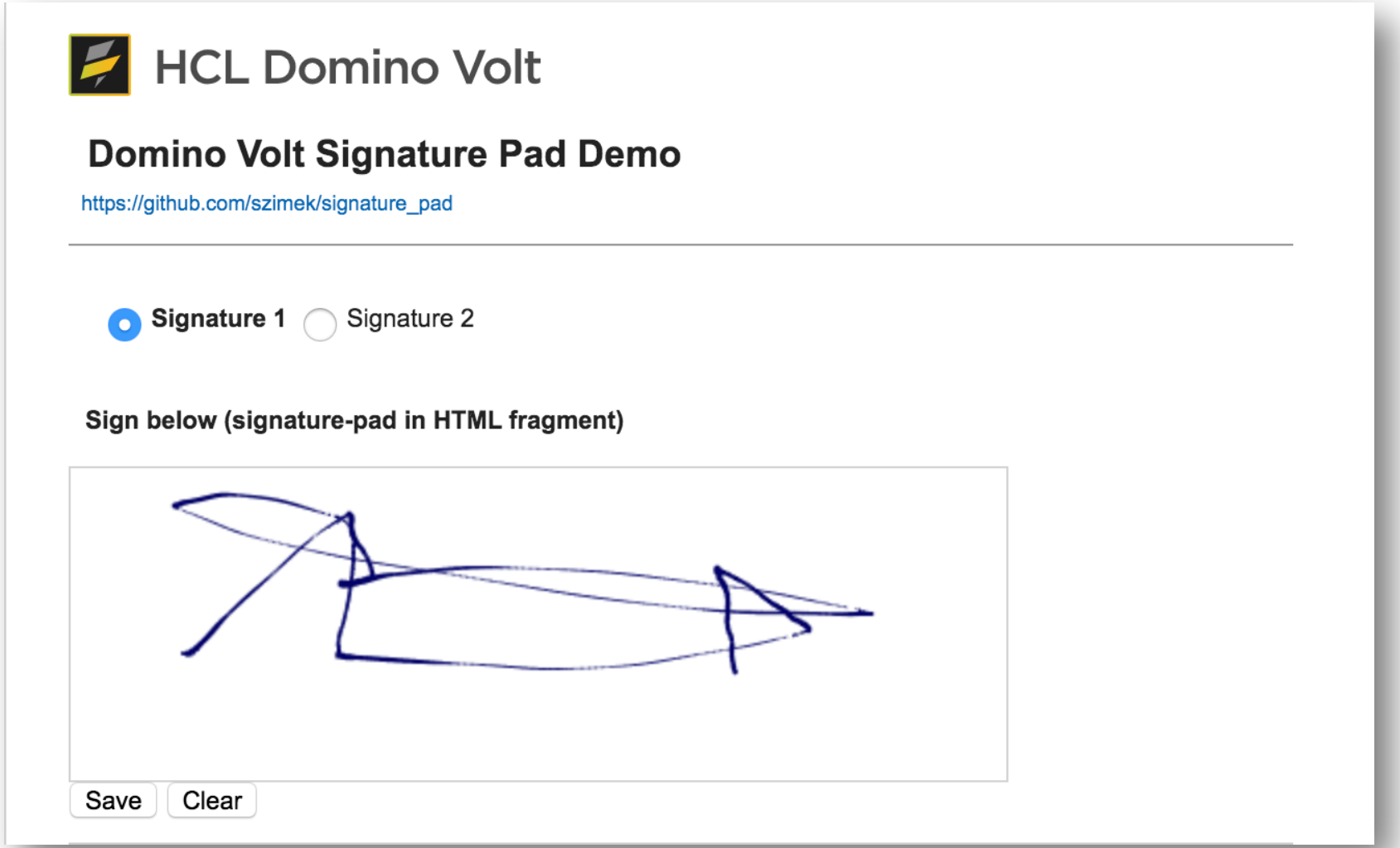
Signature-Pad example

https://github.com/szimek/signature_pad



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What if I need to load multiple JS libraries?

