

# JavaScript

## Overview

HUBzero comes with the [jQuery](#) Javascript Framework included by a system plugin. jQuery is not only a visual effects library—it also support Ajax request and JSON notation, table sort, drag & drop operations and much more. All current HUBzero JavaScripts are built on this framework.

**Note:** If running extensions that require the MooTools Javascript framework (Joomla's default), the jQuery system plugin can be run in compatibility mode or turned off completely.

## Directory & Files

### jQuery

The jQuery framework can be found within the `/media/system/js` directory. It is a compressed version used for production. An uncompressed version may be found at [jquery.com](http://jquery.com).

```
/hubzero
  /media
    /system
      /js
        jquery.js
        jquery.noconflict.js
```

Most HUBzero templates will include some scripts of their own for basic setup, visual effects, etc. These are generally stored in (but not limited to) a sub-directory, named `/js`, of the template's main directory.

```
/hubzero
  /media
    /system
      /js
        jquery.fancybox.js
        jquery.fileuploader.js
        jquery.tools.js
        jquery.ui.js
```

Of the scripts commonly found in a HUBzero template, `hub.jquery.js` is perhaps the most important and it is strongly encouraged that developers include these files in their template.

### MooTools

The MooTools framework can be found within the `/media/system/js` directory. Joomla! includes both a compressed version used for production and an uncompressed version used for debug mode and developer reference.

```
/hubzero
  /media
    /system
      /js
        mootools-uncompressed.js
        mootools.js
```

Most HUBzero templates will include some scripts of their own for basic setup, visual effects, etc. These are generally stored in (but not limited to) a sub-directory, named `/js`, of the template's main directory.

```
/hubzero
  /templates
    /{TemplateName}
      /js
        globals.js
        hub.js
        modal.js
        tooltips.js
        ...
```

Of the scripts commonly found in a HUBzero template, `hub.js` and `globals.js` are perhaps the most important and it is strongly encouraged that developers include these files in their template.

### hub.js

### jQuery

## JAVASCRIPT

---

```
//-----  
// Create our namespace  
//-----  
if (!HUB) {  
  var HUB = {};  
}  
  
//-----  
// Various functions - encapsulated in HUB namespace  
//-----  
if (!jq) {  
  var jq = $;  
  
  $.getDocHeight = function(){  
    var D = document;  
    return Math.max(Math.max(D.body.scrollHeight, D.documentElement.scro  
llHeight), Math.max(D.body.offsetHeight, D.documentElement.offsetHeigh  
t), Math.max(D.body.clientHeight, D.documentElement.clientHeight));  
  };  
} else {  
  jq.getDocHeight = function(){  
    var D = document;  
    return Math.max(Math.max(D.body.scrollHeight, D.documentElement.scro  
llHeight), Math.max(D.body.offsetHeight, D.documentElement.offsetHeigh  
t), Math.max(D.body.clientHeight, D.documentElement.clientHeight));  
  };  
}  
  
HUB.Base = {  
  // Container for jquery.  
  // Needed for noconflict mode compatibility  
  jQuery: jq,  
  
  // Set the base path to this template  
  templatepath: '/templates/hubbasic2012/',  
  
  // launch functions  
  initialize: function() {  
    var $ = this.jQuery, w = 760, h = 520;  
  
    // Set focus on username field for login form  
    if ($('#username').length > 0) {  
      $('#username').focus();  
    }  
  }  
}
```

```

// Set the search box's placeholder text color
if ($('#searchword').length > 0) {
    $('#searchword')
        .css('color', '#777')
        .on('focus', function(){
            if ($(this).val() == 'Search') {
                $(this).val('').css('color', '#ddd');
            }
        })
        .on('blur', function(){
            if ($(this).val() == '' || $(this).val() == 'Search') {
                $(this).val('Search').css('color', '#777');
            }
        });
}

// Turn links with specific classes into popups
$('a').each(function(i, trigger) {
    if ($(trigger).is('.demo, .popinfo, .popup, .breeze')) {
        $(trigger).on('click', function (e) {
            e.preventDefault();

            if ($(this).attr('class')) {
                var sizeString = $(this).attr('class').split(' ').pop();
                if (sizeString && sizeString.match('/d+xd+/')) {
                    var sizeTokens = sizeString.split('x');
                    w = parseInt(sizeTokens[0]);
                    h = parseInt(sizeTokens[1]);
                }
            }

            window.open($(this).attr('href'), 'popup', 'resizable=1,scrollbar
s=1,height='+ h + ',width='+ w);
        });
    }
    if ($(trigger).attr('rel') && $(trigger).attr('rel').indexOf('exter
nal') != - 1) {
        $(trigger).attr('target', '_blank');
    }
});

// Set the overlay trigger for launch tool links
$('.launchtool').on('click', function(e) {
    $.fancybox({
        closeBtn: false,
        href: HUB.Base.templatepath + 'images/anim/circling-ball-

