

Microsoft®

# Excel

Expert Certification Guide

## Lesson 1: Advanced Formatting

### Lesson Objectives

In this lesson, you will apply conditional formats, custom cell formats, and international formats, as well as use the +Body and +Heading fonts. Upon completion of this lesson, you will be able to:

- Use advanced conditional formatting.
- Manage conditional formatting rules.
- Create custom conditional formatting rules using formulas.
- Apply custom number, accounting, date, and time formats.
- Apply international formats to numeric and date/time data.
- Use international currency symbols.
- Configure the editing and display language.
- Understand +Body and +Heading fonts.

## Using Conditional Formatting

### Applying Advanced Conditional Formatting

#### Objective 2.3.1

You can use **conditional formatting** to change the appearance of a cell, depending on that cell's value. The cell **format** will change automatically when the cell value changes, triggering a different conditional formatting rule (Figure 1-1). This saves time for you and eliminates errors in having to make the format changes manually.

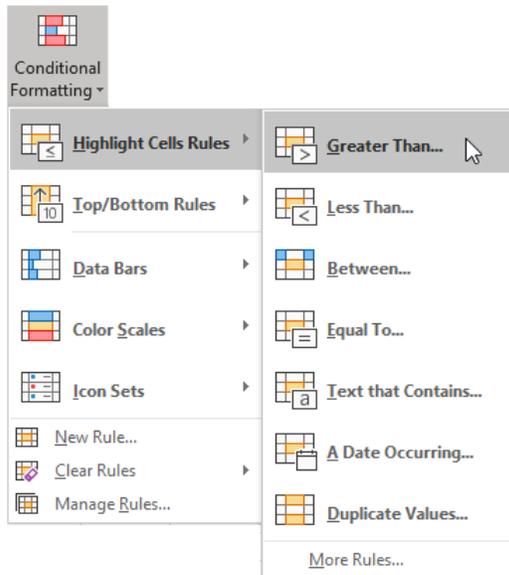


Figure 1-1: Conditional Formatting rules

The Excel courseware covered the topic of using the Ribbon to create conditional formats. The Ribbon method is easy to use and enables you to create the most frequently used conditional formats. Behind the scenes, the Ribbon method creates conditional formatting rules. You can also create these rules directly by using the New Formatting Rule dialog box (Figure 1-2). Click New Rule or More Rules in one of the Conditional Formatting drop-down menus to open the New Formatting Rule dialog box.

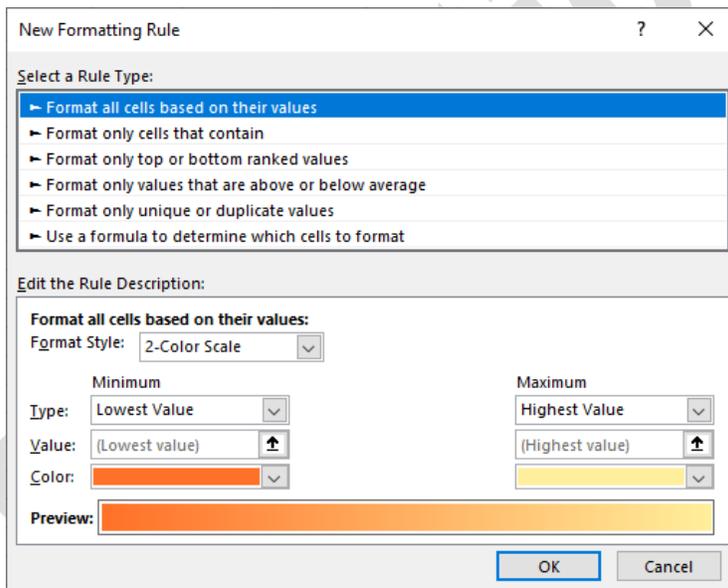


Figure 1-2: New Formatting Rule dialog box

The New Formatting Rule dialog box includes the following rule types in the *Select a Rule Type* list.

- Format all cells based on their values** – The main application of this rule is to display indicators that show how the values in a range of cells relate to each other. For example, you may want cells with the highest values to show in red, while the cells with the lowest values show in blue. Excel will choose gradient colors between the red and blue for all other cells with the data values in between the two extremes. You can choose one of four main types of indicators: a 2-color scale, a 3-color scale, a data bar, or an icon set. In addition, you can choose from several different types of icons for the icon set.