- Nest the functions
- Call them in the required order

```
var url1 = 'URL_1_to_load';
var url2 = 'URL_2_to_load';

require([url1], function() {

  require([url2], function() {

    //JS code to execute

  });
});
```

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Another way to do things

Global function for Adding JS to head section

```
app.getSharedData().loadScript = function (url, callback) {

var head = document.getElementsByTagName('head')[0];
var script = document.createElement("script")
script.type = "text/javascript";
script.src = url;

script.onreadystatechange = callback;
script.onload = callback;

// Fire the loading
head.appendChild(script);
}
```

Calling the Global function

```
var url1 = 'https://ajax.googleapis.com/ajax/libs/jquery/1.8.3/jquery.min.js';

app.getSharedData().loadScript(url1,function(){

  //JS to execute

});
```

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Another way to do things

Global function for Adding CSS to head section

```
app.getSharedData().loadStyle = function (url, callback) {
var head = document.getElementsByTagName('head')[0];
var link = document.createElement('link');
link.rel = 'stylesheet';
link.type = 'text/css';
link.href = url;
head.appendChild(link);
}
```

Calling the Global function

```
var url5 = 'https://cdnjs.cloudflare.com/ajax/libs/jqPlot/1.0.9/jquery.jqplot.min.css';
app.getSharedData().loadStyle(url5,function(){});
```

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Use of technique with JQPlot

```
var url1 = 'https://cdnjs.cloudflare.com/ajax/libs/jquery/3.4.1/jquery.min.js';
var url2 = 'https://cdnjs.cloudflare.com/ajax/libs/jqPlot/1.0.9/jquery.jqplot.min.js';
var url3 = 'https://cdnjs.cloudflare.com/ajax/libs/jqPlot/1.0.9/plugins/jqplot.barRenderer.min.js';
var url4 = 'https://cdnjs.cloudflare.com/ajax/libs/jqPlot/1.0.9/plugins/jqplot.categoryAxisRenderer.min.js';
var url5 = 'https://cdnjs.cloudflare.com/ajax/libs/jqPlot/1.0.9/jquery.jqplot.min.css';


app.getSharedData().loadScript(url1,function(){
app.getSharedData().loadScript(url2,function(){
app.getSharedData().loadScript(url3,function(){
app.getSharedData().loadScript(url4,function(){


//Load style sheet
app.getSharedData().loadStyle(url5,function(){});


//Render JQPlot
$(document).ready(function(){
        var s1 = [BO.F_S1_1.getValue(), BO.F_F_S1_2.getValue(),BO.F_F_S1_3.getValue(), BO.F_F_S1_4.getValue()
        var s2 = [BO.F_F_S2_1.getValue(), BO.F_S2_2.getValue(), BO.F_S2_3.getValue(), BO.F_S2_4.getValue()];
        var ticks = [BO.F_SingleLine1.getValue(),BO.F_SingleLine2.getValue(), BO.F_SingleLine3.getValue(), BO
```

