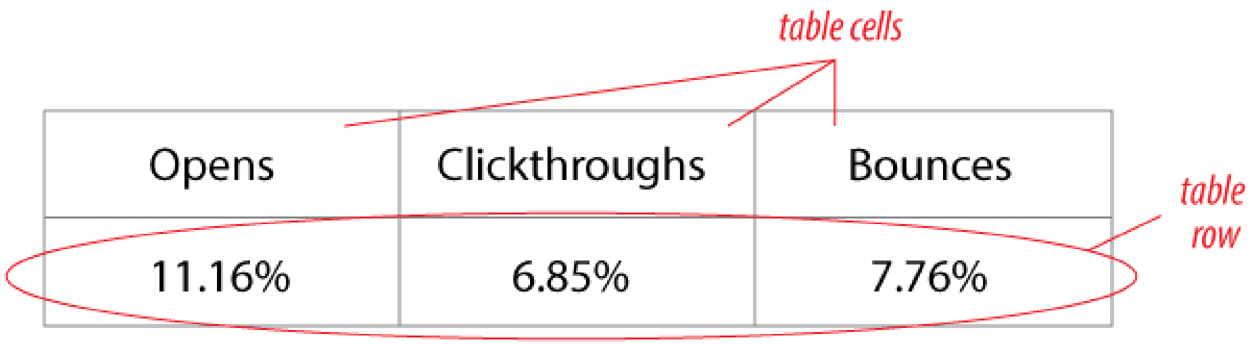
HTML BOOTCAMP : : SECTION 2

TABLES

Presentation of Data

"Table tags are used for displaying spreadsheet-like data neatly formatted in rows and columns." (simplehtmlguide.com)



Opens	Clickthroughs	Bounces
11.16%	6.85%	7.76%

How HTML handles tabular data is much like one person instructing another to build one verbally:

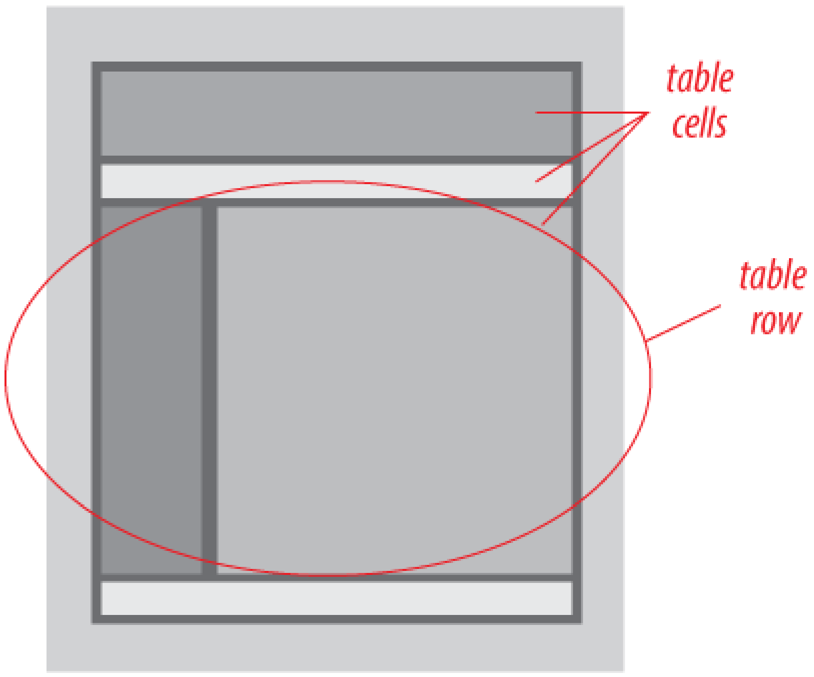
```
<table>
    <tr>
        <td>Opens</td>
        <td>Clickthroughs</td>
        <td>Bounces</td>
    </tr>
    <tr>
        <td>11.16%</td>
        <td>6.85%</td>
        <td>7.76%</td>
    </tr>
</table>
```

- first it announces that it's starting a table (opening the table paired tag), setting up the expectation that what follows next will be elements that make up the table
- it then says it's starting a row (opens the table row paired tag) and indicates what is in each cell in that row (populating each table data cell)
- when it's done with all the cells, it announces that the row was completed (closes the table row paired tag)
- it then begins a new row and does the same
- when it's done, it communicates that it has completed describing the content that made up the table (closes the table, itself)

It essentially marks up the content in such a way as to communicate how to format it as a table without having to draw a picture.

