



Zakho Technical Institute

5. Microsoft Excel - Working with Data – Filtering – Table - Chart

Lecturer:

Sipan M. Hameed

<https://www.sipan.dev/>

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5. Working with Data - Filtering Data

5.1. Introduction

If your worksheet contains a lot of content, it can be difficult to find information quickly.

Filters can be used to **narrow down** the data in your worksheet, allowing you to view only the information you need.

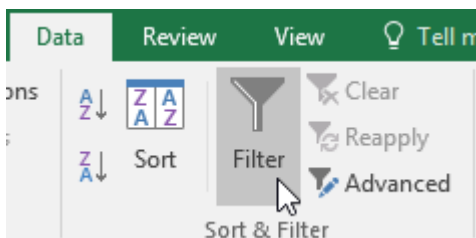
5.2. To filter data:

In our example, we'll apply a filter to an equipment log worksheet to display only the laptops and projectors that are available for checkout.

1. In order for filtering to work correctly, your worksheet should include a **header row**, which is used to identify the name of each column. In our example, our worksheet is organized into different columns identified by the header cells in row 1: **ID#**, **Type**, **Equipment Detail**, and so on.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
2	3000	Camera	Saris Lumina Digital Camera	12-May-15	15-May-15	Shannon Nguyen
3	3005	Camera	Saris Zoom Z-60 Digital Camera	27-Jul-15	06-Aug-15	Sela Shepard
4	1021	Laptop	15" EDI SmartPad L200-3 Laptop	15-Sep-15	01-Oct-15	Sofie Ragnar
5	1022	Laptop	15" EDI SmartPad L200-3 Laptop	14-Aug-15	16-Aug-15	Hank Sorenson
6	1023	Laptop	15" EDI SmartPad L200-3 Laptop	08-Aug-15	15-Aug-15	Jennifer Weiss
7	3070	Camera	Omega PixL Digital Camcorder	06-Oct-15		Min Seung
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-15	04-Oct-15	Min Seung
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-15		Nick Ortiz
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-15		Stanley Geyer
11	1033	Laptop	17" Saris X-10 Laptop	24-Sep-15	26-Sep-15	George D'Agosta

2. Select the **Data** tab, then click the **Filter** command.



3. A **drop-down arrow** will appear in the header cell for each column.
4. Click the **drop-down arrow** for the column you want to filter. In our example, we will filter column **B** to view only certain types of equipment.

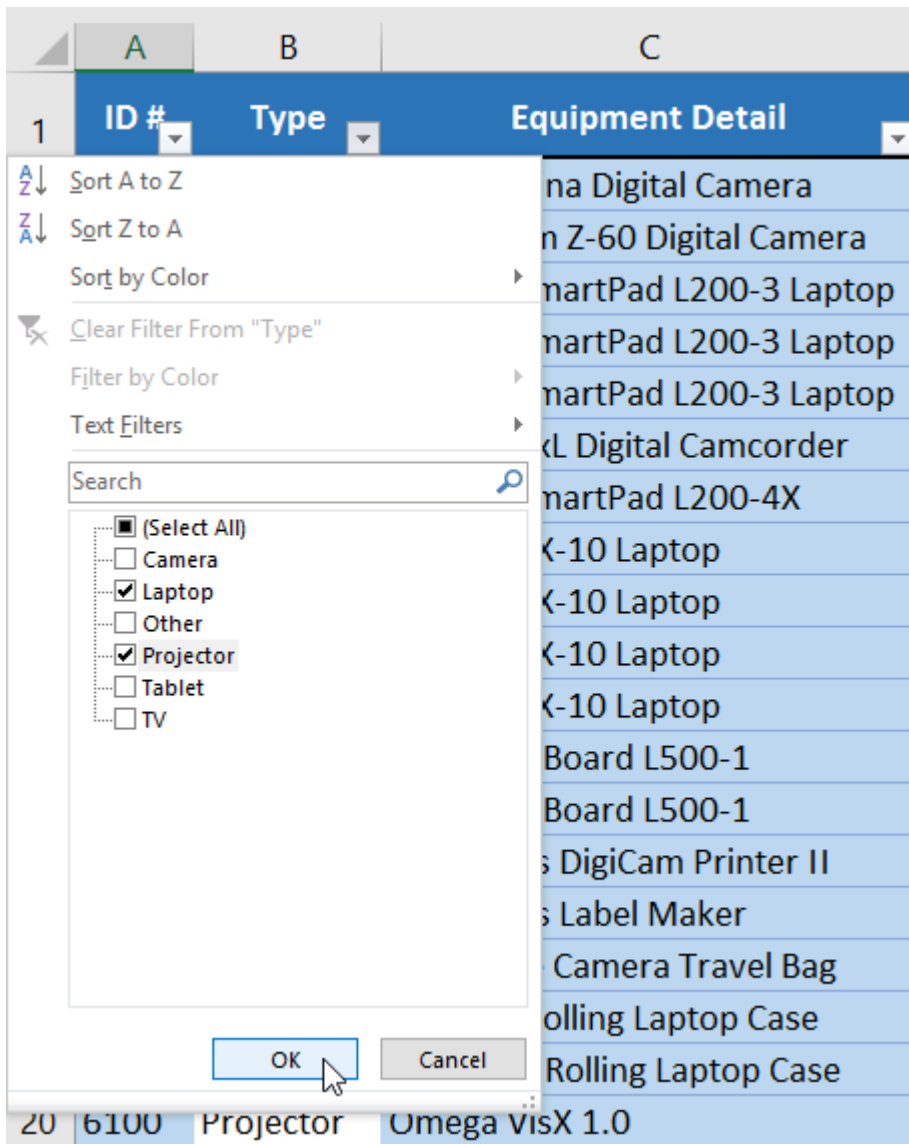
	A	B	C
1	ID #	Type	Equipment Detail
2	3000	Camera	Canon Lumina Digital Camera
3	3005	Camera	Canon Z-60 Digital Camera
4	1021	Laptop	15" EDI SmartPad L200-3
5	1022	Laptop	15" EDI SmartPad L200-3
6	1023	Laptop	15" EDI SmartPad L200-3

5. The **Filter menu** will appear.
6. **Uncheck** the box next to **Select All** to quickly deselect all data.

	A	B	C
1	ID #	Type	Equipment Detail
			na Digital Camera
			n Z-60 Digital Camera
			smartPad L200-3 Laptop
			smartPad L200-3 Laptop
			smartPad L200-3 Laptop
			L Digital Camcorder
			smartPad L200-4X
			K-10 Laptop
			K-10 Laptop
			K-10 Laptop
			K-10 Laptop
			Board L500-1
			Board L500-1
			s DigiCam Printer II
			s Label Maker
			Camera Travel Bag
			olling Laptop Case
			Rolling Laptop Case
20	6100	Projector	Omega VisX 1.0

Sort A to Z
 Sort Z to A
 Sort by Color
 Clear Filter From "Type"
 Filter by Color
 Text Filters
 Search
 (Select All)
 Camera
 Laptop
 Other
 Projector
 Tablet
 TV

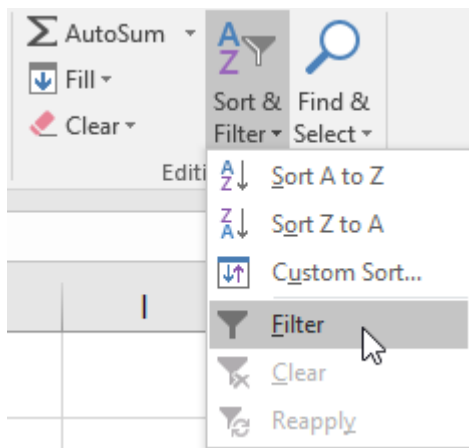
7. **Check** the boxes next to the data you want to filter, then click **OK**. In this example, we will check **Laptop** and **Projector** to view only these types of equipment.



8. The data will be **filtered**, temporarily hiding any content that doesn't match the criteria. In our example, only laptops and projectors are visible.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
4	1021	Laptop	15" EDI SmartPad L200-3 Laptop	15-Sep-15	01-Oct-15	Sofie Ragnar
5	1022	Laptop	15" EDI SmartPad L200-3 Laptop	14-Aug-15	16-Aug-15	Hank Sorenson
6	1023	Laptop	15" EDI SmartPad L200-3 Laptop	08-Aug-15	15-Aug-15	Jennifer Weiss
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-15	04-Oct-15	Min Seung
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-15		Nick Ortiz
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-15		Stanley Geyer
11	1033	Laptop	17" Saris X-10 Laptop	24-Sep-15	26-Sep-15	George D'Agosta
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-15	27-Aug-15	Jay Peralta
20	6100	Projector	Omega VisX 1.0	28-Sep-15	01-Oct-15	Win Armitage
21	6101	Projector	Omega VisX 1.0	26-Sep-15	27-Sep-15	Michael Earley
22	6102	Projector	Omega VisX 1.0	22-Aug-15	23-Aug-15	Jamila Kyle
23	6200	Projector	Saris Lux T-80	01-Sep-15	04-Sep-15	Jolie Chaturvedi
24	6301	Projector	Saris Lux T-81 Lite	10-Sep-15		Marques Herndon
25	6302	Projector	Saris Lux T-81 Lite	08-Sep-15	15-Sep-15	Dean Sorenson
31						
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Filtering options can also be accessed from the **Sort & Filter** command on the **Home** tab.



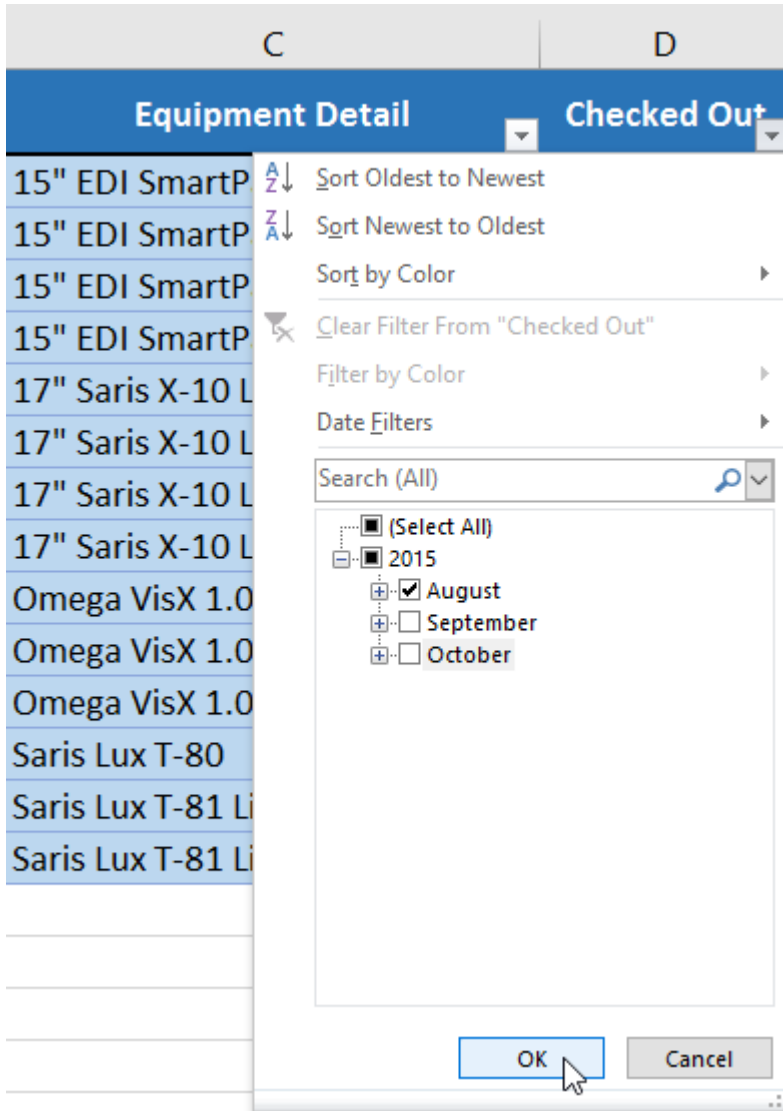
5.3. To apply multiple filters:

Filters are **cumulative**, which means you can apply **multiple filters** to help narrow down your results. In this example, we've already filtered our worksheet to show laptops and projectors, and we'd like to narrow it down further to only show laptops and projectors that were checked out in August.

1. Click the **drop-down arrow** for the column you want to filter. In this example, we will add a filter to column **D** to view information by date.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
4	1021	Laptop	15" EDI SmartPad L200-3 Laptop	15-Sep-15	01-Oct-15	Sofie Ragnar
5	1022	Laptop	15" EDI SmartPad L200-3 Laptop	14-Aug-15	15	Hank Sorenson
6	1023	Laptop	15" EDI SmartPad L200-3 Laptop	08-Aug-15	15-Aug-15	Jennifer Weiss
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-15	04-Oct-15	Min Seung
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-15		Nick Ortiz
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-15		Stanley Geyer
11	1033	Laptop	17" Saris X-10 Laptop	24-Sep-15	26-Sep-15	George D'Agosta
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-15	27-Aug-15	Jay Peralta
20	6100	Projector	Omega VisX 1.0	28-Sep-15	01-Oct-15	Win Armitage
21	6101	Projector	Omega VisX 1.0	26-Sep-15	27-Sep-15	Michael Earley
22	6102	Projector	Omega VisX 1.0	22-Aug-15	23-Aug-15	Jamila Kyle
23	6200	Projector	Saris Lux T-80	01-Sep-15	04-Sep-15	Jolie Chaturvedi
24	6301	Projector	Saris Lux T-81 Lite	10-Sep-15		Marques Herndon
25	6302	Projector	Saris Lux T-81 Lite	08-Sep-15	15-Sep-15	Dean Sorenson
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2. The **Filter menu** will appear.
3. **Check** or **uncheck** the boxes depending on the data you want to filter, then click **OK**.
In our example, we'll uncheck everything except for **August**.



4. The new filter will be applied. In our example, the worksheet is now filtered to show only laptops and projectors that were checked out in August.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
5	1022	Laptop	15" EDI SmartPad L200-3 Laptop	14-Aug-15	16-Aug-15	Hank Sorenson
6	1023	Laptop	15" EDI SmartPad L200-3 Laptop	08-Aug-15	15-Aug-15	Jennifer Weiss
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-15	27-Aug-15	Jay Peralta
22	6102	Projector	Omega VisX 1.0	22-Aug-15	23-Aug-15	Jamila Kyle
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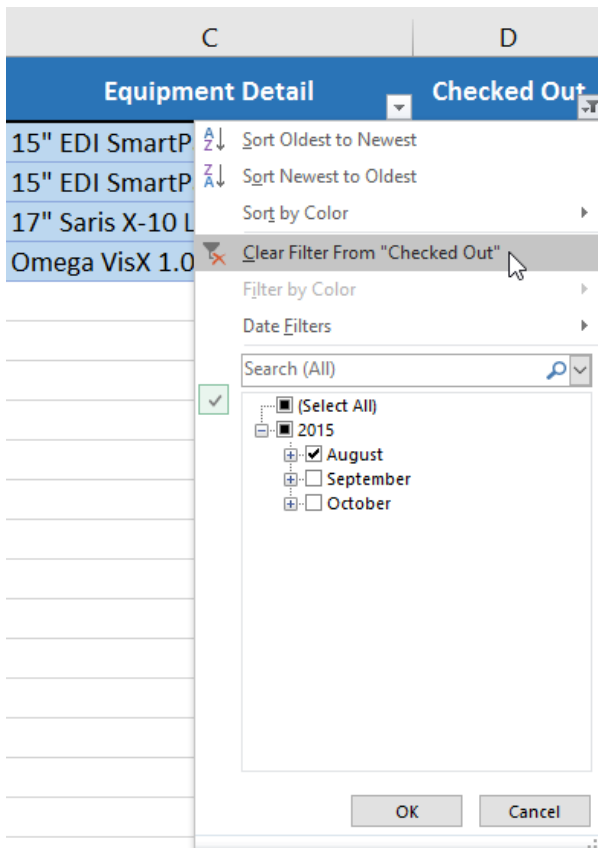
5.4.To clear a filter:

After applying a filter, you may want to remove—or **clear**—it from your worksheet so you'll be able to filter content in different ways.