- **Format only cells that contain** – The most commonly-used rule, offering a wide variety of operators to select the cells to highlight, such as between, greater than, and equal to. All cells that meet that rule will be highlighted with the same formatting.
- **Format only top or bottom ranked values** – Apply a specific format to the cells with the highest or lowest values or percentile in a range of cells. For example, you can use this rule to identify the 10% of students with the highest-ranking scores in a course.
- **Format only values that are above or below average** – Apply a specific format to cells that are above or below the average of a range of cells. Excel allows you to choose from the mean average or various degrees of standard deviation from the mean average.
- **Format only unique or duplicate values** – Identify and apply a specific format to all cells within a range with duplicate or unique values.
- **Use a formula to determine which cells to format** – Enter a formula that evaluates as TRUE or FALSE to enable the conditional formatting for the cells within the range. This formula may reference another cell in the same worksheet, but not another worksheet or workbook.

A cell may have both a manual format as well as a conditional format applied to it. If a cell is not affected by a conditional format, the cell will use the manual format.

Formatting options include only the font styles (regular, bold, italics, or bold and italics), font colors, borders, and background fill patterns. You may not choose different font names or font sizes in a conditional format.

## Managing Conditional Formatting Rules

### Objective 2.3.3

All conditional formatting rules for a worksheet are displayed in the Rules Manager window. To get to the Rules Manager window, click Manage Rules in one of the drop-down menus. You can use the **Rules Manager** to create new rules, modify existing ones, and delete rules that are no longer needed.

You may apply multiple conditional formats to a range of cells at the same time. For example, one rule may be to display a certain color if the value is less than 3,000; another rule to display a different color if the value is between 3,000 and 10,000; and a third rule if the value is greater than 10,000. In this situation, the rules do not conflict with each other and one of them will be in effect at any given time.

## Learn to apply conditional formats to cells

In this exercise, you will review how to apply basic conditional cell formatting.

1. Open **New York Temperatures Basic Formatting.xlsx** located in the *3274 Exercise Files\StarterFiles* folder.

The New York Temperatures Basic Formatting worksheet shows the average monthly temperature for New York City from 2005 to 2020. You will create a conditional format using the Ribbon to set the fill color to blue for any cell that contains a temperature value of less than 32 degrees Fahrenheit (0 degrees Centigrade).

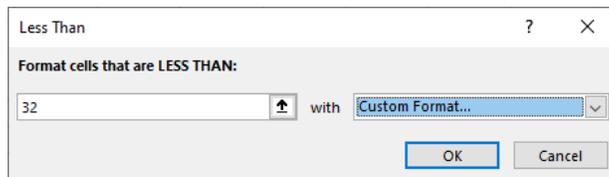
2. Select the cell range **B2:M17**.
3. On the Home tab, in the Styles group, click **Conditional Formatting**, then click **Highlight Cells Rules, Less Than**.

The Less Than dialog box opens with default values entered for you.

- In the Less Than dialog box, enter: **32** in the *Format cells that are LESS THAN* field, then click the drop-down arrow in the *with* list box and click **Custom Format**.

Because the Custom Format option was selected, the Format Cells dialog box opens.

- In the Format Cells dialog box, click the **Fill** tab, then click the **blue** standard color (bottom line, third from the right) and click **OK**.



- In the Less Than dialog box, click **OK**.

## Applying Custom Conditional Formatting Using a Formula

### Objective 2.3.2

If the predefined conditional formatting rules cannot provide what you are looking for, you can also create a customized one using a **formula**.

In Figure 1-4a, the formula `=A$1=$B$19` is used for a new conditional format on the cell range A1:M17, as shown in Figure 1-4b.

