

Microsoft®  
**Excel** 2010



Working with Charts

Working with Graphics

Analyzing, Organizing  
and Sharing Workbooks

Presenting Data Visually

# For Evaluation Only



For Evaluation Only

# Analyzing, Organizing and Sharing Workbooks

## ⋮ Lesson Objectives

In this lesson, you will look at various methods of analyzing, organizing, linking and sharing workbooks. On successful completion of this lesson, you will be able to:

- sort data
- use the AutoFilter feature to find specific data
- create, modify and delete range names
- create, modify and delete hyperlinks
- create and delete comments
- import and export data with other programs
- change workbook document properties
- use Office BackStage to share workbooks with others

FOR EVALUATION ONLY

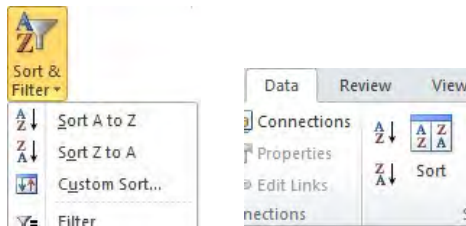
# ☰ Sorting Data

Worksheets with a large amount of data are often difficult to understand. Excel provides a sorting tool that enables you to change the sequence of the data based on the values in selected columns. After sorting, the data becomes more readable. You can sort and re-sort the data as many times as required, using different columns each time. You can sort the data by columns or rows, but the most common method is sorting by rows (with column headers and the data extending downwards).

## Sorting by Single-Level Data

The Ribbon offers the quickest method of sorting your data, but you are limited to sorting by one column. The Ribbon has two ready-to-use buttons for this:

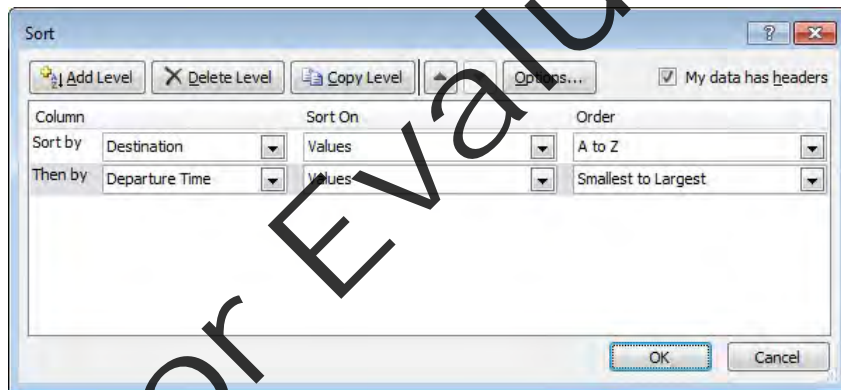
- on the **Home** tab, in the **Editing** group, click **Sort & Filter** and then click **Sort A to Z** or **Sort Z to A**, or
- on the **Data** tab, in the **Sort & Filter** group, click **Sort A to Z** or **Sort Z to A**.



## Sorting by Multi-Level Data

In many cases, you will need to sort by more than one column to handle situations with multiple rows with the same value (e.g., a list of names where several people have the same last name). Excel allows you to choose the custom sort option, which displays the sort dialog box.

This dialog box provides a comprehensive set of options for sorting your data:



<b>Add Level, Delete Level, Copy Level</b>	Add, delete or copy sort columns or rows. Note that the topmost sort key is the highest (primary) sorting level, followed by the remaining levels in descending order.
<b>Move up / Move down</b>	Move the selected sort level higher or lower in the sorting sequence.
<b>Options</b>	Sort by columns or rows, and choose whether to be case-sensitive.
<b>My data has headers</b>	Tell Excel to treat the first row of cells as data or field labels.
<b>Column/Row</b>	Identify the column or row to be used for a sort level.
<b>Sort On</b>	Includes (cell data) <i>Values</i> , <i>Cell Color</i> , <i>Font Color</i> , or <i>Cell Icon</i> .

<b>Order</b>	Sort data in ascending ( <i>A to Z, Smallest to Largest</i> ) or descending ( <i>Z to A, Largest to Smallest</i> ) order.
<b>Sort by</b>	Determine the first column or row Excel will use to sort the database—the primary sort level.
<b>Then by</b>	Determine the next columns or rows for sorting, if necessary. When there are multiple rows that match the primary sort key, this determines the sort order within the first column grouping.

With the Sort dialog box, if the primary sort level contains repeating values, you can choose up to 64 columns or rows as sort levels. You can sort the data in each sort level in ascending or descending sequence. Each sort level can also be sorted using the cell data, fill color, font color or by cell icon.

If the range of cells being sorted does not contain column or rows headers, turn off the **My data has headers** option. Use this option to prevent sorting the header data together with the other data—they will remain in their place as headers.



## Learn the Skill

*This exercise demonstrates how to sort a table of data using one column, and then multiple columns, as sort keys.*

- 1 Open the *Flights* workbook and save it as *Flights - Student*.  
First, sort the data using a column containing text data.
- 2 Select any cell in the *Airline* column.
- 3 On the **Home** tab, in the **Editing** group, click **Sort & Filter**, and then click **Sort A to Z**.

You have now sorted the data by airline name. Look closely to see how Excel has sorted the data for each group of rows with the same airline name.

	A	B	C	D
1	Airline	Flight#	Destination	Departure Time
2	Aer Lingus	104	Dublin (DUB)	5:45 PM
3	Aer Lingus	10	Shannon (SNN)	6:30 PM
4	Aer Lingus	108	Dublin (DUB)	9:50 PM
5	Aeroflot	316	Moscow (SVO)	7:00 PM
6	AeroMexico	405	Mexico City (MEX)	9:00 AM
7	AeroMexico	5279	Mexico City (MEX)	9:05 AM
8	AeroMexico	5878	Rome (FCO)	5:30 PM
9	AeroMexico	5904	Barcelona (BCN)	5:35 PM
10	AeroMexico	403	Mexico City (MEX)	5:50 PM
11	AeroMexico	5760	Richmond, VA (RIC)	6:35 PM
12	AeroMexico	5610	Albany, NY (ALB)	7:00 PM
13	AeroMexico	5388	Norfolk, VA (ORF)	7:30 PM

Now sort a column containing numbers in descending order (largest values at the top to the smallest values at the bottom).

- 4 Select any cell in the *Flight #* column.
- 5 On the **Home** tab, in the **Editing** group, click **Sort & Filter** and then click **Sort Largest to Smallest**.

Now try sorting by a column containing time data in ascending order.

- 6 Select any cell in the *Departure Time* column.
- 7 On the **Data** tab, in the **Sort & Filter** group, click **Sort Smallest to Largest**.

### Note...

*Be sure to select a cell below the header row—Excel determines how to sort for the column based on the type of data in the selected cell.*

*This sort button is also available in the Data tab.*

	A	B	C	D
1	Airline	Flight #	Destination	Departure Time
2	US Airways	5211	Seoul (ICN)	12:30 AM
3	United Airlines	1069	Seoul (ICN)	12:30 AM
4	Asiana Airlines	221	Seoul (ICN)	12:30 AM
5	Delta Air Lines	7928	Seoul (ICN)	12:50 AM
6	Korean Airlines	86	Seoul (ICN)	12:50 AM
7	American Airlines	8297	Mexico City (MEX)	12:55 AM
8	Delta Air Lines	6870	Bogota (BOG)	12:55 AM
9	Avianca	285	Bogota (BOG)	12:55 AM
10	Mexicana	1	Mexico City (MEX)	12:55 AM
11	Caribbean Airlines Limited	425	Port-of-Spain (POS)	1:05 AM
12	Delta Air Lines	383	Georgetown (GEO)	1:10 AM
13	Prince Edward Air	9743	Hamilton (YHM)	1:15 AM
14	ICL Express	941	Liege (LGG)	1:30 AM
15	Korean Airlines	258	Anchorage, AK (ANC)	3:43 AM
16	Asiana Airlines	587	Brussels (BRU)	3:55 AM
17	American Intl.	543	Amsterdam (AMS)	4:00 AM
18	United Airlines	5317	San Salvador (SAL)	4:42 AM
19	US Airways	4933	San Salvador (SAL)	4:42 AM
20	Taca Airlines	567	San Salvador (SAL)	4:42 AM
21	El Al Israel	8147	Miami, FL (MIA)	5:30 AM
22	American Airlines	1229	Miami, FL (MIA)	5:30 AM

Now sort the data using two columns.

- 8 Ensure that the active cell is anywhere within the data range, then on the **Home** tab, in the **Editing** group, click **Sort & Filter** and then **Custom Sort**.

Excel displays the Sort dialog box.

- 9 Ensure that you have selected **My data has headers**.
- 10 Click the arrow next to the **Sort by** field and click **Destination**.

The Destination column is the primary sort key. Use the Departure Time column as the secondary sort key.

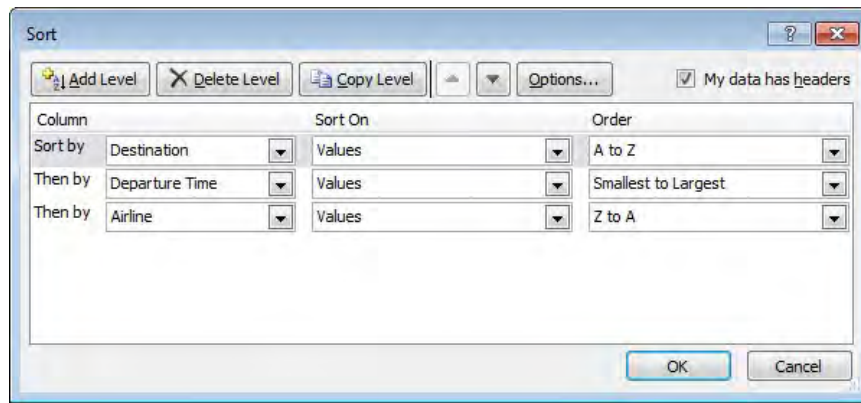
- 11 Click **Add Level** to add another sort key.
- 12 Click the arrow for **Then by** and then click **Departure Time**.
- 13 Click **OK**.

Now add a third sort key.

- 14 On the **Data** tab, in the **Sort & Filter** group, click **Sort**.
- 15 Click on the **Then by** row to select that row. The best area to click is on the **Then by** text so that you do not click in any of the selection fields.
- 16 Click **Add Level** to add another sort key below the existing rows.
- 17 Click the arrow for the second **Then by** and then click **Airline**.
- 18 Click the arrow next to the **Order** field for the second **Then by** and click **Z to A** to sort this field in descending order.

**Note...**

You can also open the Sort dialog box from the Data tab.



19 Click **OK**.

Delete the middle sort sequence.

20 On the **Data** tab, in the **Sort & Filter** group, click **Sort**.

21 Click on the first **Then by** row to select that row.

22 Click **Delete Level** and click **OK**.

The list is now sorted first by destination in ascending order and then by airline in descending order. The worksheet now looks similar to the following example:

	A	B	C	D
1	Airline	Flight #	Destination	Departure Time
2	Etihad Airways	100	Abu Dhabi (AUH)	10:50 PM
3	American Airlines	6005	Abu Dhabi (AUH)	10:50 PM
4	Air Lanka	2600	Abu Dhabi (AUH)	10:50 PM
5	KLM Royal Dutch	9135	Accra (ACC)	4:45 PM
6	Delta Air Lines	166	Accra (ACC)	4:45 PM
7	JetBlue Airways	735	Aguadilla (BQN)	5:45 AM
8	JetBlue Airways	727	Aguadilla (BQN)	11:59 PM
9	American Airlines	611	Aguadilla (BQN)	3:35 PM
10	KLM Royal Dutch	7390	Albany, NY (ALB)	7:00 PM
11	Delta Air Lines	6507	Albany, NY (ALB)	7:00 PM
12	Air France	8930	Albany, NY (ALB)	7:00 PM
13	AeroMexico	5809	Albany, NY (ALB)	7:00 PM
14	NetJets Aviation	660	Allentown, PA (ABE)	7:15 AM
15	Delta Air Lines	32	Amman (AMM)	8:15 PM
16	KLM Royal Dutch	9080	Amsterdam (AMS)	3:50 PM
17	KLM Royal Dutch	642	Amsterdam (AMS)	6:30 PM
18	KLM Royal Dutch	644	Amsterdam (AMS)	10:00 PM
19	Delta Air Lines	80	Amsterdam (AMS)	3:50 PM
20	Delta Air Lines	9357	Amsterdam (AMS)	6:30 PM
21	Delta Air Lines	9347	Amsterdam (AMS)	10:00 PM
22	American Intl.	543	Amsterdam (AMS)	4:00 AM

23 Save and close the workbook.

## ⋮ Filtering Information

Worksheets are often used to store large amounts of data. Finding information in large worksheets is often difficult because of the sheer volume. Sorting the rows is one way of making it easier to find information; however, you still have to look through many if not all the rows in the worksheet. Another way to locate information quickly is to use a filter to hide the rows you are not interested in viewing. Filtering does not change the content of your worksheet or the sequence of the rows (like the way sorting does), only what you see of your worksheet.