1. Click the **drop-down arrow** for the filter you want to clear. In our example, we'll clear the filter in column **D**.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
5	1022	Laptop	15" EDI SmartPad L200-3 Laptop	14-Aug-15	16-Aug-15	Hank Sorenson
6	1023	Laptop	15" EDI SmartPad L200-3 Laptop	08-Aug-15		Jennifer Weiss
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-15	27-Aug-15	Jay Peralta
22	6102	Projector	Omega VisX 1.0	22-Aug-15	23-Aug-15	Jamila Kyle
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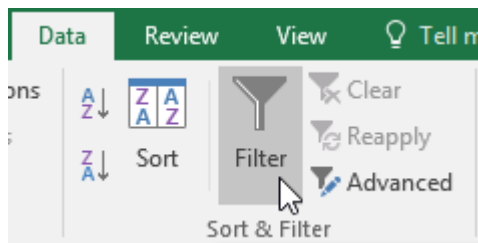
2. The **Filter menu** will appear.
3. Choose **Clear Filter From [COLUMN NAME]** from the Filter menu. In our example, we'll select **Clear Filter From "Checked Out"**.



4. The filter will be cleared from the column. The previously hidden data will be displayed.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
4	1021	Laptop	15" EDI SmartPad L200-3 Laptop	15-Sep-15	01-Oct-15	Sofie Ragnar
5	1022	Laptop	15" EDI SmartPad L200-3 Laptop	14-Aug-15	15	Hank Sorenson
6	1023	Laptop	15" EDI SmartPad L200-3 Laptop	08-Aug-15	15-Aug-15	Jennifer Weiss
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-15	04-Oct-15	Min Seung
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-15		Nick Ortiz
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-15		Stanley Geyer
11	1033	Laptop	17" Saris X-10 Laptop	24-Sep-15	26-Sep-15	George D'Agosta
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-15	27-Aug-15	Jay Peralta
20	6100	Projector	Omega VisX 1.0	28-Sep-15	01-Oct-15	Win Armitage
21	6101	Projector	Omega VisX 1.0	26-Sep-15	27-Sep-15	Michael Earley
22	6102	Projector	Omega VisX 1.0	22-Aug-15	23-Aug-15	Jamila Kyle
23	6200	Projector	Saris Lux T-80	01-Sep-15	04-Sep-15	Jolie Chaturvedi
24	6301	Projector	Saris Lux T-81 Lite	10-Sep-15		Marques Herndon
25	6302	Projector	Saris Lux T-81 Lite	08-Sep-15	15-Sep-15	Dean Sorenson
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To remove all filters from your worksheet, click the **Filter** command on the **Data** tab.



5.5. Advanced filtering

If you need a filter for something specific, basic filtering may not give you enough options. Fortunately, Excel includes many **advanced filtering tools**, including **search**, **text**, **date**, and **number filtering**, which can narrow your results to help find exactly what you need.

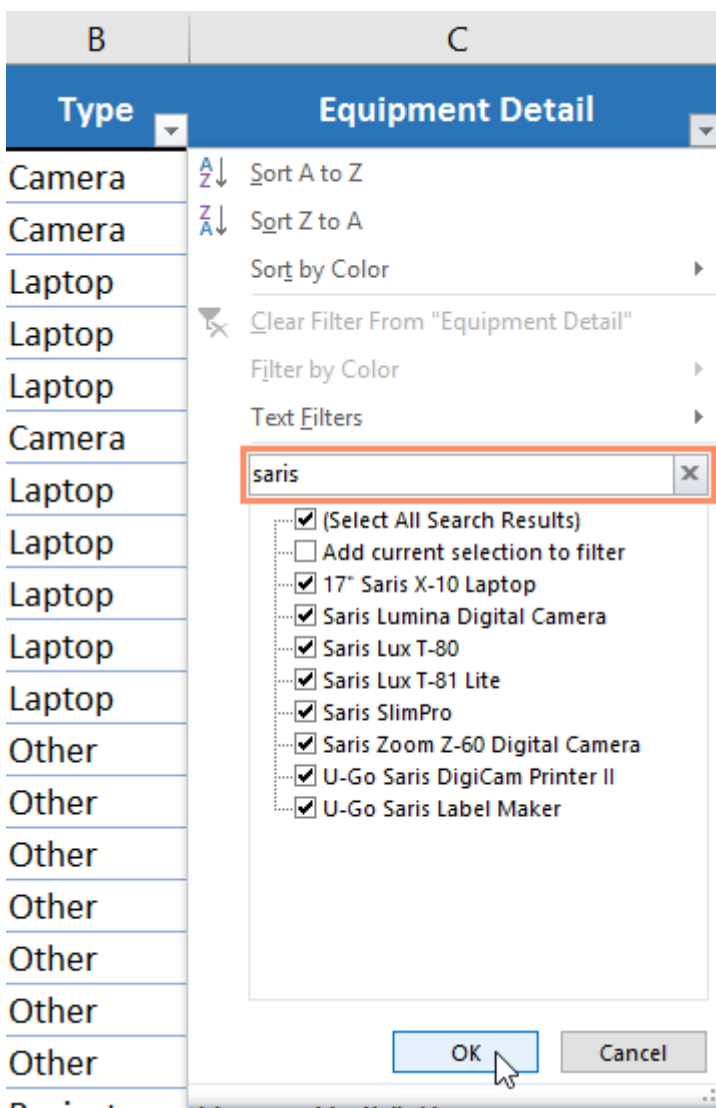
5.5.1. To filter with search:

Excel allows you to **search** for data that contains an exact phrase, number, date, and more. In our example, we'll use this feature to show only **Saris** brand products in our equipment log.

1. Select the **Data** tab, then click the **Filter** command. A **drop-down arrow** will appear in the header cell for each column. **Note:** If you've already added filters to your worksheet, you can skip this step.
2. Click the **drop-down arrow** for the column you want to filter. In our example, we'll filter column C.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
2	3000	Camera	Saris Lumina Digital Camera	15-May-15	15-May-15	Shannon Nguyen
3	3005	Camera	Saris Zoom Z-60 Digital Camera	06-Aug-15	06-Aug-15	Sela Shepard
4	1021	Laptop	15" EDI SmartPad L200-3 Laptop	15-Sep-15	01-Oct-15	Sofie Ragnar
5	1022	Laptop	15" EDI SmartPad L200-3 Laptop	14-Aug-15	16-Aug-15	Hank Sorenson
6	1023	Laptop	15" EDI SmartPad L200-3 Laptop	08-Aug-15	15-Aug-15	Jennifer Weiss
7	3070	Camera	Omega PixL Digital Camcorder	06-Oct-15		Min Seung
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-15	04-Oct-15	Min Seung
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-15		Nick Ortiz
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-15		Stanley Geyer

- The **Filter menu** will appear. Enter a **search term** into the **search box**. Search results will appear automatically below the **Text Filters** field as you type. In our example, we'll type **saris** to find all Saris brand equipment. When you're done, click **OK**.



- The worksheet will be **filtered** according to your search term. In our example, the worksheet is now filtered to show only Saris brand equipment.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
2	3000	Camera	Saris Lumina Digital Camera	12-May-15	15-May-15	Shannon Nguyen
3	3005	Camera	Saris Zoom Z-60 Digital Camera	27-Jul-15	06-Aug-15	Sela Shepard
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-15		Nick Ortiz
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-15		Stanley Geyer
11	1033	Laptop	17" Saris X-10 Laptop	24-Sep-15	26-Sep-15	George D'Agosta
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-15	27-Aug-15	Jay Peralta
15	3800	Other	U-Go Saris DigiCam Printer II	04-Aug-15	05-Aug-15	Hank Sorenson
16	3900	Other	U-Go Saris Label Maker	13-Jun-15	20-Jun-15	Clint Gosse
23	6200	Projector	Saris Lux T-80	01-Sep-15	04-Sep-15	Jolie Chaturvedi
24	6301	Projector	Saris Lux T-81 Lite	10-Sep-15		Marques Herndon
25	6302	Projector	Saris Lux T-81 Lite	08-Sep-15	15-Sep-15	Dean Sorenson
26	1011	Tablet	Saris SlimPro	04-Oct-15		Jay Peralta
27	1012	Tablet	Saris SlimPro	29-Sep-15		August Zorn
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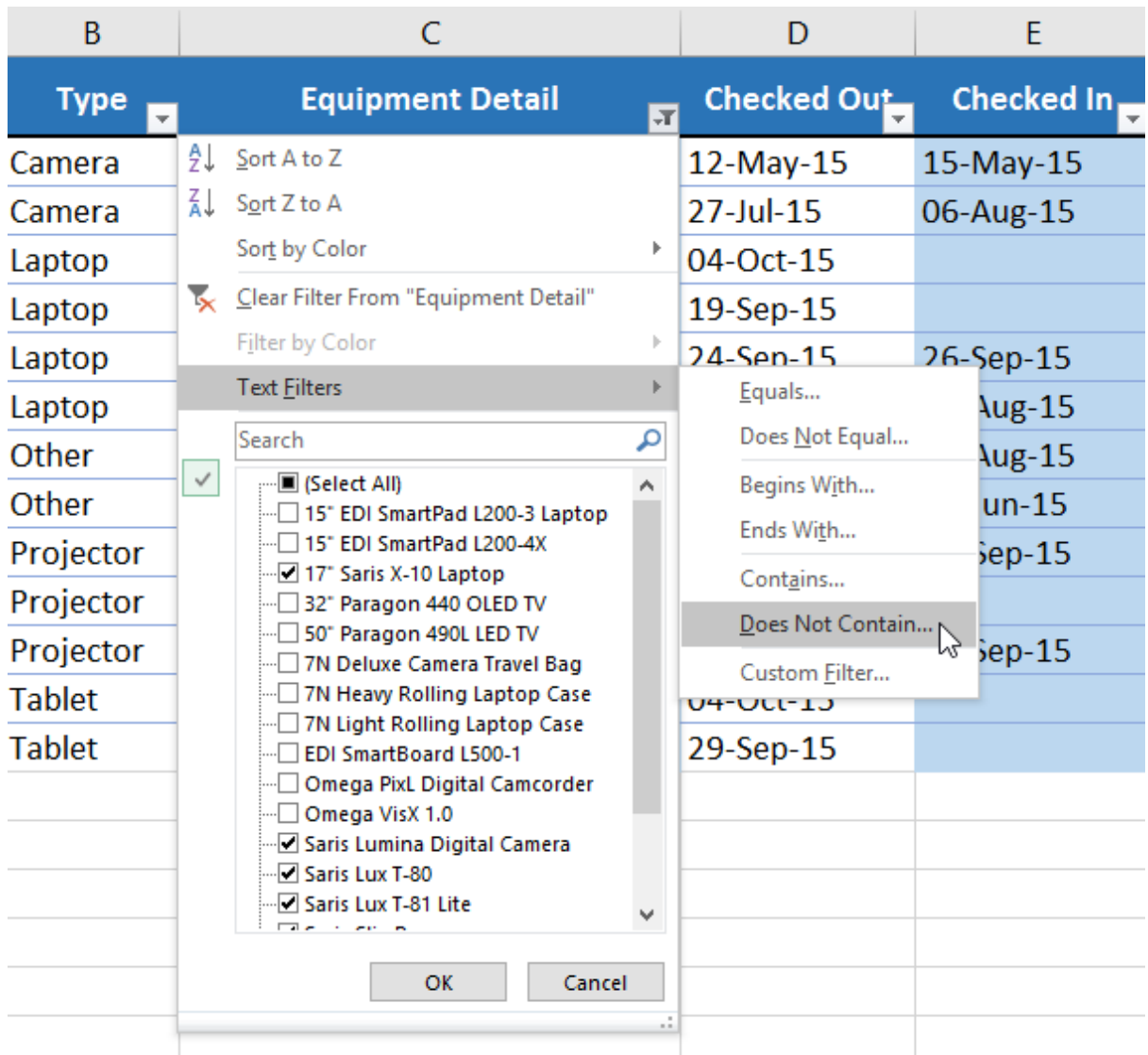
5.5.2. To use advanced text filters:

Advanced text filters can be used to display more specific information, like cells that contain a certain number of characters or data that excludes a specific word or number. In our example, we'd like to exclude any item containing the word **laptop**.

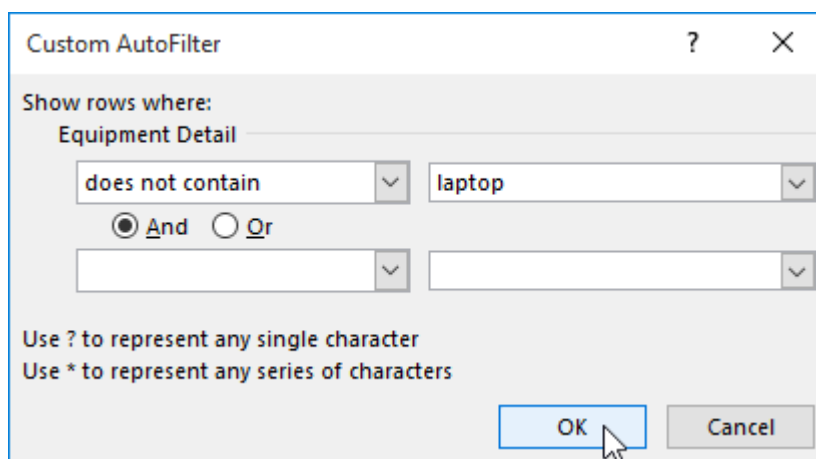
1. Select the **Data** tab, then click the **Filter** command. A **drop-down arrow** will appear in the header cell for each column. **Note:** If you've already added filters to your worksheet, you can skip this step.
2. Click the **drop-down arrow** for the column you want to filter. In our example, we'll filter column C.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
2	3000	Camera	Saris Lumina Digital Camera	12-May-15	15-May-15	Shannon Nguyen
3	3005	Camera	Saris Zoom Z-60 Digital Camera	27-Jul-15	06-Aug-15	Sela Shepard
4	1021	Laptop	15" EDI SmartPad L200-3 Laptop	15-Sep-15	01-Oct-15	Sofie Ragnar
5	1022	Laptop	15" EDI SmartPad L200-3 Laptop	14-Aug-15	16-Aug-15	Hank Sorenson
6	1023	Laptop	15" EDI SmartPad L200-3 Laptop	08-Aug-15	15-Aug-15	Jennifer Weiss
7	3070	Camera	Omega PixL Digital Camcorder	06-Oct-15		Min Seung
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-15	04-Oct-15	Min Seung
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-15		Nick Ortiz
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-15		Stanley Geyer

3. The **Filter menu** will appear. Hover the mouse over **Text Filters**, then select the desired text filter from the drop-down menu. In our example, we'll choose **Does Not Contain** to view data that does not contain specific text.