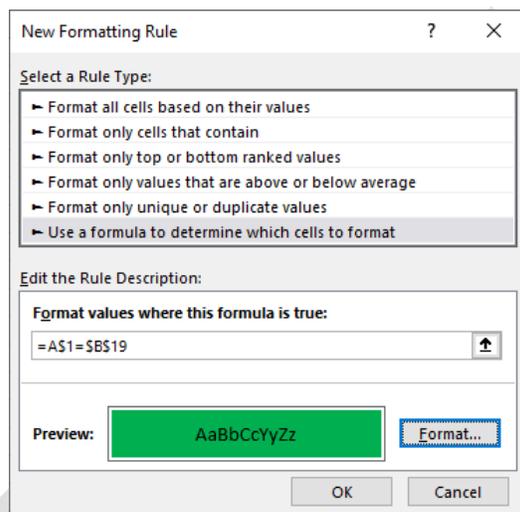


Figure 1-4a: New Formatting Rule – Using a formula

	A	B	C	D	E	F	G
1	Year	Jan	Feb	Mar	Apr	May	Jun
2	2005	31.3	37.3	47.2	51.0	63.5	71.3
3	2006	33.6	35.9	39.6	54.2	63.8	72.9
4	2007	39.9	40.6	44.1	56.1	60.7	71.4
5	2008	27.5	30.1	43.1	49.8	58.7	68.3
6	2009	24.7	35.0	43.5	53.6	65.2	71.2
7	2010	31.3	36.5	39.4	55.1	58.9	74.0
8	2011	40.9	35.7	43.1	55.7	63.1	71.0
9	2012	37.5	28.2	42.2	50.3	65.2	71.4
10	2013	36.5	35.8	42.6	54.9	60.1	74.0
11	2014	27.9	36.7	42.4	54.5	62.5	67.5
12	2015	32.5	33.1	48.2	57.9	65.3	74.7
13	2016	29.7	36.0	42.3	54.3	64.5	72.3
14	2017	37.3	40.9	50.9	54.8	65.1	71.0
15	2018	35.1	33.9	40.1	53.0	62.8	72.7
16	2019	28.7	31.7	37.7	52.3	64.0	72.5
17	2020	29.9	24.1	38.1	54.3	68.5	71.2
18							
19		Feb					

Figure 1-4b: Result of formatting rule on selected cell range

## Learn to customize conditional formatting using a formula

In this exercise, you will use a formula to apply conditional formatting.

- Open **New York Temperatures Formatting Formulas.xlsx** located in the *3274 Exercise Files\StarterFiles* folder, and save it as **My New York Temperatures Formatting Formulas.xlsx** in the *3274 Exercise Files\MyProjects* folder.

- Enter the following values into the worksheet:

Cell	Value
B19	<b>Feb</b>
C19	<b>2006</b>

Excel automatically formatted cell C19 using the same settings as the cells above containing numbers. You need to clear this formatting so that it shows as a year value without the decimal digits.

- Select cell **C19** again, then on the Home tab, in the Editing group, click **Clear**, and click **Clear Formats**.
- Select the cell range **A1:M17**.
- On the Home tab, in the Styles group, click **Conditional Formatting**, then click **New Rule**.
- In the New Formatting Rule dialog box, click **Use a formula to determine which cells to format** in the *Select a Rule Type* list.

## Using Custom Cell Formats

Formatting cells is a crucial activity because spreadsheets often contain large volumes of numeric information. Users can absorb the information much more quickly when the spreadsheet is visually readable by using a variety of fonts, colors, and sizes. The relevance and accuracy of the contents is an absolute necessity for spreadsheets, but poor presentation discourages users from paying attention.

In some cases, you may need to use special formats that are not one of these frequently-used cell formatting categories. For example, you may need special formatting for data such as dates, part numbers, phone numbers, and currencies (as you would in many European and Asian countries).

## Applying Custom Number Formats

### Objective 2.2.1

The Format Cells dialog box (Figure 1-5) includes several predefined custom formats in the Custom category.

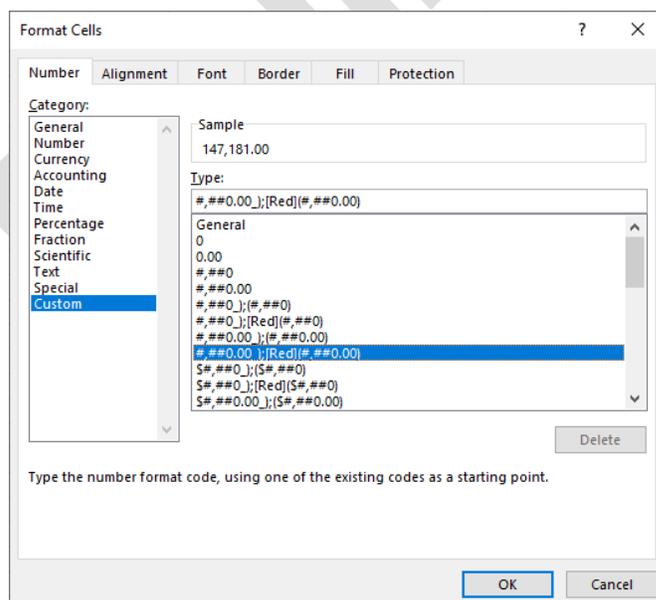


Figure 1-5: Format Cells dialog box – Custom category

You can also create your own custom number format, using the following specification:

*positive number format; negative number format; zero format; text format*

Notice that this format has four sections separated by semicolons. A custom format does not require all four sections; it can have as few as one section. If you specify only the first section, Excel will use this same format for all numbers (positive, negative, and zero). If you specify only the first two sections, Excel will use the positive number format for zero values as well as positive values and the format in the second section for negative numbers.

You can delete custom cell formats that you no longer need or have created by mistake. However, you cannot delete any of the built-in cell formats.

## Learn to create and use custom number formats

In this exercise, you will create and use custom number formats.

1. Open **Destination Profiles Numeric.xlsx** located in the *StarterFiles* folder, and save it as **My Destination Profiles Numeric.xlsx** in the *MyProjects* folder.
2. Select cells **B7:E8** and, on the Home tab, in the Number group, click the **Number Format** dialog box launcher. If necessary, select the **Number** tab.
3. In the *Category* section, click **Number**.
4. Reduce the *Decimal places* value to **0**, select **Use 1000 Separator (,)** to turn it on, and click **OK**.
5. Select cells **B13:E13**, then click the **Number Format** dialog box launcher in the Number group.
6. In the *Category* section, click **Custom**, and in the *Type* section, click **#,##0** (fourth from the top).  
Notice how the preview of the data changes in the Sample section of the dialog box when you select the custom format.
7. Click **OK**.

## Applying Custom Accounting Formats

### Objective 2.2.1

The Accounting format is intended for use with numbers that represent money or currencies. The Symbol list in the Format Cells dialog box (Figure 1-6) allows you to select from the many different currency symbols used around the world.

You can create custom accounting formats by combining the currency symbol with the custom number formatting described previously.

## Learn to create and use custom accounting formats

In this exercise, you will create and use custom accounting formats.

1. Open **Destination Profiles Accounting.xlsx** located in the *StarterFiles* folder, and save it as **My Destination Profiles Accounting.xlsx** in the *MyProjects* folder.
2. Select cells **B11:E11**, then on the Home tab, in the Number group, click the **Number Format** dialog box launcher.

3. In the *Category* section, select **Accounting**.
4. Click the **Symbol** drop-down arrow, then click **\$ English (United States)**.
5. In the *Category* section, select **Custom**.

The formatting code is much more complex because a specific currency symbol was selected in step 4.

6. Click **OK**.

## Applying Custom Date and Time Formats

### Objective 2.2.1

There are many more ways to format date and time values than you might expect. Excel provides the flexibility to accommodate almost all circumstances, as shown in Figure 1-7.

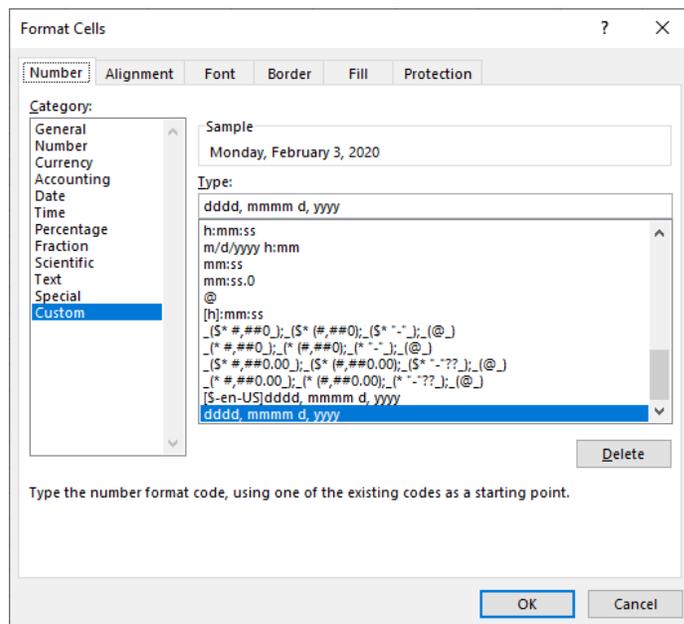


Figure 1-7: Format Cells dialog box – Custom category

## Learn to create and use custom date formats

In this exercise, you will create and use custom date formats.

