

SUTRIX



MEDIA

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# FRONTEND

(HTML / CSS / JAVASCRIPT)

## Code Conventions

BY Len Nguyen

SUTRIX



MEDIA

# Revision History

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- ❖ Version 1.0 – December 1<sup>st</sup>, 2011
  - Initial by Len Nguyen
- ❖ Version 1.1 – June 10<sup>th</sup>, 2012
  - Added CSS Sprites by Phuong Tran
  - Added JS Performance Tips by Anh Le
- ❖ Version 1.2 – December 1<sup>st</sup>, 2013
  - Added Build tools by Len Nguyen



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- ❖ Build tools



# Overview

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- ❖ The objective of this document is to define the coding standard
- ❖ It is important to follow all the rules defined in this document
- ❖ Every line of code should appear to be written by a single person, no matter the number of contributors
- ❖ Why code conventions ?
  - **Consistency** – like single person typed it
  - **Readability** – easier to read the source code
  - **Maintainability** – easier to modify the source code

# HTML

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# CONTENT



# HTML

- ❖ HTML stands for **Hyper Text Markup Language**
  - A markup language is a **set of markup tags**
  - HTML uses markup tags to describe the web pages
- ❖ File Naming
  - HTML files should be stored in and delivered as **file-name.html** files
  - **Avoid** naming a file with a period **"."**
- ❖ Indentation
  - **Two spaces** should be used **as the unit of indentation**



# HTML

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- ❖ Use well-formed HTML
  - All tags should be in lowercase
  - Closing tags
  - Nested elements
- ❖ Use well-structured HTML
  - Support dynamic content
- ❖ Use semantic HTML
  - Accessibility
  - SEO

# HTML

## ❖ Naming Conventions

- Identifiers (names, ids and classes) can contain only the characters [a-z0-9] and the hyphen (-)
- Separate words in ID and CLASS names by a hyphen (-)
- Avoid unnecessary long names
- Choose semantic names based on functionality, not on appearance or position
- Every line of code should appear to be written by a single person, no matter the number of contributors





# HTML

## ❖ Rules

- Use **p** tags for paragraph delimiters instead of multiple **br** tags
- Use **div** tags to wrap labels and controls in a form
- Use **fieldset** tags to group related elements in a form
- Use **label** fields to label each form field, the **for** attribute should associate itself with the input field, so users can click the labels
- Use **h1** for page title, **h2** for block title, **h3-h6** for smaller heading in content
- The form element should have the same values of **name** and **id** property
- The **id** attribute must be unique within the document
- Do not use the **size** attribute on your input fields. Use CSS width instead
- Add comments on some closing tags to indicate what element you're closing
- Tables should not be used for page layout, they should be used for tabular data only
- Make use of **thead**, **tbody** and **th** tags (and **scope** attribute) when appropriate
- Use **microformats**, **microdata** when appropriate



# HTML

## ❖ Rules

- Do not use all caps or all lowercase titles in markup, instead apply the CSS property `text-transform: uppercase/lowercase`
- The layer should be placed before closing of body tag. Prefer to get the content of layer from Ajax or generate from JavaScript
- Avoid to use http and https protocols in the same page, use // instead
- Use HTML encoded characters (&copy; instead of ©)
- Use HTML5 custom data attributes (data-\*)
- Always use double quotes, never single quotes, on attributes
- Nested elements should be indented once (two spaces)
- Don't include a trailing slash in self-closing elements (HTML5 doctype)
- Attribute order: class, id, name, data-\*, src, for, type, href, title, alt, aria-\*, role

# HTML

## ❖ W3C validation

- Make sure all tags are nested properly
- Do not put a block element inside an inline element
- Do not nest a **p** tag in a heading **h1-h6** tag, and vice versa
- A link should have its **title** attribute
- An image should have its **alt** attribute
- A **form** tag should have its **action, method** attributes
- Some tags in pairs (ul – li, ol – li, dl – dt & dd)
- Form elements (input, textarea, select) must have **name** attribute



# HTML

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## ❖ General structure

- [.wrapper]
  - .container
    - header
    - .inner
      - .sidebar
      - main
        - .block-1
        - .block-2
  - footer



