

Module 9: Tables

1.1 State of Minnesota: Accessible PDF Document Training



State of Minnesota Accessible PDF Document Training

Module 9: Tables

This course has no captions because the slide text provides the full transcript.

Select the Next button on the top right of the screen to begin.

1.3 About this Module

About this Module

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In this module, you will learn how to:

- Tell the difference between simple and complex tables
- Identify the four kinds of table tags
- Use the Table Editor
- Set column and row scope
- Fix tables that span multiple pages
- Fix incorrect header structure
- Fix tables with incorrect tags



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1.4 Simple and Complex Tables

Simple and Complex Tables

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A	B	C	D	E
1				
2				
3				

A	2028		2030	
	B	C	D	E
1				
2				
3				

There are two kinds of tables: simple and complex.

Simple tables:

- Have no merged or split cells.
- Have the same number of columns and rows throughout the table.
- Are typically easier to interpret with assistive technology.

Complex tables:

- Have merged or split cells, or have an irregular structure.
- May have two or more layers of headers.
- May be harder to understand using screen readers and refreshable braille displays.

This module focuses on remediating simple tables. Remediating complex tables requires advanced remediation skills and is not covered in this training. For further information, contact your agency's [digital accessibility coordinator](#).

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1.5 Table Tags

Table Tags

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Table

TR →	TH	TH	TH	TH
TR →	TH	TD	TD	TD
TR →	TH	TD	TD	TD

Properly tagged tables use these tags:

- **<Table>**: Contains the tags for the table. Every table has one **<Table>** tag.
- **<TR>** Table Row: One **<TR>** table row tag for each row.
- **<TH>** Table Header: Header cells that define a column or row.
- **<TD>** Table Data: Data cells within the table.

All tables must have column headers. This allows assistive technology to define the relationship between the header and data cells. Row headers are optional.

You may see a **<P>** paragraph tag inside **<TH>** table header and **<TD>** table data cells. That **<P>** paragraph tag contains the text inside the cell. This is okay and can be left in place.

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1.6 Table Tag Layout

Table Tag Layout

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Let's look at how tags are structured within the tag tree. The image on the slide shows the following layout:

- **<Table>**: This is the top-level tag. All content in the table is contained within this tag.
- **<TR>** Table Row: Every row has one **<TR>** table row tag inside the **<Table>** tag.
- **<TH>** Table Header: The **<TH>** table header tags are inside the **<TR>** table row tags. There is one **<TH>** table header tag for each header cell (column or row).
- **<TD>** Table Data: The **<TD>** table data tags are also in the **<TR>** table row tags. There is one **<TD>** table data tag for each data cell.

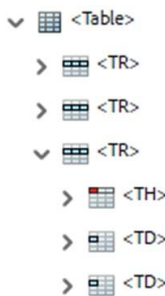


Table Tag Layout

Let's look at how tags are structured within the tag tree. The image on the slide shows the following layout:

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1.7 Example of a Properly Tagged Table

Example of a Properly Tagged Table

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Class	Date	Time
MS Word	Jan 12	1:00
PDF	Feb 3	9:00

The image on this slide shows a properly tagged table. Compare the tag structure in the tag tree to the table.

The tag tree shows one **<TR>** table row tag for each table row, with **<TH>** table header tags for header cells and **<TD>** table data tags for data cells.

<Table>

<TR>

<TH>

Class

<TH>

Date

<TH>

Time

<TR>

<TH>

MS Word

<TD>

Jan 12

<TD>

1:00

<TR>

Example of a Properly Tagged Table

The image on this slide shows a properly tagged table. Compare the tag structure in the tag tree to the table.

The tag tree shows one **<TR>** table row tag for each table row, with **<TH>** table header tags for header cells and **<TD>** table data tags for data cells.

1.8 Table Tags – Blank Cells

Table Tags – Blank Cells

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	Dog	Cat
Name	Duke	Ivy
Color	Brown	Orange

<Table>

<TR>

<TH>

<TH>

Dog

<TH>

<TH>

<TR>

<TR>

Blank cells can make table structure hard to understand by assistive technology.

If a cell is blank and you cannot change the source document, keep a placeholder cell tag for that position. Use the appropriate **<TH>** table header or **<TD>** table data tag.

The image on this slide shows a table with a blank header cell. This header cell has a matching **<TH>** table header tag in the tag tree. The **<TH>** table header tag acts as a placeholder. It may contain an empty text container, or it may have no text container.

Table Tags – Blank Cells

Blank cells can make table structure hard to understand by assistive technology.

