ODS DOCUMENT and PROC DOCUMENT Tip Sheet

ENTRY MANAGEMENT STATEMENTS

- \texttt{copy}\texttt{ path-1, \ldots, path-m\ to\ path-n};
  - Copies \texttt{path-1, \ldots, path-m}\ to\ \texttt{path-n}.
- \texttt{move}\texttt{ path-1, \ldots, path-m\ to\ path-n};
  - Moves \texttt{path-1, \ldots, path-m}\ to\ \texttt{path-n}.
- \texttt{make}\texttt{ path-1, \ldots, path-n};
  - Creates new directories named \texttt{path-1, \ldots, path-n}.
- \texttt{import}\texttt{ data=data-set-name\ to\ path};
  - Imports data set, \texttt{data-set-name}, to\ \texttt{path}.
- \texttt{import}\texttt{ grseg=grseg-name\ to\ path};
  - Imports data set, \texttt{grseg-name}, to\ \texttt{path}, respectively.
- \texttt{rename}\texttt{ path-1\ to\ \ldots, path-n};
  - Renames \texttt{path-1\ to\ \ldots, path-n}.
- \texttt{setlabel}\texttt{ path-1\ \ldots, path-n};
  - Sets the label of \texttt{path-1\ \ldots, path-n}.
- \texttt{delete}\texttt{ path-1, \ldots, path-n};
  - Deletes \texttt{path-1, \ldots, path-n}.
- \texttt{obtitle}\texttt{ path-1\ \ldots, path-n};
  - Sets the title of \texttt{path-1\ \ldots, path-n}.
- \texttt{obnote}\texttt{ path-1\ \ldots, path-n};
  - Sets the note of \texttt{path-1\ \ldots, path-n}.
- \texttt{obfoot}\texttt{ path-1\ \ldots, path-n};
  - Sets the footnote of \texttt{path-1\ \ldots, path-n}.
- \texttt{obpage}\texttt{ path</after</delete>};
  - Controls page breaks. The \texttt{after} option controls page breaks after\ \texttt{path}. The \texttt{delete} option deletes page breaks from\ \texttt{path}.

Example

- Create a new document:
  \texttt{ods document name=mydocument\ write};
- Run procedures:
  \texttt{proc contents data=sashelp.class\ ; run;}
- Close the document destination:
  \texttt{ods document close};
- Modify and replay the document:
  \texttt{proc document name=mydocument\ ;
    * List the document to see what paths exist;
    list / levels=all; run;
    * Move the table we want to the top level, remove titles, and set a new label;
      move \Contents\DataSet\Variables\ to\ \Conten ts; setlabel \Variables\ "Variable Info";
      obitle Variables;
      obnote Variables;
      run;
    * Remove tables and directories we don't need;
      delete \Contents; run;
    * Import the dataset as a table and set a new label;
      import data=sashelp.class to Class;
      setlabel Class "Student Statistics";
      run;
    * List the document to verify changes;
      list / levels=all; run;
    * Open the PDF destination;
      ods pdf;
    * Replay table labeled "% Statistics";
      replay (where=(_label_ like '% Statistics')); run;
    * Close the PDF destination;
      ods pdf close;
  quit;

ODS DOCUMENT and PROC DOCUMENT 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.

The ODS DOCUMENT destination allows you to store a report's components in order to modify and replay them using PROC DOCUMENT. This combination of tools allows you to customize your reports far more than using ODS options and statements alone. This tip sheet presents the most common statements and options used in creating, modifying, and replaying ODS documents.
Output Objects
Output objects include tables, graphs, notes, and equations. In the case of tables, the output object consists of the data and a template name.

ods trace on;
Displays information about output objects as they are created. This information includes the name of the object, the name of the template, labels, paths, and label paths.

context
The context of an output object is a set of attributes that are attached to the output object. The parts of the output object context that come before the output object are: before page break, titles, subtitles, bygroup, and before notes. The parts of the output object context that come after the output object are: afternotes, footnotes, and after page break.

Content of a Document
The content of the document includes: output object, the output object context, and the output object hierarchy.

The content of the document does not include: proc options, system options, ODS options, graph options, GRSEGs, and external graph customizations.

Documents Window
Entering odsdocuments into the command bar opens the Documents window, where you can view and edit the hierarchy and replay output objects. Right-clicking and choosing Properties displays information about the output object such as: type, name, description, template, the document that the output object belongs to, path in the hierarchy, file size, creation date and time, and last modified date and time.

Variable Description

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>Name of the item</td>
</tr>
<tr>
<td>path</td>
<td>Path of the item</td>
</tr>
<tr>
<td>label</td>
<td>Label of the item</td>
</tr>
<tr>
<td>labelpath</td>
<td>Labels of all entries in path</td>
</tr>
<tr>
<td>type</td>
<td>Type of the item</td>
</tr>
<tr>
<td>seqno</td>
<td>Sequence number of the item</td>
</tr>
<tr>
<td>cdate</td>
<td>Creation date of the item</td>
</tr>
<tr>
<td>mdate</td>
<td>Modification date of the item</td>
</tr>
<tr>
<td>ctime</td>
<td>Creation time of the item</td>
</tr>
<tr>
<td>mttime</td>
<td>Modification time of the item</td>
</tr>
<tr>
<td>cdatetimet</td>
<td>Creation date-time of the item</td>
</tr>
<tr>
<td>mdatetimet</td>
<td>Modification date-time of the item</td>
</tr>
<tr>
<td>variable</td>
<td>BY variable</td>
</tr>
</tbody>
</table>

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**Document Paths**
Each output object has a path associated with it that includes the directory hierarchy, much like in a computer file system. For example:

```
\Directory-1\n...\Directory-n\n\Object\n```

Each segment in the path, separated by backslashes (/), consists of a name (e.g., Directory-1, Directory-n, Object) as well as a sequence number (e.g., #n). Sequence numbers are used to ensure that each directory and object is uniquely addressable.

A path that consists only of a backslash represents the root directory.

A caret (^) in a path indicates the current directory. A double caret (^^) indicates one directory up.

WHERE Clauses
Document paths can be followed by a WHERE clause to further subset the objects matched by a path. The general form of WHERE clause usage is shown below.

```
document-path (where= (where-exp) )
```

Variables available in a WHERE clause are listed in the following table.

**Creating a Document**
- ods document name=document-name;
- ... procedure code ...
- ods document close;

`document-name` is the name of a document with an optional SAS® library name.

An access option can be applied to the document, `document-name`, by appending one of the following, in parentheses, to `document-name`.

**write**
Creates a new document. A document is overwritten if it already exists.

**update**
Creates a new document. A document is appended to if it already exists.

**Replaying a Document**
- proc document name=document-name;
- replay <path-1, ... path-n> /levels=n; run;

**replay**
Replays entire contents of document, `document-name`, to all open ODS destinations.

**replay path-1, ..., path-n;**
Replays only specified paths, `path-1`, ..., `path-n`, to all open ODS destinations.

**replay / levels=n;**
Replays all output objects in `document-name`, within `n` levels of directories, to all open ODS destinations.

**Document Management Statements**
- dir;
  - Displays the path of the current directory.
- dir path;
  - Changes the current directory to `path`.
- list <option(s)>;
- list path-1, ... path-n <option(s)>;
  - Lists the content of the current directory or `path-1`, ..., `path-n`, respectively. The following options are available.

**Navigation Statements**
- bygroups | Displays BY variables
- details | Displays verbose information
- levels=n | List `n` or all directory levels, respectively
- order=... | Sort output by alpha, date, or insert