# HTML

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## ❖ General block structure

- .block-1
  - [.outer]
    - [.inner]
      - [.content]
        - p Hello World
      - [.group]
        - .block-2
        - .block-3



# HTML

## ❖ Specific block structure

- .block-1.product-block
  - .item
  - .item
  - .item
  - .item
- .block-2.price-block
  - .row
    - .col
    - .col
    - .col
  - .row
    - .col
    - .col
    - .col



# HTML

## ❖ Specific block structure

- .slideshow(data-slideshow, data-effect="fade")
  - .preview
    - .wrap
      - ul
        - li
          - a
  - .controls
    - ul
      - li
        - a



# HTML

## ❖ Newsletter

- HTML3/CSS1 will be used
- Need to test on:
  - Web: Google Mail, Yahoo! mail, Windows Live Email, Hotmail, etc
  - Software: MS Outlook, Mozilla Thunderbird, Apple Mail, etc
- Your code should be inside BODY tag
- Use TABLE structure
- TABLE tags must have the following attributes: `<table cellpadding="0" cellspacing="0" border="0" width="800" style="width: 800px">`
- Use thead, tbody and th tags in table
- TD tags must have the valign attributes and must contain explicit width and height: `<td valign="top" width="30" height="50" style="width: 30px; height: 50px;"></td>`
- Do not use **colspan** or **rowspan**. Use inline tables instead
- IMG tags must contain **width**, **height**, **alt**, **border** attributes and inline CSS display: block: `<img alt="" width="150" height="15" style="display: block;">`





# HTML

## ❖ Newsletter

- Links with specific color: `<a href="#" style="text-decoration: none;"><span style="color: #ffffff;">Example.com</span></a>`
- **TD tags do not contain text** must **have font-size: 1**. eg. `<td width="50" height="50" style="width: 50px; height: 50px; font-size: 1px;">`
- **TD tags contain text** must **have the font-size of the text**: `<td width="250" height="50" style="width: 250px; height: 50px; font-size: 12px;">Text</td>`
- All unnecessary spaces, tabs and line breaks inside TD tags must be removed. eg. `<td valign="bottom" width="250" height="50" style="width: 250px; height: 50px; font-size: 12px;">Dear <b>Name</b>,<br><span style="font-size: 14px;">Text</span></td>`
- When text over background image or gradient background, cut it as image



CSS

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# PRESENTATION



# CSS

- ❖ CSS stands for **Cascading Style Sheets**
  - Styles define how to display HTML elements
  - Is used to describe the presentation of HTML document
- ❖ File Naming
  - CSS files should be stored in and delivered as **file-name.css** files
  - Avoid naming a file with a period “.”
- ❖ Indentation
  - Two spaces should be used as the unit of indentation



# CSS

## ❖ Selector

- A selector is the element that is linked to a particular style
- Syntax: **selector** {property: value; property: value;}

## ❖ ID selector

- The ID selector is used to specify a style for a single, unique element
- Example: **#selector-long-name** {property: value; property: value;}

## ❖ CLASS selector

- The CLASS selector is used to specify a style for a group of elements, several elements.
- Example: **.selector-long-name** {property: value; property: value;}



# CSS

## ❖ TAG selector

- Example: **tag** {property: value; property: value;}

## ❖ UNIVERSAL selector

- Example: \* {property: value; property: value;}

## ❖ Contextual selector

- Descendant selector: the 2<sup>nd</sup> element is nested within the 1<sup>st</sup> one  
p a {color: red;}
- Adjacent selector: the 2<sup>nd</sup> element is immediately following by the 1<sup>st</sup> one  
h1 + p {font-weight: bold;}
- Child selector: The 2<sup>nd</sup> element is the immediate child of 1<sup>st</sup> one  
ul > li {font-weight: bold;}



# CSS

## ❖ Multiple selectors

- Multiple selectors should be in order, **HTML tags selector**, **HTML tags with class/id selector**, **.CLASS selector**, **#ID selector**
- Syntax:

**HTML tags selector, HTML tags with class/id selector, .CLASS selector, #ID selector** {property: value; property: value;}