Layout Framework

Given the structure tables impose upon data - which is just content, really - tables have been used as a framework for layout. That was not the original intent, mind you.



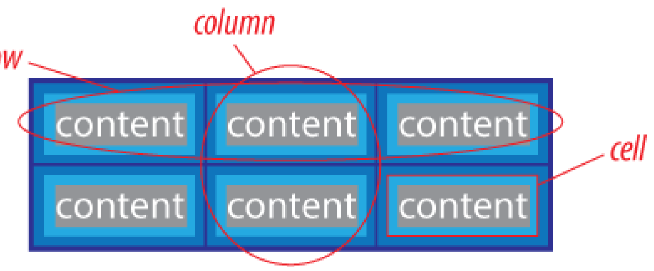
Tables are largely a thing of the past as CSS has provided a more robust and flexible way of laying out and presenting content. Because, as it is, if you want the individual elements of a design that's laid out with tables you'd have to rip it out of the framework to use it. And, even then, removing the individual element is bound to break the entirety of the table itself since so much of its structure is dependent upon the other elements and how they are situated among one another.

Tables are the bread and butter of html for email though because it is supported across all the different use-cases; the modern browsers, the not so modern browsers, the robust email clients, the crappy email clients, etc.

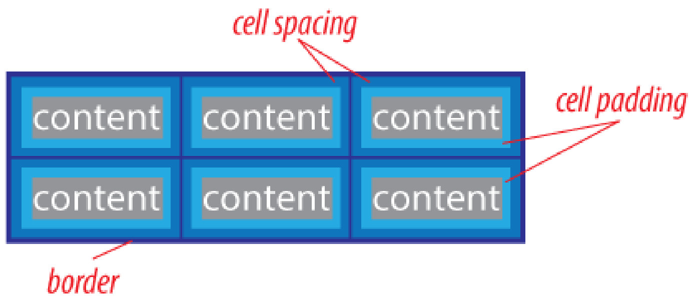
CSS in its complete form, unfortunately, is not.

ANATOMY OF A TABLE

The basic breakdown of an HTML table:



Cells are also referred to as table cells. Similarly, rows are also referred to as table rows.



Do note that the content of a table will often determine its height and width. Unless specified, the table's dimensions will shrink to fit the content it contains. The same goes for the individual table cells, themselves, with a couple exceptions:

- a row's height will be determined by the cell with the tallest height in that row
- a column's width will be determined by the cell with the widest width in that column

Moreover, bear in mind that because cell spacing comes between each of the table cells and cell padding pads the interior of each of the table cells, they both will impact the table's overall height and width.

TABLE HTML

When attributes aren't demarcated, these tags will follow a default value. CSS provides more granular control. Note: *n* is a regular whole number, *rrggbb* is a hexadecimal number:

tag	**common attributes**

<table> </table>
the paired tag that contains the entirety of the table content
	cellpadding="*n*"
	space between content and table cell
	
	cellspacing="*n*"
	space between table cells
	
	border="*n*"
	draws a border around the perimeter of the table and in between the table cells
	
	bgcolor="#*rrggbb*"
	sets background color of the table
	
	align="center"; align="left"; align="right"
	sets alignment of the table relative to its container element (usually the page)
	
	height="*n*"
	width="*n*"

<tr> </tr> *table row*	

<td> </td>
table data cell
	bgcolor="#*rrggbb*"
	sets background color of the table cell
	
	align="center"; align="left"; align="right"
	sets alignment of the content inside the table cell
	
	valign="top"; valign="middle"; valign="bottom"
	sets alignment of the content inside the table cell
	
	colspan="*n*"
	sets a table data cell to run wider by another column-width
	
	rowspan="*n*"
	sets a table data cell to run longer by another row-height
	
	height="*n*"
	width="*n*"