The quickest and easiest way to filter data in Excel is to use the AutoFilter tool. When you activate this tool, Excel places AutoFilter icons on the right side of each of the column titles. Use these icons to specify the selection criteria that Excel uses to display the records.

In its simplest form, the AutoFilter finds and displays the rows where the value in the selected column is equal to a specific value.

	A	B	C	D
1	Airline	Flight #	Destination	Departure Time
406	Lufthansa	8626	Pittsburgh, PA (PIT)	2:55 PM
423	Lufthansa	8550	Fort Lauderdale, FL (FLL)	3:13 PM
434	Lufthansa	8574	San Juan (SJU)	3:29 PM
511	Lufthansa	401	Frankfurt (FRA)	4:00 PM
546	Lufthansa	8632	Buffalo, NY (BUF)	4:20 PM
564	Lufthansa	8620	Raleigh-Durham, NC (RDU)	4:39 PM
640	Lufthansa	8638	Syracuse, NY (SYR)	5:10 PM
671	Lufthansa	411	Munich (MUC)	5:30 PM
736	Lufthansa	8552	Fort Lauderdale, FL (FLL)	6:05 PM
741	Lufthansa	8654	Rochester, NY (ROC)	6:11 PM
801	Lufthansa	8634	Buffalo, NY (BUF)	6:35 PM
886	Lufthansa	8556	Tampa, FL (TPA)	7:20 PM
965	Lufthansa	8568	Austin, TX (AUS)	8:10 PM
1036	Lufthansa	8564	New Orleans, LA (MSY)	9:29 PM
1043	Lufthansa	405	Frankfurt (FRA)	9:40 PM
1063	Lufthansa	8624	Raleigh-Durham, NC (RDU)	9:50 PM
1095	Lufthansa	8640	Syracuse, NY (SYR)	10:40 PM
1097	Lufthansa	8656	Rochester, NY (ROC)	10:45 PM
1103	Lufthansa	8636	Buffalo, NY (BUF)	10:50 PM
1116	Lufthansa	8578	San Juan (SJU)	10:55 PM

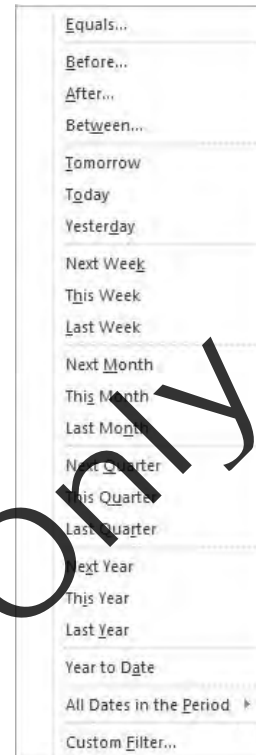
The AutoFilter has the flexibility to help you build more complex queries, which you can use to narrow down the results and avoid selecting rows that you do not want. For example, you can select criteria that examine two or more columns, or that are equal to one of two or more values. In addition, Excel provides powerful selection criteria that are specific to columns containing text, numbers or dates, such as the following:

#### Numbers

Evaluate data in the selected column with the commonly used comparison operators (equals, greater than, less than, greater than or equal to, between and so on) as well as the Top 10 values (or rows with values above or below the average of all values in the column).



**Dates** Evaluate date-type data using special criteria that are specific for dates, such as comparing the date of today with tomorrow, yesterday, this/next/last week, this/next/last month, this/next/last quarter, this/next/last year or year to date.



**Text** Evaluate text data using special criteria that are specific to text, such as begins or ends with (text), or contains or does not contain (text).



## Learn the Skill

*This exercise demonstrates how to use AutoFilters in various ways on a worksheet.*

- 1 Open the *Flights* workbook.

Do a quick visual scan of the worksheet to see how many rows are in it.

- 2 Scroll down to the bottom of the data (row 1121), then scroll back to the top.

Activate the AutoFilter and select all rows for a specific airline.

- 3 Select any cell in the data (between cells **A2:D1121**).
- 4 On the **Data** tab in the **Sort & Filter** group, click **Filter**.

### Note...

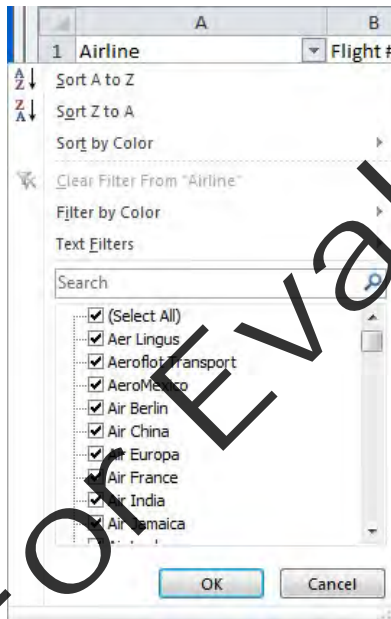
*Another way of activating the AutoFilter icons is on the Home tab, in the Editing group, click Sort & Filter and click Filter.*

AutoFilter arrows now appear next to each field name:

	A	B	C	D
1	Airline	Flight #	Destination	Departure Time
2	Asiana	221	Seoul (ICN)	12:30 AM
3	United Airlines	1069	Seoul (ICN)	12:30 AM
4	US Airways	5211	Seoul (ICN)	12:30 AM
5	Delta Air Lines	7928	Seoul (ICN)	12:50 AM
6	Korean	86	Seoul (ICN)	12:50 AM
7	American Airlines	8297	Mexico City (MEX)	12:55 AM
8	Avianca	285	Bogota (BOG)	12:55 AM
9	Delta Air Lines	6870	Bogota (BOG)	12:55 AM
10	Mexicana	1	Mexico City (MEX)	12:55 AM
11	Caribbean Airlines Limited	425	Port-Of-Spain (POS)	1:05 AM
12	Delta Air Lines	383	Georgetown (GEO)	1:10 AM
13	CME	9743	Hamilton (YHM)	1:15 AM
14	ICL	941	Liege (LGG)	1:30 AM
15	Korean	258	Anchorage, AK (ANC)	3:43 AM
16	Asiana	587	Brussels (BRU)	3:55 AM
17	American Intl.	543	Amsterdam (AMS)	4:00 AM
18	Taca	567	Sansalvador (SAL)	4:42 AM
19	United Airlines	5317	Sansalvador (SAL)	4:42 AM
20	US Airways	4933	Sansalvador (SAL)	4:42 AM
21	American Airlines	1779	Miami Fl (MIA)	5:00 AM

- Click the AutoFilter arrow for the *Airline* column.

The AutoFilter menu displays a list of every unique value in this column. You set the filter by turning the check box on or off for the value(s) you want.



- Click **Select All** to turn it off.
- Scroll down the list, click *Lufthansa* to turn it on and click **OK**.

Notice the row numbers of the records that remain displayed from the database. Excel hides the rows that do not meet the criteria and displays only records that have a matching value in the filtered field. Excel also changes the AutoFilter icon to indicate that it is using a field to limit the records displayed.

Now redisplay all records.

- Click the AutoFilter arrow for the *Airline* column and click **Clear Filter From "Airline"**.

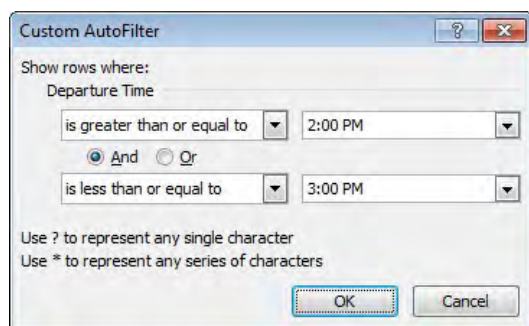
The conditions you select are called **filter criteria**. You can also set up criteria for date, time and numeric values.

- Click the AutoFilter arrow for the *Departure Time* column, click **Select All** to turn it off. Click *6:00 AM* to turn that check box on and click **OK**.

You can set date, time and numeric AutoFilters to look for a range of values using comparison operators such as greater than, less than, between and more.

Suppose you want to find all flights departing between 2 PM and 3 PM. Text fields contain a similar set of comparison operators.

- On the **Data** tab, in the **Sort & Filter** group, click **Clear**.
- Click the AutoFilter arrow for the *Departure Time* column, click **Number Filters and** then click **Between**.
- Select the departure time values as shown in the following example screen:



- Click **OK**.

The results should look similar to the following example:

	A	B	C	D
1	Airline	Flight #	Destination	Departure Time
363	American Airlines	4606	Raleigh-Durham, NC (RDU)	2:00 PM
364	British Airways	5519	Raleigh-Durham, NC (RDU)	2:00 PM
365	Delta Air Lines	7824	Seoul (ICN)	2:00 PM
366	Jet Airways	5105	Raleigh-Durham, NC (RDU)	2:00 PM
367	Korean	87	Seoul (ICN)	2:00 PM
368	MALEV Hungarian Airlines	4122	Raleigh-Durham, NC (RDU)	2:00 PM
369	Saudi Arabian	24	Jeddah (JED)	2:00 PM
370	SouthAfrica	7451	Washington, DC (IAD)	2:04 PM
371	United Airlines	7112	Washington, DC (IAD)	2:04 PM
372	JetBlue Airways	821	Santo Domingo (SDQ)	2:17 PM
373	Alaska Airlines	4273	Boston, MA (BOS)	2:20 PM
374	American Airlines	4638	Boston, MA (BOS)	2:20 PM
375	Japan Airlines	5650	Boston, MA (BOS)	2:20 PM
376	Jet Airways	5102	Boston, MA (BOS)	2:20 PM
377	MALEV Hungarian Airlines	4121	Boston, MA (BOS)	2:20 PM
378	JetBlue Airways	615	Jacksonville, FL (JAX)	2:23 PM
379	JetBlue Airways	143	West Palm Beach, FL (PBI)	2:29 PM

The AutoFilter selection menu includes a search field that you can use to find the filter values you are looking for quickly instead of scrolling up and down the list. In effect, you are applying a filter to the filter values. Suppose now that you want to find flight 8778. You can search for 8778. You can also use shorter search criteria, which will find all filter values that contain this search value in it.

- On the **Data** tab, in the **Sort & Filter** group, click **Clear**.
- Click the AutoFilter arrow for the *Flight #* column. Then type 87 in the Search text box (located above the Select All check box) to display a list of all values with 87 in it.

**Note...**

Another way of clearing filter criteria is to click AutoFilter and then click Select All to turn it on, or, on the Data tab, in the Sort & Filter group, click Clear.

- 16 Click the **Select All Search Results** check box to turn it off. Then click the *8778* check box to turn it on and click **OK**.

	A	B	C	D
1	Airline	Flight #	Destination	Departure Time
712	Air China	8778	Los Angeles, CA (LAX)	6:00 PM
864	Air France	8778	Fort Lauderdale, FL (FLL)	7:05 PM

Excel does not limit you to selecting rows using only one value; you can also select multiple values for a single column.

- 17 On the **Data** tab, in the **Sort & Filter** group, click **Clear**.
- 18 Click the AutoFilter arrow for the *Airline* column and click **Select All** to turn it off. Click *KLM Royal Dutch* and *Lufthansa* to turn them on and click **OK**.