Or

**HTML tags selector,**  
**HTML tags with class/id selector,**  
**.CLASS selector,**  
**#ID selector** {  
    property: value;  
    property: value;  
}



# CSS

## ❖ Syntax

- The CSS syntax is made up of three parts: a selector, a property and a value:  
selector {property: value;}

1. selector1,[space]selector2[space]{property:[space]value;}
2. selector1,  
selector2[space]{property:[space]value;[space]property:[space]value;}
3. selector1,  
selector2[space]{  
property:[space]value;  
property:[space]value;  
property:[space]value;  
}



# CSS

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## ❖ Naming Conventions

- Identifiers (names, ids and classes) can contain only the characters [a-z0-9] and the hyphen (-)
- Selector long names using hyphen “-” separator
- Avoid unnecessary long names
- Choose semantic names based on functionality, not on appearance or position
- Every line of code should appear to be written by a single person, no matter the number of contributors





# CSS

## ❖ Naming Conventions

### ▪ Naming:

- ID: Don't use ID selectors in CSS
- CLASS:
  - Use suffixes: -block, -list, -item, -form, -btn, -group for specific case
  - Use prefixes: block-, list-, item-, form-, btn-, group- for general case
  - Use prefixes for elements: select-, input-, width-, color-, editor-
  - Use classes: outer, inner, content, group, wrap for wrapper
  - Use general block naming: slideshow, slider, carousel, gallery, banner, accordion, calendar, datepicker
  - Use common classes: wrapper, container, main, primary, secondary, sidebar, header, footer, overlay, nav, slogan, loading, thumb, preview, highlight, featured, related, panel, module, box, layer, tab, rating, caption, description, breadcrumb, paging, social, toolbar, toolbox, tooltip, active, inactive, current, focus, warning, error, success



# CSS

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## ❖ Naming Conventions

### ■ Naming:

#### • CLASS:

- Use sprite classes: wi-general, wi-text, wi-icon, wi-button, wi-box, wi-layer, wi-form, wi-form-elements, wi-corner, wi-frame
- Avoid naming: id, name, class, submit, reset



# CSS

## ❖ Naming Conventions

- Abbreviation images:
  - Particular elements
    - Background: **bgd-**
    - Photo / Picture: **photo-**
    - Button: **btn-**
    - Logo: **logo-**
    - Icon: **icon-**
  - Sprites elements: **their filenames**



# CSS

## ❖ Image Optimization

- The importance of reducing images sizes is a way to increase the overall speed of a webpage
- Images must be optimized and highly compressed
- Choose the same format for one type of images
- Keep the same size for the same collection images
- Image file formats:
  - **JPG**: photographic images with **quality 65**
  - GIF: animated images
  - **PNG 8**: images with **simple colors**
  - **PNG 24**: images with **alpha transparency**



# CSS

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## ❖ KITs

- Prepare a modification kits for special text fonts, images, banner, frame and background
- Keep the guides, layers, effects and unmerged texts in PSDs



# CSS

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- ❖ CSS Prints
  - Only show the necessary text

# CSS

## ❖ CSS Sprites

- A sprite combines multiple images into a one large image and using CSS background-position to only display parts of it
- This is a technique for making webpage faster because it reduces the number of HTTP requests in the page
- Do sprite for all backgrounds, icons, bullets, buttons, special text fonts, custom form elements, frames, boxes, layers, etc
- Do not sprite for logos, particular images and photos
- Do not make sprites too large to avoid memory usage problem



# CSS

## ❖ CSS Sprites

### ▪ Sprite Images:

- Background: **wi-bgd-x**, **wi-bgd-y**, **wi-grd-x**, **wi-grd-y**
  - **wi-bgd-x**: background repeat x
  - **wi-bgd-y**: background repeat y
  - **wi-grd-x**: background gradient repeat x
  - **wi-grd-y**: background gradient repeat y
- General: **wi-general**
  - **wi-general**: background fixed width and height
- Text: **wi-text**
  - **wi-text**: special text fonts
  - use **wi-text-n** class selector for position
- Icon: **wi-icon**
  - **wi-icon**: icons
  - use **wi-icon-n** class selector for position