1. Open **Age Calculator.xlsx** located in the *StarterFiles* folder, and save it as **My Age Calculator.xlsx** in the *MyProjects* folder.
2. In cell **B1**, enter your date of birth.
3. Select cells **B1:B2**. On the Home tab, in the Number group, click the **Number Format** dialog box launcher.
4. Select the **Number** tab. In the *Category* section, select **Custom**.

# Using International Formats

## Objective 1.3.1

Some types of data are displayed differently depending on which country is being represented. Examples include currency (or money), dates, and measurements such as temperature and weight. Some of this country-dependent data can be identified using ordinary text such as kg for kilograms or C for Celsius. Excel has special capabilities to handle the unique formatting requirements for currency and date values.

## Applying International Currency and Number Formats

### Objective 1.3.1

Most European countries in the European Union (EU) use the € symbol to identify the Euro as their recognized currency. Australia, Canada, USA, Mexico, and several other countries use the \$ symbol to identify the dollar or peso as their currency.

The currency format is set for all software on your computer through the Regional Settings of the Control Panel. Windows then determines the correct currency symbol to use with the selected region of the world. In addition, you can choose from a long list of currency symbols for other countries for your spreadsheet. The Symbol list in the Currency category of the Format Cells dialog box provides this list. Excel also ensures that the symbol position is correct when displaying the currency values.

## Learn to select different regional currency formats

In this exercise, you will select different regional currency formats.

1. Open **Consolidated Income Numeric.xlsx** located in the *StarterFiles* folder, and save it as **My Consolidated Income Numeric.xlsx** in the *MyProjects* folder.
2. Select cells **D5:D13**. On the Home tab, in the Number group, click the **Number Format** dialog box launcher.
3. If necessary, click the **Number** tab. In the *Category* section, select **Currency**.
4. Click the **Symbol** drop-down arrow, and then select **£ English (United Kingdom)**.
5. In the *Negative numbers* list box, select the option at the bottom (displays both negative sign and red font), then click **OK**.

## Inserting International Currency Symbols

### Objective 1.3.1

You can also manually insert the symbol for many of the most common international currencies as an individual text character. You may be able to find these symbols on the Insert tab, in the Symbols group, under Symbol. The currency symbols are listed under the Latin-1 Supplement subset (Figure 1-9a) or the Currency Symbols subset (Figure 1-9b).

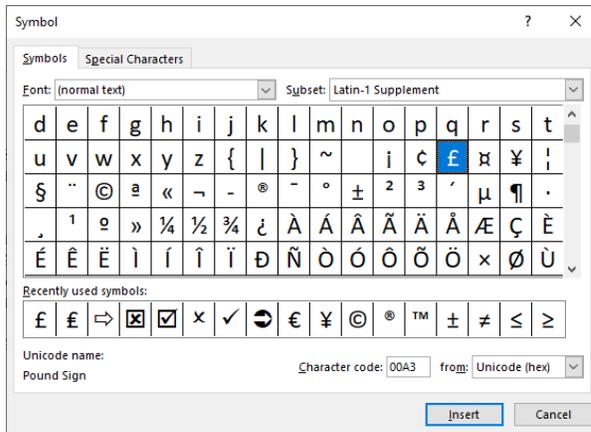


Figure 1-9a: Symbol dialog box – Latin-1 Supplement subset

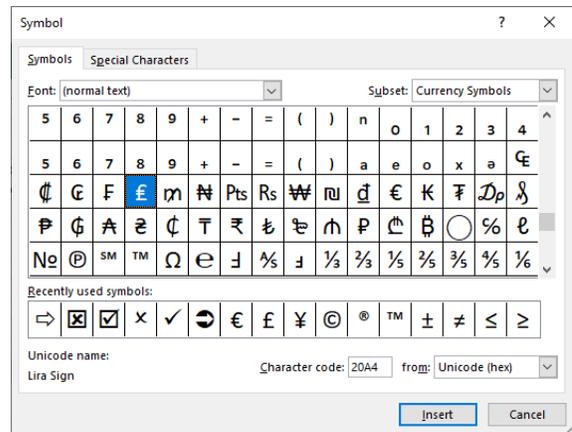


Figure 1-9b: Symbol dialog box – Currency Symbols subset

## Learn to insert a currency symbol as a text character

In this exercise, you will insert a currency symbol as a text character.