```

```
loading.gif'
  });
});

// Set overlays for lightboxed elements
$('a[rel=lightbox]').fancybox();

// Init tooltips
$('.hasTip, .tooltips').tooltip({
  position: 'top center',
  effect: 'fade',
  offset: [-4, 0],
  onBeforeShow: function(event, position) {
    var tip = this.getTip(),
        tipText = tip[0].innerHTML;

    if (tipText.indexOf(':::') != -1) {
      var parts = tipText.split(':::');
      tip[0].innerHTML = '' + parts[0] + '' + parts[1] + '';
    }
  }
});

// Init fixed position DOM: tooltips
$('.fixedToolTip').tooltip({
  relative: true
});
};

jQuery(document).ready(function($) {
  HUB.Base.initialize();
});
```

### MooTools

If a template includes hub.js, it will be auto-loaded by the system (thus, no reason to specifically declare it in your layout file). When loaded successfully, it will check for the inclusion of the MooTools framework and its version. Should everything pass, the script will then load any other scripts you declare in a comma-separated string.

```
var HUBzero = {
  Version: '1.1',
```

```
require: function(libraryName) {
    // inserting via DOM fails in Safari 2.0, so brute force approach
    document.write('<script type="text/javascript" src="'+libraryName+
'"></script>');
},
load: function() {
    if((typeof MooTools=='undefined') ||
        parseFloat(MooTools.version) < 1.1)
        throw("This HUB requires the MooTools JavaScript framework >= 1.
1.0");

    $A(document.getElementsByTagName("script")).each( function(s) {
        if (s.src && s.src.match(/hub.js(?:.*)?$/)) {
            var path = s.src.replace(/hub.js(?:.*)?$/, '');
            var includes = s.src.match(/(?:.*load=([a-z,]*)/);
            (includes ? includes[1] : 'globals, tooltips').split(',').each(
                function(include) { HUBzero.require(path+include+'.js') });
        }
    });
}
}

HUBzero.load();
```

## HUB Namespace

Whether using MooTools or jQuery, the template will include a file (hub.jquery.js) that first establishes a HUB namespace and then proceeds through some basic setup routines. All HUBzero built components, modules, and templates that employ JavaScript place scripts within this HUB namespace. This helps prevent any naming collisions with third-party libraries. While it is recommended that any scripts you may add to your code is also placed within the HUB namespace, it is not required.