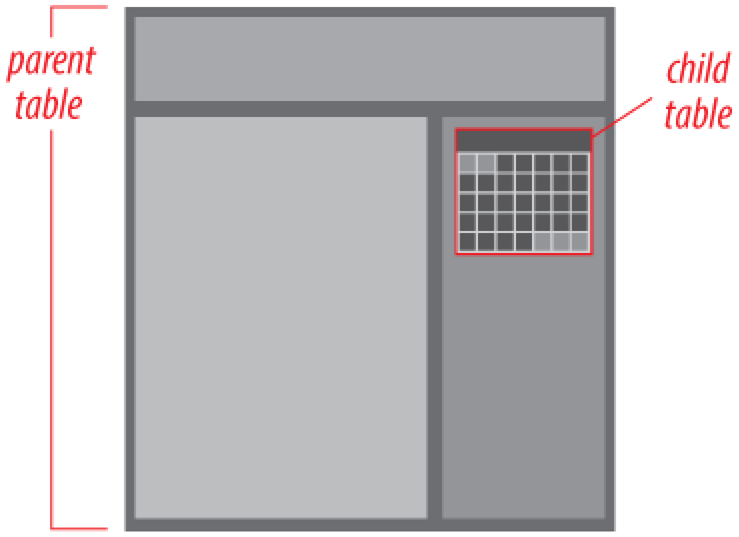
<th> </th> *table header; not widely used.*	
<tbody> </tbody> *table body; not widely used.*	

TROUBLE WITH TABLES

Nesting Tables

Despite having colspans and rowspans available, there are times when nesting tables (literally putting a table inside another table) is necessary or just plain easier.

To do this, put another table inside one of the data cells of another table, like so:



In terms of HTML, you put another table in its entirety within one of the parent table's table data cells That is to say, it becomes the content inside a <td> and a </td>.

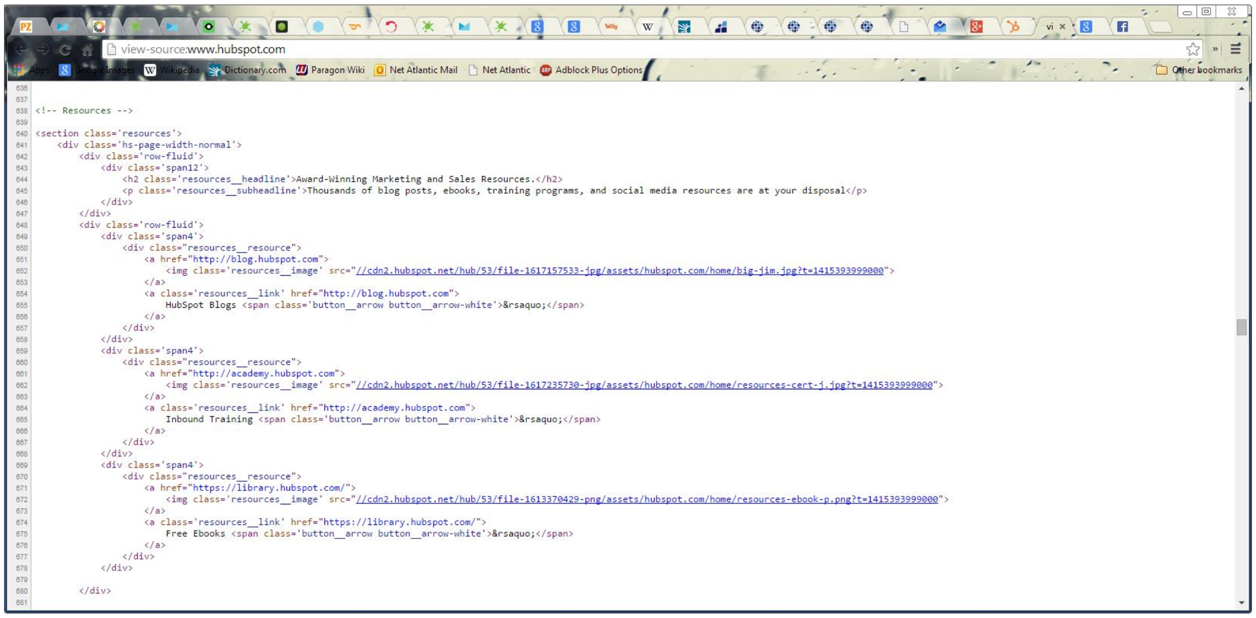
However, try not to nest too many tables (that is, a table inside a table inside a table inside a table et ad infinitum):