1. Open Consolidated Income Currency Symbols.xlsx located in the *StarterFiles* folder, and save it as My Consolidated Income Currency Symbols.xlsx in the *MyProjects* folder.
2. Select cell **A15** and type: **British Pound** (with a blank space at the end), but do not press **ENTER** yet.
3. On the Insert tab, in the Symbols group, click **Symbol**.
4. If necessary, click the **Font** drop-down arrow and select **(normal text)**.

## Applying Custom and International Date and Time Formats

### Objective 1.3.1

Like the currency formats, you can also select from among different date formats. To override the current Regional Settings date format, you can change the Locale (location) setting in the Format Cells dialog box (Figure 1-10) for a range of cells.

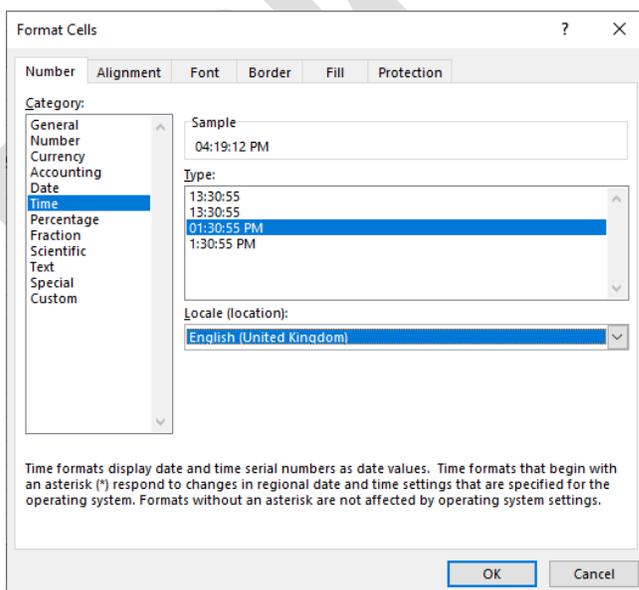


Figure 1-10: Format Cells dialog box – Time category

## Learn to change the formatting of date and time values

In this exercise, you will change the formatting of date and time values.

**Note:** The dates and times shown on your computer will be current according to your computer's clock and will differ from those shown here. Date and time formatting will also reflect the Regional settings of your computer.

1. Open **Date and Time Demo.xlsx** located in the *StarterFiles* folder, and save it as **My Date and Time Demo.xlsx** in the *MyProjects* folder.
2. Select cell **B2**, then on the Home tab, in the Number group, click the **Number Format** dialog box launcher.
3. If necessary, click the **Number** tab. In the *Category* section, select **Custom**.
4. Delete the current contents of the *Type* field and then type (do this slowly, and observe what is displayed in the *Sample* field as you enter each character): **dddd dd-mmmm-yyyy** and click **OK**.
5. Select cell **B3**, then on the Home tab, in the Number group, click the **Number Format** dialog box launcher.
6. Click the **Custom** category, and replace the contents of the *Type* field with: **hh:mm:ss** and click **OK**.
7. Select cell **C2**, and click the **Number Format** dialog box launcher in the Number group.

## Configuring the Editing and Display Language

### Objective 1.3.1

You can change the editing language and the display language in Excel. The **editing language** consists of the keyboard layout and proofing tools (these include language-specific features such as dictionaries for spelling and grammar checking, and paragraph direction buttons). The **display language** affects the language used in the menus, tool tips, and Help system.

## Learn to change the editing language

In this exercise, you will change the editing language.

1. Open **Climate Data.xlsx** located in the *StarterFiles* folder, click **File**, and then click **Options** to open the Excel Options dialog box.
2. In the Excel Options dialog box, click the **Language** tab in the left panel.
3. In the *Choose Editing Languages* section, click the **[Add additional editing languages]** drop-down arrow, then in the list, click **Spanish (Spain)**.
4. Close the workbook without saving.

# Understanding +Body and +Heading Fonts

## Objective 1.3.2

In the Microsoft Office Suite, the +Body and +Heading fonts are the ones that automatically adjust themselves whenever a different theme is selected. In Excel, the Font list in the Home tab and the Mini toolbar identifies these two fonts in the Theme Fonts section with the font name followed by (Body) or (Headings) (Figure 1-14a). This is also true of the font list that displays in the Font tab of the Format Cells dialog box (Figure 1-14b). Notice that the Font tab of the Format Cells dialog box offers effects such as Strikethrough, Superscript, and Subscript, which are not available on the Ribbon.