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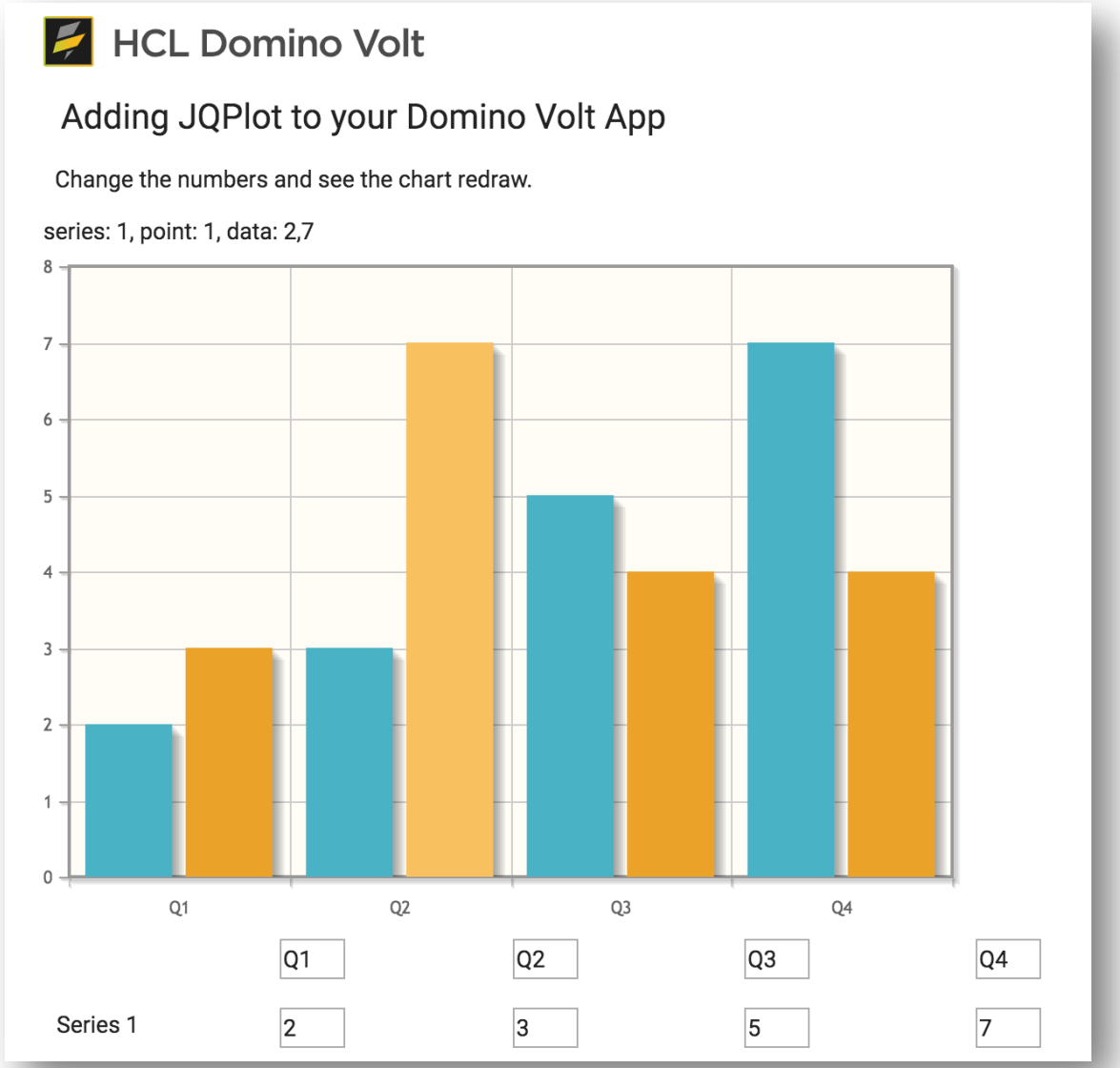
JQPlot example



http://www.jqplot.com/

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Sometimes you need to combine both techniques

```
var url1 = 'https://ajax.googleapis.com/ajax/libs/jquery/1.8.3/jquery.min.js';
var url2 = 'https://cdnjs.cloudflare.com/ajax/libs/pdfmake/0.1.20/pdfmake.js';
var url3 = 'https://cdnjs.cloudflare.com/ajax/libs/pdfmake/0.1.20/vfs_fonts.js';
var url4 = 'https://cdnjs.cloudflare.com/ajax/libs/signature_pad/1.5.3/signature_pad.min.js';

app.getSharedData().loadScript(url1,function(){
app.getSharedData().loadScript(url2,function(){
app.getSharedData().loadScript(url3,function(){

require([url4],
function rendersignature() {
var signaturePad = new SignaturePad(document.getElementById('signature-pad'),
// signature pad options
{
  backgroundColor: 'white',
  penColor: '#000066',
  minWidth: .5,
  maxWidth: 1.75
});
```