- this sometimes results in unexpected behavior (the page may break, the deeply nested table may not render or behave correctly, etc.)
- tables require some processing by the computer that's viewing it and too many nested inside one another may make some machines really work hard to render the HTML
- too many nested tables can be difficult to keep track of

The Importance of Neat Code

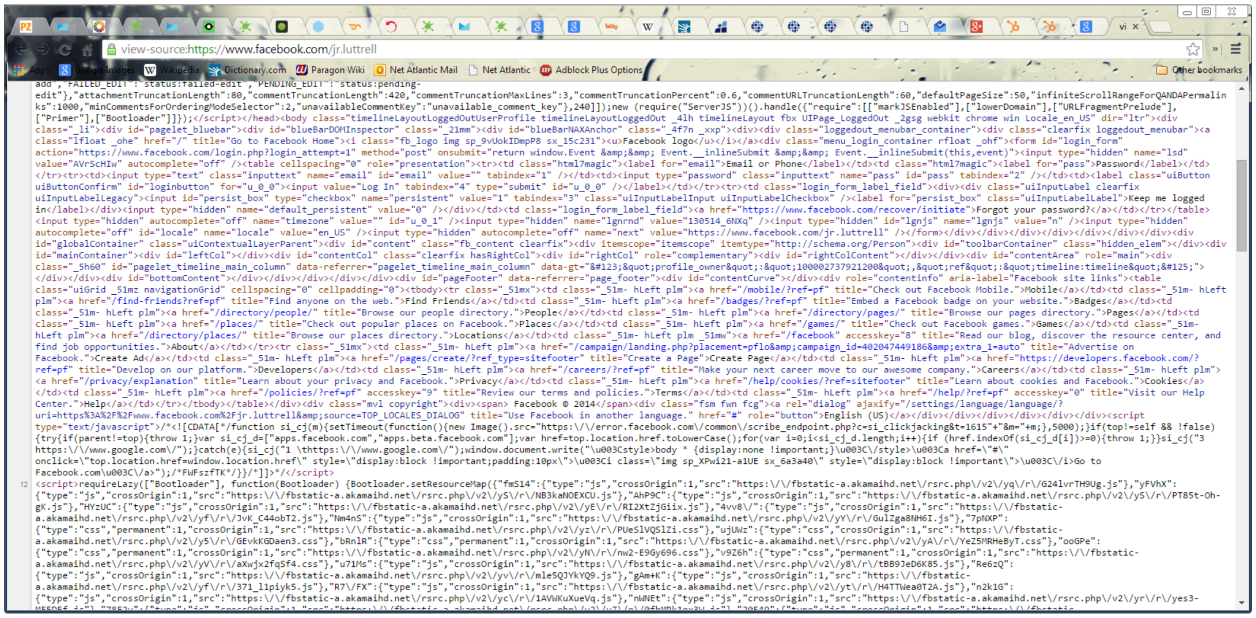
Given the economy of space that HTML features, multiple carriage returns or taps on the space bar will all resolve to a single space. To that end, steps should be taken to clean up the code in order to make it navigable by human eyes.

Compare the HTML from HubSpot's top page:



```


<!-- Resources -->

<section class='resources'>
    <div class='hs-page-width-normal'>
        <div class='row-fluid'>
            <div class='span12'>
                <h2 class='resources__headline'>Award-Winning Marketing and Sales Resources.</h2>
                <p class='resources__subheadline'>Thousands of blog posts, ebooks, training programs, and social media resources are at your disposal</p>
            </div>
        </div>
        <div class='row-fluid'>
            <div class='span4'>
                <div class="resources__resource">
                    <a href="http://blog.hubspot.com">
                        <img class='resources__image' src="//cdn2.hubspot.net/hub/53/file-1617157533-jpg/assets/hubspot.com/home/big-jim.jpg?t=1415393999000">
                    </a>
                    <a class='resources__link' href="http://blog.hubspot.com">
                        HubSpot Blogs <span class='button__arrow button__arrow-white'>&rsaquo;</span>
                    </a>
                </div>
            </div>
            <div class='span4'>
                <div class="resources__resource">
                    <a href="http://academy.hubspot.com">
                        <img class='resources__image' src="//cdn2.hubspot.net/hub/53/file-1617235730-jpg/assets/hubspot.com/home/resources-cert-j.jpg?t=1415393999000">
                    </a>
                    <a class='resources__link' href="http://academy.hubspot.com">
                        Inbound Training <span class='button__arrow button__arrow-white'>&rsaquo;</span>
                    </a>
                </div>
            </div>
            <div class='span4'>
                <div class="resources__resource">
                    <a href="https://library.hubspot.com/">
                        <img class='resources__image' src="//cdn2.hubspot.net/hub/53/file-1613370429-png/assets/hubspot.com/home/resources-ebook-p.png?t=1415393999000">
                    </a>
                    <a class='resources__link' href="https://library.hubspot.com/">
                        Free Ebooks <span class='button__arrow button__arrow-white'>&rsaquo;</span>
                    </a>
                </div>
            </div>

        </div>

