# 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 |

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For complete information, refer to the Base SAS® 9.4 documentation at http://support.sas.com/v9doc


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SAS® 9

# 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)
```