If a cell is blank and you cannot change the source document, keep a placeholder cell tag for that position. Use the appropriate **<TH>** table header or **<TD>** table data tag.

The image on this slide shows a table with a blank header cell. This header cell has a matching **<TH>** table header tag in the tag tree. The **<TH>** table header tag acts as a placeholder. It may contain an empty text container, or it may have no text container.

1.9 The Table Editor

The Table Editor

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<Table>

New Tag...

Autotag document

Increase font size(y) Ctrl+Plus

Cut

Delete Tag

Delete Empty Tags

Reading Order (z)

Table Editor (q)

Find Tag from Selection

Create Tag from Selection

Class	Date	Time
MS Word	Jan 12	1:00
PDF	Feb 3	9:00

The **Table Editor** shows the table layout and identifies which cells are table headers (<TH>) and which are table data (<TD>).

To open the **Table Editor**:

1. Right-click the <Table> tag.
2. Select **Table Editor** (or press Shift + F10, Q).

The **Table Editor** displays a colored overlay on the table. **Note:** The overlay might not line up perfectly with the visible cell borders.

In the image on the slide, pink cells are table header cells (<TH>) and gray cells are table data cells (<TD>). Your colors may look different depending on your settings.

The Table Editor

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1.10 Set Column and Row Scope, 1 of 2

Set Column and Row Scope, 1 of 2

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Class	Time
MS Word	:00
PDF	:00

Table Cell Properties.
Table Editor Options...
Auto Generate Header Cell IDs

Scope tells assistive technology (AT) whether a header cell belongs to a row or a column. This helps the AT connect each data cell to the correct header cell.

Every header cell must have its scope set to either Column or Row. Column headers are at the top of the table. Row headers are in the first column.

To set scope:

1. Open the **Table Editor** and select the header cells.
2. Right-click and choose **Table Cell Properties** (Shift + F10, P).

Set Column and Row Scope, Slide 1 of 2

Scope tells assistive technology (AT) whether a header cell belongs to a row or a column. This helps the AT connect each data cell to the correct header cell.

Every header cell must have its scope set to either Column or Row. Column headers are at the top of the table. Row headers are in the first column.

To set scope:

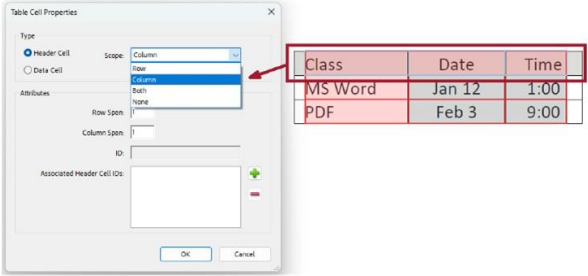
1. Open the Table Editor and select the header cells.
2. Right-click and choose Table Cell Properties (Shift + F10, P).

1.11 Set Column and Row Scope, 2 of 2

Set Column and Row Scope, 2 of 2

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3. Set **Type** to **Header Cell**.

4. Set **Scope**: to **Row** or **Column**.

In the image on this slide, “Date” has a scope of Column and “PDF” has a scope of Row. Always set scope to header cells so assistive technology can tell which data cells they label.

Note: Always select **Row** or **Column**. Do not use **Both** or **None**.

Set Column and Row Scope, Slide 2 of 2

3. Set Type to Header Cell.
4. Set Scope: to Row or Column.

In the image on this slide, “Date” has a scope of Column and “PDF” has a scope of Row. Always set scope to header cells so assistive technology can tell which data cells they label.

Note: Always select Row or Column. Do not use Both or None.

1.12 Tables Spanning Multiple Pages, 1 of 4

Tables Spanning Multiple Pages, 1 of 4

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A table may span two or more pages. When this happens, the table may have more than one **<Table>** tag in the tag tree. This must be fixed.

Merge all **<TR>** table row tags from the second **<Table>** tag under the first **<Table>** tag.

To merge two tables:

1. Open the first **<Table>** tag so you can see the **<TR>** table row tags.
2. Open the second **<Table>** tag.
3. Select all **<TR>** table row tags from the second **<Table>** tag.

<Table>

<TR>

<TR>

<TR>

<TR>

<TR>

<Table>

<TR>

<TR>

<TR>

<TR>

<TR>

<P>

Tables Spanning Multiple Pages, Slide 1 of 4

A table may span two or more pages. When this happens, the table may have more than one **<Table>** tag in the tag tree. This must be fixed.

Merge all **<TR>** table row tags from the second **<Table>** tag under the first **<Table>** tag.

