





# **Excel 2010: Database Management**

*Bravo! Employee Summer Institute 2011*

# Database Management in Excel 2010

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# Database Management in Excel 2010

Excel 2010 gives you the ability to work with an **enormous amount of data**. Arranging your data alphabetically, from smallest to largest or other criteria can help you find the information you're looking for more quickly.

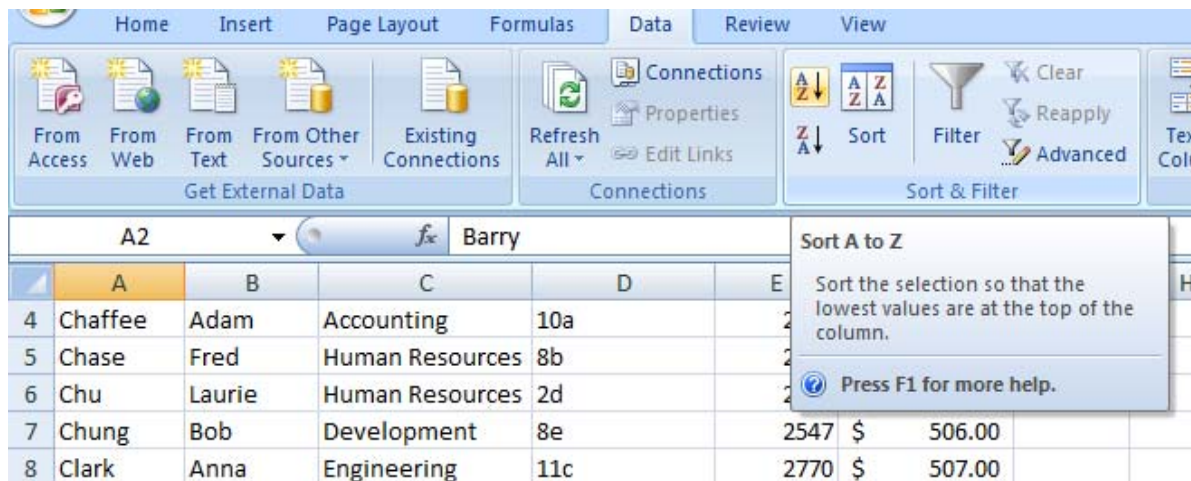
## To Sort in Alphabetical Order:

1. Select a cell in the column you want to sort by. In this example, we will sort by Last Name.

	A	B	C	D	E	F	G
1	Last Name	First Name	Department	Office Location	Extension	Bonus	
2	Barry	Angela	Accounting	3g	2667	\$ 500.00	
3	Boller	Mary	Development	8d	2544	\$ 501.00	
4	Chaffee	Adam	Accounting	10a	2678	\$ 503.00	
5	Chase	Fred	Human Resources	8b	2511	\$ 504.00	
6	Chu	Laurie	Human Resources	2d	2055	\$ 505.00	
7	Chung	Bob	Development	8e	2547	\$ 506.00	
8	Clark	Anna	Engineering	11c	2770	\$ 507.00	
9	Clark	John	Development	2c	2546	\$ 508.00	
10	Clarke	Joe	Engineering	11d	2776	\$ 509.00	
11	Cole	Daniel	Accounting	4c	2066	\$ 510.00	

Selecting a column to sort

2. Select the **Data** tab, and locate the **Sort and Filter** group.
3. Click the ascending command  to **Sort A to Z**, or the descending command  to **Sort Z to A**.
- 4.



The screenshot shows the Excel 2010 interface with the **Data** tab selected. The **Sort & Filter** group is visible, and the **Sort A to Z** icon is highlighted. A tooltip is displayed over the icon, stating: "Sort A to Z. Sort the selection so that the lowest values are at the top of the column. Press F1 for more help." The background shows a portion of the data table from the previous image, with the **Last Name** column selected.