- The **Custom AutoFilter** dialog box will appear. Enter the **desired text** to the right of the filter, then click **OK**. In our example, we'll type **laptop** to exclude any items containing this word.



- The data will be filtered by the selected text filter. In our example, our worksheet now displays items that do not contain the word **laptop**.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
2	3000	Camera	Saris Lumina Digital Camera	12-May-15	15-May-15	Shannon Nguyen
3	3005	Camera	Saris Zoom Z-60 Digital Camera	27-Jul-15	06-Aug-15	Sela Shepard
7	3070	Camera	Omega PixL Digital Camcorder	06-Oct-15		Min Seung
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-15	04-Oct-15	Min Seung
13	2050	Other	EDI SmartBoard L500-1	05-Oct-15	06-Oct-15	Anthony Liddell
14	2051	Other	EDI SmartBoard L500-1	01-Oct-15	05-Oct-15	Sofie Ragnar
15	3800	Other	U-Go Saris DigiCam Printer II	04-Aug-15	05-Aug-15	Hank Sorenson
16	3900	Other	U-Go Saris Label Maker	13-Jun-15	20-Jun-15	Clint Gosse
17	4800	Other	7N Deluxe Camera Travel Bag	27-Jul-15	06-Aug-15	Sela Shepard
20	6100	Projector	Omega VisX 1.0	28-Sep-15	01-Oct-15	Win Armitage
21	6101	Projector	Omega VisX 1.0	26-Sep-15	27-Sep-15	Michael Earley
22	6102	Projector	Omega VisX 1.0	22-Aug-15	23-Aug-15	Jamila Kyle

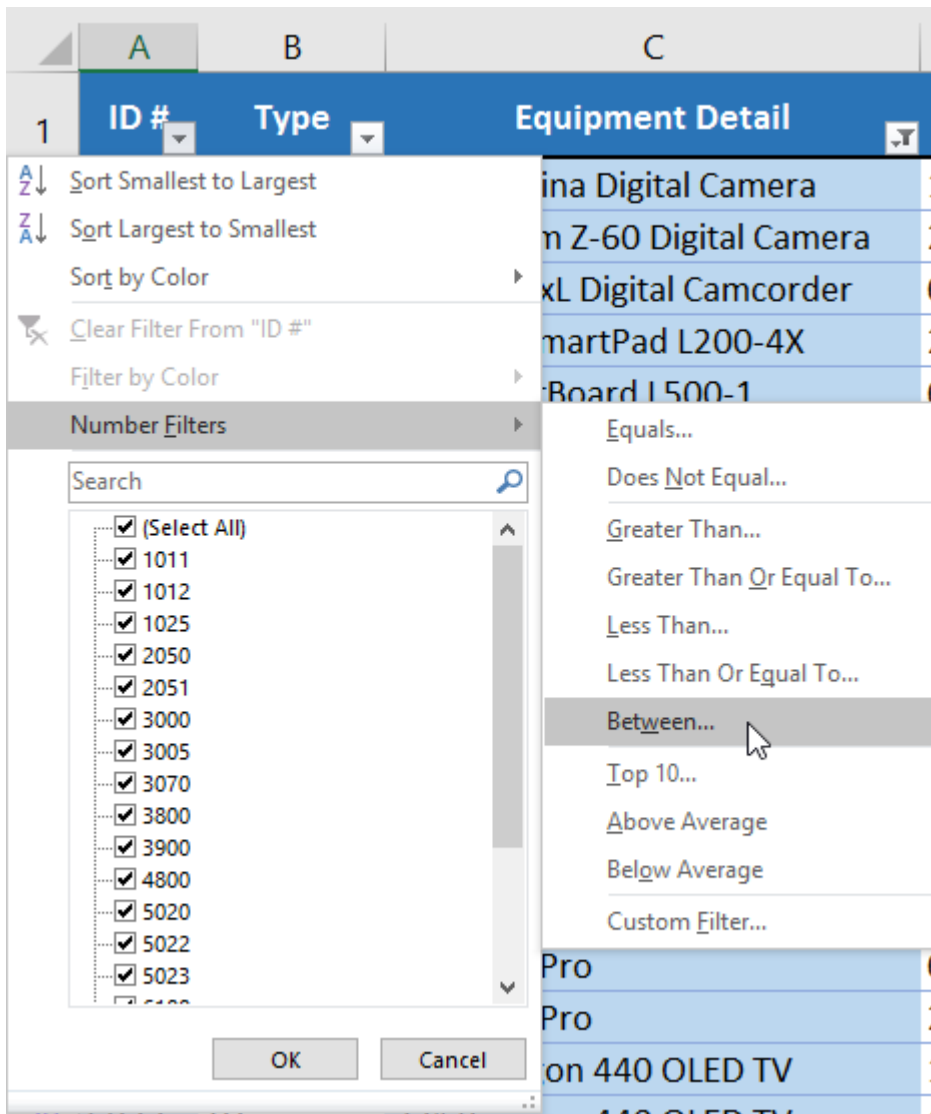
5.5.3. To use advanced number filters:

Advanced number filters allow you to manipulate numbered data in different ways. In this example, we'll display only certain types of equipment based on the range of ID numbers.

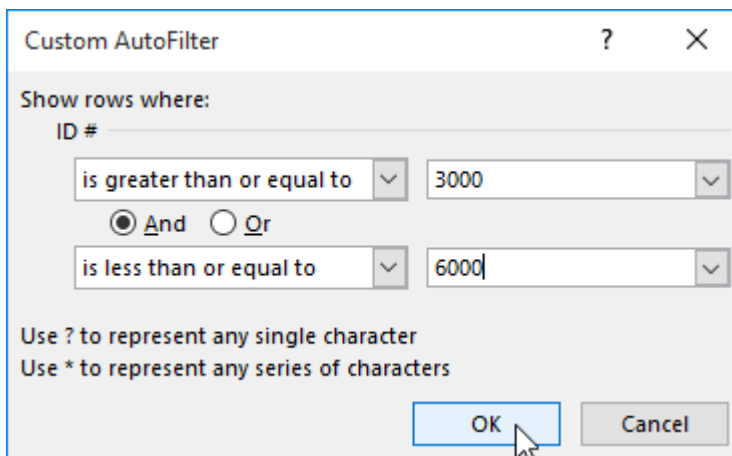
- Select the **Data** tab on the Ribbon, then click the **Filter** command. A **drop-down arrow** will appear in the header cell for each column. **Note:** If you've already added filters to your worksheet, you can skip this step.
- Click the **drop-down arrow** for the column you want to filter. In our example, we'll filter column **A** to view only a certain range of ID numbers.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
2	3000	Camera	Saris Lumina Digital Camera	12-May-15	15-May-15	Shannon Nguyen
3	3005	Camera	Saris Zoom Z-60 Digital Camera	27-Jul-15	06-Aug-15	Sela Shepard
7	3070	Camera	Omega PixL Digital Camcorder	06-Oct-15		Min Seung
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-15	04-Oct-15	Min Seung
13	2050	Other	EDI SmartBoard L500-1	05-Oct-15	06-Oct-15	Anthony Liddell
14	2051	Other	EDI SmartBoard L500-1	01-Oct-15	05-Oct-15	Sofie Ragnar
15	3800	Other	U-Go Saris DigiCam Printer II	04-Aug-15	05-Aug-15	Hank Sorenson
16	3900	Other	U-Go Saris Label Maker	13-Jun-15	20-Jun-15	Clint Gosse
17	4800	Other	7N Deluxe Camera Travel Bag	27-Jul-15	06-Aug-15	Sela Shepard
20	6100	Projector	Omega VisX 1.0	28-Sep-15	01-Oct-15	Win Armitage
21	6101	Projector	Omega VisX 1.0	26-Sep-15	27-Sep-15	Michael Earley

- The **Filter menu** will appear. Hover the mouse over **Number Filters**, then select the desired number filter from the drop-down menu. In our example, we'll choose **Between** to view ID numbers between a specific number range.



- The **Custom AutoFilter** dialog box will appear. Enter the desired **number(s)** to the right of each filter, then click **OK**. In our example, we want to filter for ID numbers greater than or equal to **3000** but less than or equal to **6000**, which will display ID numbers in the 3000-6000 range.



- The data will be filtered by the selected number filter. In our example, only items with an ID number between **3000** and **6000** are visible.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
2	3000	Camera	Saris Lumina Digital Camera	12-May-15	15-May-15	Shannon Nguyen
3	3005	Camera	Saris Zoom Z-60 Digital Camera	27-Jul-15	06-Aug-15	Sela Shepard
7	3070	Camera	Omega PixL Digital Camcorder	06-Oct-15		Min Seung
15	3800	Other	U-Go Saris DigiCam Printer II	04-Aug-15	05-Aug-15	Hank Sorenson
16	3900	Other	U-Go Saris Label Maker	13-Jun-15	20-Jun-15	Clint Gosse
17	4800	Other	7N Deluxe Camera Travel Bag	27-Jul-15	06-Aug-15	Sela Shepard
28	5020	TV	32" Paragon 440 OLED TV	11-Aug-15	13-Aug-15	Marta Lao
29	5022	TV	32" Paragon 440 OLED TV	17-Jul-15	17-Jul-15	Carl Langer
30	5023	TV	50" Paragon 490L LED TV	01-Oct-15	01-Oct-15	Margaret Lisbon
31						
32						

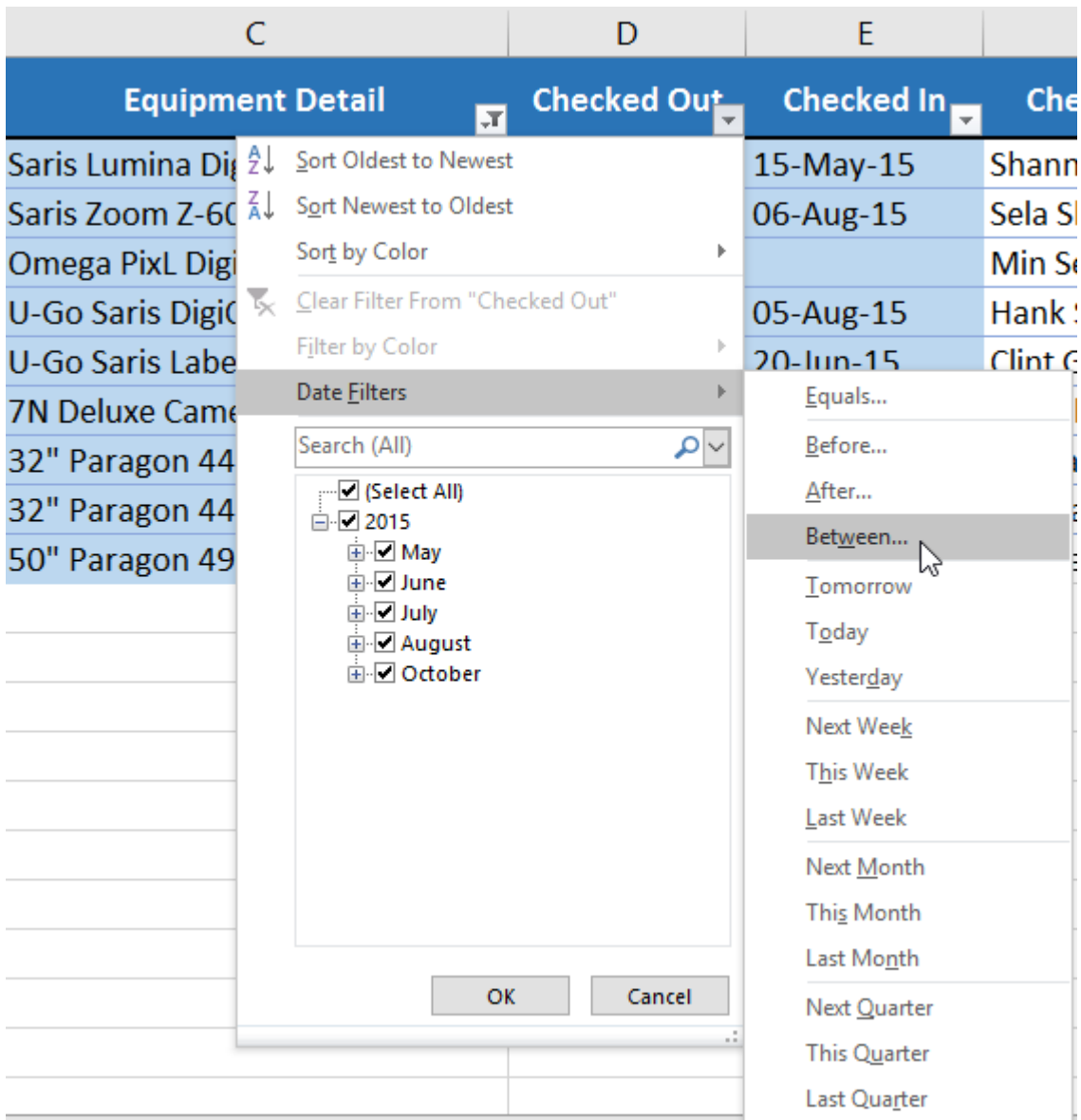
5.5.4. To use advanced date filters:

Advanced date filters can be used to view information from a certain time period, such as last year, next quarter, or between two dates. In this example, we'll use advanced date filters to view only equipment that has been checked out between July 15 and August 15.

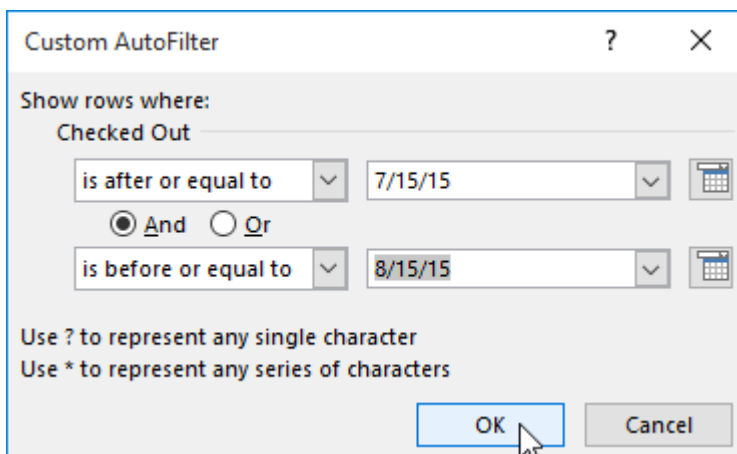
- Select the **Data** tab, then click the **Filter** command. A **drop-down arrow** will appear in the header cell for each column. **Note:** If you've already added filters to your worksheet, you can skip this step.
- Click the **drop-down arrow** for the column you want to filter. In our example, we'll filter column **D** to view only a certain range of dates.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
2	3000	Camera	Saris Lumina Digital Camera	12-May-15	15-May-15	Shannon Nguyen
3	3005	Camera	Saris Zoom Z-60 Digital Camera	27-Jul-15	06-Aug-15	Sela Shepard
7	3070	Camera	Omega PixL Digital Camcorder	06-Oct-15		Min Seung
15	3800	Other	U-Go Saris DigiCam Printer II	04-Aug-15	05-Aug-15	Hank Sorenson
16	3900	Other	U-Go Saris Label Maker	13-Jun-15	20-Jun-15	Clint Gosse
17	4800	Other	7N Deluxe Camera Travel Bag	27-Jul-15	06-Aug-15	Sela Shepard
28	5020	TV	32" Paragon 440 OLED TV	11-Aug-15	13-Aug-15	Marta Lao
29	5022	TV	32" Paragon 440 OLED TV	17-Jul-15	17-Jul-15	Carl Langer
30	5023	TV	50" Paragon 490L LED TV	01-Oct-15	01-Oct-15	Margaret Lisbon
31						
32						

- The **Filter menu** will appear. Hover the mouse over **Date Filters**, then select the desired date filter from the drop-down menu. In our example, we'll select **Between** to view equipment that has been checked out between July 15 and August 15.