```

with Facebook's:



```
add","FAILED_EDIT":"status:failed-edit","PENDING_EDIT":"status:pending-
edit"},"attachmentTruncationLength":80,"commentTruncationLength":420,"commentTruncationMaxLines":3,"commentTruncationPercent":0.6,"commentURLTruncationLength":60,"defaultPageSize":50,"infiniteScrollRangeForQANDAPermalin
ks":1000,"minCommentsForOrderingModeSelector":2,"unavailableCommentKey":"unavailable_comment_key"},240]]);new (require("ServerJS"))().handle({"require":[["markJSEnabled"],["lowerDomain"],["URLFragmentPrelude"],
["Primer"],["Bootloader"]]});</script></head><body class="timelineLayoutLoggedOutUserProfile timelineLayoutLoggedOut _4lh timelineLayout fbx UIPage_LoggedOut _2gsg webkit chrome win Locale_en_US" dir="ltr"><div
class="_li"><div id="pagelet_bluebar"><div id="blueBarDOMInspector" class="_21mm"><div id="blueBarNAXAnchor" class="_4f7n _xxp"><div><div class="loggedout_menubar_container"><div class="clearfix loggedout_menubar"><a
class="lfloat _ohe" href="/" title="Go to Facebook Home"><i class="fb_logo img sp_9vUokIDmpP8 sx_15c231"><u>Facebook logo</u></i></a><div class="menu_login_container rfloat _ohf"><form id="login_form"
action="https://www.facebook.com/login.php?login_attempt=1" method="post" onsubmit="return window.Event &amp;&amp; Event.__inlineSubmit &amp;&amp; Event.__inlineSubmit(this,event)"><input type="hidden" name="lsd"
value="AVrScHIw" autocomplete="off" /><table cellspacing="0" role="presentation"><tr><td class="html7magic"><label for="email">Email or Phone</label></td><td class="html7magic"><label for="pass">Password</label></td>
</tr><tr><td><input type="text" class="inputtext" name="email" id="email" value="" tabindex="1" /></td><td><input type="password" class="inputtext" name="pass" id="pass" tabindex="2" /></td><td><label class="uiButton
uiButtonConfirm" id="loginbutton" for="u_0_0"><input value="Log In" tabindex="4" type="submit" id="u_0_0" /></label></td></tr><tr><td class="login_form_label_field"><div><div class="uiInputLabel clearfix
uiInputLabelLegacy"><input id="persist_box" type="checkbox" name="persistent" value="1" tabindex="3" class="uiInputLabelInput uiInputLabelCheckbox" /><label for="persist_box" class="uiInputLabelLabel">Keep me logged
in</label></div><input type="hidden" name="default_persistent" value="0" /></div></td><td class="login_form_label_field"><a href="https://www.facebook.com/recover/initiate">Forgot your password?</a></td></tr></table>
<input type="hidden" autocomplete="off" name="timezone" value="" id="u_0_1" /><input type="hidden" name="lgnrnd" value="130514_6NXq" /><input type="hidden" id="lgnjs" name="lgnjs" value="n" /><input type="hidden"
autocomplete="off" id="locale" name="locale" value="en_US" /><input type="hidden" autocomplete="off" name="next" value="https://www.facebook.com/jr.luttrell" /></form></div></div></div></div></div></div></div><div
id="globalContainer" class="uiContextualLayerParent"><div id="content" class="fb_content clearfix"><div itemscope="itemscope" itemtype="http://schema.org/Person"><div id="toolbarContainer" class="hidden_elem"></div><div
id="mainContainer"><div id="leftCol"></div><div id="contentCol" class="clearfix hasRightCol"><div id="rightCol" role="complementary"><div id="rightColContent"></div></div><div id="contentArea" role="main"><div
class="_5h60" id="pagelet_timeline_main_column" data-referrer="pagelet_timeline_main_column" data-gt="&#123;&quot;profile_owner&quot;:&quot;100002737921200&quot;,&quot;ref&quot;:&quot;timeline:timeline&quot;&#125;">
</div></div><div id="bottomContent"></div></div></div></div></div><div id="pageFooter" data-referrer="page_footer"><div id="contentCurve"></div><div role="contentinfo" aria-label="Facebook site links"><table
class="uiGrid _51mz navigationGrid" cellspacing="0" cellpadding="0"><tbody><tr class="_51mx"><td class="_51m- hLeft plm"><a href="/mobile/?ref=pf" title="Check out Facebook Mobile.">Mobile</a></td><td class="_51m- hLeft
plm"><a href="/find-friends?ref=pf" title="Find anyone on the web.">Find Friends</a></td><td class="_51m- hLeft plm"><a href="/badges/?ref=pf" title="Embed a Facebook badge on your website.">Badges</a></td><td
class="_51m- hLeft plm"><a href="/directory/people/" title="Browse our people directory.">People</a></td><td class="_51m- hLeft plm"><a href="/directory/pages/" title="Browse our pages directory.">Pages</a></td><td