To merge two tables:

1. Open the first **<Table>** tag so you can see the **<TR>** table row tags.
2. Open the second **<Table>** tag.
3. Select all **<TR>** table row tags from the second **<Table>** table tag.

1.13 Tables Spanning Multiple Pages, 2 of 4

Tables Spanning Multiple Pages, 2 of 4

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4. Move the second set of table row tags below the last **<TR>** table row tag in the first table.

- Mouse: drag the selected **<TR>** table row tags into position.
- Keyboard: Cut (Ctrl + X), then Paste (Ctrl + V) in the correct location.

5. Delete the empty **<Table>** tag.

Repeat these instructions if there are more than two table tags for one table.

▼  **<Table>**

>  **<TR>**

>  **<TR>**

>  **<TR>**

>  **<TR>**

>  **<TR>**

>  **<TR>**

>  **<TR>**

>  **<P>**

Tables Spanning Multiple Pages, Slide 2 of 4

4. Move the second set of table row tags below the last **<TR>** table row tag in the first table.
 - Mouse: drag the selected **<TR>** table row tags into position.
 - Keyboard: Cut (Ctrl + X), then Paste (Ctrl + V) in the correct location.
5. Delete the empty **<Table>** tag.

Repeat these instructions if there are more than two table tags for one table.

1.14 Tables Spanning Multiple Pages, 3 of 4

Tables Spanning Multiple Pages, 3 of 4

003432	Capitol Complex Trade Shp Supv	16E	216	19K	1	35.38	51.28	73,873	107,073
000147	Carpenter Supervisor	16E	216	18D	2	34.11	38.16	71,222	79,678
002968	Central Mail Supervisor	16E	210	14K	1	29.33	42.61	51,241	88,970

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Remove this table row

JOB CODE	JOB TITLE	GRID	BARG	COMP	PROGRESS	MINIMUM HOURLY	MAXIMUM HOURLY	MINIMUM ANNUAL	MAXIMUM ANNUAL
000640	Chemist Supervisor	16E	210	15K	1	35.38	51.28	73,873	107,073
000407	Chemistry Laboratory Director	16E	216	24K	1	42.61	61.14	88,970	127,660
003487	Chief Dep State Fire Marshal	16E	216	22K	1	39.54	56.94	82,560	118,891

Tables that span multiple pages should only have one column header row identified in the tag tree at the top of the first page. Remove any repeated <TH> table header tags that start on the second and subsequent pages.

Remove the extra <TR> table row tag by selecting the tag and then doing one of the following:

- Keyboard: Use the **Delete** key.
- Mouse: Select the tag, then select **Background/Artifact** on the **Reading Order** tool.

Tables Spanning Multiple Pages, Slide 3 of 4

Tables that span multiple pages should only have one column header row identified in the tag tree at the top of the first page. Remove any repeated <TH> table header tags that start on the second and subsequent pages.

Remove the extra <TR> table row tag by selecting the tag and then doing one of the following:

- Keyboard: Use the Delete key.
- Mouse: Select the tag, then select Background/Artifact on the Reading Order tool.

1.15 Tables Spanning Multiple Pages, 4 of 4

Tables Spanning Multiple Pages, 4 of 4 < PREV NEXT >

000147	Carpenter Supervisor	16E	216	180	2	34.11	38.16	71,222	79,678
002968	Central Mail Supervisor	16E	216	24K	1	19.33	12.61	51,241	88,970

115

This row (starting on page 2) has no tag

JOB CODE	JOB TITLE	GRID	BARG	COMP	PROGRESS	MINIMUM HOURLY	MAXIMUM HOURLY	MINIMUM ANNUAL	MAXIMUM ANNUAL
000640	Chemist Supervisor	16E	216	24K	1	15.30	11.20	2,573	107,073
000407	Chemistry Laboratory Director	16E	216	24K	1	42.61	61.14	88,970	127,660

This slide shows the correct tagging structure for a table that spans two pages.

- The repeated **<TR>** table row tag containing the column headers at the top of page 2 has been removed.
- The **<TR>** table row tags continue in order from the last data row on page 1 to the first data row on page 2.

Tables Spanning Multiple Pages, Slide 4 of 4

This slide shows the correct tagging structure for a table that spans two pages.

- The repeated **<TR>** table row tag containing the column headers at the top of page 2 has been removed.
- The **<TR>** table row tags continue in order from the last data row on page 1 to the first data row on page 2.