- The **Custom AutoFilter** dialog box will appear. Enter the desired **date(s)** to the right of each filter, then click **OK**. In our example, we want to filter for dates after or equal to **July 15, 2015**, and before or equal to **August 15, 2015**, which will display a range between these dates.



- The worksheet will be filtered by the selected date filter. In our example, we can now see which items have been checked out **between July 15 and August 15**.

	A	B	C	D	E	F
1	ID #	Type	Equipment Detail	Checked Out	Checked In	Checked Out By
3	3005	Camera	Saris Zoom Z-60 Digital Camera	27-Jul-15	06-Aug-15	Sela Shepard
15	3800	Other	U-Go Saris DigiCam Printer II	04-Aug-15	05-Aug-15	Hank Sorenson
17	4800	Other	7N Deluxe Camera Travel Bag	27-Jul-15	06-Aug-15	Sela Shepard
28	5020	TV	32" Paragon 440 OLED TV	11-Aug-15	13-Aug-15	Marta Lao
29	5022	TV	32" Paragon 440 OLED TV	17-Jul-15	17-Jul-15	Carl Langer
31						
32						

6. Working with Data - Tables

6.1.Introduction

Once you've entered information into your worksheet, you may want to format your data as a **table**. Just like regular formatting, tables can improve the **look and feel** of your workbook, and they'll also help you **organize** your content and make your data easier to use. Excel includes several **tools** and **predefined table styles**, allowing you to create tables quickly and easily.

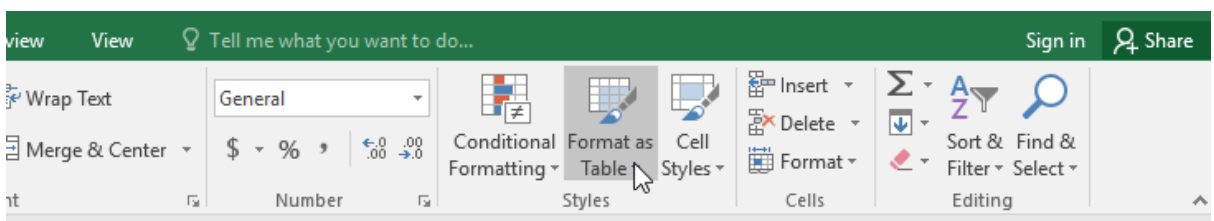
6.2.To format data as a table:

1. Select the **cells** you want to format as a table. In our example, we'll select the cell range **A2:D9**.

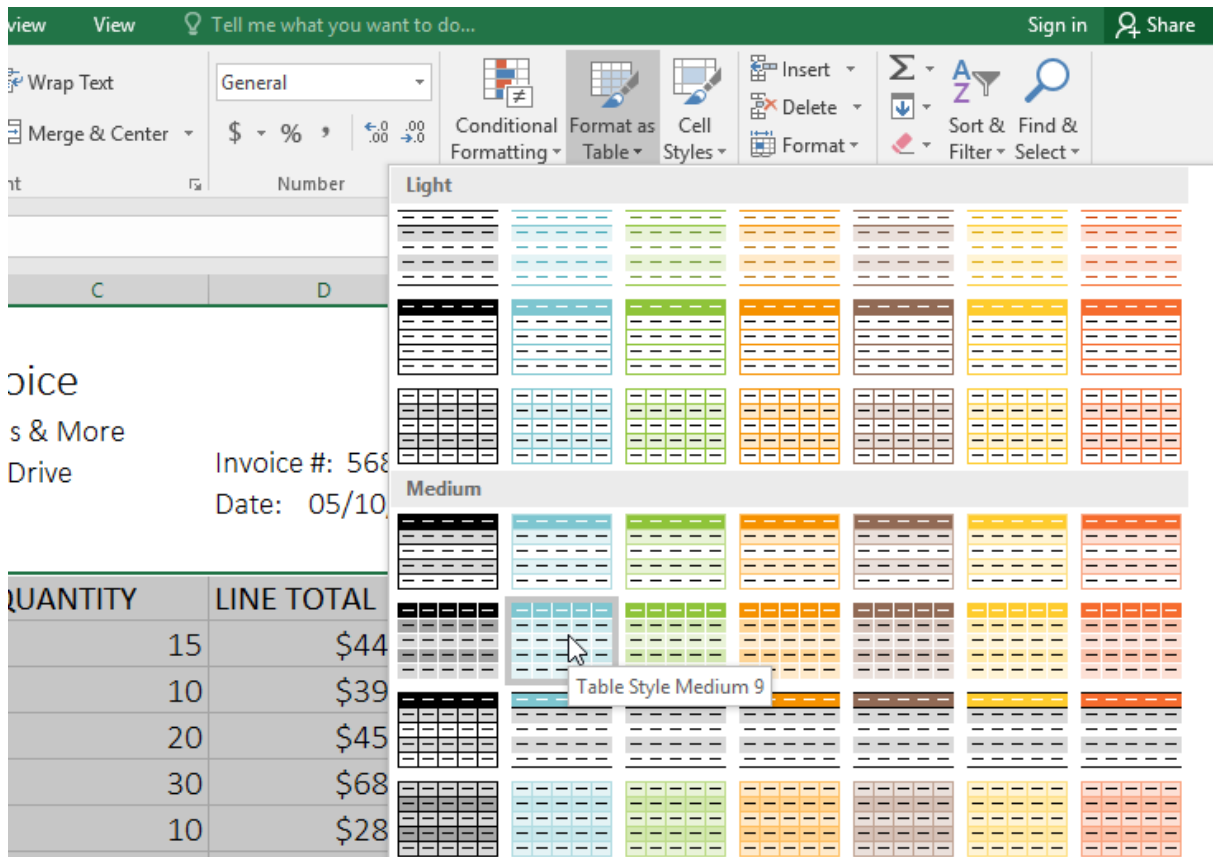


MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL
Empanadas: Beef Picadillo	\$2.99	15	\$44.85
Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90
Tamales: Chicken Tinga	\$2.29	20	\$45.80
Tamales: Vegetable	\$2.29	30	\$68.70
Arepas: Carnitas	\$2.89	10	\$28.90
Arepas: Queso Blanco	\$2.49	20	\$49.80
Beverages: Horchata	\$1.89	25	\$47.25

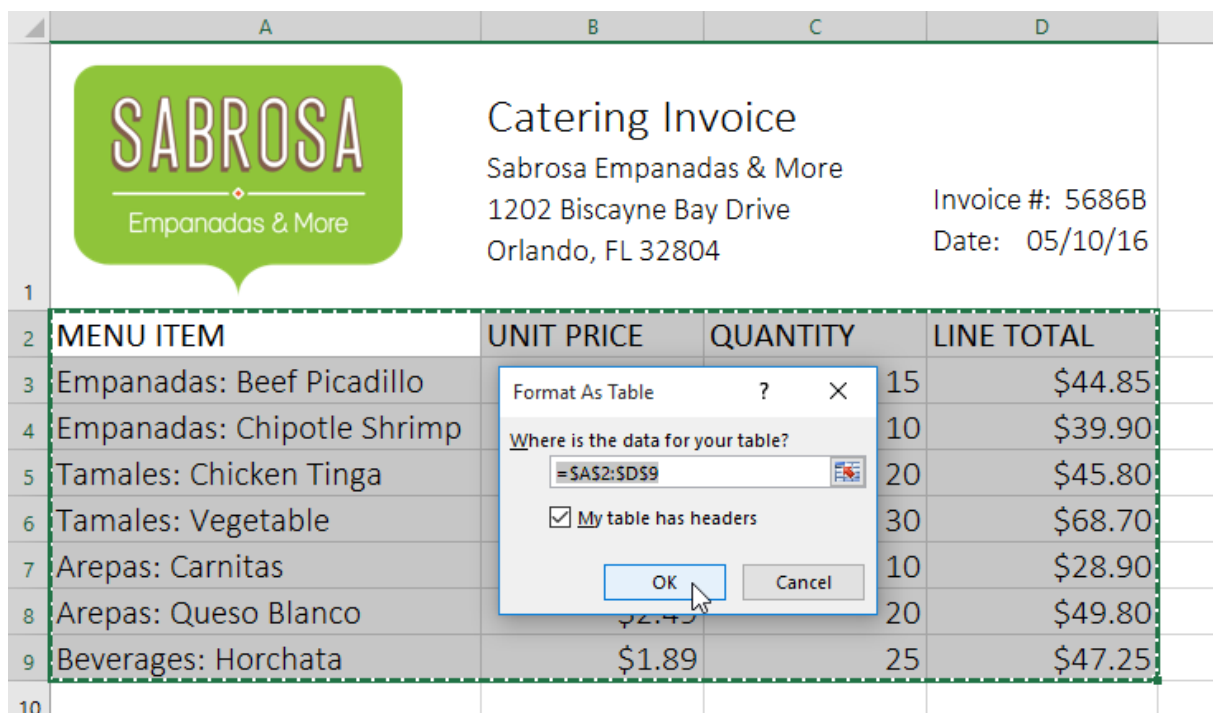
2. From the **Home** tab, click the **Format as Table** command in the **Styles** group.



3. Select a **table style** from the drop-down menu.



4. A dialog box will appear, confirming the selected **cell range** for the table.
5. If your table has **headers**, check the box next to **My table has headers**, then click **OK**.



6. The cell range will be formatted in the selected **table style**.

	A	B	C	D
1			Catering Invoice Sabrosa Empanadas & More 1202 Biscayne Bay Drive Orlando, FL 32804	
				Invoice #: 5686B Date: 05/10/16
2	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL
3	Empanadas: Beef Picadillo	\$2.99	15	\$44.85
4	Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90
5	Tamales: Chicken Tinga	\$2.29	20	\$45.80
6	Tamales: Vegetable	\$2.29	30	\$68.70
7	Arepas: Carnitas	\$2.89	10	\$28.90
8	Arepas: Queso Blanco	\$2.49	20	\$49.80
9	Beverages: Horchata	\$1.89	25	\$47.25
10				

Tables include **filtering** by default. You can filter your data at any time using the **drop-down arrows** in the header cells. To learn more, review our lesson on [Filtering Data](#).


6.3.Modifying tables

It's easy to modify the look and feel of any table after adding it to a worksheet. Excel includes many different options for customizing a table, including **adding rows or columns** and changing the **table style**.


6.3.1. To add rows or columns to a table:


If you need to fit more content into your table, Excel allows you to modify the **table size** by including additional rows and columns. There are two simple ways to change the table size:

- Enter **new content** into any adjacent row or column. The row or column will be roped into the table automatically.

	A	B	C	D
1			Catering Invoice Sabrosa Empanadas & More 1202 Biscayne Bay Drive Orlando, FL 32804	
				Invoice #: 5686B Date: 05/10/16
2	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL
3	Empanadas: Beef Picadillo	\$2.99	15	\$44.85
4	Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90
5	Tamales: Chicken Tinga	\$2.29	20	\$45.80
6	Tamales: Vegetable	\$2.29	30	\$68.70
7	Arepas: Carnitas	\$2.89	10	\$28.90
8	Arepas: Queso Blanco	\$2.49	20	\$49.80
9	Beverages: Horchata	\$1.89	25	\$47.25
10	Beverages: Lemonade			
11				

- Click and drag the **bottom-right corner** of the table to create additional rows or columns.

	A	B	C	D
1			Catering Invoice Sabrosa Empanadas & More 1202 Biscayne Bay Drive Orlando, FL 32804	
				Invoice #: 5686B Date: 05/10/16
2	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL
3	Empanadas: Beef Picadillo	\$2.99	15	\$44.85
4	Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90
5	Tamales: Chicken Tinga	\$2.29	20	\$45.80
6	Tamales: Vegetable	\$2.29	30	\$68.70
7	Arepas: Carnitas	\$2.89	10	\$28.90
8	Arepas: Queso Blanco	\$2.49	20	\$49.80
9	Beverages: Horchata	\$1.89	25	\$47.25
10				
11				
12				
13				



6.3.2. To change the table style:

1. Select **any cell** in your table, then click the **Design** tab.

Table Name: Table3

Table Style Options

MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL
Empanadas: Beef Picadillo	\$2.99	15	\$44.85
Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90
Tamales: Chicken Tinga	\$2.29	20	\$45.80
Tamales: Vegetable	\$2.29	30	\$68.70

2. Locate the **Table Styles** group, then click the **More** drop-down arrow to see all available table styles.

Table Style Options

Table Styles

More
Quickly change the visual style of your table.

3. Select the desired **table style**.

Header Row First Column
 Total Row Last Column
 Banded Rows Banded Columns

Table Style

Medium


Dark

Table Style Dark 11

New Table Style...

QUANTITY	LINE TOTAL
15	\$44.85
10	\$39.90
20	\$45.80
30	\$68.70
10	\$28.90
20	\$49.80
25	\$47.25

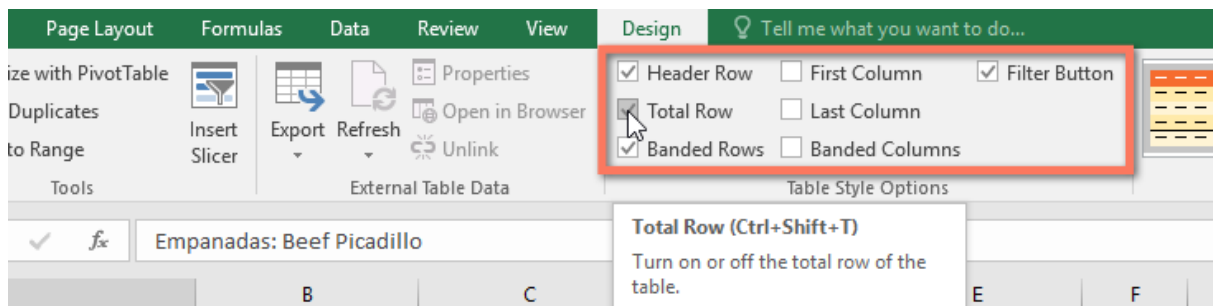
4. The **table style** will be applied.

	A	B	C	D
1			Catering Invoice Sabrosa Empanadas & More 1202 Biscayne Bay Drive Orlando, FL 32804	
			Invoice #: 5686B	Date: 05/10/16
2	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL
3	Empanadas: Beef Picadillo	\$2.99	15	\$44.85
4	Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90
5	Tamales: Chicken Tinga	\$2.29	20	\$45.80
6	Tamales: Vegetable	\$2.29	30	\$68.70
7	Arepas: Carnitas	\$2.89	10	\$28.90
8	Arepas: Queso Blanco	\$2.49	20	\$49.80
9	Beverages: Horchata	\$1.89	25	\$47.25
10				


6.3.3. To modify table style options:

You can turn various options **on** or **off** to change the appearance of any table. There are several options: **Header Row**, **Total Row**, **Banded Rows**, **First Column**, **Last Column**, **Banded Columns**, and **Filter Button**. Select **any cell** in your table, then click the **Design** tab.

1. **Check** or **uncheck** the desired options in the **Table Style Options** group. In our example, we'll check **Total Row** to automatically include a **total** for our table.



2. The table style will be modified. In our example, a **new row** has been added to the table with a **formula** that automatically calculates the total value of the cells in column D.