class="_51m- hLeft plm"><a href="/places/" title="Check out popular places on Facebook.">Places</a></td><td class="_51m- hLeft plm"><a href="/games/" title="Check out Facebook games.">Games</a></td><td class="_51m-
hLeft plm"><a href="/directory/places/" title="Browse our places directory.">Locations</a></td><td class="_51m- hLeft plm _51mw"><a href="/facebook" accesskey="8" title="Read our blog, discover the resource center, and
find job opportunities.">About</a></td></tr><tr class="_51mx"><td class="_51m- hLeft plm"><a href="/campaign/landing.php?placement=pflo&amp;campaign_id=402047449186&amp;extra_1=auto" title="Advertise on
Facebook.">Create Ad</a></td><td class="_51m- hLeft plm"><a href="/pages/create/?ref_type=sitefooter" title="Create a Page">Create Page</a></td><td class="_51m- hLeft plm"><a href="https://developers.facebook.com/?
ref=pf" title="Develop on our platform.">Developers</a></td><td class="_51m- hLeft plm"><a href="/careers/?ref=pf" title="Make your next career move to our awesome company.">Careers</a></td><td class="_51m- hLeft plm">
<a href="/privacy/explanation" title="Learn about your privacy and Facebook.">Privacy</a></td><td class="_51m- hLeft plm"><a href="/help/cookies/?ref=sitefooter" title="Learn about cookies and Facebook.">Cookies</a>
</td><td class="_51m- hLeft plm"><a href="/policies/?ref=pf" accesskey="9" title="Review our terms and policies.">Terms</a></td><td class="_51m- hLeft plm"><a href="/help/?ref=pf" accesskey="0" title="Visit our Help
Center.">Help</a></td></tr></tbody></table></div><div class="mvl copyright"><div><span> Facebook © 2014</span><div class="fsm fwn fcg"><a rel="dialog" ajaxify="/settings/language/language/?
uri=https%3A%2F%2Fwww.facebook.com%2Fjr.luttrell&amp;source=TOP_LOCALES_DIALOG" title="Use Facebook in another language." href="#" role="button">English (US)</a></div></div></div></div></div></div><script
type="text/javascript">/*<![CDATA[*/function si_cj(m){setTimeout(function(){new Image().src="https:\/\/error.facebook.com\/common\/scribe_endpoint.php?c=si_clickjacking&t=1615"+"&m="+m;},5000);}if(top!=self && !false)
{try{if(parent!=top){throw 1;}var si_cj_d=["apps.facebook.com","apps.beta.facebook.com"];var href=top.location.href.toLowerCase();for(var i=0;i<si_cj_d.length;i++){if (href.indexOf(si_cj_d[i])>=0){throw 1;}}si_cj("3
https:\/\/www.google.com\/");}catch(e){si_cj("1 \thttps:\/\/www.google.com\/");window.document.write("\u003Cstyle>body * {display:none !important;}\u003C\/style>\u003Ca href=\"#\"
onclick=\"top.location.href=window.location.href\" style=\"display:block !important;padding:10px\">\u003Ci class=\"img sp_XPwi21-a1UE sx_6a3a40\" style=\"display:block !important\">\u003C\/i>Go to
Facebook.com\u003C\/a>");/*FWFszfTK*/}}/*]]>*/</script>
<script>requireLazy(["Bootloader"], function(Bootloader) {Bootloader.setResourceMap({"fmS14":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yq\/r\/G24lvrTH9Ug.js"},"yFVhX":
{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yS\/r\/NB3kaNOEXCU.js"},"AhP9C":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yS\/r\/PT85t-Oh-
gK.js"},"HYzUC":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yE\/r\/RI2XtZjGiix.js"},"4vv8\/":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-
a.akamaihd.net\/rsrc.php\/v2\/yf\/r\/JvK_C44obT2.js"},"Nm4nS":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yY\/r\/GulZga8NH6I.js"},"7pNXP":
{"type":"css","permanent":1,"crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yz\/r\/PUeSlVQSlZi.css"},"ujUWz":{"type":"css","crossOrigin":1,"src":"https:\/\/fbstatic-
a.akamaihd.net\/rsrc.php\/v2\/y5\/r\/GEvkKGDaen3.css"},"bRnlR":{"type":"css","permanent":1,"crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yA\/r\/YeZ5MRHeByT.css"},"ooGPe":
{"type":"css","permanent":1,"crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yN\/r\/nw2-E9Gy696.css"},"v9Z6h":{"type":"css","permanent":1,"crossOrigin":1,"src":"https:\/\/fbstatic-
a.akamaihd.net\/rsrc.php\/v2\/yV\/r\/aXwjx2fqSf4.css"},"u71Ms":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/y8\/r\/tBB9JeD6K85.js"},"Re6zQ":
{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yv\/r\/mle5QJYkYQ9.js"},"gAm+K":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-
a.akamaihd.net\/rsrc.php\/v2\/yf\/r\/371_l1piyk5.js"},"R7\/FX":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yt\/r\/H4TTWea0T2A.js"},"n2k1G":
{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yc\/r\/1AVWKuXueVq.js"},"nWNEt":{"type":"js","crossOrigin":1,"src":"https:\/\/fbstatic-a.akamaihd.net\/rsrc.php\/v2\/yr\/r\/yes3-
```