Sorting in ascending alphabetical order

# Database Management in Excel 2010

5. The data in the spreadsheet will be organized alphabetically.

	A	B	C	D	E	F	G
1	Last Name	First Name	Department	Office Location	Extension	Bonus	
2	Barry	Angela	Accounting	3g	2667	\$ 500.00	
3	Boller	Mary	Development	8d	2544	\$ 501.00	
4	Chaffee	Adam	Accounting	10a	2678	\$ 503.00	
5	Chase	Fred	Human Resources	8b	2511	\$ 504.00	
6	Chu	Laurie	Human Resources	2d	2055	\$ 505.00	
7	Chung	Bob	Development	8e	2547	\$ 506.00	
8	Clark	Anna	Engineering	11c	2770	\$ 507.00	
9	Clark	John	Development	2c	2546	\$ 508.00	
10	Clarke	Joe	Engineering	11d	2776	\$ 509.00	
11	Cole	Daniel	Accounting	4c	2066	\$ 510.00	
12	Comuntzis	Mark	Executive	6a	2089	\$ 511.00	
13	Decker	Erica	Accounting	9e	2665	\$ 512.00	
14	Donnell	Susan	Accounting	3d	2688	\$ 514.00	
15	Ellis	Janet	Customer Service	2f	2109	\$ 515.00	
16	Fern	Elizabeth	Accounting	10b	2700	\$ 516.00	
17	Ferris	Jim	Human Resources	3c	2478	\$ 517.00	
18	Filosa	Alexandra	Facilities	6b	2110	\$ 518.00	
19	Flanders	Elizabeth	Engineering	1a	2046	\$ 502.00	
20	Grant	Sabrina	Development	12d	2967	\$ 519.00	
21	Paul	John	Customer Service	2f	2109	\$ 515.00	
22	Sanchez	Barbara	Tech. Support	2e	2099	\$ 513.00	
23							

Sorted by last name, from A to Z

Sorting options can also be found on the Home tab, condensed into the **Sort & Filter** command.



# Database Management in Excel 2010

## To Sort in Numerical Order:

1. Select a cell in the column you want to sort by.

	A	B	C	D	E	F	G
1	Last Name	First Name	Department	Office Location	Extension	Bonus	
2	Flanders	Elizabeth	Engineering	1a	2046	\$ 502.00	
3	Chu	Laurie	Human Resources	2d	2055	\$ 505.00	
4	Cole	Daniel	Accounting	4c	2066	\$ 510.00	
5	Comuntzis	Mark	Executive	6a	2089	\$ 511.00	
6	Sanchez	Barbara	Tech. Support	2e	2099	\$ 513.00	
7	Ellis	Janet	Customer Service	2f	2109	\$ 515.00	
8	Paul	John	Customer Service	2f	2109	\$ 515.00	
9	Filosa	Alexandra	Facilities	6b	2110	\$ 518.00	
10	Ferris	Jim	Human Resources	3c	2478	\$ 517.00	
11	Chase	Fred	Human Resources	8b	2511	\$ 504.00	
12	Boller	Mary	Development	8d	2544	\$ 501.00	
13	Clark	John	Development	2c	2546	\$ 508.00	
14	Chung	Bob	Development	8e	2547	\$ 506.00	
15	Decker	Erica	Accounting	9e	2665	\$ 512.00	
16	Barry	Angela	Accounting	3g	2667	\$ 500.00	
17	Chaffee	Adam	Accounting	10a	2678	\$ 503.00	
18	Donnell	Susan	Accounting	3d	2688	\$ 514.00	
19	Fern	Elizabeth	Accounting	10b	2700	\$ 516.00	
20	Clark	Anna	Engineering	11c	2770	\$ 507.00	
21	Clarke	Joe	Engineering	11d	2776	\$ 509.00	
22	Grant	Sabrina	Development	12d	2967	\$ 519.00	
23							

*Selecting a column to sort*

2. From the **Data** tab, click the **ascending command**  to **Sort Smallest to Largest**, or the **descending command**  to **Sort Largest to Smallest**.
3. The data in the spreadsheet will be organized numerically.

	A	B	C	D	E	F	G
1	Last Name	First Name	Department	Office Location	Extension	Bonus	
2	Grant	Sabrina	Development	12d	2967	\$ 519.00	
3	Clarke	Joe	Engineering	11d	2776	\$ 509.00	
4	Clark	Anna	Engineering	11c	2770	\$ 507.00	
5	Fern	Elizabeth	Accounting	10b	2700	\$ 516.00	
6	Donnell	Susan	Accounting	3d	2688	\$ 514.00	
7	Chaffee	Adam	Accounting	10a	2678	\$ 503.00	
8	Barry	Angela	Accounting	3g	2667	\$ 500.00	
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14	Ferris	Jim	Human Resources	3c	2478	\$ 517.00	
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21	Chu	Laurie	Human Resources	2d	2055	\$ 505.00	
22	Flanders	Elizabeth	Engineering	1a	2046	\$ 502.00	
23							