The results should look similar to the following example:

	A	B	C	D
1	Airline	Flight #	Destination	Departure Time
33	KLM Royal Dutch	9362	Atlanta, GA (ATL)	6:00 AM
68	KLM Royal Dutch	5790	San Francisco, CA (SFO)	7:00 AM
69	KLM Royal Dutch	8342	Los Angeles, CA (LAX)	7:00 AM
70	KLM Royal Dutch	9356	Salt Lake City, UT (SLC)	7:00 AM
128	KLM Royal Dutch	9555	Chicago, IL (ORD)	8:10 AM
162	KLM Royal Dutch	9259	Buffalo, NY (BUF)	8:30 AM
163	KLM Royal Dutch	9734	Pittsburgh, PA (PIT)	8:30 AM
196	KLM Royal Dutch	5049	Burlington, VT (BTV)	9:00 AM
203	KLM Royal Dutch	5124	Detroit, MI (DTW)	9:05 AM
281	KLM Royal Dutch	7311	Chicago, IL (ORD)	11:20 AM
284	KLM Royal Dutch	9401	Minneapolis, MN (MSP)	11:25 AM
309	KLM Royal Dutch	9609	Detroit, MI (DTW)	12:20 PM
337	KLM Royal Dutch	9331	Tokyo (NRT)	1:10 PM
339	KLM Royal Dutch	9367	Rochester, NY (ROC)	1:20 PM
389	KLM Royal Dutch	7269	Buffalo, NY (BUF)	2:40 PM
406	Lufthansa	8625	Pittsburgh, PA (PIT)	2:55 PM
423	Lufthansa	8550	Fort Lauderdale, FL (FLL)	3:13 PM
427	KLM Royal Dutch	9205	Toronto (YYZ)	3:15 PM
431	KLM Royal Dutch	7293	Washington, DC (DCA)	3:25 PM

You may also select criteria across multiple fields. For example, try selecting all rows where the destination is Fort Lauderdale and the airline is KLM or Lufthansa.

- 19 Click the AutoFilter arrow for **Destination**, click **Select All** to turn it off and then click *Fort Lauderdale, FL (FLL)* to turn only that check box on. Click **OK**.

	A	B	C	D
1	Airline	Flight #	Destination	Departure Time
423	Lufthansa	8550	Fort Lauderdale, FL (FLL)	3:13 PM
503	KLM Royal Dutch	9342	Fort Lauderdale, FL (FLL)	3:55 PM
736	Lufthansa	8552	Fort Lauderdale, FL (FLL)	6:05 PM
877	KLM Royal Dutch	7370	Fort Lauderdale, FL (FLL)	7:05 PM

This list shows that there are four flights departing today for Fort Lauderdale.

Now turn off the AutoFilter feature.

- 20 On the **Data** tab, in the **Sort & Filter** group, click **Filter**.
- 21 Close the workbook and discard the changes.

# Working with Named Ranges

## Creating Named Ranges

When developing spreadsheets, you will find that they quickly become very large and it becomes difficult to keep track of all the cells. One feature in most spreadsheet programs is the ability to create a name for a cell or range of cells. It is much easier to understand the formula `=Revenues-Expenses` than a cryptic formula such as `=C7-C16`.

To define a range with a name, select the range and then use one of the following methods:

- On the **Formulas** tab, in the **Defined Names** group, click **Define Name**; or
- click in the **Name Box** and type the name; or
- right-click the selected range and then click **Define Name**.

Once you define a name for a cell or a range of cells, you can use that name when creating formulas. Excel also provides tools for applying range names to your existing formulas.

You can also quickly jump to a named range by using **Go To** or by selecting the named range from the **Name Box** list to the left of the Formula bar.

In addition to making spreadsheets easier to read, range names can make the process of entering cell data easier. Simply changing the range defined by a range name updates all formulas that use that range name; therefore, there is no need to edit every formula in the spreadsheet.

Range names can be from 1 to 255 characters in length. They may contain alphabetic or numeric characters (alphanumeric), underscores (`_`), backslashes (`\`), periods (`.`) and question marks (`?`). You cannot use spaces in range names. The first character must be alphanumeric, an underscore or a backslash.

## Modifying and Deleting Named Ranges

You can use the Name Manager to modify and delete range names or change the cell range references.

Be cautious when deleting named ranges. When you delete a named range, any formula that refers to this name no longer displays the correct value. Deleting a range name may also cause a domino effect with other formulas that indirectly refer to this formula.



### Learn the Skill

*This exercise demonstrates how to create range names and set up formulas using those range names.*

- 1 Open the *Income Statement* workbook and save as *Income Statement - Student*.

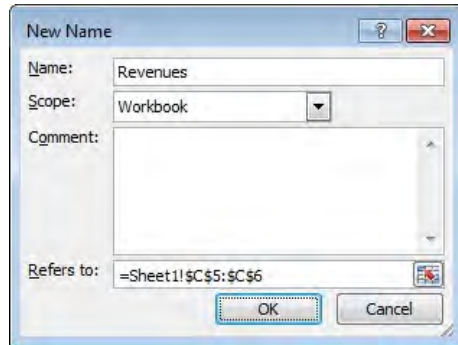
	A	B	C
1		Tolano Adventures	
2		Income Statement	
3			
4		Revenues:	
5		Sales	77,500.00
6		Other Revenues	555.00
7		Total Revenues	
8			
9		Expenses:	
10		Rent	63,450.00
11		Telephone	1,833.75
12		Internet	1,630.92
13		Courier	4,582.62
14		Postage	670.59
15		Supplies	2,451.92
16		Photocopier	750.45
17		Total Expenses	
18			
19		Net Income	

Now create a range name to use in sales calculations.

Excel can use either row or column headers as range names. However, this is not a good practice because formulas using this range name will often not recalculate correctly if you (or someone else) add more data. You should explicitly create range names instead.

- 2 Select cells **C5:C6**.
- 3 On the **Formulas** tab, in the **Defined Names** group, click **Define Name**.

The New Name dialog box displays with the cell range entered.



- 4 In the **Name** field, type: Revenues and click **OK**.

From now on, whenever you select these two cells, the range name **Revenues** displays in the **Name Box**, which appears to the left of the Formula Bar. If you click the arrow at the right side of the Name Box and select a range name, Excel will select that range of cells.

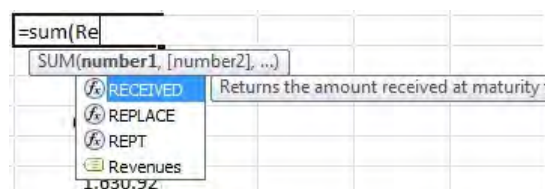
Revenues		fx	77500
A	B	C	
1	Tolano Adventures		
2	Income Statement		
3			
4	Revenues:		
5	Sales	77,500.00	
6	Other Revenues	535.00	
7	Total Revenues		

- 5 Select each of the cells in the cell range **C5:C6** and observe what displays in the Name Box.
- 6 Select the cell range **C5:C6** and observe what displays in the Name Box.
- 7 Select cells **C10:C16**. On the **Formulas** tab, in the **Defined Names** group, click **Define Name**.
- 8 In the **Name** field, type: Expenses and click **OK**.

Now enter summary formulas using this range name.

- 9 Select cell **C7**.
- 10 Type: =SUM(Revenues) and press **Enter**.

Notice that as you type the first one or two characters of the range name, a quick tip box appears, showing you this name and other functions with similar names. You can double-click the range name in the quick tip box to select it



- 11 Select cell **C17**, type: =SUM(Expenses) and press **Enter**.

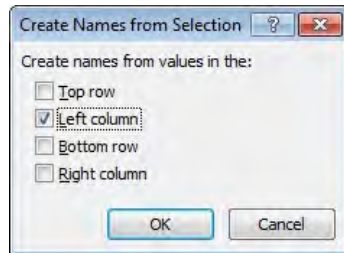
**Note...**

Range names are not case sensitive.

You can also create a range name by selecting the desired cell(s) and clicking in the **Name Box** on the Formula bar. Then type the desired name and press **Enter**.

12 Select cells **B7:C7**.

13 On the **Formulas** tab, in the **Defined Names** group, click **Create from Selection**.



14 Click **Left column** to turn it on and click **OK**.

15 Select cell **C7**.

Note that the range name in the Name Box is **Total\_Revenues**.

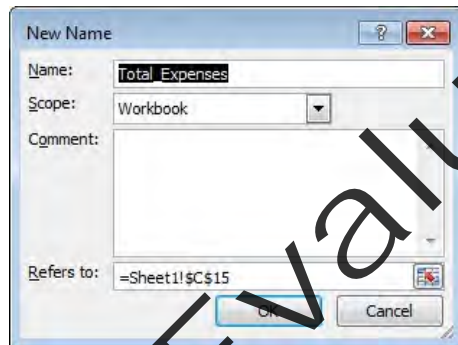
Create a range name for the *Total Expenses* cell, but this time using the Name Manager.

16 Select cell **C17**.

17 On the **Formulas** tab, in the **Defined Names** group, click **Name Manager**.

The Name Manager dialog box is now displayed.

18 In the Name Manager dialog box, click **New** to create a new range name.



19 Verify that the **Name** is **Total\_Expenses** and that the **Refers to** field contains the formula **=Sheet1!\$C\$17**. Click **OK**.

If the New Name dialog box is blocking access to the worksheet behind it, you can minimize it temporarily by clicking the **Expand** button to the right of the **Refers to** field. You can then select a range of cells from the worksheet.

The Name Manager dialog box now has this new range name added, similar to the following example:

**Note...**

Excel does not permit blank spaces in range names. You can use the underscore character between the words in a multi-word range name.



20 Click **Close** to close the Name Manager dialog box.

Enter the formula to calculate the Net Income, using the range names.

21 Select cell **C19**, and type: =

22 On the **Formulas** tab, in the **Defined Names** group, click **Use in Formula**.



23 Click **Total\_Revenues**, then press **(-)** to indicate that you are going to perform a subtraction.

24 On the **Formulas** tab, in the **Defined Names** group, click **Use in Formula**. Click **Total\_Expenses** and press **Enter**.

The completed worksheet will look similar to the following example:

	A	B	C
1		Tolano Adventures	
2		Income Statement	
3			
4	Revenues:		
5	Sales		77,500.00
6	Other Revenues		555.00
7	Total Revenues		78,055.00
8			
9	Expenses:		
10	Rent		63,450.00
11	Telephone		1,833.75
12	Internet		1,630.92
13	Courier		4,582.62
14	Postage		670.59
15	Supplies		2,451.92
16	Photocopier		750.45
17	Total Expenses		75,370.25
18			
19	Net Income		2,684.75

A common situation is adding more rows to a named range. As long as you add the rows inside the range, Excel automatically includes the new data as part of the range. If you add the new data below the range, you will need to expand the range to include the new row(s).

- 25 Click the gray header for row 17 to highlight the entire row. Right-click in the highlighted row and click **Insert** in the menu.
- 26 Select cell **B17**, type: Travel and press **Tab**.
- 27 In cell **C17** type: 1400 and press **Enter**.

Note that none of the figures in the report changed because the new entry sits outside of the named range Expenses. Now expand the named range to include the new entry.

When you first created the range name, you could have included additional blank cells for future growth. Then, as you add new entries to the list, Excel automatically recalculates the total expenses formula.

- 28 On the **Formulas** tab, in the **Defined Names** group, click **Name Manager**.
- 29 In the Name Manager dialog box, click the *Expenses* row to select it.
- 30 In the **Refers to** text field, change the range to **=Sheet1!\$C\$10:\$C\$17** as the range.
- 31 Click **Update** (the checkmark) to the left of the field to update the changes, and click **Close**.

The worksheet should now show the correct calculations for each of the functions, similar to this example:

	A	B	C
1		Tolano Adventures	
2		Income Statement	
3			
4		Revenues:	
5		Sales	77,500.00
6		Other Revenues	555.00
7		Total Revenues	78,055.00
8			
9		Expenses:	
10		Rent	63,450.00
11		Telephone	1,833.75
12		Internet	1,630.00
13		Courier	4,582.62
14		Postage	67.59
15		Supplies	2,351.94
16		Photocopier	750.44
17		Travel	1,400.00
18		Total Expenses	76,770.25
19			
20		Net Income	1,284.75

Try deleting a named range and see how it affects the worksheet.

- 32 On the **Formulas** tab, in the **Defined Names** group, click **Name Manager**.
- 33 Click the *Revenues* row and then click **Delete**.  
Excel displays a message box asking you to confirm the deletion of this range name.
- 34 Click **OK** for the confirmation message box and then click **Close** to close the Name Manager dialog box.

As shown in the following example, when you remove a named range, Excel displays an error indicator regarding any formulas that depend on that name. Note also that the change has affected the formula in cell **C20** as well, even though it does not use the range name Revenues directly.

	A	B	C
4	Revenues:		
5	Sales		77,500.00
6	Other Revenues		555.00
7	Total Revenues		#NAME?
8			
9	Expenses:		
10	Rent		63,450.00
11	Telephone		1,833.75
12	Internet		1,630.92
13	Courier		4,582.62
14	Postage		670.59
15	Supplies		2,451.92
16	Photocopier		750.45
17	Travel		1,400.00
18	Total Expenses		76,770.25
19			
20	Net Income		#NAME?

35 In the Quick Access Toolbar, click **Undo**.

36 Save and close the workbook.

## Using Hyperlinks

A hyperlink is a clickable element in an electronic document that you can use to jump to or open another document. The World Wide Web consists of web pages (which are essentially documents) containing text, images, videos and hyperlinks to other web pages. You can insert hyperlinks into workbooks to enable the same capability of launching web pages from the Internet or an internal corporate intranet, or open documents located on any computer within your local area network.