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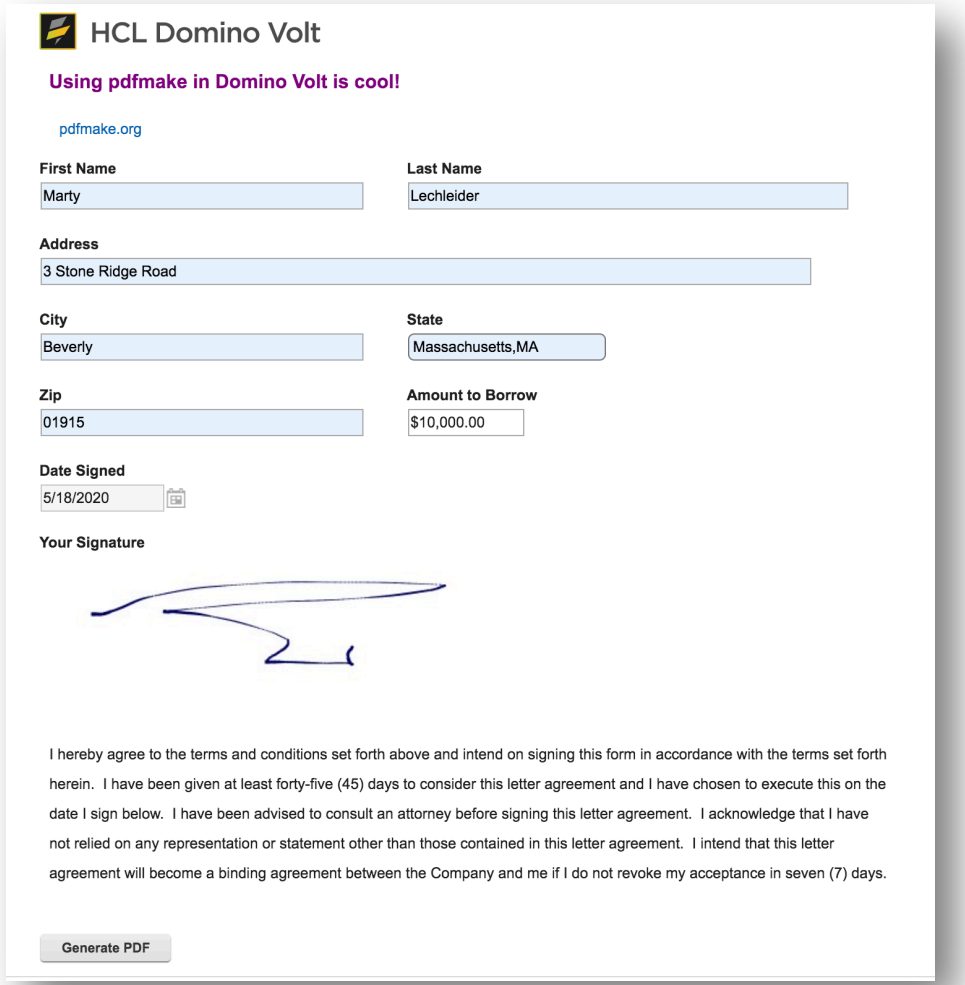
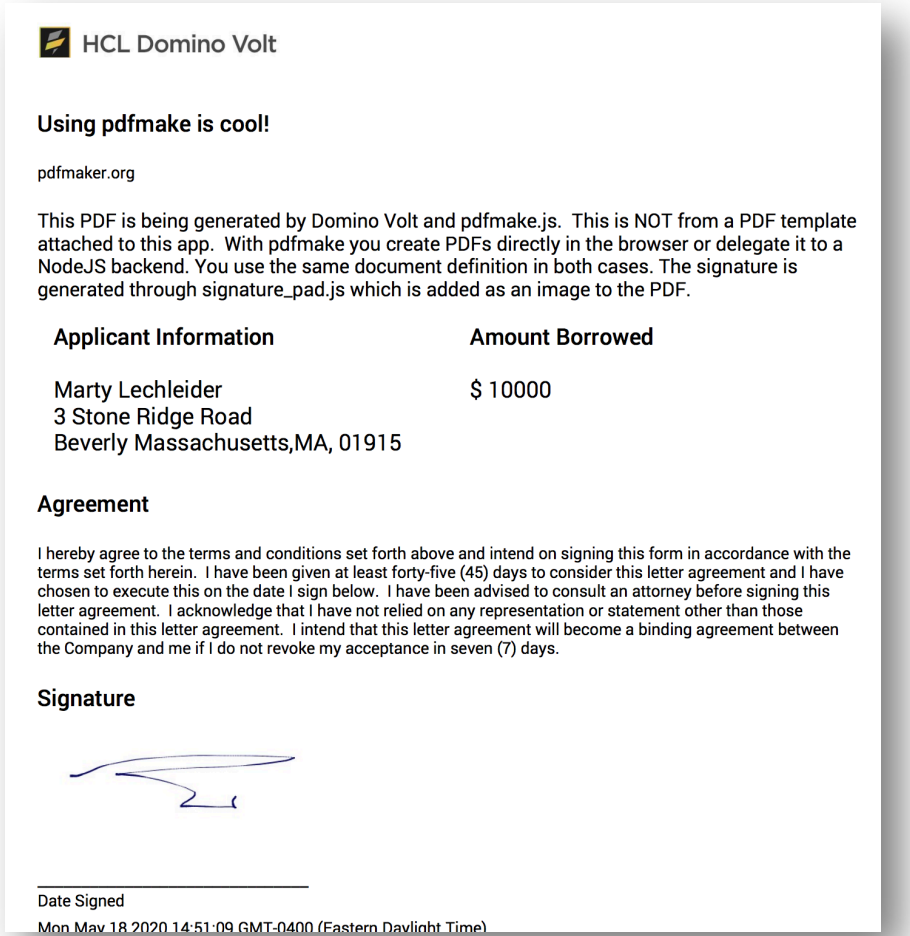
Signature-pad & PDF Make example

