# Creating Accessible Microsoft Excel Spreadsheets

Microsoft Excel is one of the most commonly used spreadsheet applications. However Excel brings unique challenges for building accessible workbooks. Some users may not be able to access these files using a mouse and instead rely on programs such as screen readers or other assistive technologies such as braille displays.

## Naming Excel Workbooks

Name workbooks with file names that convey information about the contents.

Examples of poor file names:

* Training
* Sales

Examples of meaningful, accessible file names:

* ExcelTrainingRoster\_27July2016
* Daily\_Computer\_Sales\_June2016

## Naming Workbook Sheets

Information may be separated into separate sheets within the same workbook. This separation allows the data to be viewed as chunks of related information. For example, suppose your workbook consolidates sales figures for 2017. You, as the creator of the workbook, find it useful to display each month’s figures on a separate sheet. To aid your users in navigating to the information they need, name each sheet in the workbook with a unique, concise, meaningful name that describes the sheet’s contents, such as “January\_2017\_Sales”.

### To name a workbook sheet,

1. Click the Sheet1 at the bottom of the workbook window and type in a descriptive name.
2. Hit the Return/Enter key on the keyboard.

-or-

1. Right-click Sheet1.
2. Select Rename from the menu.
3. Type in a descriptive name.
4. Hit the Return/Enter key on the keyboard.

The new sheet name now appears at the bottom of the workbook window.

## Creating More Accessible Tables

Tables are difficult for screen readers to render tables to convey effectively the relationship between information in rows and columns. Help screen reader users understand these relationships by describing the table’s contents in alternative text (also known as alt text). Descriptive alt text helps users effectively scan the table’s data and decide whether to interact with the table.

Keep tables as simple as possible. Tables that are more complex than simple columns and rows, such as those with nested cells, can only be displayed accessibly using HTML or PDF.  If you have more complex tables but prefer to display them in Excel, consider if the information could be separated into simpler tables on multiple sheets.

Tables should be defined in three ways:

* As the total range of cells comprising the table. Screen readers can relay this information to the user, providing details of the size and location of the table.
* The row containing the headers. This header row helps screen reader users understand the table’s data relationships.
* Column names with meaningful information about the column contents.

## Defining a Table

1. From the Insert ribbon or pull-down menu, click Table. The Create Table box appears.
2. Indicate the location of the data that will be included in the table by clicking and dragging from the first cell to last cell of the data range or by typing the range in the input area. ($ indicates that this is a fixed location in which data can be found. Make sure you retain the $.) You can indicate this location either before or after the data has been added.
3. The data in this table will be located in cells A1 through K21. This range is surrounded by green dashes.
4. Click the checkbox indicating My table has headers.
5. Click OK.
6. The Table ribbon now has a check in the Header Row checkbox.
   1. By default the Filter Button checkbox is also checked once the table has been defined. The Filter Button is the arrow associated with each column heading. The button is used to quickly find information in the column.
7. Deselecting the checkbox removes the Filter Button, which can be toggled on/off as needed.
8. From the Table Ribbon, click the Table Name: field.
9. Enter a meaningful name for the table.
   1. Note: Table names must
      1. Begin with a letter or underscore
      2. Not include spaces or other invalid characters
      3. Not conflict with built-in Excel names or other object names in the workbook
10. Once you have typed the Table Name, click the Return/Enter key.

## Naming Column Headings

1. Click in a cell labeled as a Column Heading, such as Column1 or Column2, etc.
2. Type a meaningful name that describes the data that the column contains.
3. Once the name has been entered, click the Return/Enter key.

## Describing Table in Alt Text

1. To add Alt Text to a table, select the table or click a cell within the defined table.
2. Right click on the selection to access the menu.
3. From the menu mouse over Table and select Alternate Text… from the submenu.
4. From the Alternative Text pop-up, enter a Title for the table in the Title input area.
5. The Title of the table should be short but describe the table’s contents. This information allows screen reader users to decide whether to read the entire table.
6. Add more information about the table’s data in the Description box to provide more detailed information.
7. Once you have entered the Alternative Text information, click OK.

## Charts and Graphs in Excel

Screen reader software cannot read data included in Excel’s charts and graphs. Although alt text may be added to the chart object, screen reader software cannot access this information. Make certain the information used to build the chart is clearly structured, and provide it as an alternative means of accessing the data. Preferably, position this data table before the chart.

## Alternative Text Descriptions for Images

Images should be described using alternative text (alt text) if they contribute information to the document and are not merely decorative.

If an image is decorative, the image should be tagged as such. If no alt text is provided, the screen reader will note the image to the user but will give no information about it. The user will then know that a graphic exists on the page but is given no clue as to whether it provides information or not, causing confusion.

### Adding Alternative Text to Images

1. Insert the image in Excel.
2. Select the image.
3. From the Format Picture Ribbon, select Format Pane.  
   -or-
4. Right click the image and select Format Picture.
5. In the Format Pane, choose the Size and Properties button.
6. Then select Alt Text.
7. In the Alt Text Title box, add a title that is meaningful, not a cryptic file name. However, this area provides information that is not read by screen readers.
8. Use the Description box to input a detailed description of the image that will be read by screen reader software.
9. You may now close the Format Picture frame.

## Links

Give links names that can be understood out of context of the other content on the page.

Avoid the use of “Click Here” or “More Information” as link names. These names give the user no information about the destination of the link.

### Adding and Naming Links

1. Select and copy the link you wish to add to Excel.
2. Click the cell destination.
3. Right click in the cell.
4. From the menu, select Hyperlink.
5. The Insert Hyperlink box opens.
6. Paste the copied link into the Address: field.
7. Select the Text to Display box.
8. Type a concise, meaningful name for the link’s destination.
9. Click the Screen Tip button.
10. In the ScreenTip text: box input a name that will appear on mouse-over.
11. Click OK.
12. You will return to the Edit Hyperlink dialog box.
13. Click OK.

## Other Considerations

* Keep font size large enough to be easily readable, at least 12 points.
* Make sure that the font color provides sufficient contrast to the document's background color.
* Do not use color or shapes as the only means of conveying information.
* Write clearly.
* Include transcripts and/or captions for any audio or video added.

## References

[Creating accessible Excel workbooks](https://support.office.com/en-us/article/Creating-accessible-Excel-workbooks-6cc05fc5-1314-48b5-8eb3-683e49b3e593?ui=en-US&rs=en-US&ad=US)