A hyperlink can be text or a picture on a page that links you from where you are to another location. This allows you to “jump” to that location, which may be in the same document, another document, a document or page on another Web site or an e-mail address.

### Inserting Hyperlinks

By clicking a hyperlink, you can display the referenced document. Each hyperlink contains a code in the form of a Uniform Resource Locator (URL), which is the unique address for this document or page at this particular location on the Internet or intranet.

URLs can be stored in Excel worksheets or workbooks and used as hyperlinks to jump to other documents on the Internet or intranet, other Excel workbooks or other Microsoft Office documents.

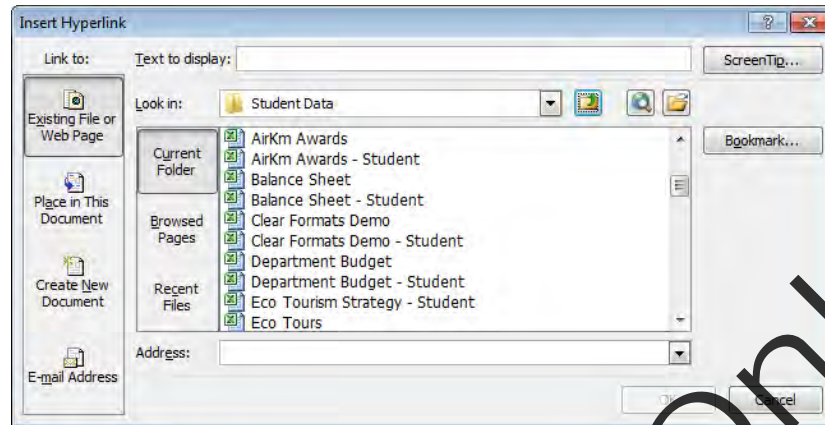
To insert a hyperlink, use one of the following methods:

- On the **Insert** tab, in the **Links** group, click **Hyperlink**; or
- right-click on a cell and click **Hyperlink**; or
- press **Ctrl**+**K**.

The displayed Insert Hyperlink dialog box allows you to insert one of four types of hyperlinks:

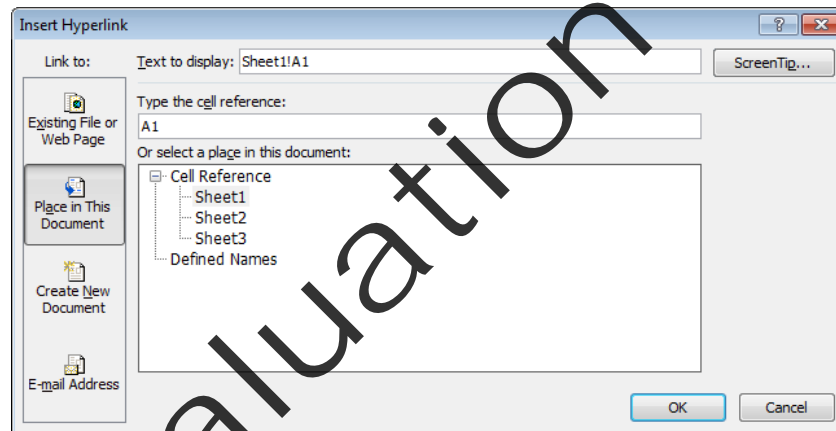
**Existing File or Web Page**

Used to link to workbooks, files, or documents stored on a local or networked hard drive, or on the intranet or the Internet.



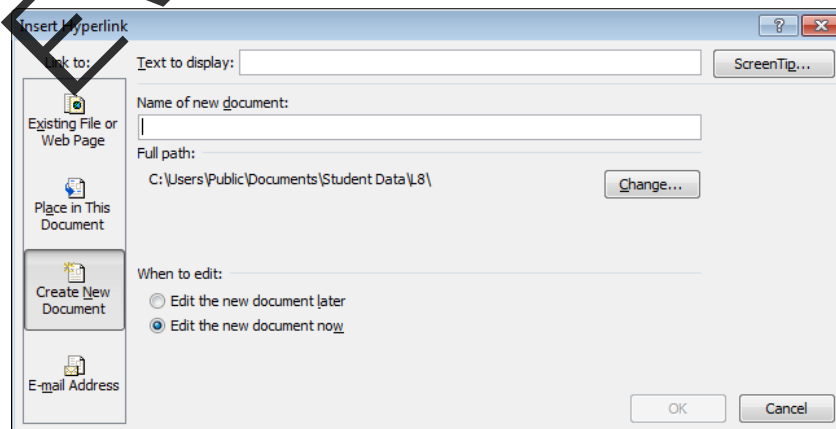
**Place in This Document**

Used to link to a cell or named range of cells in the current workbook, either in the current worksheet or another worksheet.



**Create New Document**

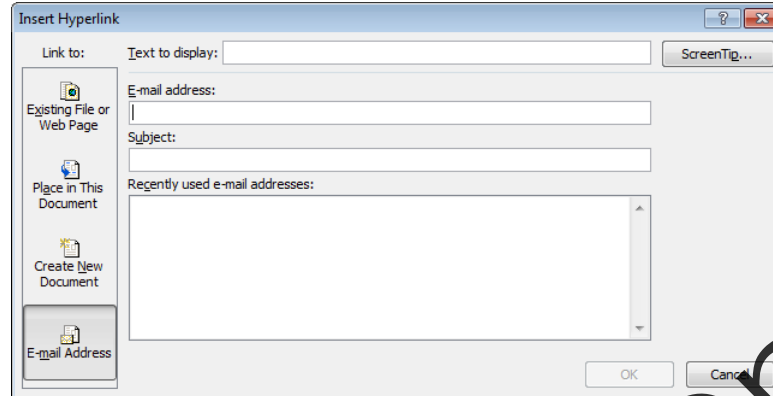
Used to create a new workbook using the name that you specify in the **Name of new document** text box and located in the folder specified under **Full path**.



FOR EVALUATION ONLY

**E-mail Address**

Used to launch the e-mail program (e.g. Outlook) installed on the local computer, and create a new e-mail message using the e-mail address and subject line specified in this dialog box.



A **mailto** URL is a special type of URL used by e-mail systems.

## Modifying and Deleting Hyperlinks

Hyperlink addresses are unique, specific locations to a document, whether it is stored on the Internet, the local intranet or a local computer. If you move or rename the referenced document, you must change the hyperlink.

You may also want to change the text displayed in the worksheet for the hyperlink or add a custom ScreenTip.

When you no longer need the hyperlink, you can remove the reference. The text displayed for the hyperlink remains in the cell.

To modify a hyperlink in the worksheet, use one of the following methods:

- Right-click the hyperlink and then click **Edit Hyperlink**; or
- move the cell pointer to the cell containing the link and then, on the **Insert** tab, in the **Links** group, click **Hyperlink** to display the Edit Hyperlink dialog box. Make the necessary changes and close the dialog box.

To delete a hyperlink in the worksheet, use one of the following methods:

- Right-click the link and then click **Remove Hyperlink**; or
- move the cell pointer to the cell containing the link and then, on the **Insert** tab, in the **Links** group, click **Hyperlink** to display the Edit Hyperlink dialog box. Click **Remove Link**.



## Learn the Skill

*This exercise demonstrates how to create and modify hyperlinks in an Excel workbook.*

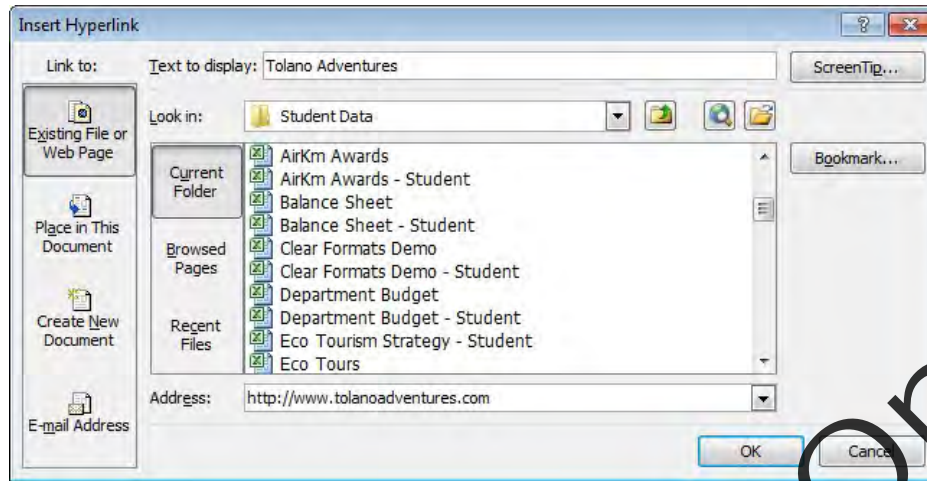
- 1 Open the *Financial Statements* workbook and save it as *Financial Statements - Student*.

	A	B	C	D
1	Tolano Adventures			
2				
3	Website:			
4				
5	Income Statement:			
6				
7	Balance Sheet:			

Insert a hyperlink to a website in cell **B3**.

- 2 Select cell **B3**.
- 3 On the **Insert** tab, in the **Links** group, click **Hyperlink**.

- 4 Click in the **Address** field and type: `http://tolanoadventures.com`.
- 5 Click in **Text to display** and change the contents to: Tolano Adventures.



- 6 Click **OK**.

Now insert two hyperlinks to other workbooks.

- 7 Select cell **B5**.
- 8 On the **Insert** tab, in the **Links** group, click **Hyperlink**.
- 9 Scroll down and select the *Income Statement* workbook. If necessary, select a different folder in the **Look in** list where the data files are located, as directed by the instructor.
- 10 Click **OK**.
- 11 Right-click in cell **B7**, then click **Hyperlink**.
- 12 Scroll down and select the *Balance Sheet* workbook and click **OK**.

Test one of the hyperlinks by clicking on it.

- 13 Position the mouse cursor over the hyperlink in cell **B5**; the cursor changes to a white pointing hand. Notice that a screen tip will appear with the URL for the *Income Statement* workbook.
- 14 Click the *Income Statement* hyperlink.  
The *Income Statement* workbook is now open on top of the *Financial Statements* workbook.
- 15 Close the *Income Statement* workbook.

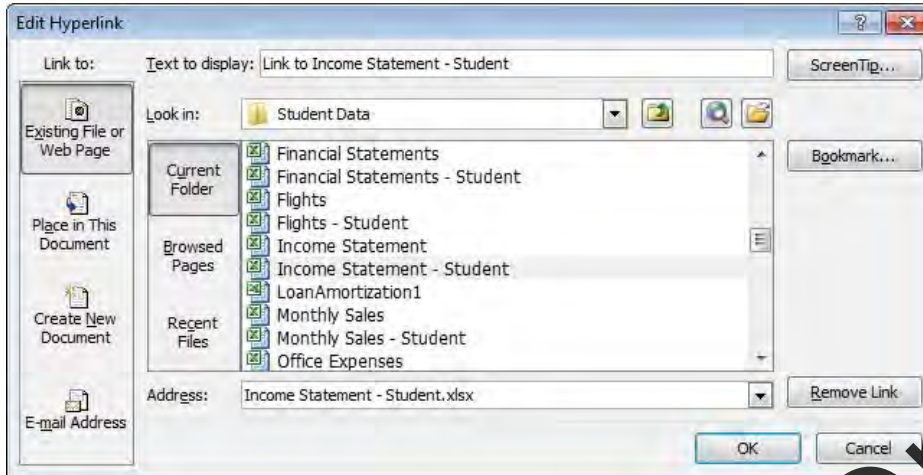
The color of the hyperlink has changed to indicate that it has been used. The worksheet should look similar to the following example:

	A	B	C	D
1	Tolano Adventures			
2				
3	Website:	<a href="http://www.tolanoadventures.com">Tolano Adventures</a>		
4				
5	Income Statement:	<a href="#">Income Statement.xlsx</a>		
6				
7	Balance Sheet:	<a href="#">Balance Sheet.xlsx</a>		

Now manually change one of the hyperlinks to point at a different workbook.

- 16 Right-click the *Income Statement* hyperlink in cell **B5** and then click **Edit Hyperlink**.
- 17 In the Edit Hyperlink dialog box, scroll down and select the *Income Statement – Student* workbook.

- 18 Click **Text to display**, and change the contents to: Link to Income Statement - Student.



- 19 Click **OK**.