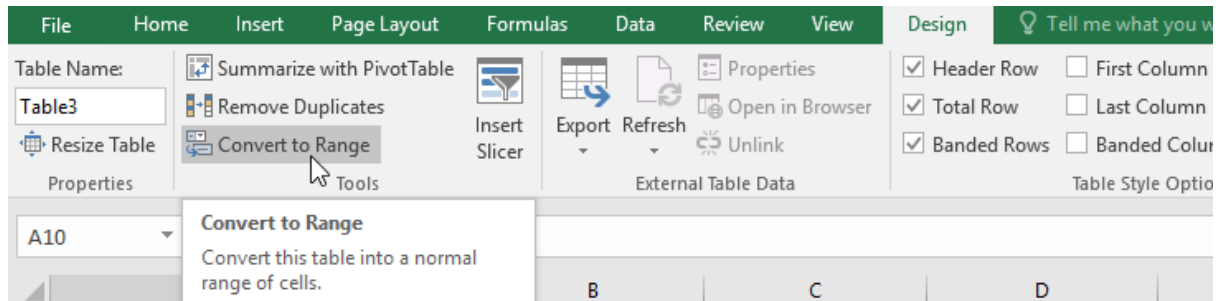
	A	B	C	D
1				
	Catering Invoice		Sabrosa Empanadas & More	
	1202 Biscayne Bay Drive		Invoice #: 5686B	
	Orlando, FL 32804		Date: 05/10/16	
2	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL
3	Empanadas: Beef Picadillo	\$2.99	15	\$44.85
4	Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90
5	Tamales: Chicken Tinga	\$2.29	20	\$45.80
6	Tamales: Vegetable	\$2.29	30	\$68.70
7	Arepas: Carnitas	\$2.89	10	\$28.90
8	Arepas: Queso Blanco	\$2.49	20	\$49.80
9	Beverages: Horchata	\$1.89	25	\$47.25
10	Total			\$325.20
11				

Depending on the type of **content** you have—and the **table style** you've chosen—these options can affect your table's appearance in various ways. You may need to experiment with a few different options to find the exact style you want.

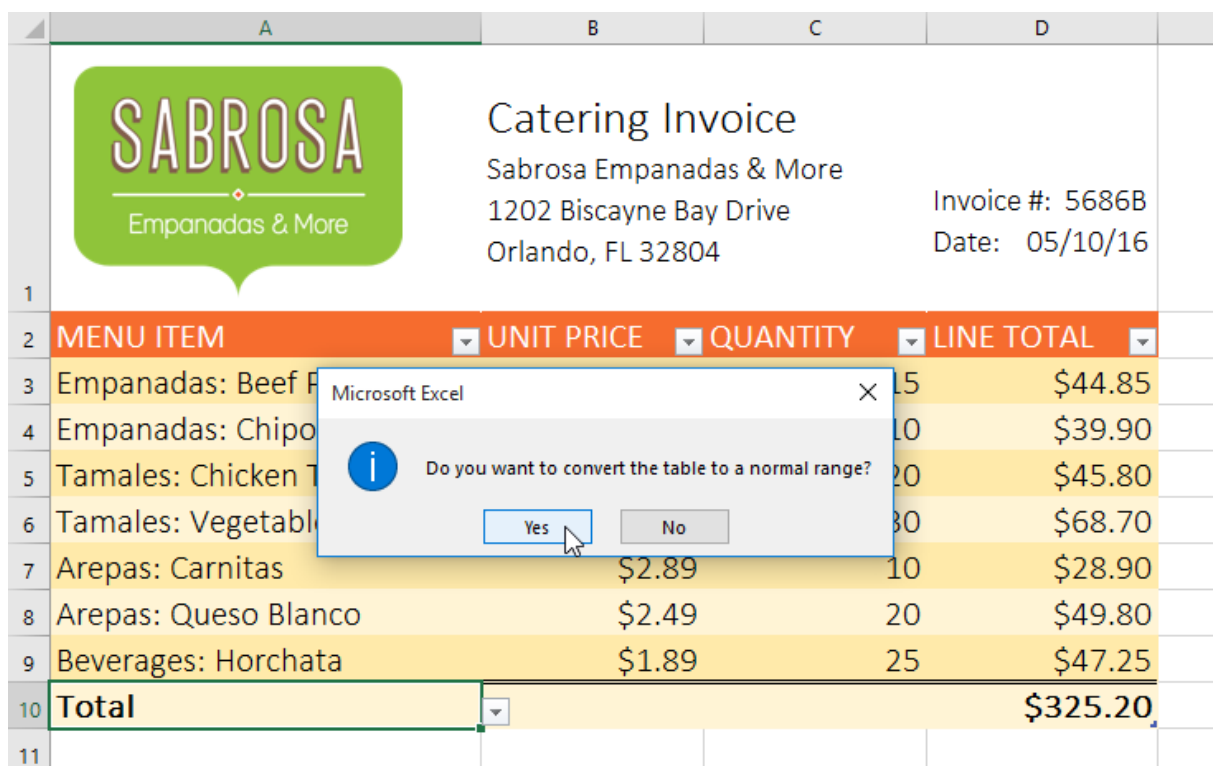
6.3.4. To remove a table:

It's possible to remove a table from your workbook without losing any of your data. However, this can cause issues with certain types of **formatting**, including colors, fonts, and banded rows. Before you use this option, make sure you're prepared to reformat your cells if necessary.

1. Select **any cell** in your table, then click the **Design** tab.
2. Click the **Convert to Range** command in the **Tools** group.



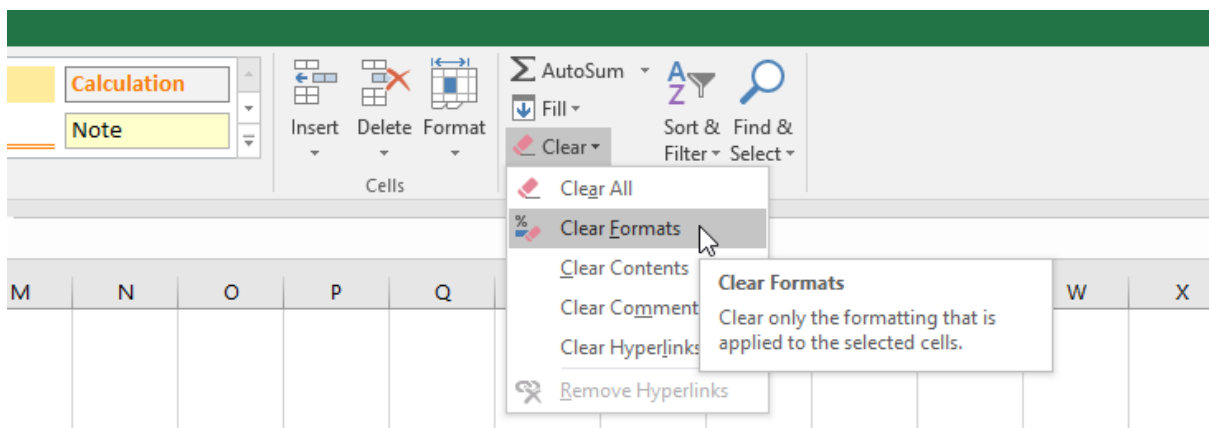
3. A dialog box will appear. Click **Yes**.



4. The range will no longer be a table, but the cells will retain their data and formatting.

	A	B	C	D
1			Catering Invoice Sabrosa Empanadas & More 1202 Biscayne Bay Drive Orlando, FL 32804	
				Invoice #: 5686B Date: 05/10/16
2	MENU ITEM	UNIT PRICE	QUANTITY	LINE TOTAL
3	Empanadas: Beef Picadillo	\$2.99	15	\$44.85
4	Empanadas: Chipotle Shrimp	\$3.99	10	\$39.90
5	Tamales: Chicken Tinga	\$2.29	20	\$45.80
6	Tamales: Vegetable	\$2.29	30	\$68.70
7	Arepas: Carnitas	\$2.89	10	\$28.90
8	Arepas: Queso Blanco	\$2.49	20	\$49.80
9	Beverages: Horchata	\$1.89	25	\$47.25
10	Total			\$325.20
11				

To restart your formatting from scratch, click the **Clear** command on the **Home** tab. Next, choose **Clear Formats** from the menu.



7. Working with Data - Charts

7.1.Introduction

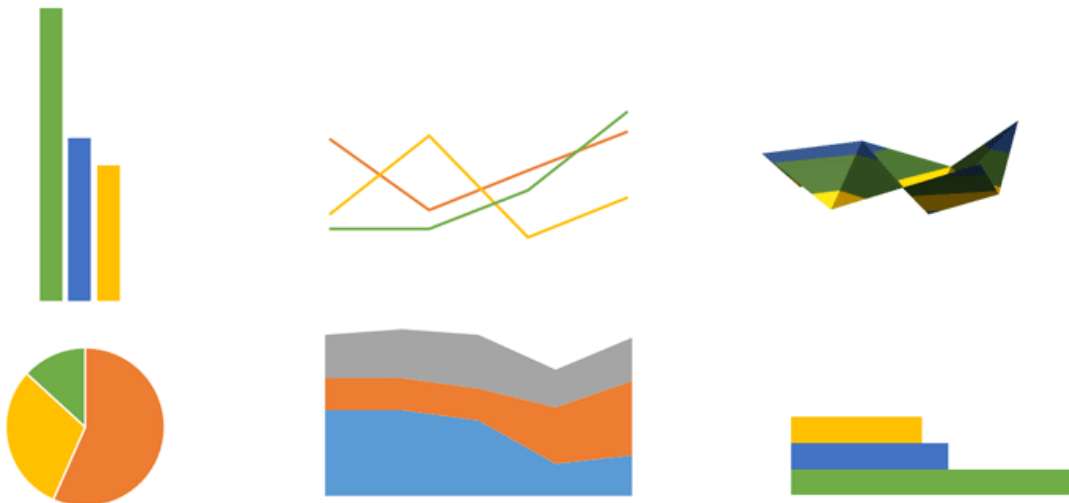
It can be difficult to interpret Excel workbooks that contain a lot of data. **Charts** allow you to illustrate your workbook data **graphically**, which makes it easy to visualize **comparisons** and **trends**.

7.2.Understanding charts

Excel has several different **types of charts**, allowing you to choose the one that best fits your data. In order to use charts effectively, you'll need to understand how different charts are used.

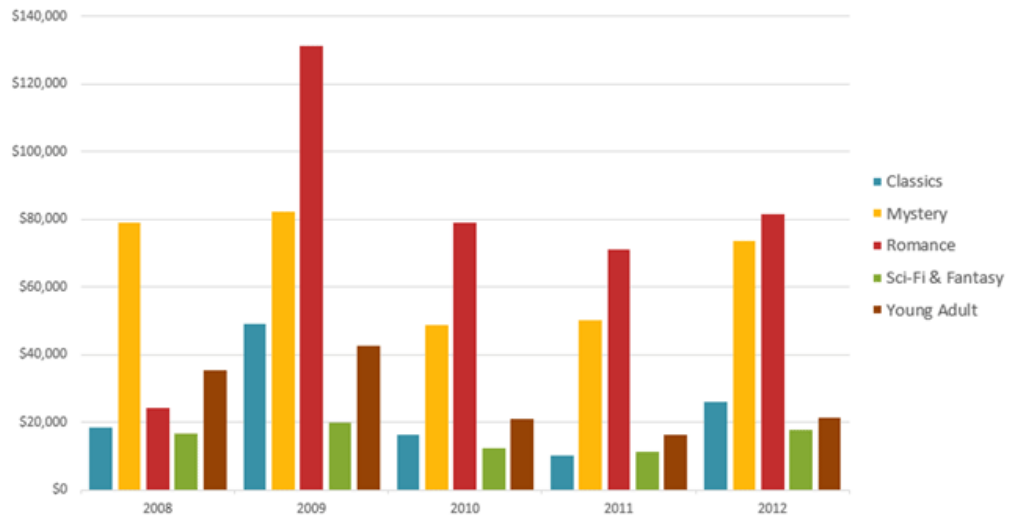
Click the arrows in the slideshow below to learn more about the types of charts in Excel.

Types of Charts



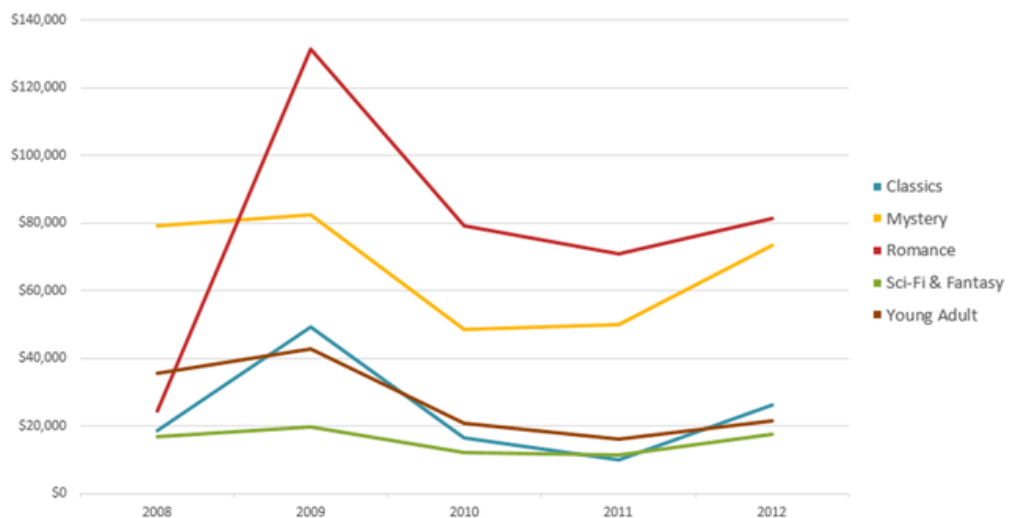
Excel has a variety of chart types, each with its own advantages. Click the arrows to see some of the different types of charts available in Excel.

Column



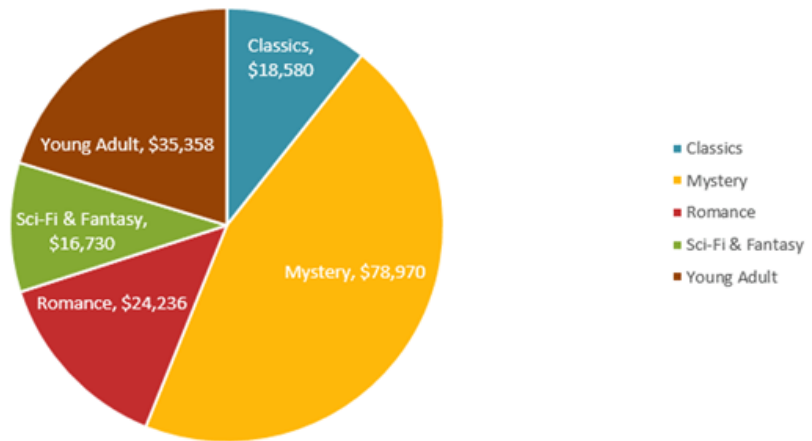
Column charts use vertical bars to represent data. They can work with many different types of data, but they're most frequently used for comparing information.