# CSS

## ❖ CSS Sprites

### ▪ Sprite Images:

- Button: **wi-button**
  - **wi-button**: button fixed width and height
  - use **wi-button-n** class selector for position
  - can inject into **wi-form**
- Form: **wi-form**
  - **wi-form**: form elements fixed width and height, checkbox icons
  - can inject into **wi-general**
- Form elements: **wi-form-elements**
  - **wi-form-elements**: form elements fluid-width, cut 3 pieces



# CSS

## ❖ CSS Sprites

- Sprite Images:
  - Frame: **wi-frame**
    - can inject into **wi-general**
    - use **wi-frame-n** class selector for position
  - Corner: **wi-corner**
    - **wi-corner**: cut 4 corners of box
  - Others: **wi-nav**, **wi-slider**, **wi-rating**, **wi-tab**, **wi-number**
  - Background repeat two ways, background gradient filled color, background shadow: cut separate background images
  - Use **wi-?** for normal, **wi-?-x** for repeat x and **wi-?-y** for repeat y



# CSS

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## ❖ CSS Specificity

- Specificity determines which CSS rule is applied by the browsers
- If two selectors apply to the same element, the one with higher specificity wins
- Using !important overrides all specificity no matter how high it is. Avoid using it if possible
- Understand cascading and selector specificity so you can write very terse and effective code



# CSS

## ❖ CSS Specificity

- Every selector has its place in the specificity hierarchy. There are four distinct categories which define the specificity level of a given selector:
  - Inline styles
    - `<p style="padding: 5px;">example</p>`
  - IDs
    - `#content`
  - Classes, attributes and pseudo-classes
    - `.classes`, `[attributes]`, `:hover`, `:focus`, `:active`, `:link`, `:visited`, `:lang`, `:first-child`, `:last-child`, `:nth-child`, `:nth-last-child`, `:only-child`, `:only-of-type`, `:empty`, `:target`, `:root`, `:not`, `:enabled`, `:disabled`, `:checked`
  - Elements and pseudo-elements
    - `p`, `:before`, `:after`, `:first-line`, `:first-letter`, `::selection`



# CSS

## ❖ CSS Specificity

- Memorize how to measure specificity:
  - Start at 0
  - Add 1000 for style attribute
  - Add 100 for each ID
  - Add 10 for each attribute, class or pseudo-class
  - Add 1 for each element name or pseudo-element



# CSS

## ❖ CSS Specificity

### ■ Specificity Examples

- |   |                                       |
|---|---------------------------------------|
| • <code>* { }</code>                    | 0 (universal and inherited selectors) |
| • <code>li { }</code>                   | 1 (one element)                       |
| • <code>ul li { }</code>                | 2 (two elements)                      |
| • <code>p:first-line { }</code>         | 2 (one element, one pseudo-element)   |
| • <code>p[title] { }</code>             | 11 (one attribute, one element)       |
| • <code>ul li.level { }</code>          | 12 (one class, two elements)          |
| • <code>li.level.odd { }</code>         | 21 (two classes, one element)         |
| • <code>style=""</code>                 | 1000 (one inline)                     |
| • <code>.level</code>                   | 10 (one class)                        |
| • <code>#sidebar</code>                 | 100 (one id)                          |
| • <code>body #sidebar .box p { }</code> | 112 (two elements, one id, one class) |



# CSS

## ❖ CSS Values

### ■ Colors

- All color values are written in the hexadecimal format and using lowercase

### ■ Units

- Use pixel (px) unit – corresponds to actual pixels on the screen – for margin, padding
- Use em (em) unit – corresponds to the specified point size of the font – for text
- Use percentage (%) unit for fluid width/height content

### ■ Fonts

- Always specify a fallback generic font
- Font names with spaces must surrounded by double-quotes



# CSS

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## ❖ CSS Shorthand

- CSS shorthand is preferred because of its terseness
- Follow the TRBL acronym
- Common shorthand properties:
  - margin
  - padding
  - font
  - background
  - border
  - border-radius
  - transition
  - transform
  - list-style