http://pdfmake.org/





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Sometimes things need a little extra time

```
var url = '//translate.google.com/translate_a/element.js';

require([url], function() {
function myFunction() {
    reset = setTimeout(timeFunc, 500);
}

function timeFunc() {
new google.translate.TranslateElement({pageLanguage: 'en', layout:
google.translate.TranslateElement.InlineLayout.SIMPLE}, 'google_translate_element');
}

myFunction();

});
```

500 = .5 seconds

https://translate.google.com/translate_a/element.js?cb=googleTranslateElementInit

normal usage includes callback parameter on url

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Google Translate example

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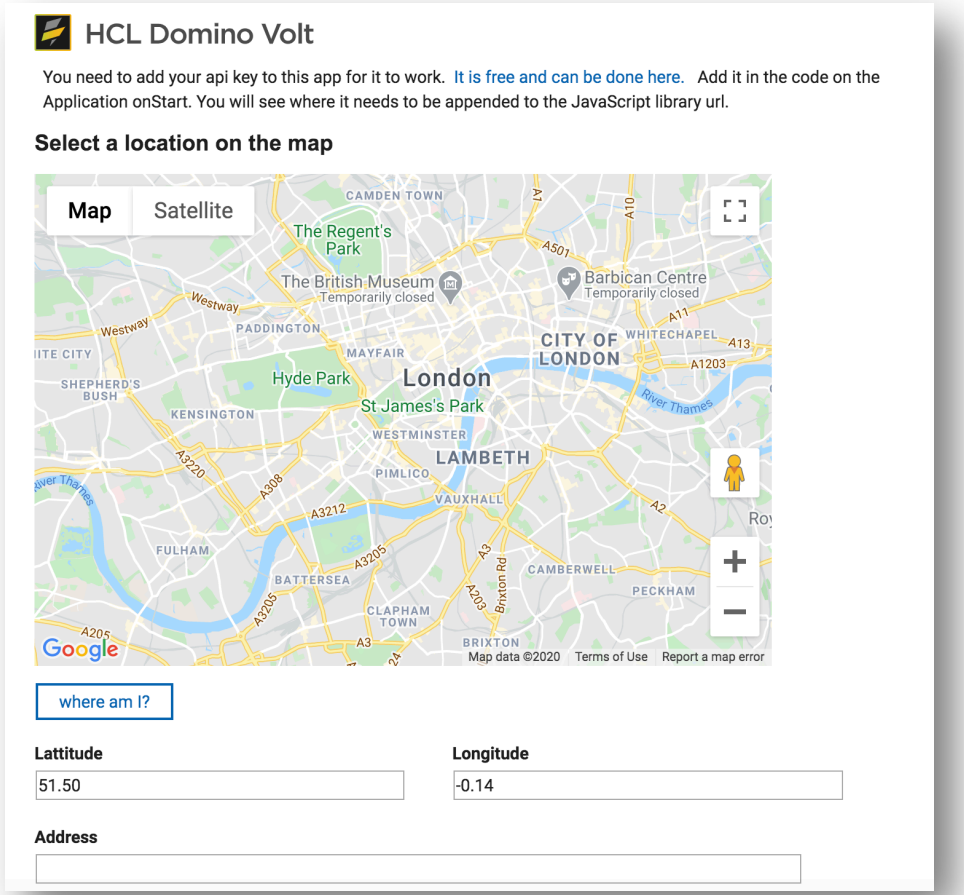
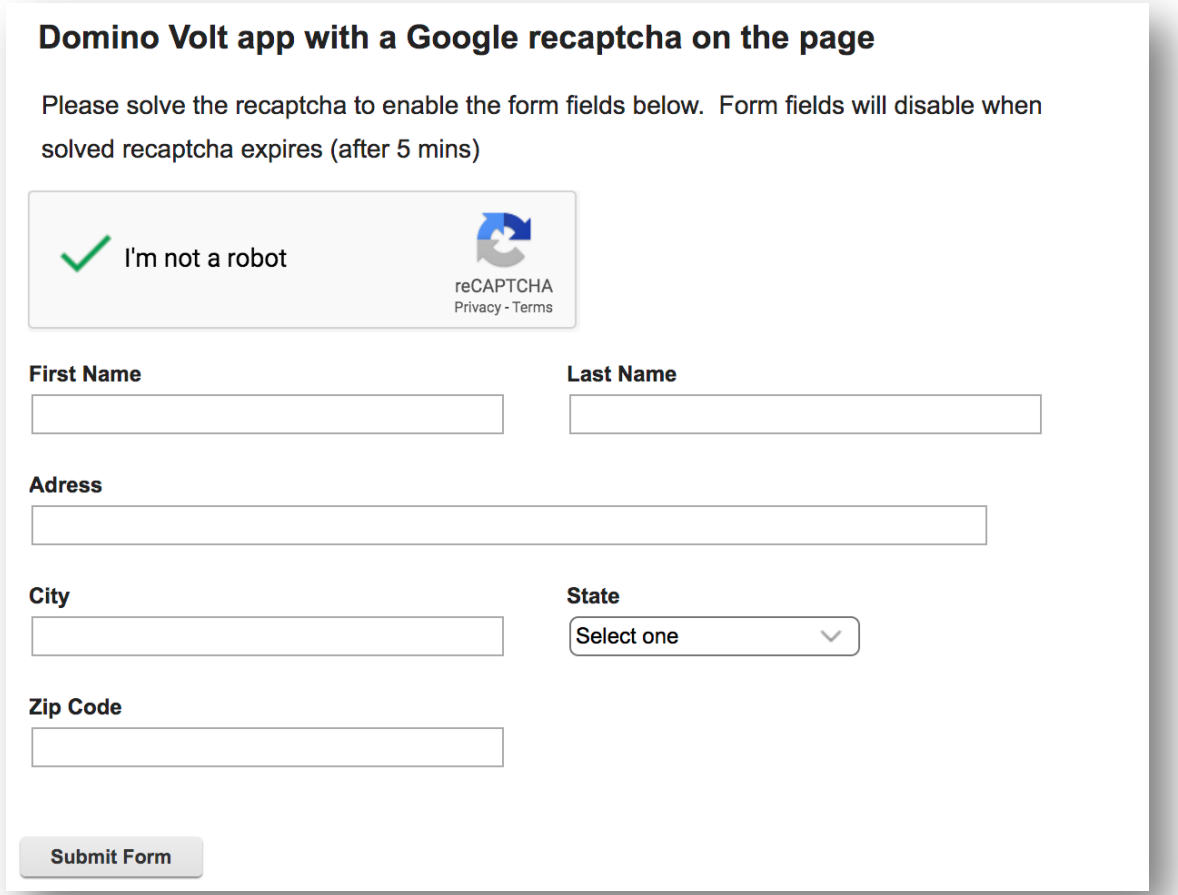
Other examples

https://developers.google.com/maps/documentation/javascript/tutorial



https://developers.google.com/recaptcha/intro



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Caution

- Some things may not work
  - Certain library versions
    - e.g. - moment.js 2.1 works, later versions do not
  - Certain libraries
    - e.g. - have not been able to get AG-Grid to work