You can change the hyperlink text directly on the worksheet without having to launch the Edit Hyperlink dialog box. However, if you click on the cell containing the hyperlink, the workbook will open. The next two steps will show you how to work around the problem.

- 20 Click in cell **A7** and then press the **→** key to make cell **B7** into the active cell without activating the hyperlink.
- 21 Press the **F2** key to switch to edit mode, change the link text to Balance Sheet workbook and press **Enter**.

**Note...**

You can select any nearby cell and then use the cursor keys on the keyboard to select the cell.

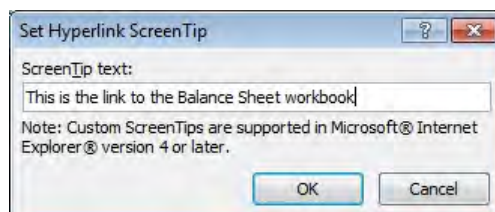
There are two other ways of selecting a cell without activating the hyperlink, by holding down the **Ctrl** key while clicking on the cell, or by clicking and holding down the left mouse button on the cell for a few seconds, until the mouse pointer changes from a hand to a white cross. Release the left mouse button and press the **F2** key to go into edit mode.

The worksheet should now look similar to the following:

	A	B	C	D	E
1	Tolano Adventures				
2					
3	Website:	<a href="#">Tolano Adventures</a>			
4					
5	Income Statement:	<a href="#">Link to Income Statement - Student</a>			
6					
7	Balance Sheet:	<a href="#">Balance Sheet workbook</a>			

Now enter a custom ScreenTip for one of the hyperlinks.

- 22 Right-click the *Balance Sheet* hyperlink in cell **B7** and then click **Edit Hyperlink**.
- 23 In the Edit Hyperlink dialog box, click **ScreenTip**.
- 24 In the Set Hyperlink ScreenTip dialog box, type: This is the link to the Balance Sheet workbook and click **OK**.



- 25 In the Edit Hyperlink dialog box, click **OK**.

**26** Position the cursor over the hyperlink in cell **B7** to view the ScreenTip.

Test the change to the Balance Sheet hyperlink to make sure that it is working properly.

**27** Click the hyperlink in cell **B7**.

**28** Close the *Balance Sheet* workbook.

Now delete one of the hyperlinks.

**29** Right-click the hyperlink in cell **B7** and click **Remove Hyperlink**.

The hyperlink in cell B7 has now changed to plain text.

**30** Save and close the workbook.

## ⋮ Using Comments

Comments are like “sticky” notes on a hard-copy document. You typically use them so that several users who are sharing a workbook can annotate the spreadsheet with their various comments. Excel automatically adds the current user’s name (as shown in the Excel Options dialog box located in the Backstage) at the top of the comment text box. The final reviewer can then act on each comment and follow up with the originator, if necessary.

In non-workgroup situations, you can use comments to remind yourself about things you need to do or to record detailed information about formulas you have used for future reference. Spreadsheets typically contain large volumes of numbers, titles and formulas to produce the desired results. Comments often help with explanations. The traditional way of adding comments is to enter free-form text into cells on the worksheet. Although this method is simple and works well with smaller spreadsheets, it does not work well with large spreadsheets where the space available may be far away and you have to draw lines from your comments to the cells to which you are referring. Embedded comments are better because you can insert them directly into the cells and display them only when you want to see them.

To insert a comment into a worksheet, use one of the following methods:

- Select the cell where the comment will be inserted, then on the **Review** tab, in the **Comments** group, click **New Comment**; or
- press **Shift+F2**; or
- right-click the cell where the comment will be inserted and then click **Insert Comment**.

To temporarily display the contents of an individual comment, position the cursor over a cell containing the **Comment Symbol**. When you move the cursor away, only the Comment Symbol displays.

To force a comment to remain displayed, use one of the following methods:

- Select the cell containing the comment, then on the **Review** tab, in the **Comments** group, click **Show/Hide Comment**; or
- right-click the cell containing the comment and click **Show/Hide Comment**.

To display the contents of all comments in a worksheet, on the **Review** tab, in the **Comments** group, click **Show All Comments**.

To delete a comment, use one of the following methods:

- Select the cell containing the comment, then on the **Review** tab, in the **Comments** group, click **Delete**; or
- right-click the cell and then click **Delete Comment**; or
- select the cell containing the comment, then on the **Home** tab, in the **Editing** group, click **Clear**, and then click **Clear Comments**.



## Learn the Skill

In this exercise, you will insert comments into a worksheet.

- 1 Open the *Income Statement - Student* workbook.
- 2 Select cell **C6**.
- 3 On the **Review** tab, in the **Comments** group, click **New Comment**.
- 4 In the comment box, type: Revenue source was sales of souvenir T-shirts.

The worksheet appears as follows with the comment displayed.

	A	B	C	D	E	F
1		Tolano Adventures				
2		Income Statement				
3						
4		Revenues:				
5		Sales	77,500.00			
6		Other Revenues	555.00			
7		Total Revenues	78,055.00			
8						
9		Expenses:				
10		Rent	63,450.00			
11		Telephone	1,833.75			
12		Internet	1,030.92			
13		Courier	4,582.62			
14		Postage	670.59			
15		Supplies	2,431.92			
16		Photocopier	750.45			
17		Travel	1,400.00			
18		Total Expenses	76,770.25			
19						
20		Net Income	1,284.75			

- 5 Click anywhere on the worksheet away from the comment.  
Excel displays a **Comment Symbol** in this cell to remind you that you have inserted a comment there; otherwise, the comment would remain hidden until you placed the cursor over that cell.
- 6 With the current active cell elsewhere on the worksheet, move the cursor over cell **C6**.  
The comment box reappears and continues to display until you move the cursor elsewhere.
- 7 Select cell **C20** and, on the **Review** tab, in the **Comments** group, click **New Comment**.
- 8 In the comment box, type: Net income needs to be improved!
- 9 Click elsewhere on the worksheet.

If necessary, you can display all comments on a worksheet at one time. You may want to do this if you are seeing the worksheet for the first time, or if others have added many comments since you last opened the workbook.

- 10 Select cell **C20** again and then, on the **Review** tab, in the **Comments** group, click **Show/Hide Comment**.  
Click elsewhere on the worksheet.

You can now hide the comment again.

- 11 Select cell **C20** and then, on the **Review** tab, in the **Comments** group, click **Show/Hide Comment** again.

You can also make all the comments in the worksheet display at the same time.

- 12 On the **Review** tab, in the **Comments** group, click **Show All Comments**.

	A	B	C	D	E	F
1		Tolano Adventures				
2		Income Statement				
3						
4		Revenues:				
5		Sales	77,500.00			
6		Other Revenues	555.00			
7		Total Revenues	78,055.00			
8						
9		Expenses:				
10		Rent	63,450.00			
11		Telephone	1,833.75			
12		Internet	1,630.92			
13		Courier	4,582.62			
14		Postage	670.59			
15		Supplies	2,451.92			
16		Photocopier	750.45			
17		Travel	1,400.00			
18		Total Expenses	76,770.25			
19						
20		Net Income	1,284.75			
21						
22						
23						

- 13 On the **Review** tab, in the **Comments** group, click **Show All Comments** again to hide all comments.

- 14 On the **Review** tab, in the **Comments** group, click **Next**.

- 15 Click the **Next** button two more times until Excel displays a message box.

- 16 Click **Cancel** to close the message box and click elsewhere on the worksheet.

You can delete a comment from a cell when you no longer need it.

- 17 Select cell **C6**. Then on the **Review** tab, in the **Comments** group, click **Delete**.

- 18 Save and close the workbook.

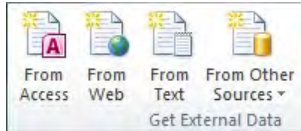
## ⋮ Importing and Exporting Data

### Importing Data Files

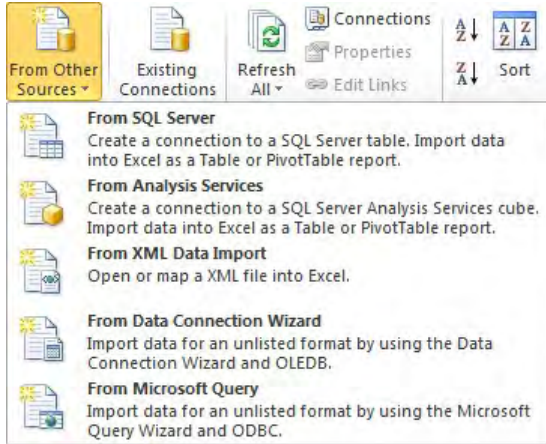
Most businesses use various specialized computer systems for their operations. Typically these systems reside on servers, other PCs, or even mainframe computers. The challenge has always been trying to move data from one system to another without having to manually re-enter the data. Almost all of these systems have the ability to export data into files, and the text data file format is the most commonly used.

Because Excel uses a customized binary format for its own workbook data, it has to convert external data files by importing them.

On the **Data** tab, in the **Get External Data** group are four icons used for importing external data:



The **From Other Sources** button shows a drop down menu for the remaining options for importing data:



These import options are as follows:

<b>From Access</b>	Imports directly from a Microsoft Access database.
<b>From Web</b>	Imports data that is displayed in specific locations of a web page.
<b>From Text</b>	Imports data from a file containing numeric and alphabetic data in text format.
<b>From SQL Server</b>	Imports data from a Microsoft SQL Server database.
<b>From Analysis Services</b>	Imports data from the Analysis Services module, a component of Microsoft SQL Server.
<b>From XML Data Import</b>	Imports data from a XML-formatted file. The XML format is rapidly becoming a standard format for exchanging data between different systems.
<b>From Data Connection Wizard</b>	Imports data using a data connection (such as ODBC) to another system.
<b>From Microsoft Query</b>	Imports data using the Microsoft Query module.

The text format has at least three sub-formats:

- **Delimited:** The text data is separated by a pre-defined character such as comma, tab, semi-colon, blank space, or possibly other characters. Excel uses this delimiter to separate the line of text into separate values to be inserted into each worksheet cell.
- **Fixed width:** Each value has a specific start and end position in every line of text. Excel uses the position of the text to separate the data into each worksheet cell.



## Learn the Skill

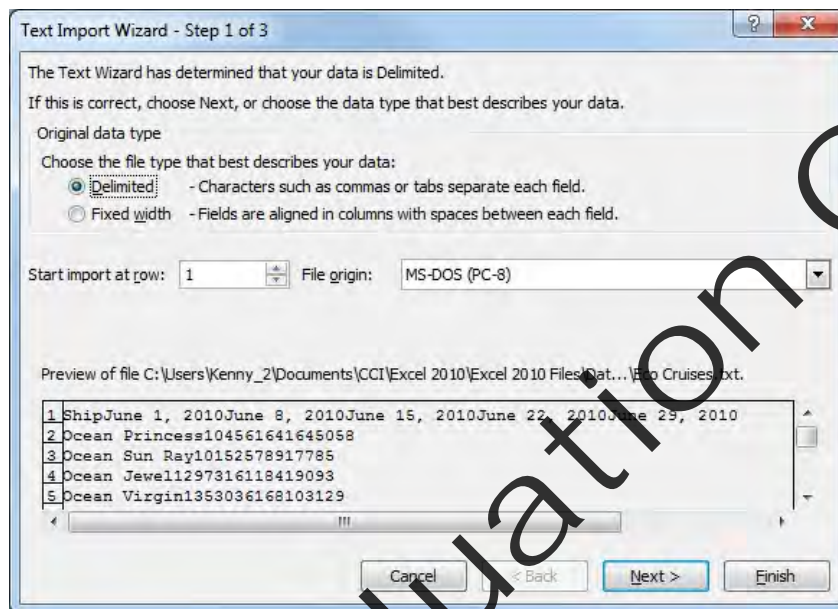
In this exercise, you will import a comma delimited text file into a worksheet.

- 1 Create a new blank workbook.
- 2 On the **Data** tab, in the **Get External Data** group, click **From Text**.

The Import Text File dialog box is displayed.

- 3 Locate and select the *Eco Cruises.txt* file and click **Import** in the Import Text File dialog box.

The Text Import Wizard will start automatically.