Line



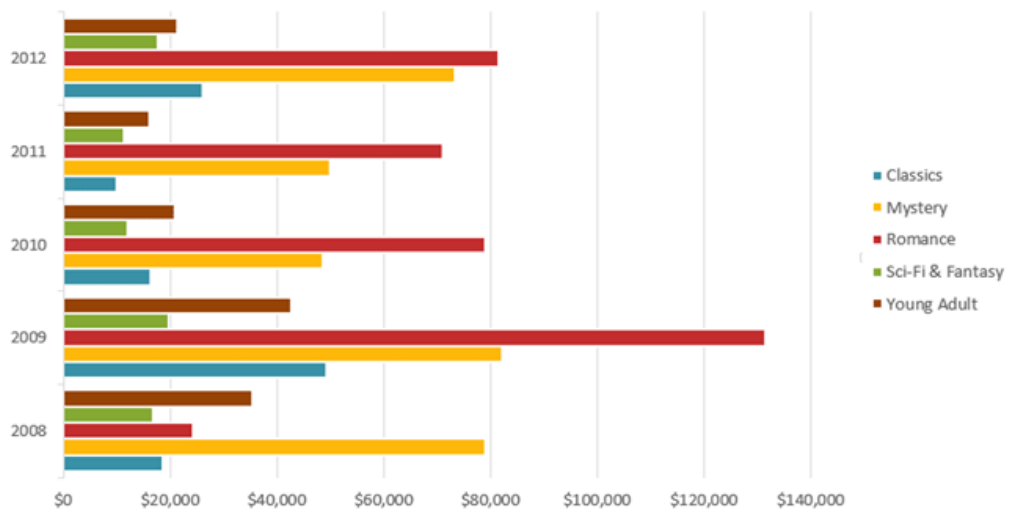
Line charts are ideal for showing trends. The data points are connected with lines, making it easy to see whether values are increasing or decreasing over time.

Pie



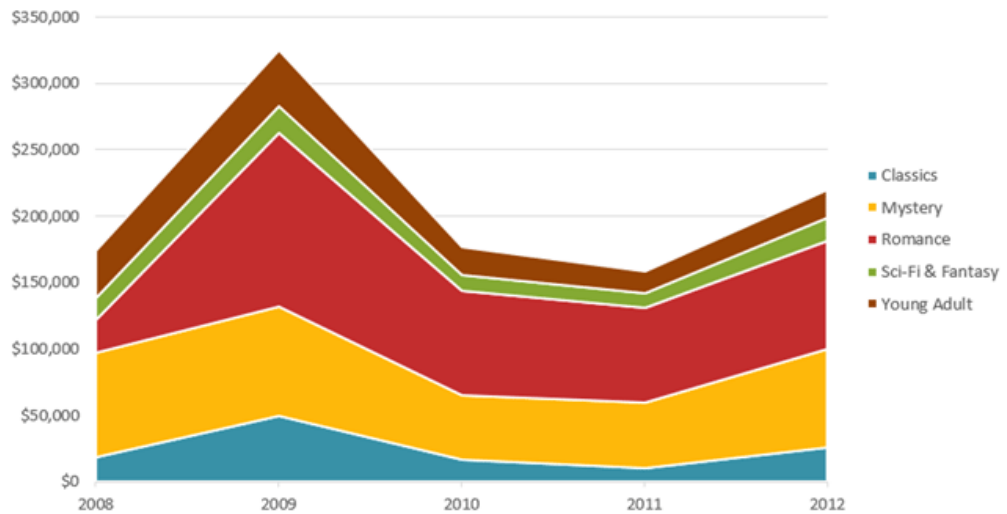
Pie charts make it easy to compare proportions. Each value is shown as a slice of the pie, so it's easy to see which values make up the percentage of a whole.

Bar



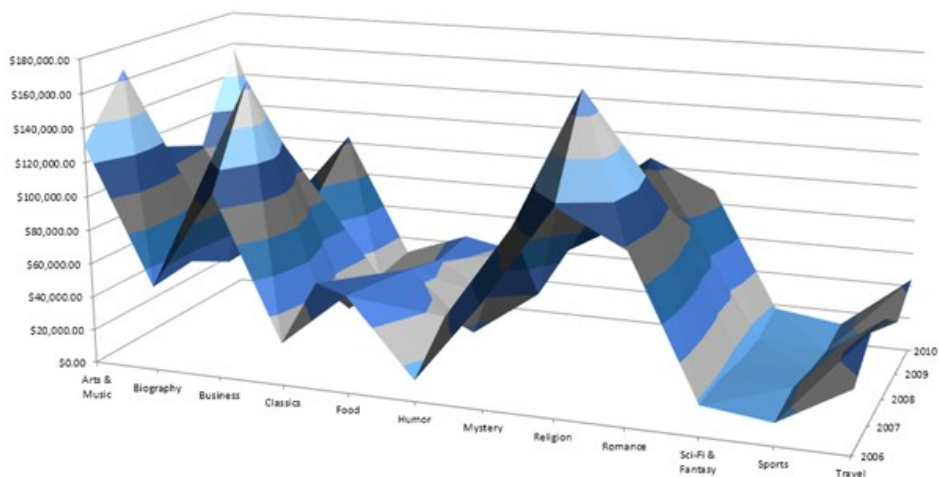
Bar charts work just like column charts, but they use horizontal rather than vertical bars.

Area



Area charts are similar to line charts, except the areas under the lines are filled in.

Surface



Surface charts allow you to display data across a 3D landscape. They work best with large data sets, allowing you to see a variety of information at the same time.

In addition to chart types, you'll need to understand how to **read a chart**. Charts contain several different elements, or parts, that can help you interpret the data.

Click the buttons in the interactive below to learn about the different parts of a chart.

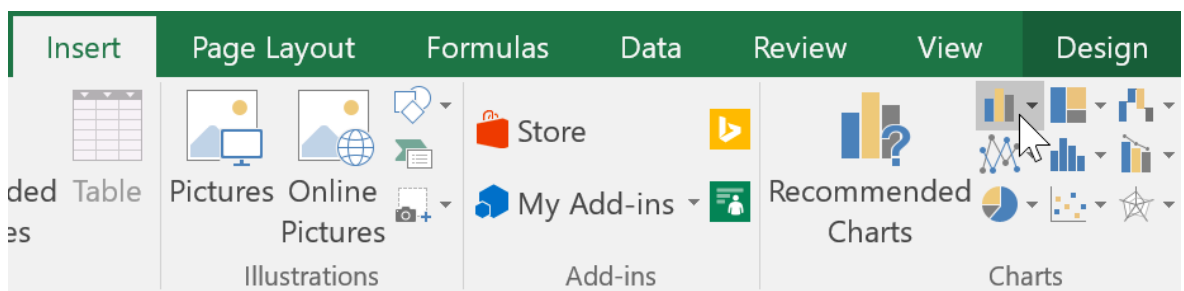


7.3.To insert a chart:

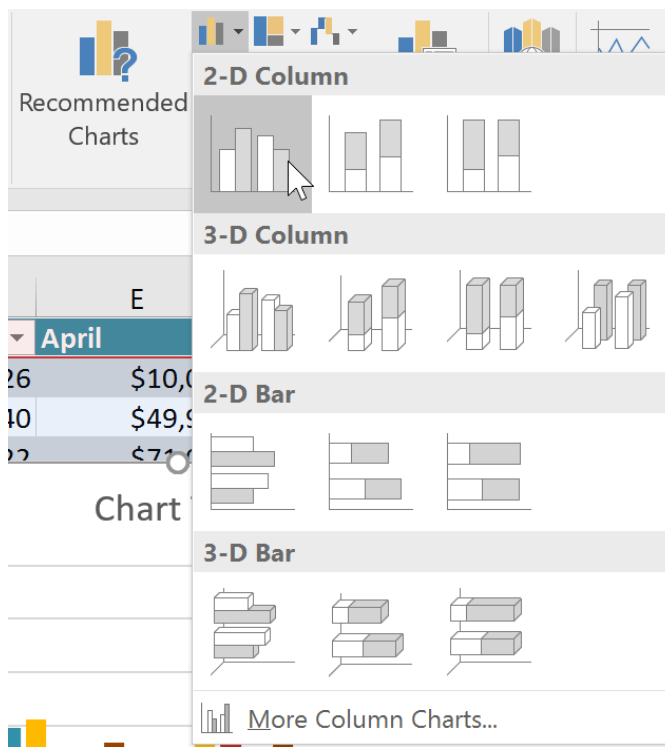
1. Select the **cells** you want to chart, including the **column titles** and **row labels**. These cells will be the source data for the chart. In our example, we'll select cells A1:F6.

	A	B	C	D	E	F	G
1	Genre	January	February	March	April	May	
2	Classics	\$18,580	\$49,225	\$16,326	\$10,017	\$26,134	
3	Mystery	\$78,970	\$82,262	\$48,640	\$49,985	\$73,428	
4	Romance	\$24,236	\$131,390	\$79,022	\$71,009	\$81,474	
5	Sci-Fi & Fantasy	\$16,730	\$19,730	\$12,109	\$11,355	\$17,686	
6	Young Adult	\$35,358	\$42,685	\$20,893	\$16,065	\$21,388	
7							
8							

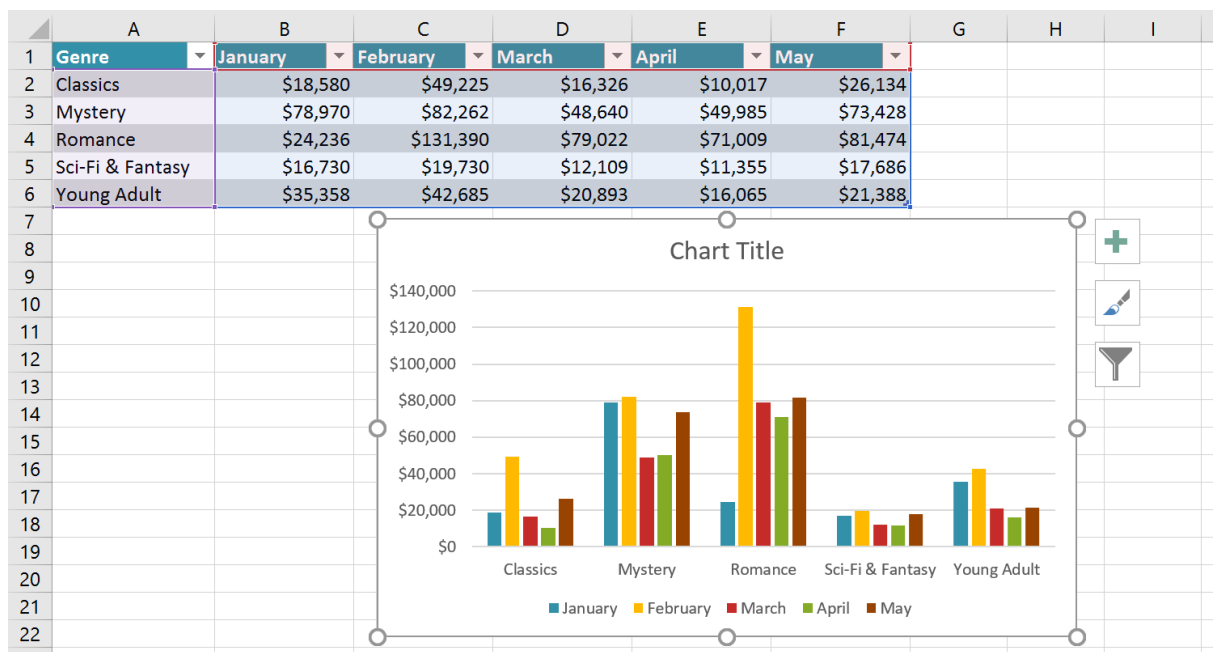
2. From the **Insert** tab, click the desired **Chart** command. In our example, we'll select **Column**.



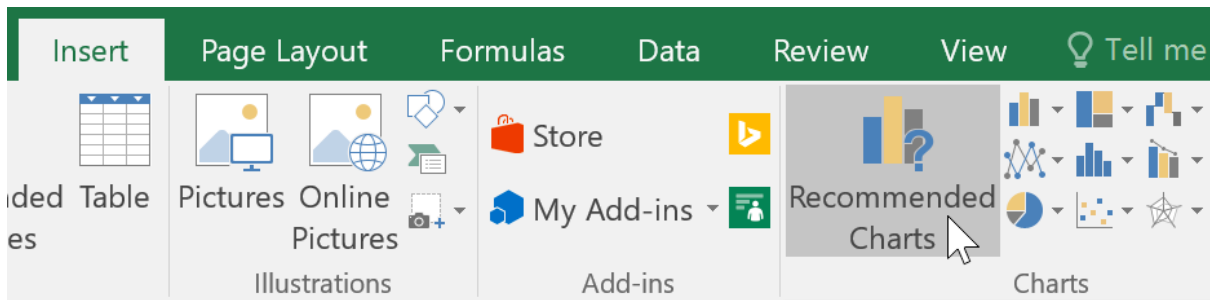
- Choose the desired **chart type** from the drop-down menu.



- The Selected chart will be inserted into the worksheet.



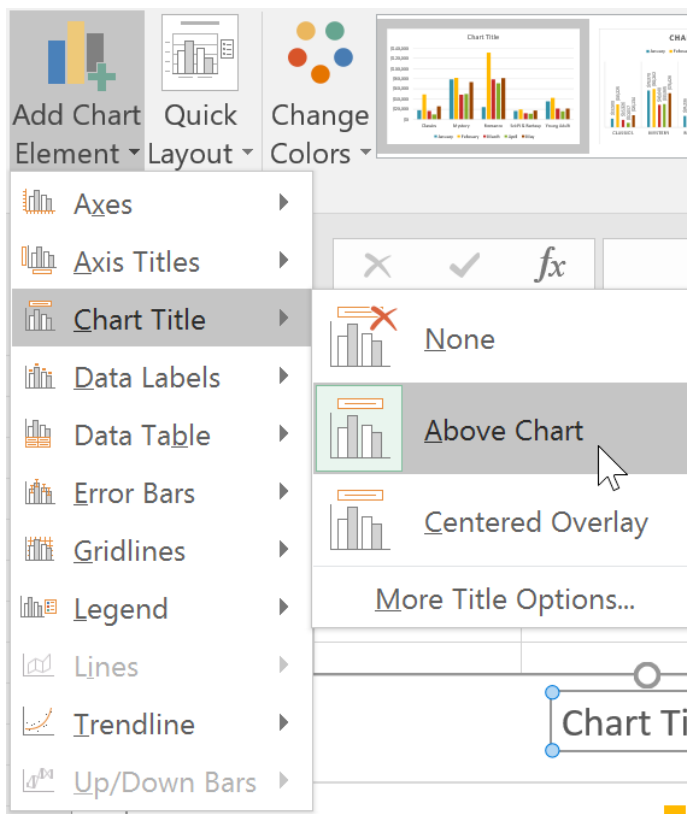
If you're not sure which type of chart to use, the **Recommended Charts** command will suggest several different charts based on the source data.