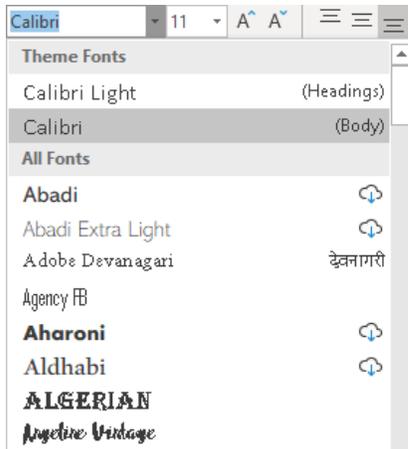


Figure 1-14a: Font list – Headings and Body fonts

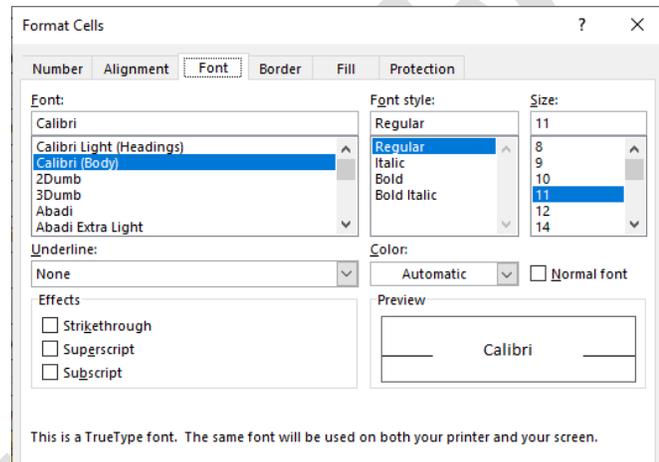


Figure 1-14b: Format Cells dialog box – Font tab

## Learn to experiment with manually applied font settings

In this exercise, you will manually apply font settings so they will remain constant when you change the workbook theme.

1. Open *Travel Insurance Premiums Body Heading Fonts.xlsx* located in the *StarterFiles* folder, and save it as *My Travel Insurance Premiums Body Heading Fonts.xlsx* in the *MyProjects* folder.
2. On the **Insert** tab, in the **Text** group, click **Text Box**.
3. Click in any blank area of the worksheet, and type: **Not valid for more than 365 days**.
4. Click and drag this text box to cell **H12**.

Now you will manually apply a different font to one of the new worksheet cell values.

# Lesson Summary

Now that you have completed this lesson, you should be able to:

- Use advanced conditional formatting.
- Manage conditional formatting rules.
- Create custom conditional formatting rules using formulas.
- Apply custom number, accounting, date, and time formats.
- Apply international formats to numeric and date/time data.
- Use international currency symbols.
- Configure the editing and display language.
- Understand +Body and +Heading fonts.

## Key Terms

Term	Definition
<b>Conditional Formatting</b>	A feature that enables you to change the appearance of a cell, depending on that cell's value.
<b>Display Language</b>	Refers to the language-specific text used in menus, tool tips, and the Help system.
<b>Editing Language</b>	Refers to the language-specific keyboard layout and proofing tools such as dictionaries for spelling and grammar checking, and paragraph direction buttons.
<b>Rules Manager</b>	A feature you can use to create new conditional formatting rules, modify existing ones, and delete rules that are no longer needed. See Conditional Formatting.

## Quiz Questions

For each question, select the best answer.

- Which of the following is NOT a valid conditional format?
  - Display a dark gray background color if the cell contains a text string with the text string "con" in it.
  - Display cell text in a different font if the cell value is greater than 10,000.
  - Display a color that could range from dark green to dark red, with lighter shades between these two extremes, depending on the numeric value in the cell.
  - All of the options listed are valid conditional formats.
- Suppose you create the following two conditional format rules on a range of cells: Rule 1 – display an orange background color if the cell has a value > 7.5; and Rule 2 – display a green background color if the cell has a value >= 7.4. What background color will display if every value has a minimum value of 8?
  - It depends which rule is listed above the other in the Rules Manager dialog box.
  - Orange
  - Green
  - Brown – both colors are applied and combined