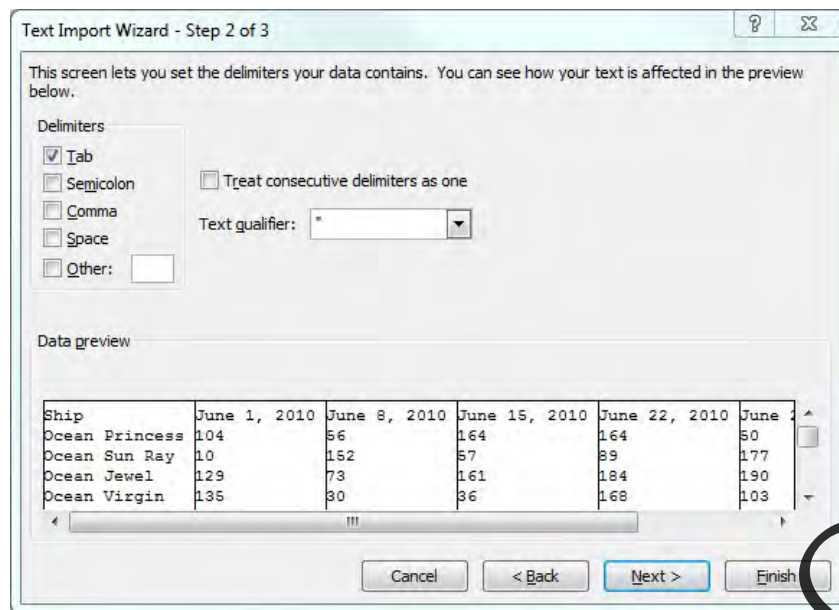
The **Original data type** section has two options: **Delimited** and **Fixed width**. Use the **Delimited** option if the data is compressed together with no gaps between the values, and delimiter characters (such as commas and tab characters) to separate each value from the next. Use **Fixed width** if the values are vertically aligned, and blank spaces are inserted into the data where necessary. The Preview section at the bottom of this Wizard shows the data in each line pushed together, so it is obviously not a **Fixed width** type.

The **File origin** text box allows you to select whether the data originated from a computer using the Macintosh, DOS, Windows (ANSI), or a variety of foreign language formats.

- 4 Verify the Original data type is **Delimited**, and Start import at row is **1**, then click **Next**.

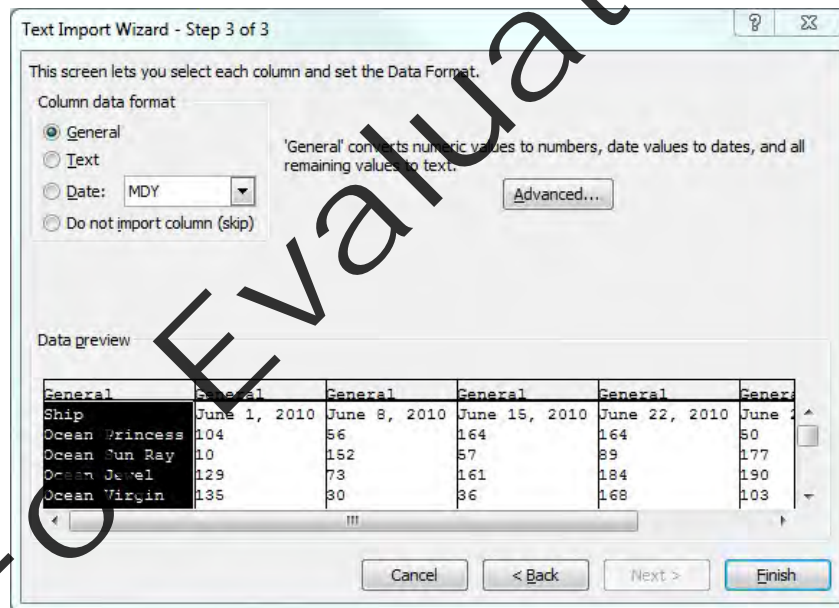
In Step 2 of the Text Import Wizard, you specify the delimiter character from the list of options: **Tab**, **Semicolon**, **Comma**, **Space**, or **Other**. You can select more than one type of delimiter character.

You also specify the type of **Text qualifier**: double-quote (") or single quote ('). Text qualifiers are used to identify text characters that belong together. For this data file, none of the data is using any text qualifier.

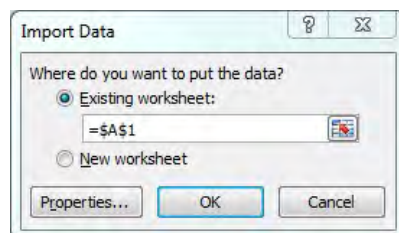


- 5 In the **Delimiters** section, verify the **Tab** check box is turned on and click **Next**.

Step 3 of the Text Import Wizard tries to guess the correct type of data used in each column. The default type is **General**, in which a column with data that appears to be all numeric will be converted into a number. Similarly, data that appears to be recognizable date values will be converted into dates, and any remaining types will be treated as text. You can also force Excel to accept columns as date or text, or to skip the entire column.



- 6 Click **Finish**.



- 7 Click **OK**.

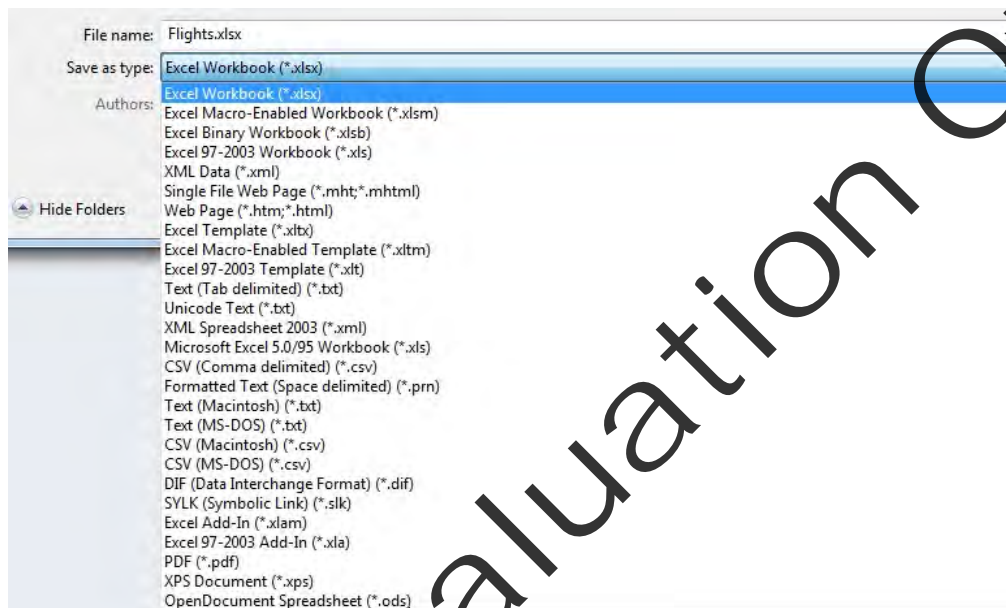
The worksheet should appear similar to the following:

	A	B	C	D	E	F	G
1	Ship	1-Jun-10	8-Jun-10	15-Jun-10	22-Jun-10	29-Jun-10	6-Jul-10
2	Ocean Princess	104	56	164	164	50	58
3	Ocean Sun Ray	10	152	57	89	177	85
4	Ocean Jewel	129	73	161	184	190	93
5	Ocean Virgin	135	30	36	168	103	129
6	Ocean Dancer	75	143	96	144	169	81
7	Ocean Radiance	150	18	106	111	158	70

- 8 Save the workbook as *Eco Cruises - Student* and close it.

## Exporting Data from Excel

Excel provides an easy-to-use method of exporting data to other systems. In the **Save As** dialog box, the **Save as type** drop down list includes an extensive list of different formats for saving the worksheet data:



Another method of sending data to another Windows program is to use the Windows Clipboard. To use it, simply copy the data from Excel into the Clipboard, and paste the data into the other Windows program. The target software will usually offer several options, such as copying the data formatting as well.

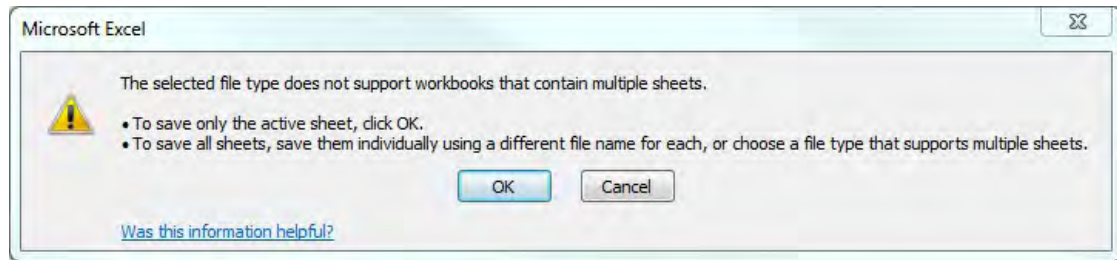


## Learn the Skill

*In this exercise, you will export worksheet data to a comma-delimited text file, and copy and paste the data to a Microsoft Word document.*

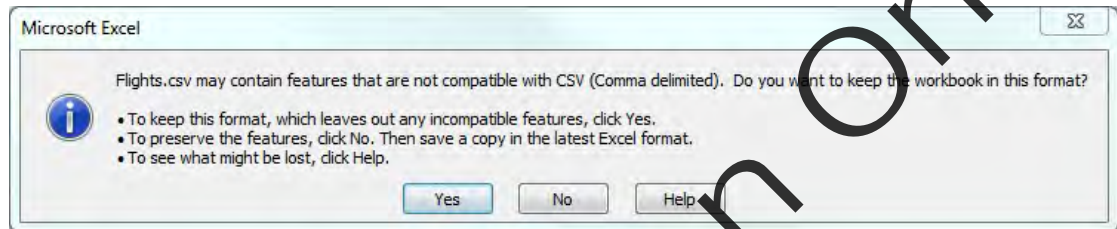
- 1 Open the *Flights* workbook.  
Export this worksheet to an external CSV data file.
- 2 Click the **File** tab, then click **Save As**.
- 3 Click the arrow at the far right of the **Save as type**, and select **CSV (Comma delimited) (\*.csv)**.
- 4 With the **File name** as *Flights.csv*, click **Save**.

A warning message box appears to inform you that the data from only the current worksheet will be exported to the data file.



- 5 Click **OK**.

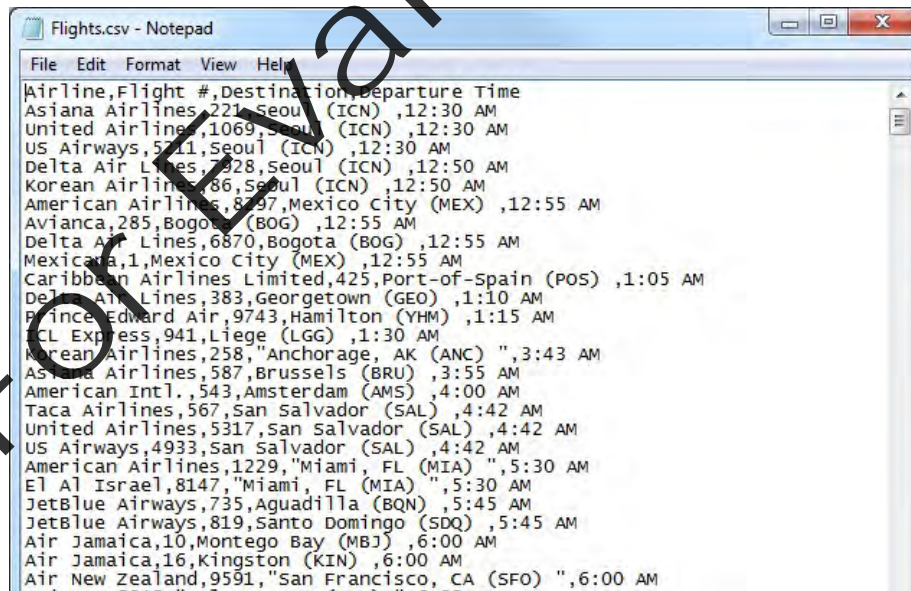
A second warning message box appears to inform you of possible data incompatibilities. Do not be overly concerned about the warning—you can just verify the output to make sure that the data looks correct.



- 6 Click **Yes**.

Use MS Notepad to check the contents of the output file.

- 7 Start up Notepad from the Windows **Start** button.
- 8 In Notepad, click **File, Open** from the menu.
- 9 Change the document type from **Text Documents (\*.txt)** to **All Files (\*.\*)**.
- 10 Locate and select the *Flights.csv* file and click **Open**.



- 11 Close Notepad without saving any changes.
- 12 Go back to Excel and close the *Flights.csv* file.

Now try copying and pasting the worksheet data to Microsoft Word using the Clipboard.