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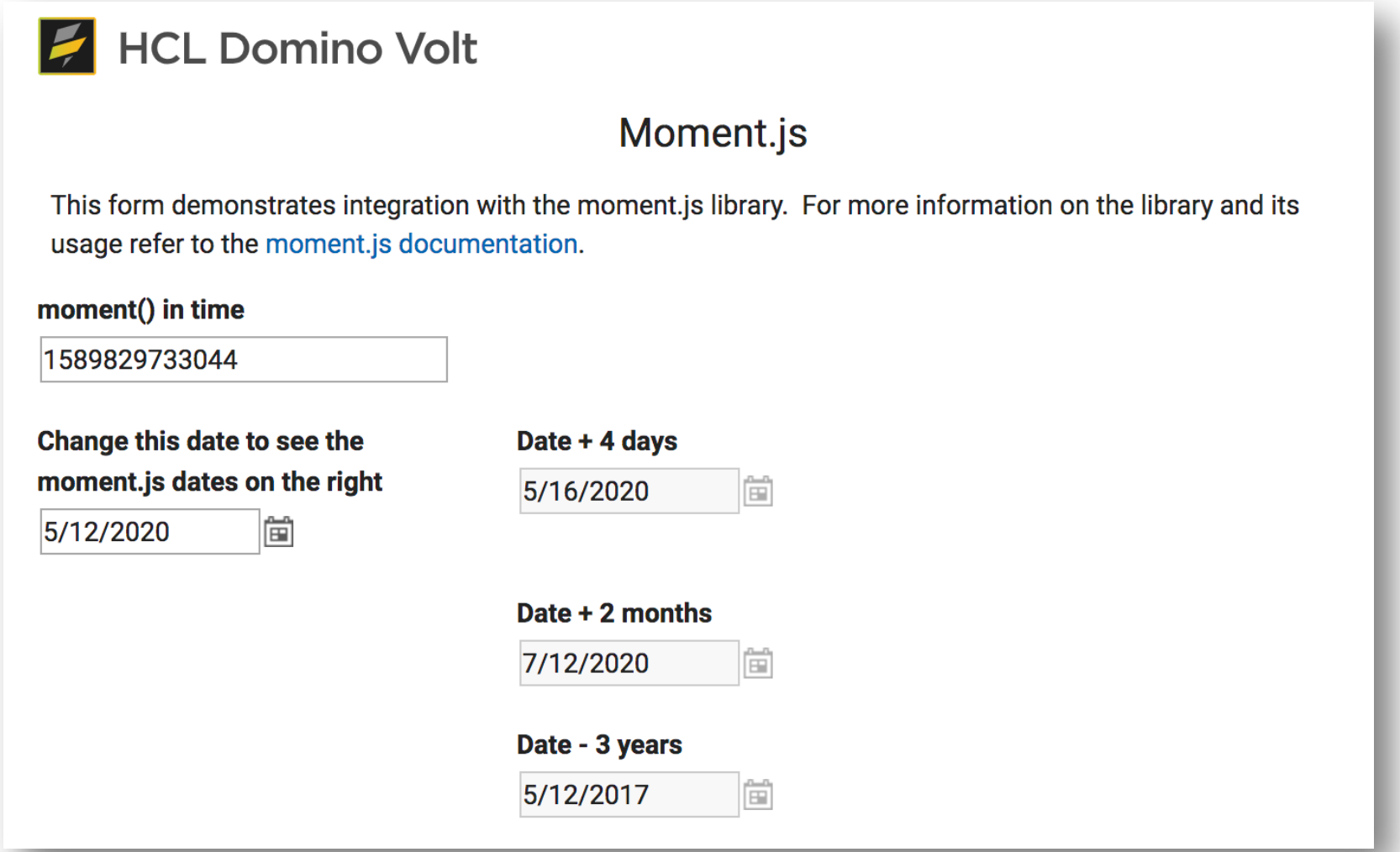
Moment.js example