# CSS

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## ❖ CSS Box Model

- Margin
- Border
- Padding
- Content

# CSS

## ❖ Rules

- Follow the CSS files in template structure
- Use a reset CSS file to avoid browser inconsistencies
- Use a minimal number of style sheets
- Properties should be listed in group similar:
  - Display & Flow (display, visibility, float, clear)
  - Positioning & Floats (position, top, right, bottom, left, z-index)
  - Dimensions (width, \*-width, height, \*-height, overflow)
  - Margins & Paddings (margin, padding)
  - Borders & Outline (border, outline)
  - Background (background)
  - Typography (font-\*, line-height, text-\*, \*-spacing, white-space, vertical-align, color, list-style)
  - Opacity & Cursors (opacity, cursor)



# CSS

## ❖ Rules

- Avoid using **!important** if possible
- Use the **link** tag to include, never use **@import**
- Quote attribute values in selectors, e.g. `input[type="text"]`
- Avoid specifying units for zero values
- Avoid using style inline in the HTML file
- Avoid using single line CSS because it can cause issues with version control
- Single declarations on one line
- Multiple declarations, one per line
- Elements occur only once inside a document should use ID selector, otherwise, use CLASS selector
- Prefer CLASS selector than ID selector
- Write selectors that are optimized for speed
- For mobile version, should cut as separate images, do not use sprite images



# JAVASCRIPT

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# BEHAVIOR



# JAVASCRIPT

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- ❖ JavaScript is the scripting language of the web
  - JavaScript was designed to add interactivity to HTML pages
  
- ❖ File Naming
  - JavaScript programs should be stored in and delivered as **file-name.js** files
  - Avoid naming a file with a period “.”
  
- ❖ Indentation
  - Two spaces should be used as the unit of indentation
  - Avoid lines longer than 80 characters
  - When an expression will not fit on a single line, break it according to these general principles:
    - Break after a comma
    - Break before an operator
    - Align the new line with the beginning of the expression at the same level on the previous line



# JAVASCRIPT

## ❖ Indentation

- When an expression will not fit on a single line, break it according to these general principles:

- Examples

```
var result = 0,  
    longName = '';
```

```
var result = longExp1 + longExp2  
    + longExp3;
```

```
var result = (longExp) ? longResult1  
    : longResult2;
```

```
if((longCondition1 && longCondition2)  
    || longCondition3){  
}
```



# JAVASCRIPT

---

## ❖ Naming Conventions

- Identifiers (variables, methods) can contain only the characters [a-z0-9]
- Capitalization:
  - functionNamesLikeThis
  - methodNamesLikeThis
  - variableNamesLikeThis
  - EnumNamesLikeThis
  - ClassNamesLikeThis
  - CONSTANTS\_LIKE\_THIS
- Be descriptive
- All code in any code-base should look like a single person typed it, no matter how many people contributed.



# JAVASCRIPT

## ❖ Comments

- Be generous with comments. It is useful to leave information that will be read at a later time by people (possibly yourself) who will need to understand what you have done
- Make comments meaningful. Focus on what is not immediately visible
- Comments should not be enclosed in large boxes drawn with asterisks or other characters
- Comments should never include special characters such as form-feed and backspace
- Multiline comments should be

```
/*  
comment here  
*/
```
- Inline comments should be

```
// comment here
```





# JAVASCRIPT

## ❖ Declarations

- One declaration per line is recommended since it encourages commenting  
var result = 0, // comment here  
longName1 = '',  
longName2 = '', longName3 = '';
- Do not put different types on the same line
- Try to initialize local variables where they're declared
- No space between a method name and the parenthesis "()  
function methodName()  
// to do  
}



# JAVASCRIPT

## Declarations

- Open brace “{” appears at the end of the same line as the declaration statement

```
function methodName(){
  // do to
}
```

- Closing brace “}” starts a line by itself indented to match its corresponding opening statement, except when it is a null statement the “}” should appear immediately after the “{”

```
function methodName(){
  // to do
}
```

```
function empty() {
```

- Methods are separated by a blank line



# JAVASCRIPT

---

## ❖ Declarations

- JavaScript does not have block scope, so defining variables in blocks can confuse programmers who are experienced with other C family languages. Put declarations only at the beginning of blocks
- Use of global variables should be minimized