1.16 Incorrectly Tagged Tables

Incorrectly Tagged Tables

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Class	Date	Time
MS Word	Jan 12	1:00
PDF	Feb 3	9:00

<Table>

<tr>

>

<td>

>

<td>

>

<td>

>

</tr>

<tr>

>

<td>

>

<td>

>

<td>

>

</tr>

Sometimes a document does not convert to PDF properly. The table tags may not be correct. Common problems include:

- Incorrectly tagged header and data cells (<TH> table header vs. <TD> table data).
- Missing cell tags (<TH> table header or <TD> table data)
- More than one table cell grouped within a single <TH> table header or <TD> table data tag.

Learn how to fix these errors in the following slides.

Incorrectly Tagged Tables

Sometimes a document does not convert to PDF properly. The table tags may not be correct. Common problems include:

- Incorrectly tagged header and data cells (<TH> table header vs. <TD> table data).
- Missing cell tags (<TH> table header or <TD> table data).
- More than one table cell grouped within a single <TH> table header or <TD> table data tag.

Learn how to fix these errors in the following slides.

1.17 Incorrect Header Structure

Incorrect Header Structure

< PREVIOUS > NEXT >

	Dog	Cat	Bird
Name	Duke	Milo	Polly
Color	Brown	Orange	Yellow

<Table>

<TR>

>

<TD>

>

<TD>

>

<TD>

>

<TD>

>

<TR>

Header cells may be tagged incorrectly. For example, column headers may be tagged as `<TD>` table data instead of `<TH>` table header.

On the next slide, you'll learn how to change incorrectly tagged header cells from `<TD>` table data to `<TH>` table header.

Incorrect Header Structure

Header cells may be tagged incorrectly. For example, column headers may be tagged as `<TD>` table data instead of `<TH>` table header.

On the next slide, you'll learn how to change incorrectly tagged header cells from `<TD>` table data to `<TH>` table header.

1.18 Change Header Structure

Change Header Structure

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<TR>

>

<TH>

>

<TD>

>

<TD>

>

<TD>

<TH>

>

<TD>

>

<TD>

Properties...

	Dog
Name	Duke
Color	Brown

Table Cell Properties

Type

☒ Header Cell

☐ Data Cell

Sc

There are three methods to change a `<TD>` table data cell to a `<TH>` table header cell:

- Edit the tag within the tag tree.
- Use the tag's **Properties** menu.
- Change the tag in the **Table Editor**.

Refer to Module 4 to review editing tags.

Change Header Structure

There are three methods to change a `<TD>` table data cell to a `<TH>` table header cell:

- Edit the tag within the tag tree.
- Use the tag's Properties menu.
- Change the tag in the Table Editor.

Refer to Module 4 to review editing tags.

1.19 Fix Incorrectly Tagged Tables

Fix Incorrectly Tagged Tables

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Reading Order

Draw a rectangle around the content then click one of the buttons below:

Text/Paragraph

Figure

Form Field

Figure/Caption

Heading 1

Heading 4

Table

Heading 2

Heading 5

Cell

Heading 3

Heading 6

Formula

Reference (q)

Note (z)

Background/Artifact

date	time
Jan 12	1:00
Feb 3	9:00

> <TD>

> <Table>

> <TR>

> <TR>

> <TD>

> <TD>

> <TR>

Add a missing header or data cell:

1. Open the **Reading Order** tool.
2. Highlight the table cell in the document. In the **Reading Order** tool, choose **Cell**.
3. In the **tag tree**, check where the new **<TD>** table data tag appears. It may be outside the **<Table>**.
4. Move the new **<TD>** table data tag to the correct location within the appropriate **<TR>** table row tag.
5. Check to make sure header and data cells are tagged appropriately (**<TH>** table header or **<TD>** table data).

Fix Incorrectly Tagged Tables

Add a missing header or data cell:

1. Open the Reading Order tool.
2. Highlight the table cell in the document. In the Reading Order tool, choose Cell.
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1.22 Practice Document

Practice Document

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You're now ready to apply what you've learned.

Download and follow the instructions in the [Module 9 Practice Document](#).

A **Module 9 Remediated Practice Document** is also available under the **Resources** tab above for you to check your work.

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1.23 Summary

Summary

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- Tell the difference between simple and complex tables
- Identify the four kinds of table tags
- Use the Table Editor
- Set column and row scope
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Summary

In this module, you learned how to:

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- Fix incorrect header structure
- Fix tables with incorrect tags

1.24 Module 9 Complete

Module 9 Complete



Congratulations!

You have completed **Module 9: Tables**.

The Office of Accessibility would like to thank you for your hard work.

Click the **Exit** button to continue with the course.

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EXIT

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