- 13 Open the *Flights* workbook.
- 14 Select columns A, B, C, and D, and on the **Home** tab, in the **Clipboard** group, click **Copy**.
- 15 Start up Microsoft Word with a new blank document.
- 16 In Word, on the **Home** tab, in the **Clipboard** group, click the arrow under **Paste**, and click **Paste Special**.
- 17 Select **Formatted Text (RTF)** and click **OK**.
- 18 Save and close the Word document as *Flights - Student*.
- 19 Go back to Excel and close the *Flights* workbook without saving any changes.

## Changing Workbook Properties

Another useful tool for workgroups is the ability to display a workbook's properties prior to opening it. This is useful when there are many workbooks stored on the network server, often with very similar names. The properties display will help distinguish each of the workbooks from each other.

These same benefits apply in non-workgroup situations as well.

It is good practice to view the document properties before saving your workbook for the first time or sending it to others. Sometimes the document properties may contain confidential data about you or your company that you should not be sharing with others.

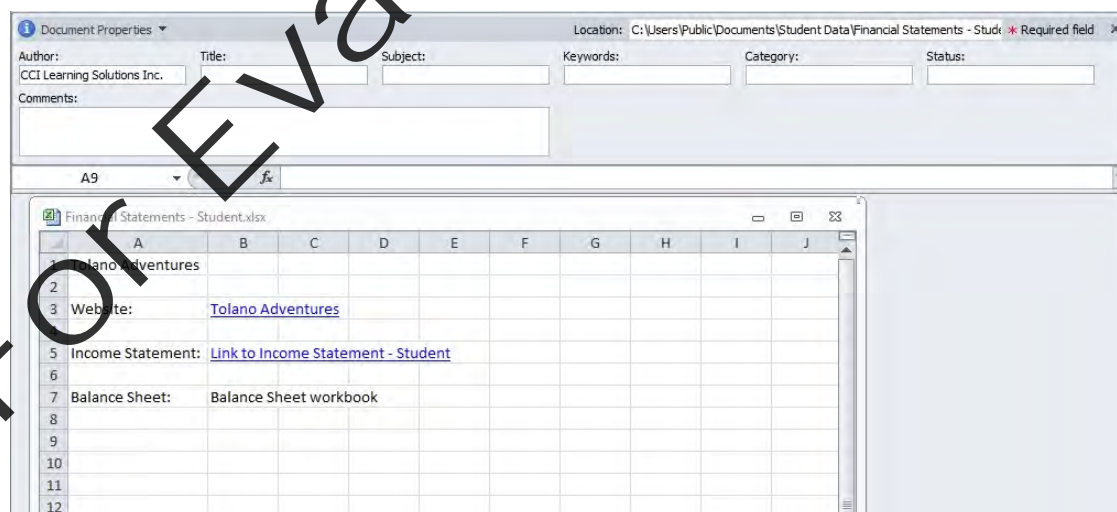


## Learn the Skill

*In this exercise, you will display and change the workbook properties.*

- 1 Open the *Financial Statements - Student* workbook.
- 2 Click the **File** button, click **Info**, and then click **Properties**, and click **Show Document Panel**.

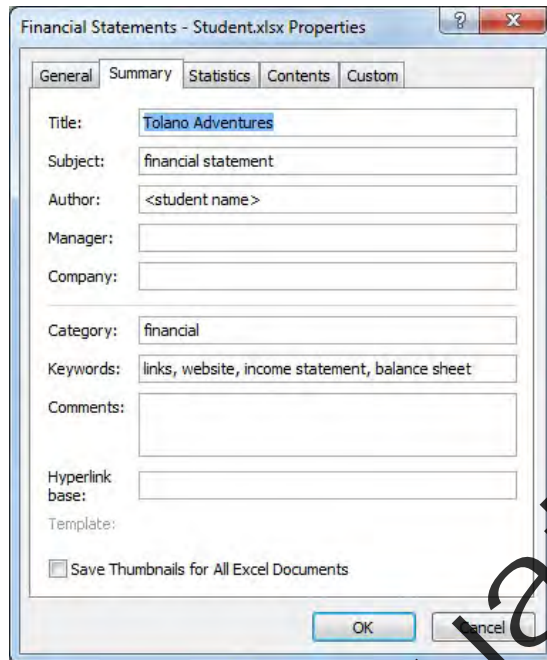
The Document Properties panel is displayed above the workbook.



- 3 Type the following:

**Author:** <your own name>  
**Title:** Tolano Adventures  
**Subject:** financial statement  
**Keywords:** links, website, income statement, balance sheet  
**Category:** financial  
**Status:** Draft

- 4 Click **Document Properties** and then **Advanced Properties**.



- 5 Click each of the tabs and you will see that entering the information in the Document Properties panel is the same as with Windows, except that you can see the contents of the document at the same time, which enables you to enter more precise details about the document.
- 6 Click **OK** to close the dialog box.
- 7 Close the Document Properties panel.
- 8 Save and close the workbook.

## ⋮ Sharing Workbooks

The rapid adoption of the Internet into everyday life demonstrates how communication helps people to connect in social and work settings. Today's workplace leverages the power of technology to increase worker productivity in creating, analyzing and sharing data, leading to faster and more informed decision-making. Most office workers now have at least one computer, and almost every one of them connects to the others using the corporate local area network.

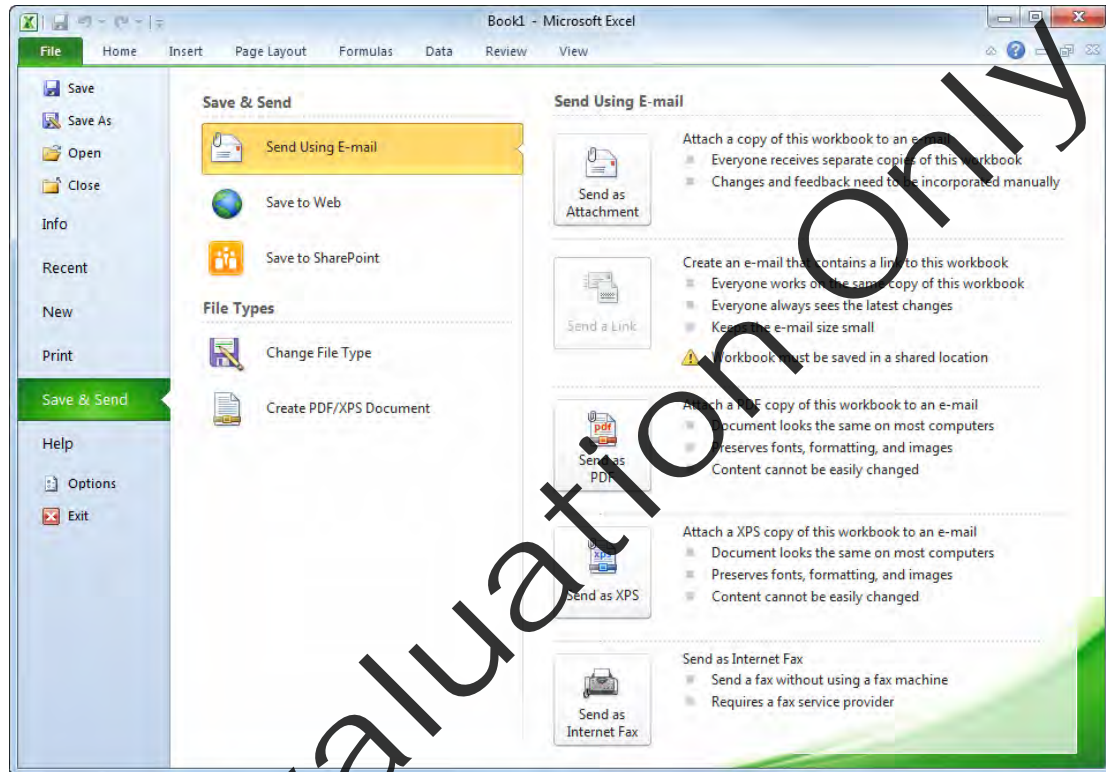
Excel taps into this pervasive connectivity with its built-in ability to send workbooks to others using e-mail, the Internet, and Microsoft SharePoint.

## Using E-mail

One way of sharing workbooks quickly with others is to send them by e-mail. The downside of using e-mail is that every recipient gets his or her own copy of the workbook. These individuals often make changes or add comments to their copy of the workbook and send it back. The originator must then merge these copies together.

To send a workbook using e-mail from within Excel, do the following steps:

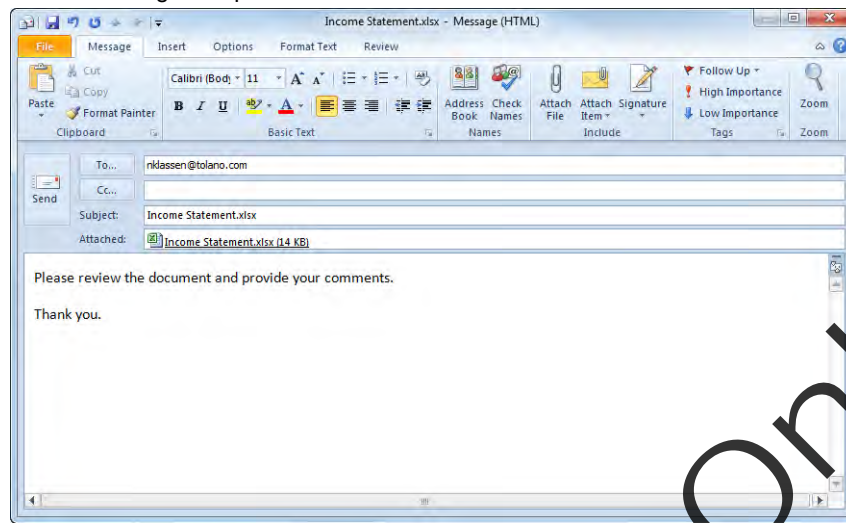
1. Open the workbook.
2. On the **File** tab, click **Save & Send**.



3. Ensure **Send Using E-mail** is selected and then click one of the following buttons:
  - a. Send as Attachment
  - b. Send a Link
  - c. Send as PDF
  - d. Send as XPS
  - e. Send as Internet Fax

**Send as Attachment**

Create a new e-mail message with your workbook included as an attachment, as demonstrated in the following example:



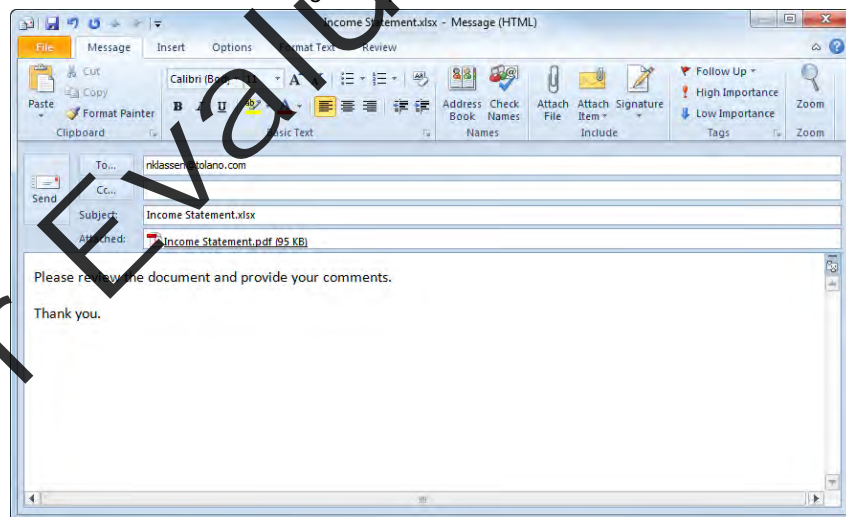
When you click the **Send** button, Outlook sends the e-mail and the attached workbook to the intended recipient.

**Send as Link**

Launch Outlook with a new e-mail message containing a hyperlink to your workbook. Unlike **Send as Attachment**, **Send as PDF** or **Send as XPS**, your recipients do not receive any file; instead, they open the original workbook by clicking on the hyperlink in the e-mail. Note that your workbook must be stored in a shared location (e.g., a network drive) where your recipients can access it from wherever they are located.

**Send as PDF**

Convert the workbook into a PDF (Portable Document Format) before you send it. Then Outlook creates a new e-mail message with this PDF file included as an attachment, as demonstrated in the following example:



The PDF format allows the recipient to view and print the workbook, but it does not permit them to make changes.

**Send as XPS**

Convert the workbook into XPS format before sending. As with **Send as PDF**, Excel converts the workbook and then Outlook creates a new e-mail message with this XPS file included as an attachment; recipients can view and print the workbook but they cannot make changes to it.

**Send as Internet Fax**

Convert the workbook into an electronic fax file and send it to the internet fax software installed on your local computer.