# JAVASCRIPT

---

## ❖ Statements

- Simple Statements:
  - Each line should contain at most one statement
- Compound Statements: Compound statements are statements that contain lists of statements enclosed in “{ }” (curly braces):
  - The “{” should be at the end of the line that begins the compound statement
  - The “}” should begin a line and be indented to align with the beginning of the line containing the matching “{”



# JAVASCRIPT

## ❖ Statements

### ■ Conditional statements

#### • if statement

```
if(condition1){  
    // to do if condition1 is true  
}  
else if(condition2){  
    // to do if condition2 is true  
}  
else{  
    // to do if neither condition1 nor condition2 is true  
}
```



# JAVASCRIPT

## ❖ Statements

### ▪ Conditional statements

#### • switch statement

```
switch(expression){  
  case expression1:  
    // to do 1  
    break;  
  case expression2:  
    // to do 2  
    break;  
  default:  
    // to do if expression is different from expression1 and expression2  
}
```



# JAVASCRIPT

## ❖ Statements

### ■ Loop statements

#### • for statement

```
for(initialization; condition; update){  
    // to do  
}
```

```
for(variable in object){  
    // to do  
}
```



# JAVASCRIPT

## ❖ Statements

### ■ Loop statements

- while statement

```
while(condition){  
  // to do  
}
```
- do statement

```
do{  
  // to do  
}  
while(condition);
```





# JAVASCRIPT

## ❖ Statements

- Loop statements
  - try...catch statement

```
try{  
    // to do  
}  
catch(variable){  
}  
finally{  
    // to do  
}
```



# JAVASCRIPT

## ❖ White Space

- Blank spaces should be used in the following circumstances:
  - A blank space should not be used between a function value and its "("
  - All binary operators except "." (period), "(" (left parenthesis) and "[" (left bracket) should be separated from their operands by a space

```
var result = longExp1 + longExp2;
```

```
var result = (longExp1 + longExp2);
```

```
var result = jsonData['result'];
```

- No space should separate a unary operator and its operand except when the operator is a word such as typeof

```
var x = 0;
```

```
x++
```

```
--x;
```

```
var y = -x;
```

```
typeof x;
```



# JAVASCRIPT

## ❖ White Space

- Blank spaces should be used in the following circumstances:
  - Each “;” (semicolon) in the control part of a for statement should be followed with a space

```
for(var i = 0, j = 10; i < j; i++){  
    // to do  
}
```

- Whitespace should follow every “,” (comma)  
var x = 10, y = 15;

```
function methodName(param1, param2, param3){  
    // to do  
}
```



# JAVASCRIPT

---

## ❖ Rules

- Variable declarations must start with **var** keyword
- Variables and functions should be declared before used
- Constants or configuration variables should be at the top of the file
- JS expressions must end with a semi-colon
- Don't rely on the user-agent string. Do proper feature detection
- Don't use document.write function
- Avoid using inline script in the HTML file
- Avoid using eval function
- All Boolean variables should start with "is", "has"
- Create functions which can be generalized, take parameters, and return values
- Do not send too many function parameters
- Minimizing repaints & reflows



# JAVASCRIPT

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## ❖ Rules

- Do not compare `x == true`, use `(x)` instead
- Use `[value1, value2]` to create an array
- Use `{member: value}` to create an object
- Comment your code! It helps reduce time spent troubleshooting JavaScript functions
- End of file with a newline
- Avoid:
  - Too much happening in a loop
  - Too much happening in a function
  - Too much recursion
  - Too much DOM interaction



# JAVASCRIPT

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## ❖ Performance Tips

- Define local variables

- Don't

```
var user = document.getElementById('user'),  
    pass = document.getElementById('pass');
```

- Do

```
var doc = document,  
    user = doc.getElementById('user'),  
    pass = doc.getElementById('pass');
```



# JAVASCRIPT

## ❖ Performance Tips

- Avoid using eval or the Function constructor

- Don't

```
function addMethod(object, property, code) {  
    object[property] = new Function(code);  
}  
addMethod(myObj, 'methodName', 'this.localVar = 1');
```