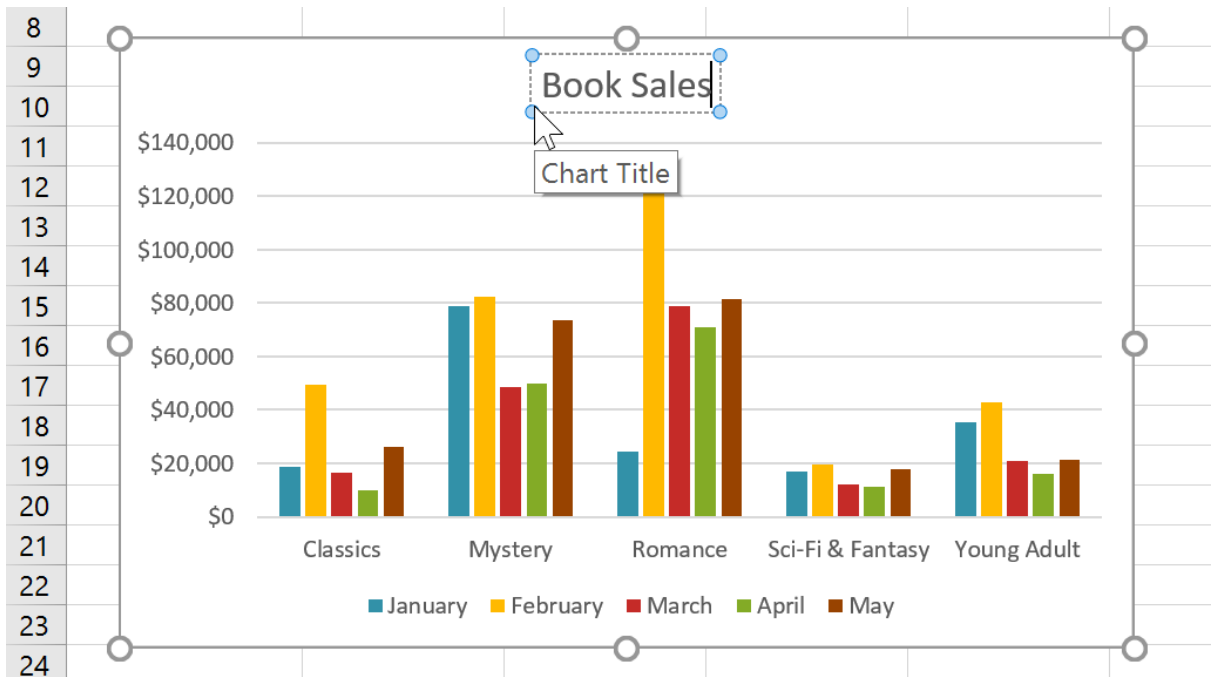
7.4. Chart and layout style

After inserting a chart, there are several things you may want to change about the way your data is displayed. It's easy to edit a chart's **layout** and **style** from the **Design** tab.

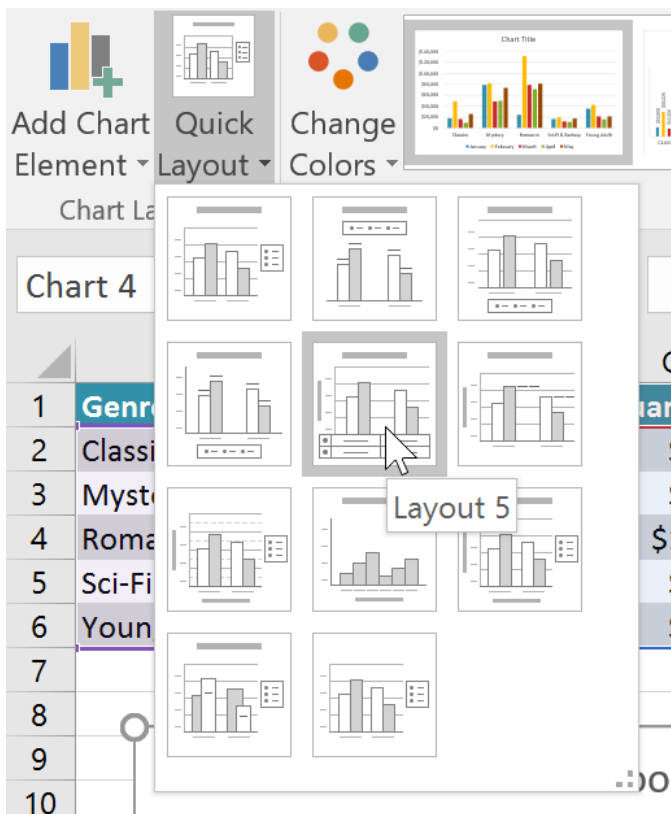
- Excel allows you to add **chart elements**—such as **chart titles**, **legends**, and **data labels**—to make your chart easier to read. To add a chart element, click the **Add Chart Element** command on the **Design** tab, then choose the **desired element** from the drop-down menu.



- To **edit** a chart element, like a **chart title**, simply double-click the **placeholder** and begin typing.

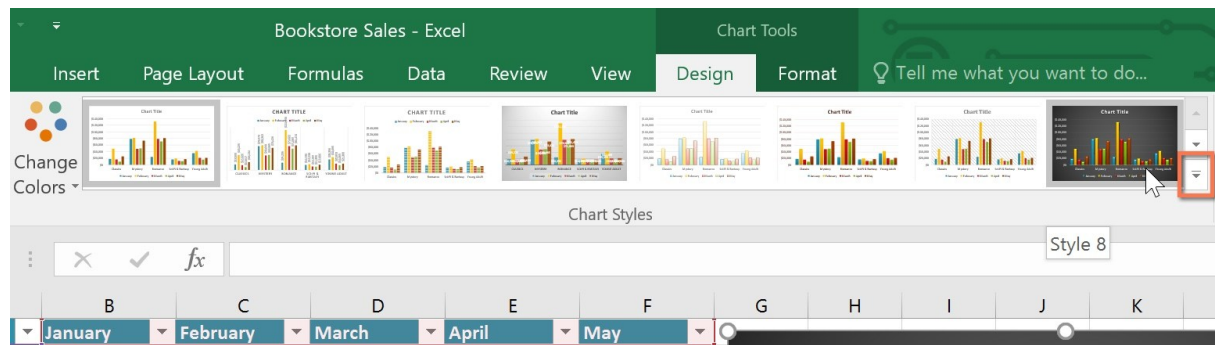


- If you don't want to add chart elements individually, you can use one of Excel's predefined layouts. Simply click the **Quick Layout** command, then choose the **desired layout** from the drop-down menu.

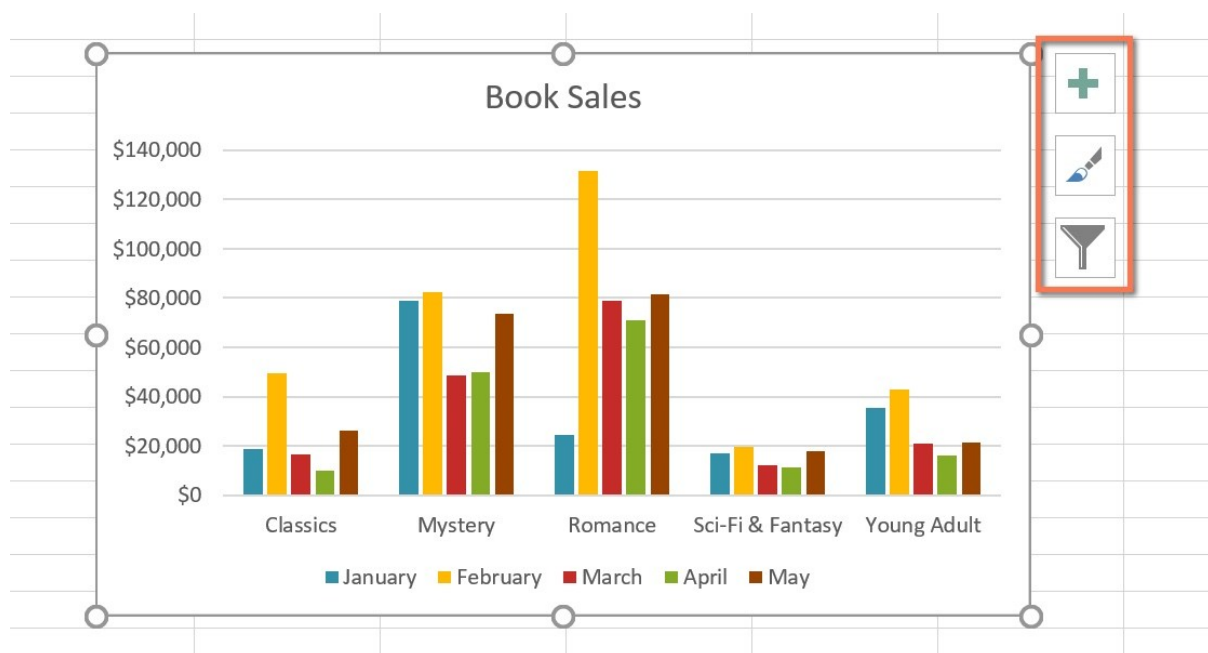


- Excel also includes several **chart styles**, which allow you to quickly modify the look and feel of your chart. To change the chart style, select the **desired style** from the

Chart styles group. You can also click the drop-down arrow on the right to see more styles.



You can also use the chart formatting shortcut buttons to quickly **add chart elements**, change the **chart style**, and **filter** the chart data.

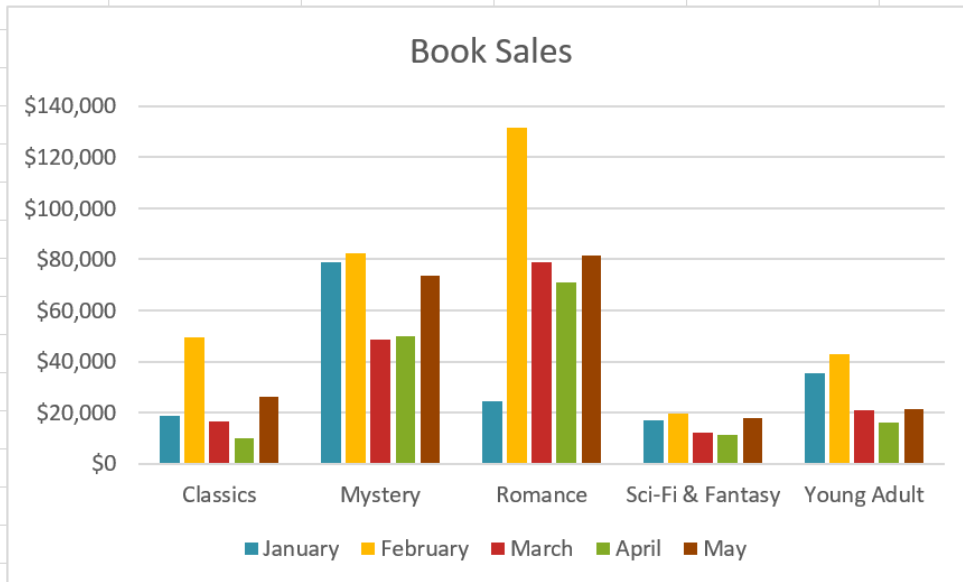


7.5. Other chart options

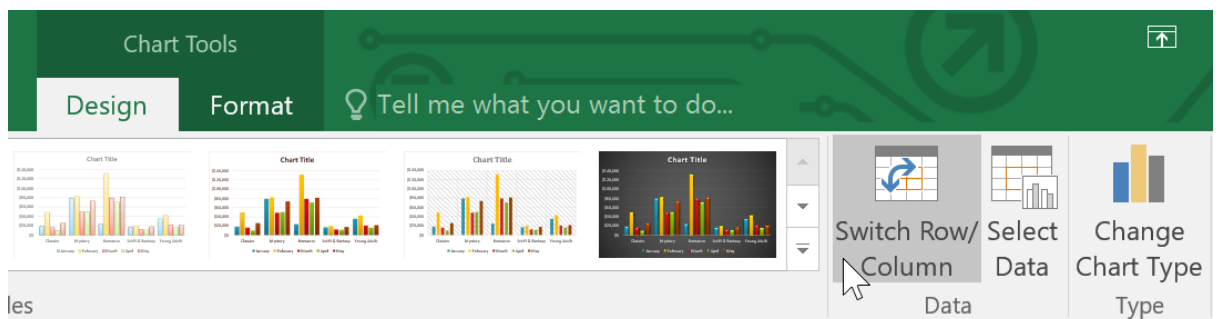
There are many other ways to customize and organize your charts. For example, Excel allows you to **rearrange** a chart's data, change the **chart type**, and even **move** the chart to a different location in a workbook.

7.5.1. To switch row and column data:

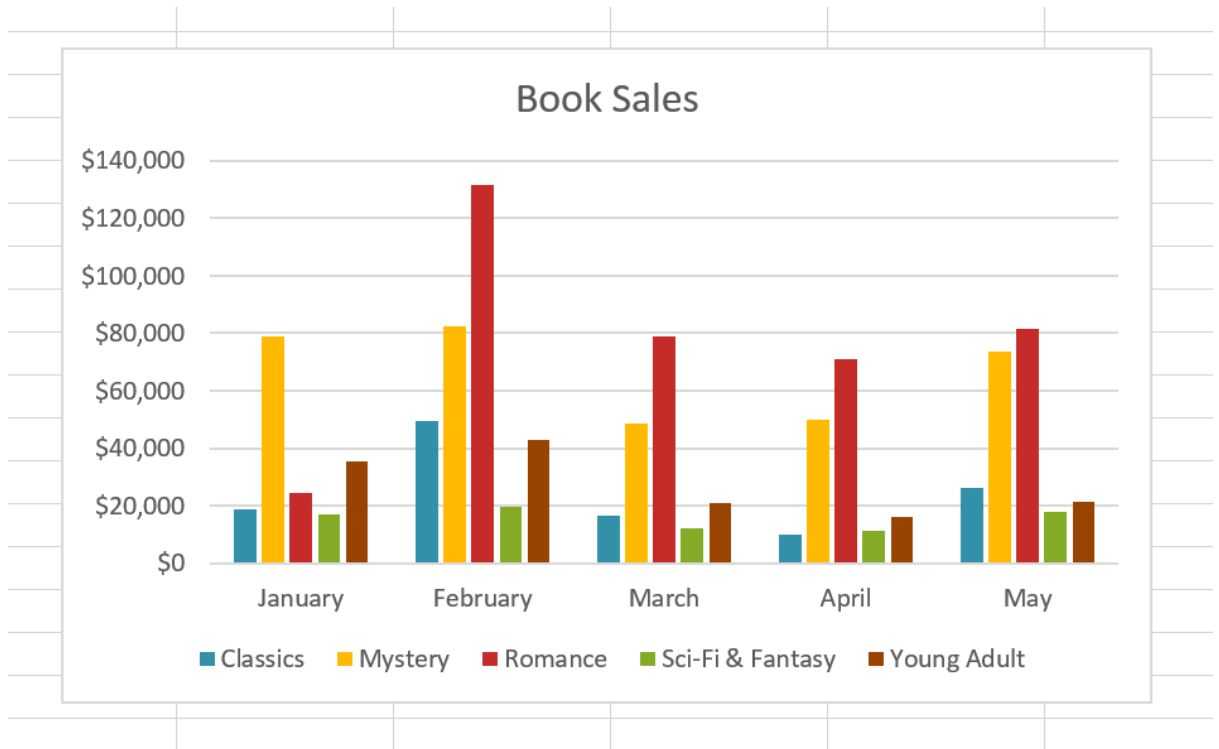
Sometimes you may want to change the way charts **group** your data. For example, in the chart below Book Sales data is grouped **by genre**, with columns for **each month**. However, we could switch the rows and columns so the chart will group the data **by month**, with columns for **each genre**. In both cases, the chart contains the same data—it's just organized differently.