Tab-indenting to form visual groups of HTML makes it easier to distinguish parent-child relationships when it comes to nesting. Consequently, it makes things easier when it comes to having to fix or figure out what's wrong with a page's HTML. Unorganized code can lead to mistakes and wasted time.

Other sources of issues with tables

There are a number of reasons why tables may not resolve correctly or as expected. Here are some reasons:

- failure to close to a table tag
- failure to pair or nest table tags correctly
- cells don't add up
- columns (and colspans) don't add up
- rows (and rowspans) don't add up
- math (with respect to widths and heights) doesn't add up

When tables are incorrectly formatted in HTML, they break. Obviously. Just how they break may vary from browser to browser (or, more specifically, from browser-and-platform-combination to browser-and-platform-combination). Some browsers are more "forgiving" and will render the table correctly, kinda sorta guessing what it is you meant to do (e.g., behave as if the close tag you left out is actually there). While that's convenient, it enables poorly constructed HTML. What's more, too many of these "forgiven incidents" in the same HTML file may result in something spectacularly different from what was intended as one interpretation steps on the toes of another. Other browsers, however, are strict and won't cooperate unless you format things correctly. Then there are those few browsers that will try to force the HTML to work even if it's wrong (e.g., forcing the inclusion of a fourth table cell in a three-by-three table because you accidentally included another <td> in a row where it shouldn't be).

Vigilance and diligence are key.

SUGGESTED READING

A Simple Guide to HTML: HTML Tables
http://www.simplehtmlguide.com/tables.php

Temple University Computer Services: Creating Tables with HTML
https://computerservices.temple.edu/creating-tables-html

Campaign Monitor: Coding Your Emails - Chapter 2 - Guidelines for a Solid HTML Email Template
https://www.campaignmonitor.com/guides/coding/guidelines