- Do

```
function addMethod(object, property, fn) {  
    object[property] = fn;  
}  
addMethod(myObj, 'methodName', function () {  
    this.localVar = 1;  
});
```



# JAVASCRIPT

## ❖ Performance Tips

- Don't use try-catch-finally inside loop statements

- Don't

```
for(var i = 0; i < 10; i++){  
  try{  
    // to do  
  }  
  catch({})  
}
```

- Do

```
try{  
  for(var i = 0; i < 10; i++){  
    // to do  
  }  
}  
catch({})
```





# JAVASCRIPT

---

## ❖ Performance Tips

- Pass functions, not strings to `setTimeout` and `setInterval`

- Don't

```
setTimeout('doSomething()', 100);  
setInterval('doSomething()', 100);
```

- Do

```
setTimeout(doSomething, 100);  
setInterval(doSomething, 100);
```



# JAVASCRIPT

## ❖ Performance Tips

### ■ Better loop

#### • Don't

```
for(var i = 0; i < results.length; i++){  
    // to do  
}
```

#### • Do

```
for(var i = 0, len = results.length; i < len; i++){  
    // to do  
}
```



# JAVASCRIPT

## ❖ Performance Tips

### ■ Better conditional

#### • Don't

```
if(type == 'js' || type == 'css'){  
  // to do  
}
```

#### • Do

```
if(/^ (js | css) $/.test(type)){  
  // to do  
}
```

```
if(({css: 1, js: 1})[type]){  
  // to do  
}
```



# JAVASCRIPT

## ❖ Performance Tips

### ■ Chaining

#### • Don't

```
$('#notification').fadeOut('slow');  
$('#notification').addClass('active');  
$('#notification').css('marginLeft', '50px');
```

#### • Do

```
$('#notification')  
  .fadeOut('slow')  
  .addClass('active')  
  .css('marginLeft', '50px');
```



# JAVASCRIPT

## ❖ Performance Tips

- Use jQuery.data method to store data

- Don't

```
var el = $('#element')[0];  
el.user = 'user';  
el.pass = 'pass';
```

- Do

```
$('#element').data('login', {  
  user: 'user',  
  pass: 'pass'  
});
```



# JAVASCRIPT

## ❖ Performance Tips

- Use CSS class to change style

- Don't

```
$('#element').css({  
  color: 'white',  
  background: 'red'  
});
```

- Do

```
<style>  
  .alert {color: white; background: red;}  
</style>
```

```
<script>  
  $('#element').addClass('alert');  
</script>
```



# JAVASCRIPT

## ❖ Performance Tips

- [https://developer.mozilla.org/en-US/docs/Developer\\_Guide/Coding\\_Style](https://developer.mozilla.org/en-US/docs/Developer_Guide/Coding_Style)
- <https://github.com/rwaldron/idiomatic.js>
- <http://www.jshint.com/lint.html>
- <http://jshint.com/docs/options>
- <http://coding.smashingmagazine.com/2012/11/05/writing-fast-memory-efficient-javascript>
- <http://www.codeproject.com/Tips/623082/JavaScript-Performance-Tips>
- <http://moduscreate.com/efficient-dom-and-css>
- <http://addyosmani.com/japrovenperformance>
- <http://tutorialzine.com/2011/06/15-powerful-jquery-tips-and-tricks-for-developers>
- <http://learn.jquery.com/performance/optimize-selectors>
- <http://jonraasch.com/blog/10-advanced-jquery-performance-tuning-tips-from-paul-irish>