https://momentjs.com/



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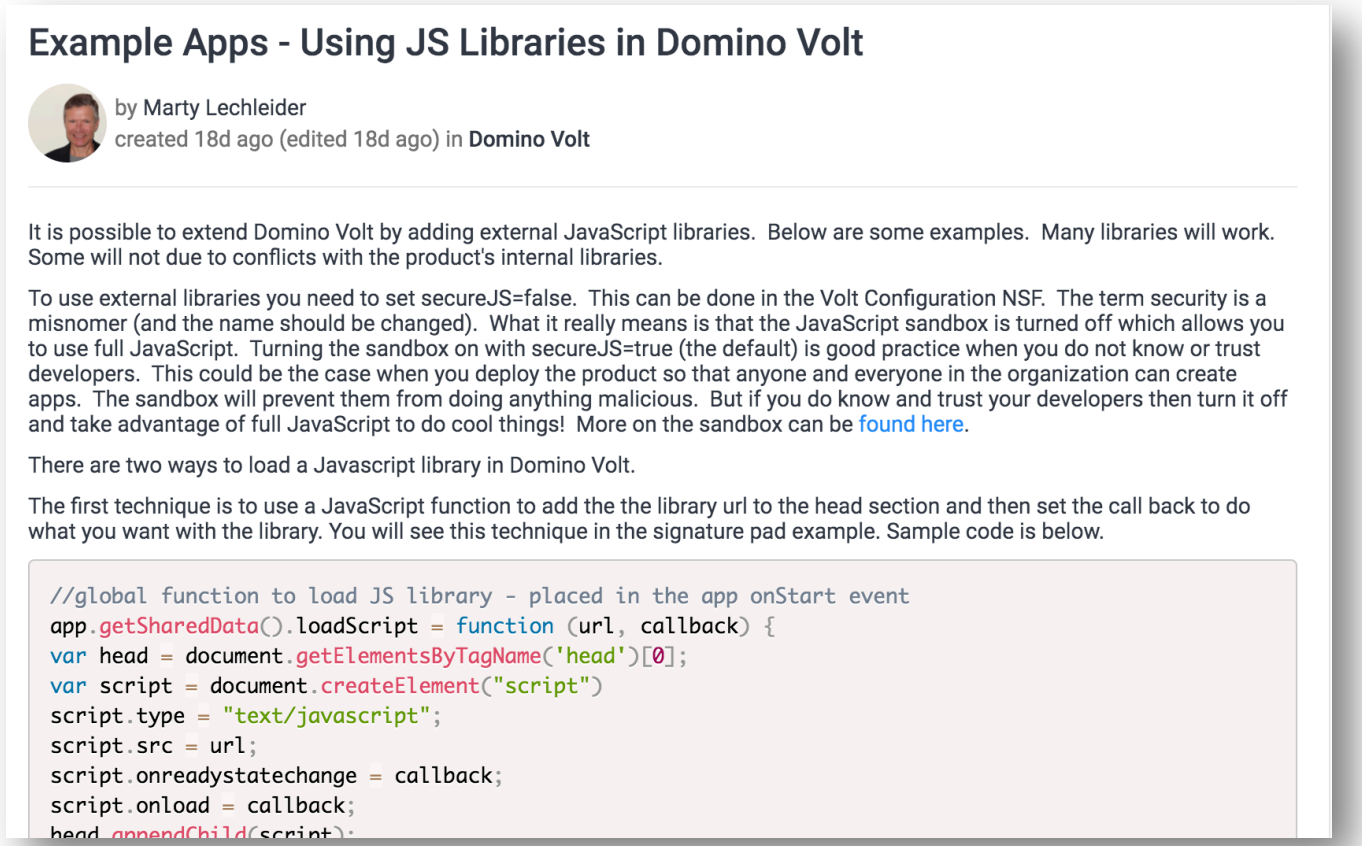
Resources



Example Apps - Using JS Libraries in Domino Volt

by Marty Lechleider
created 18d ago (edited 18d ago) in **Domino Volt**

It is possible to extend Domino Volt by adding external JavaScript libraries. Below are some examples. Many libraries will work. Some will not due to conflicts with the product's internal libraries.

To use external libraries you need to set secureJS=false. This can be done in the Volt Configuration NSF. The term security is a misnomer (and the name should be changed). What it really means is that the JavaScript sandbox is turned off which allows you to use full JavaScript. Turning the sandbox on with secureJS=true (the default) is good practice when you do not know or trust developers. This could be the case when you deploy the product so that anyone and everyone in the organization can create apps. The sandbox will prevent them from doing anything malicious. But if you do know and trust your developers then turn it off and take advantage of full JavaScript to do cool things! More on the sandbox can be found here.

There are two ways to load a Javascript library in Domino Volt.

The first technique is to use a JavaScript function to add the the library url to the head section and then set the call back to do what you want with the library. You will see this technique in the signature pad example. Sample code is below.

```
//global function to load JS library - placed in the app onStart event
app.getSharedData().loadScript = function (url, callback) {
var head = document.getElementsByTagName('head')[0];
var script = document.createElement("script")
script.type = "text/javascript";
script.src = url;
script.onreadystatechange = callback;
script.onload = callback;
head.appendChild(script);
```

https://hclpnpsupport.hcltech.com/community?id=community_question&sys_id=5dcacab81ba89858c1f9759d1e4bcbe3

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