SAS® 9 ODS CSS Tip Sheet

ODS Document Object Model

When using CSS with HTML, the document context is easy to see simply by viewing the source of the file. However, within ODS, the document used to apply CSS rules to isn't evident. To enable ODS DOM tracing, use the following:

```
/* enable dom tracing in all destinations */
ods trace dom;

/* enable dom tracing in one destination */
ods destination dom;

/* send destination dom to a file */
ods destination dom='filename';
```

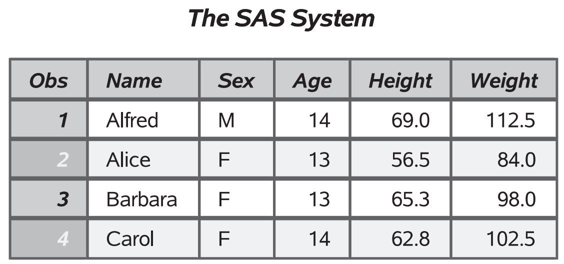
Selector / DOM Matching Example

Here is one example of an ODS DOM trace with possible matching CSS selectors.

```
/* table */
/* table.table */
<table class="table">
 <colgroup><col name="name"></colgroup>
 <thead>
  <tr>
   /* th.header */
   /* th[class='header'] */
   /* thead th:first-child */
   <th class="header">Name</th>
  </tr>
 </thead>
 <tbody>
  <tr>
   /* td.data */
   /* table > tbody > tr > td */
   /* tbody td[type='char'][data-name='name'] */
   <td class="data" type="char"
         unformatted-type="char"
         index="1" name="name"
         data-name="name"
         label="name" format="$">
     Alfred
   </td>
  </tr>
 </tbody>
</table>
```

CSS Example

```
-- mystyle.css --

/* global font for printer */
body, * {
  font: 12pt arial; color: black }

/* table borders */
.table, .table td, .table th {
  border: 1pt solid #404040;
  border-collapse: collapse;
  border-spacing: 0 }
/* cell color and padding */
.table th, .table td {
  padding: 5pt 10pt }
.table th {
  font-style: italic;
  font-weight: bold;
  background-color: rgb(200,200,200) }
/* alternating colors */
.table tbody tr:nth-child(even) td {
  background-color: rgb(240,240,240) }
.table tbody tr:nth-child(even) th {
  color: rgb(240,240,240);
  background-color: rgb(180,180,180) }

/* title settings */
.systemtitle, .systemfooter {
  font: bold italic 14pt arial }

-- sas program --

ods pdf cssstyle='mystyle.css';
proc print data=sashelp.class(obs=4);
run;
ods pdf close;
```



The SAS System

Obs	*Name*	*Sex*	*Age*	*Height*	*Weight*
1	Alfred	M	14	69.0	112.5
2	Alice	F	13	56.5	84.0
3	Barbara	F	13	65.3	98.0
4	Carol	F	14	62.8	102.5

Column for logo, address, and trademark info.

For complete information, refer to the Base SAS® documentation at support.sas.com/base

SAS Institute Inc. World Headquarters
+1 919 677 8000 www.sas.com/offices

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ODS Cascading Style Sheet (CSS) Tip Sheet

This tip sheet places frequently used information in one place, on one sheet of paper, so you don't have to search through the online documentation. It also gives you something to take home, type in, and try.

Cascading style sheets (CSS) provide an alternative style format to PROC TEMPLATE styles. They were developed by the World Wide Web Consortium (W3C) for use in web browsers, but can easily be applied to almost any type of output.

This tip sheet presents the most common CSS properties and features, and their usage in ODS reports.

SAS® 9 ODS CSS Tip Sheet

Using a CSS File

```
ods destination cssstyle='URL';
    ... procedures ...
ods destination close;
```

where *URL* is a local file, or a location using the FTP or HTTP protocols. A fileref can also be used.

Terms

property
the name of the attribute to be styled (see **Common Properties**).

value
what the property should be set to (*see* **Common Values**).

selector
the context within the document where the style properties should be applied (*see* **Selector Types**).

combinator
an operator used between selectors to create more complex selectors that depend on sibling/descendant relationships in the document.

Combinator	Description
(*space*)	Descendant combinator
>	Direct descendent combinator
~	General sibling combinator
+	Adjacent sibling combinator

Common Values

lengths
a numeric value followed by one of the following units of measure:

em	current font size
ex	height of the ‘x’ character
in	inches
cm	centimeters (2.54cm = 1inch)
mm	millimeters (25.4mm = 1inch)
pt	points (72pts = 1 inch)
pc	picas (6picas = 1inch)
px	pixels

percentages
numeric value followed by %. Corresponds to percentage of font size, width, or height depending on context.

URLs
reference to an external resource.

```
url("url-specification")
```

colors
keyword or numerical value that specifies a color. Numerical values are as follows:

hex	#rrggbb (each component is 00-ff)

rgb	rgb(0-255, 0-255, 0-255)
	rgb(0-100%, 0-100%, 0-100%)

rgba	rgba(0-255, 0-255, 0-255, 0-1.0)
	rgba(0-100%, 0-100%, 0-100%, 0-1.0)

hsl	hsl(0-360, 0-100%, 0-100%)
hsla	hsla(0-360, 0-100%, 0-100%, 0-1.0)

strings
characters within either single or double quotation marks.

keywords
known identifier specific to a property.

Common Properties

background-color: *color*
background-image: *URL*
background: < *color* > < *URL* >
specifies background attributes.

border-*side*-color: *color*
border-color: *color* {1,4}
specifies border color where *side* is top, right, bottom, or left.

border-*side*-style: solid | double | none
border-style: solid | double | none {1,4}
specifies border style where *side* is top, right, bottom, or left.

border-*side*-width: *length*
border-width: *length* {1,4}
specifies border width where *side* is top, right, bottom, or left.

border-spacing: *length*
specifies the space between table cells.

color: *color*
specifies the text color.

font-family: *font-name-1,…, font-name-n*
font-size: *length* | *percentage*
font-style: roman | italic
font-weight: normal | bold
font: < *style* > < *weight* > *size family*
specifies font attributes.

padding-*side*: *length* | *percentage*
padding: *length* | *percentage* {1,4}
specifies padding where *side* is top, right, bottom, or left.

Selector Types

All selector types below can be combined to form more complex selectors.

element
selects elements based on the tag name, such as body, table, tr, td. The universal selector (*) matches any tag name.

```
table
```

class
selects elements based on the class= attribute, such as header, rowheader, etc.

```
.header
```

id
selects elements based on the id= attribute.

```
#IDX
```

attribute
selects elements based on attribute names and values.

```
[class='Header']
```

Valid attribute matching operators are:

=	full match
^=	match beginning
=$	match ending
***=**	match any substring
~=	match space separated word

pseudo-class
selects elements based on element relationships and behaviors.

```
:first-child
:first-of-type
:nth-child(even|odd|an+b)
:nth-of-type(even|odd|an+b)
:not(selector)
```