# BUILD TOOLS

---

# GRUNT, JADE, LESS





# BUILD TOOLS

---

## ❖ Grunt

- JavaScript task runner
- Reference @ <http://gruntjs.com>

## ❖ Jade

- Node template engine
- Reference @ <http://jade-lang.com>

## ❖ Less

- CSS pre-processor
- Reference @ <http://lesscss.org>



# References

## ❖ W3C:

- <http://www.w3.org/TR/WCAG10-CORE-TECHS>
- <http://www.w3.org/TR/WCAG10-HTML-TECHS>
- <http://www.w3.org/TR/WCAG10-CSS-TECHS>
- <http://www.w3.org/TR/WAI-WEBCONTENT-TECHS>
- <http://www.w3.org/TR/UAAG10>
- <http://www.w3.org/TR/1999/REC-html401-19991224>
- <http://www.w3.org/TR/1998/REC-CSS2-19980512>
- <http://www.w3.org/TR/CSS21>
- <http://www.w3.org/TR/CSS1>
- <http://www.whatwg.org/specs/web-apps/current-work/multipage/index.html>
- <http://www.w3.org/QA/Tools>
- [http://www.w3.org/wiki/HTML\\_structural\\_elements](http://www.w3.org/wiki/HTML_structural_elements)
- <http://www.w3.org/TR/WCAG10/full-checklist.html>
- <https://developer.mozilla.org/en-US/docs/Web/Accessibility/ARIA>



# References

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❖ Web Accessibility tool:

- <http://wave.webaim.org/report>
- <http://achecker.ca/checker/index.php>



# References

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## ❖ HTML:

- <http://www.w3schools.com/html/default.asp>
- <http://reference.sitepoint.com/html>
- <http://www.htmlhelp.com>
- <http://www.htmldog.com>
- <https://developer.mozilla.org/en/HTML>
- <http://microformats.org/wiki/hcard>
- <http://microformats.org/code/hcard/creator>
- <http://www.w3.org/TR/microdata>
- <http://schema.org>



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## ❖ CSS:

- <http://www.w3schools.com/css/default.asp>
- <http://reference.sitepoint.com/css>
- <http://www.cssbasics.com>
- <https://developer.mozilla.org/en/CSS>
- [https://developer.mozilla.org/en-US/docs/Web/Guide/CSS/Writing\\_efficient\\_CSS](https://developer.mozilla.org/en-US/docs/Web/Guide/CSS/Writing_efficient_CSS)
- <http://websitetips.com/articles/css/sprites>
- <http://www.impressivewebs.com/difference-block-inline-css>
- <http://blog.themeforest.net/tutorials/vertical-centering-with-css>
- <http://lesliefranke.com/files/reference/csscheatsheet.html>
- <http://alistapart.com/article/responsive-web-design>
- <http://hicksdesign.co.uk/boxmodel>
- <http://dustindiaz.com/css-shorthand>
- <http://lesscss.org>
- <http://sass-lang.com>

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## ❖ JavaScript:

- <http://www.w3schools.com/js/default.asp>
- <https://developer.mozilla.org/en/JavaScript>
- <http://reference.sitepoint.com/javascript>
- <http://jquery.com>
- <http://dev.opera.com/articles/view/efficient-javascript>
- <http://developer.yahoo.com/performance/rules.html>
- <http://contribute.jquery.org/style-guide/js>
- <http://coffeescript.org>
- <http://nodejs.org>



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## ❖ HTML5 / CSS3:

- <http://html5.org>
- <http://diveintohtml5.info/canvas.html>
- <http://introducinghtml5.com>
- <http://html5readiness.com>
- <http://slides.html5rocks.com>
- <http://html5demos.com>
- <http://html5doctor.com>
- <http://jade-lang.com>
- <http://www.initializr.com>
- <http://html5boilerplate.com>



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❖ Newsletter:

- <http://www.sitepoint.com/code-html-email-newsletters>
- <http://kb.mailchimp.com/article/how-to-code-html-emails>
- <http://www.campaignmonitor.com/resources/will-it-work/email-clients>
- <http://www.campaignmonitor.com/css>
- [http://www.greatsites.com.au/html\\_specifications](http://www.greatsites.com.au/html_specifications)



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❖ Resource:

- <http://quirksmode.org>
- <http://www.smashingmagazine.com>
- <http://ajaxian.com>
- <http://mashable.com>
- <http://www.alistapart.com>
- <http://jsbeautifier.org>
- <http://dean.edwards.name/packer>
- <http://www.html5canvastutorials.com>
- <http://html2jade.aaron-powell.com>
- <http://isobar-idev.github.io/code-standards>
- <http://codeguide.co>
- <https://developer.mozilla.org/en-US/docs/Web/Tutorials>
- <http://addyosmani.com/resources/essentialjsdesignpatterns/book>



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