**Note:** When not using jQuery, the template will include a global.js file that establishes the HUB namespace.

Some additional sub-spaces for further organization are available within the HUB namespace. Separate spaces for Modules, Components, and Plugins are created. Once again, this further helps avoid possible naming/script collisions. Additionally, one more Base space is created for basic setup and utilities that may be used in other scripts.

```
// Create our namespace
```

## JAVASCRIPT

---

```
if (!HUB) {
  var HUB = {};

  // Establish a space for setup/init and utilities
  HUB.Base = {};

  // Establish sub-spaces for the various extensions
  HUB.Components = {};
  HUB.Modules = {};
  HUB.Plugins = {};
}
```

To demonstrate adding code to the namespace, below is code from a script in a component named `com_example`.

```
// Create our namespace
if (!HUB) {
  var HUB = {};

  // sub-space for components
  HUB.Components = {};
}

// The Example namespace and init method
HUB.Components.Example = {
  init: function() {
    // do something
  }
}

// Initialize the code (jQuery)
jQuery(document).ready(function($){
  Components.Example.init();
});

/*
// Initialize the code (MooTools)
window.addEvent('domready', HUB.Components.Example.init);
*/
```

### Loading From An Extension

#### Components

Occasionally a component will have scripts of its own. Pushing JavaScript to the template from a component is quite easy and involves only a few lines of code.

```
Hubzero\Document\Assets::addComponentScript('com_example');
```

First, we load the Hubzero\Document\Assets class. Next we call the static method `addComponentScript`, passing it the name of the component as the first (and only) argument. This will first check for the presence of the style sheet in the active template's [overrides](#). If found, the path to the overridden script will be added to the array of scripts the template needs to include in the `<head>`. If no override is found, the code then checks for the existence of the script in the component's directory. Once again, if found, it gets pushed to the template.

#### Modules

Loading Javascript from a module works virtually the same as loading from a component save one minor difference in code. Instead of calling the `addComponentScript` method, we call the `addModuleScript` method and pass it the name of the module.

```
Hubzero\Document\Assets::addModuleScript('mod_example');
```

#### Plugins

Loading Javascript from a plugin works similarly to loading from a component or module but instead we call the `addPluginScript` method and pass it the name of the plugin group **and** the name of the plugin.

```
Hubzero\Document\Assets::addPluginScript('examples', 'test');
```

Plugin Javascript must be named the same as the plugin and located within a directory of the same name as the plugin inside the plugin group directory.

```
/plugins  
  /examples
```



```
/test
  test.css
test.php
test.xml
```

### View Helpers (all extensions)

Modules, Component, and plugin views now have helpers for pushing Cascading StyleSheets and JavaScript assets to the document. Each method automatically looks for overrides within the current, active template, taking out the busy work of checking yourself each time assets are added. The method names are short, accept a range of options, and allow for method chaining, all tailored for brevity and ease of use.

The `css()` method provides a quick and convenient way to attach stylesheets. For components, it accepts two arguments:

1. The name of the stylesheet to be pushed to the document (file extension is optional). If no name is provided, the name of the component or plugin will be used. For instance, if called within a view of the component "com\_tags", the system will look for a stylesheet named "tags.css".
2. The name of the extension to look for the stylesheet. For components, this will be the component name (e.g., com\_tags). For plugins, this is the name of the plugin folder and requires the third argument of plugin group (type) be passed to the method.
3. \*Plugin views only.\* The name of the plugin.

Example:

```
<?php
// Push a stylesheet to the document
$this->css()
    ->css('another') // Extension (.css) is optional
    ->css('tags.css', 'com_tags'); // Load CSS from another compone
nt
?>
... view HTML ...
```

Along with file names, the method also accepts style declarations:

```
<?php
// Push a stylesheet to the document
```

## JAVASCRIPT

---

```
$this->css('.foo {  
  color: #000;  
}');  
?>  
... view HTML ...
```

Similarly, a `js()` method is available for pushing javascript assets to the document. The arguments accepted are the same as the `css()` method described above.

```
<?php  
// Push some javascript to the document  
$this->js()  
    ->js('another');  
?>  
... view HTML ...
```

And, just as the `css()` method accepts style declarations, the `js()` method accepts script declarations:

```
<?php  
// Push some javascript to the document  
$this->js('  
  jQuery(document).ready(function($){  
    $("a").on("click", function(e){  
      console.log($(this).attr("href"));  
    });  
  });  
');  
?>  
... view HTML ...
```