Of these alternatives, you should select **Send as Link** as your preferred method when sharing with co-workers within the same organization. Avoid sending a workbook as an attachment because you will simply create more work for yourself when your co-workers make changes to their copies of the workbook, possibly at the same time as you are doing so. If instead you put the workbook into a shared location and send out a link, everyone (including you) is always updating the same workbook.

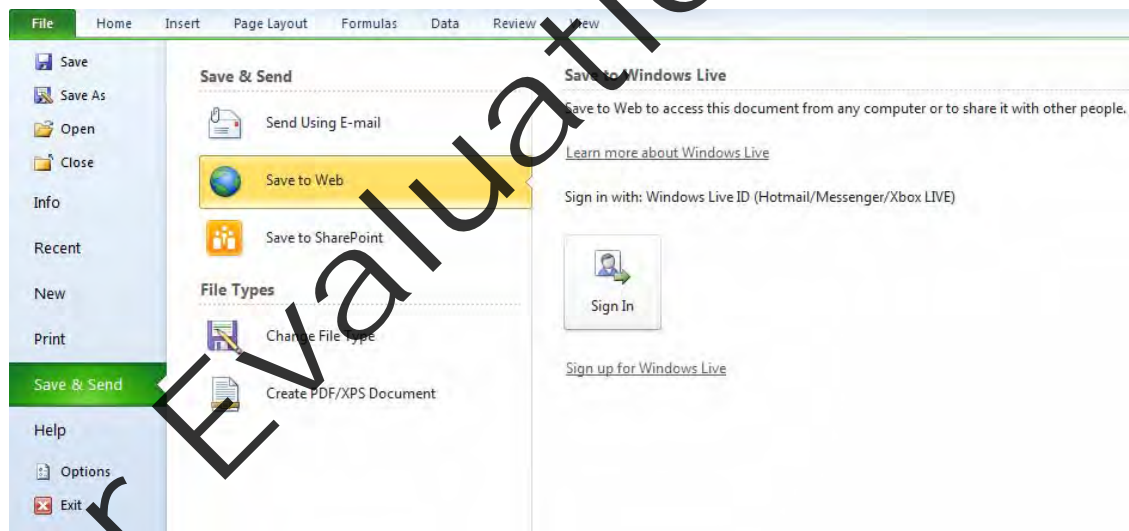
The **Send as PDF** or **Send as XPS** are useful alternatives if you want to prevent the recipients from making changes to the workbook.

## Save to Web

Another way of sharing workbooks with others is to use a web-based storage service such as the Microsoft SkyDrive. SkyDrive is one of the components of the Microsoft's Windows Live group of online services. Every registered Windows Live user has a SkyDrive with 25 GB of storage space at no cost. By default, you have two main folders: My Documents and Public. Anyone with a Windows Live ID can access any files in the Public folder at any time; any files you put into the My Documents folder are only accessible by you, except for the ones that you designate your contacts can share. You can also add other online web-based (e.g. Internet) storage services to store your workbooks.

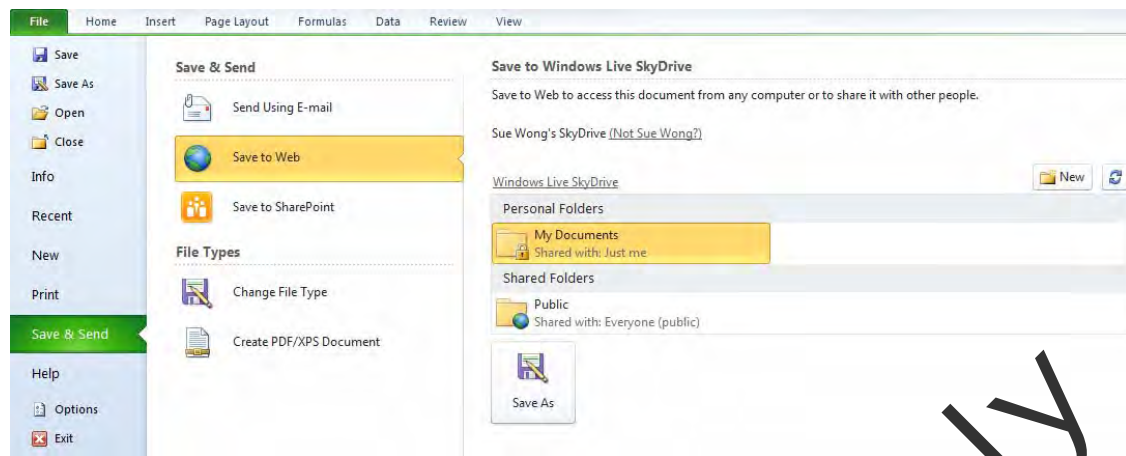
To save a workbook to the SkyDrive from within Excel, do the following:

1. Open the workbook.
2. On the **File** tab, click **Save & Send**.
3. Under **Save & Send**, click **Save to Web**.



4. If necessary, click **Sign In** to access the SkyDrive.
5. Enter your login ID and password in Windows Live.

Excel then displays the folders in your SkyDrive.



6. Click one of the SkyDrive folders (e.g. *Public* or *My Documents*) and then click **Save As**.

The Save As dialog box appears (there may be a short wait while the connection is completed with the SkyDrive). Although it looks like any other folder on your computer or a network drive, it is actually a remote drive provided as part of your Windows Live account. If you want to share your workbook with others, be sure to select the *Public* folder.

7. If desired, change the **File name** and/or **Save as type**.
8. Click **Save**.
9. If necessary, make any other changes to the workbook and save these changes. Note that, any time you save changes, you are saving them directly to the workbook in the SkyDrive, not to your local computer.
10. Close the workbook.

The workbook is now accessible from the SkyDrive.

## Using SharePoint

Another method of sharing Excel workbooks (and other documents) with co-workers is by using SharePoint. Recognizing that people working together are more productive than people working alone, Microsoft designed SharePoint to facilitate document sharing within an organization and with authorized users in partner organizations. The term *web-based collaborative environment* refers to this kind of online sharing.

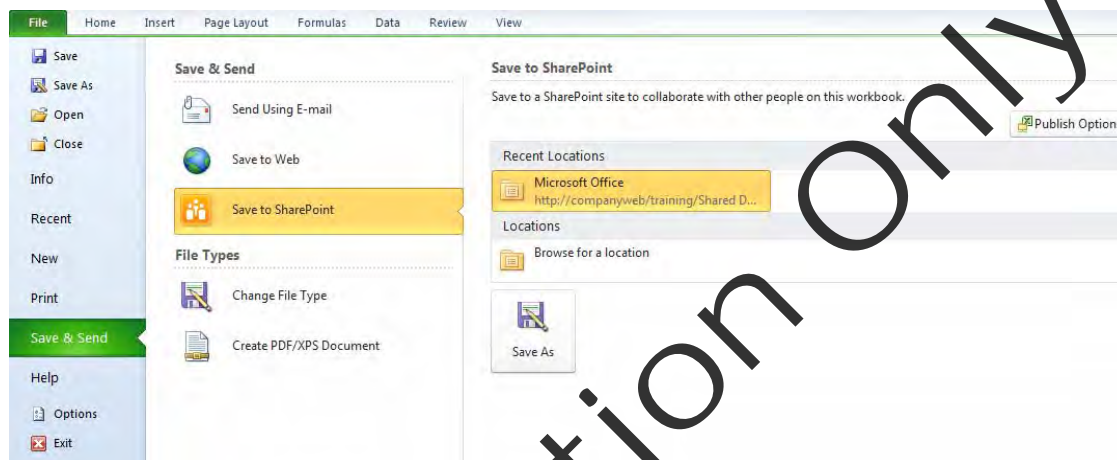
SharePoint brings together the many different tools that people use to share, including:

- **Shared network drives to store files and documents**—In the past, a company or IT department would designate specific computers to store these files. Access security quickly followed to ensure protection of confidential files. However, the demand for shared storage space in an organization usually exceeds the space available after a few years, representing an ongoing administrative nightmare for most IT departments.
- **Document version control**—A collaborative environment brings a new set of challenges and headaches, primarily the dispersal of ownership and loss of control over changes made, which often leads to uncontrolled and haphazard changes. For example, someone may delete a document accidentally or make changes that conflict with another person's changes. Version control ensures that only one person enters their changes at any one time. If someone accidentally deletes a document or makes unwanted changes, this feature allows you to restore a previous version easily.
- **Workflow control**—You can designate documents to be funneled through workflow processes, such as approving purchase requisitions or media releases. The system then automatically routes the document to the next person in the workflow when the current approver has completed his or her work.
- **Social networking**—Facebook is an example of social networking.

- **E-mail**—Announcements, notices and other types of team communication, which are often sent by e-mail, can be quickly lost in the daily volume of other e-mail. An effective collaboration site has a section containing the most relevant communications to the team without having to wade through e-mails.
- **Other shared communications**—These include things such as corporate or team calendars, surveys and polls.

To save a workbook to SharePoint from within Excel, do the following:

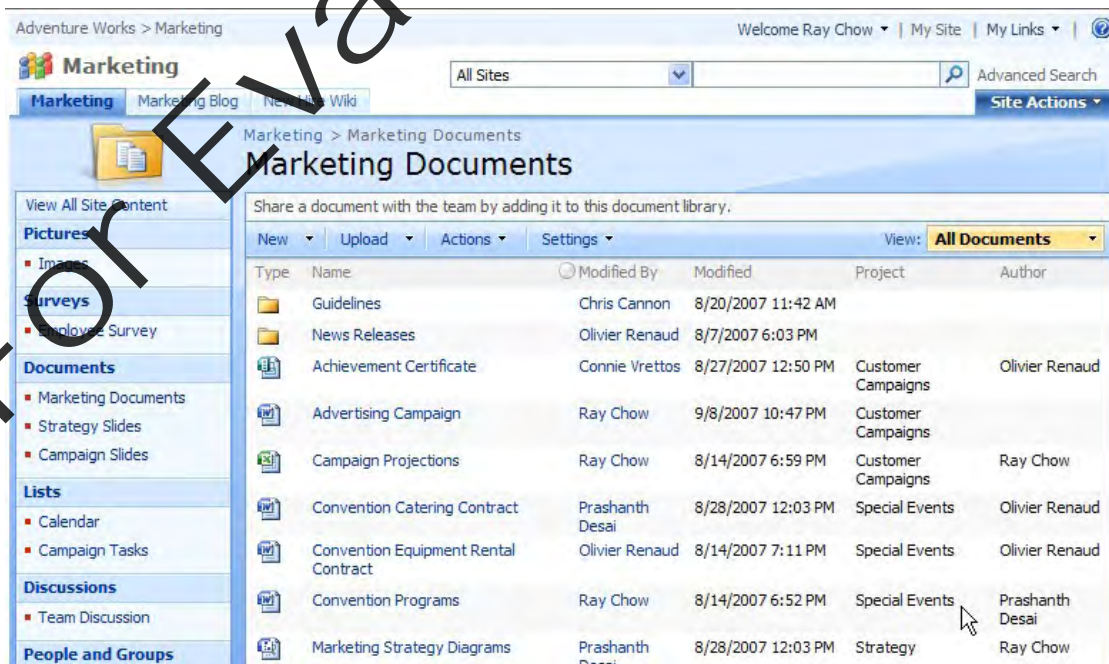
1. Open the workbook.
2. On the **File** tab, click **Share**.
3. Under **Share**, click **Save to SharePoint**.



4. If necessary, click **Browse for a location**.

The Excel Save As dialog box now appears, allowing you to navigate to the SharePoint site where the document is to be stored.

A SharePoint site can be designed in many different ways; the following illustration shows one example where documents of various types are stored.



## Lesson Summary

In this lesson, you learned to work with different types of illustrations, including shapes, WordArt, pictures, clip art graphics and SmartArt. You should now be able to:

- sort data
- use the AutoFilter feature to find specific data
- create, modify and delete range names
- create, modify and delete hyperlinks
- create and delete comments
- import and export data with other programs
- change workbook document properties
- use Office BackStage to share workbooks with others.

## Review Questions

1. What is the difference between sorting and filtering?
2. What can you use the AutoFilter tool for in a worksheet?
3. Why do you need to tell Excel whether you have headers in the data?
4. Provide examples of when you might set up multiple levels for sorting.
5. Give examples of why you might want to name cell ranges instead of using the cell references.
6. What restrictions are in place regarding range names?
7. What can you use the Name Manager for?
8. Give an example of when you might insert a hyperlink into a worksheet.
9. What can you use comments for in a worksheet?
10. What is the preferred method of sharing a workbook with your co-workers, and why?