1. Select the **chart** you want to modify.
2. From the **Design** tab, select the **Switch Row/Column** command.



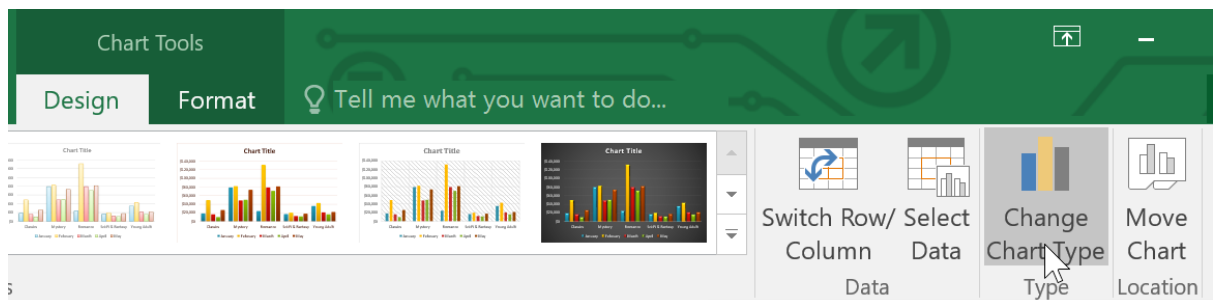
3. The rows and columns will be **switched**. In our example, the data is now grouped by month, with columns for each genre.



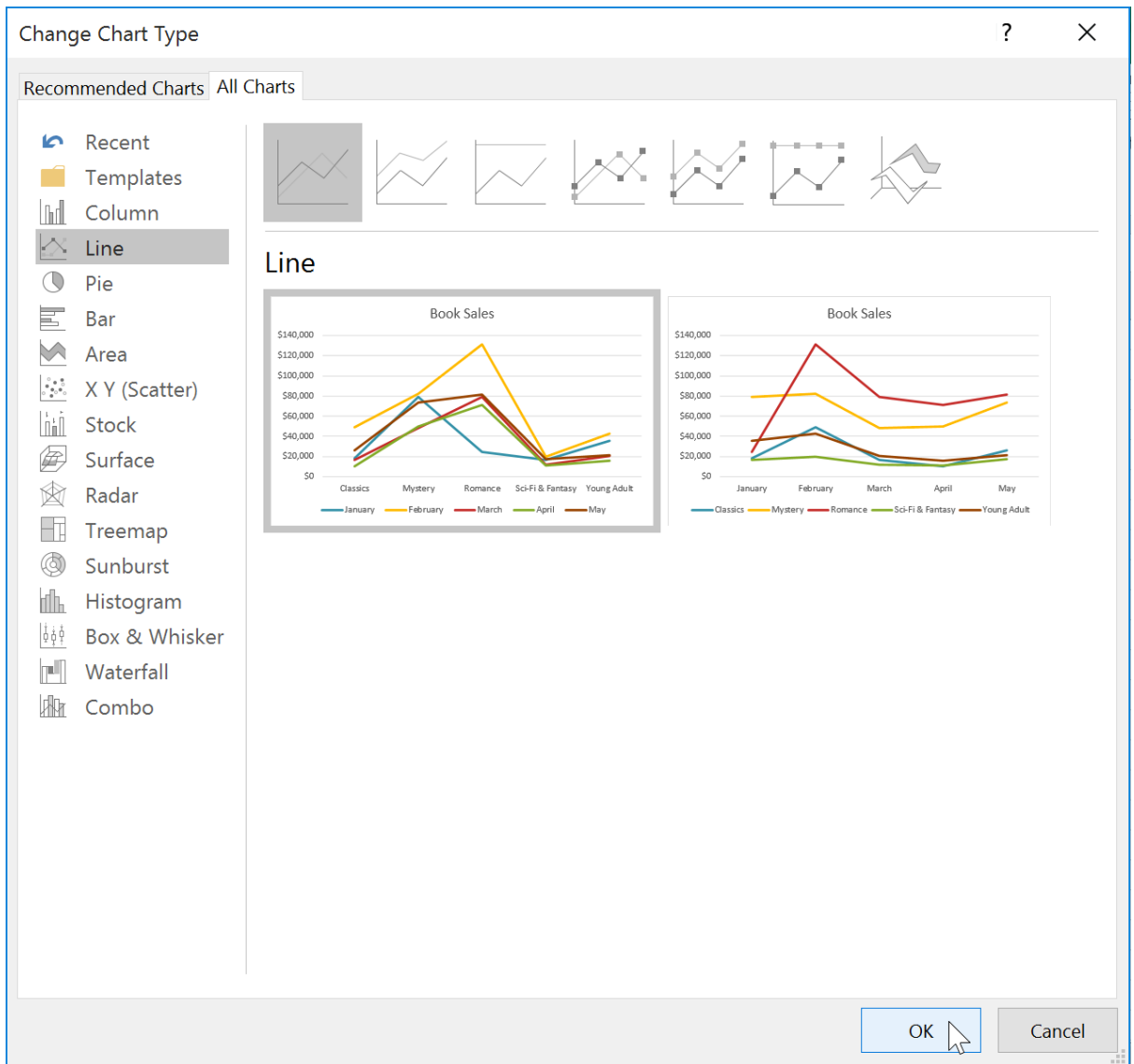
7.5.2. To change the chart type:

If you find that your data isn't well suited to a certain chart, it's easy to switch to a new chart type. In our example, we'll change our chart from a column chart to a line chart.

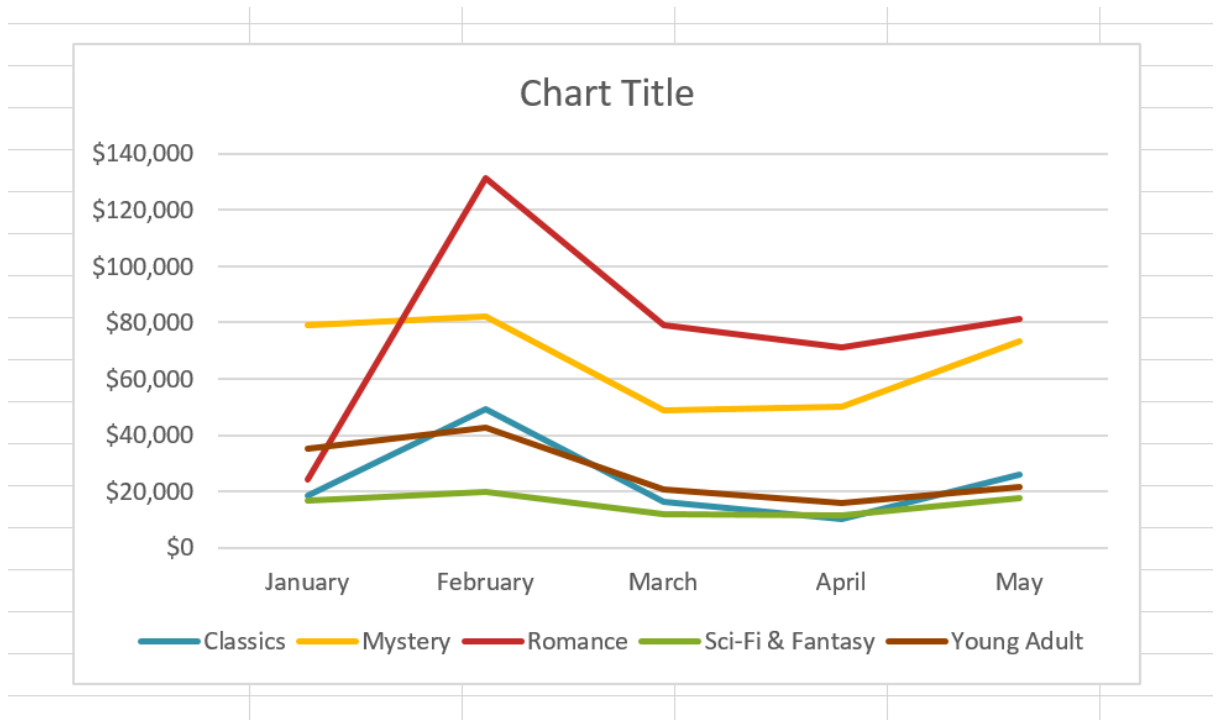
1. From the **Design** tab, click the **Change Chart Type** command.



2. The **Change Chart Type** dialog box will appear. Select a new chart **type** and **layout**, then click **OK**. In our example, we'll choose a **Line** chart.



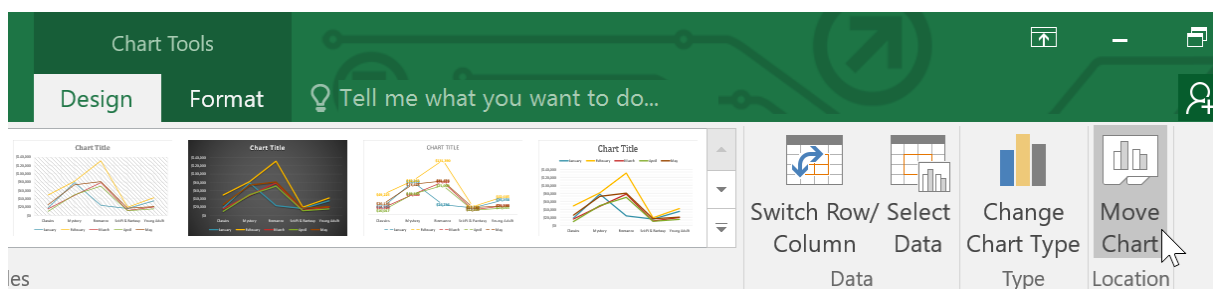
3. The selected chart type will appear. In our example, the line chart makes it easier to see trends in sales data over time.



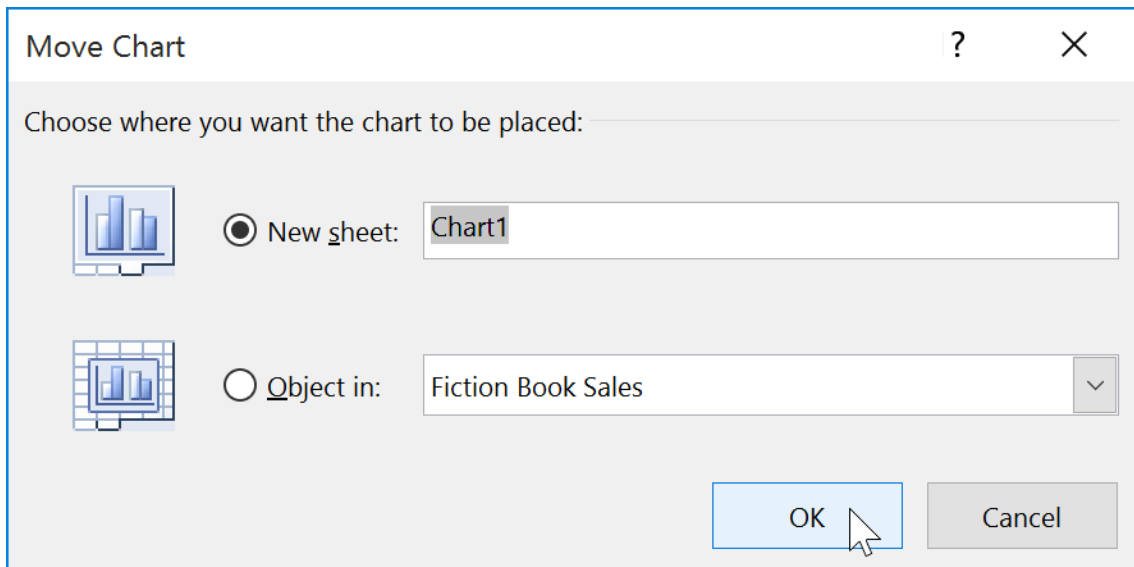
7.5.3. To move a chart:

Whenever you insert a new chart, it will appear as an object on the same worksheet that contains its source data. Alternatively, you can **move** the chart to a **new worksheet** to help keep your data organized.

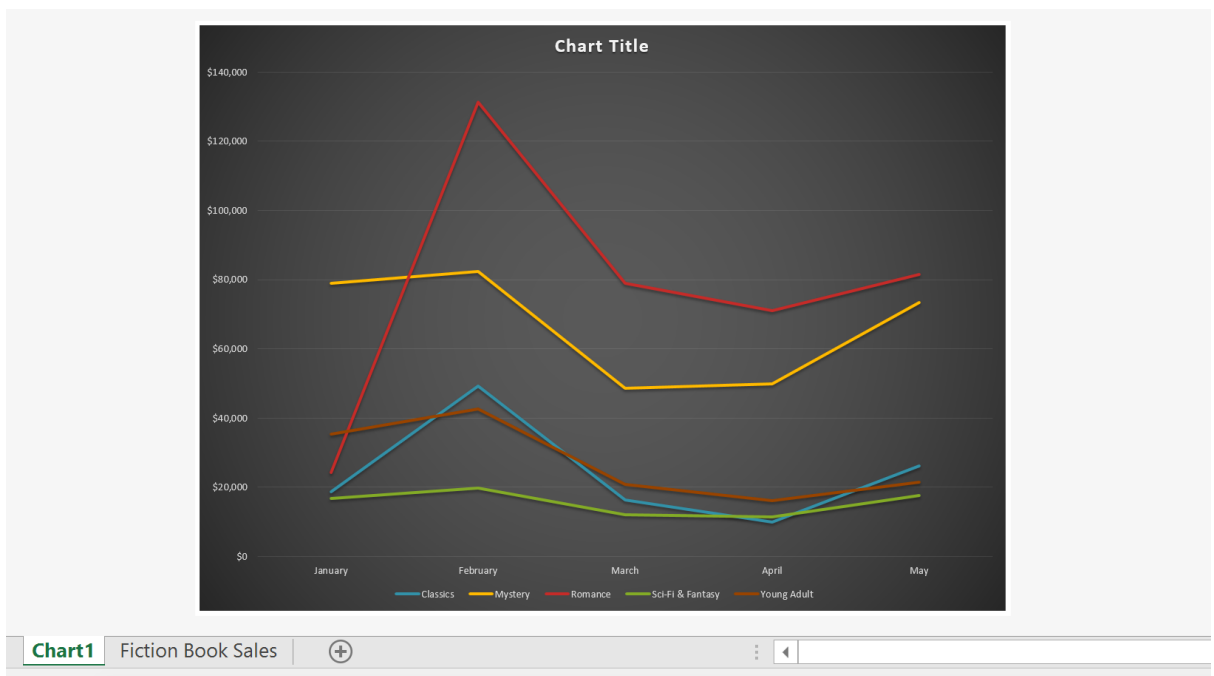
1. Select the **chart** you want to move.
2. Click the **Design** tab, then select the **Move Chart** command.



3. The **Move Chart** dialog box will appear. Select the **desired location** for the chart. In our example, we'll choose to move it to a **New sheet**, which will create a new worksheet.
4. Click **OK**.



- The chart will appear in the selected location. In our example, the chart now appears on a new worksheet.



7.5.3.1. Keeping charts up to date

By default, when you add more data to your spreadsheet, the chart may not include the new data. To fix this, you can adjust the **data range**. Simply click the chart, and it will highlight the data range in your spreadsheet. You can then click and drag the **handle** in the lower-right corner to change the data range.

	B	C	D	E	F
	January	February	March	April	May
	\$18,580	\$49,225	\$16,326	\$10,017	\$26,134
	\$78,970	\$82,262	\$48,640	\$49,985	\$73,428
	\$24,236	\$131,390	\$79,022	\$71,009	\$81,474
	\$16,730	\$19,730	\$12,109	\$11,355	\$17,686
	\$35,358	\$42,685	\$20,893	\$16,065	\$21,388

If you frequently add more data to your spreadsheet, it may become tedious to update the data range. Luckily, there is an easier way. Simply format your source data as a **table**, then create a **chart based on that table**. When you add more data below the table, it will automatically be included in both the table and the chart, keeping everything consistent and up to date.