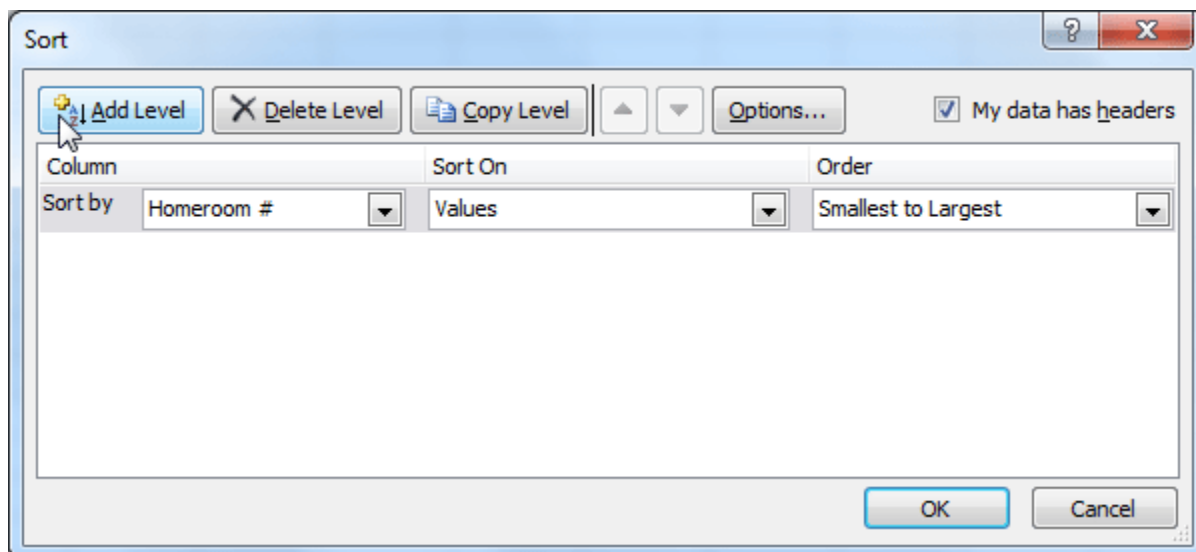
# Database Management in Excel 2010

## Sorting Multiple Levels

Another feature of custom sorting, **sorting multiple levels** allows you to identify which columns to sort by and when, giving you more control over the organization of your data. For example, you could sort by more than one cell color (such as red, then yellow, then green, to indicate different levels of priority); or, as seen here, sort students by homeroom number, then by last name.

### To Add a Level:

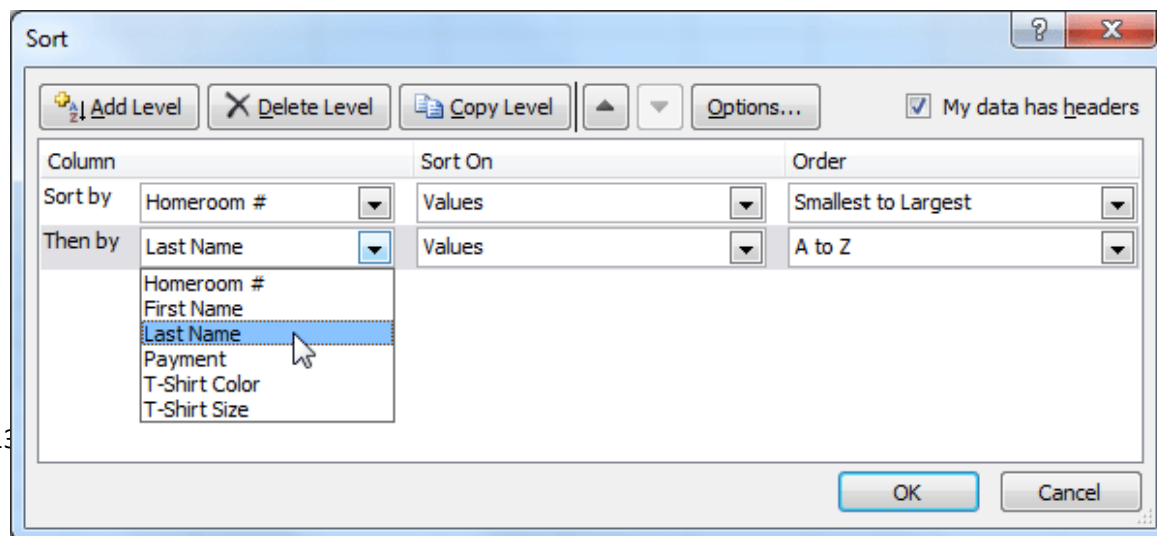
1. From the **Data** tab, click the **Sort** command to open the **Sort** dialog box.
2. Identify the first item you want to **Sort by**. In this example, we will sort Homeroom # from Smallest to Largest.
3. Click **Add Level** to add another item.



Adding a level

4. Identify the item you want to sort by next in the example shown below: Sort on Last Name from A to Z.

Choosing criteria for a second level



# Database Management in Excel 2010

5. Click **OK**.
6. The spreadsheet will be sorted so that homeroom numbers are in order, and within each homeroom, students are listed alphabetically by last name.

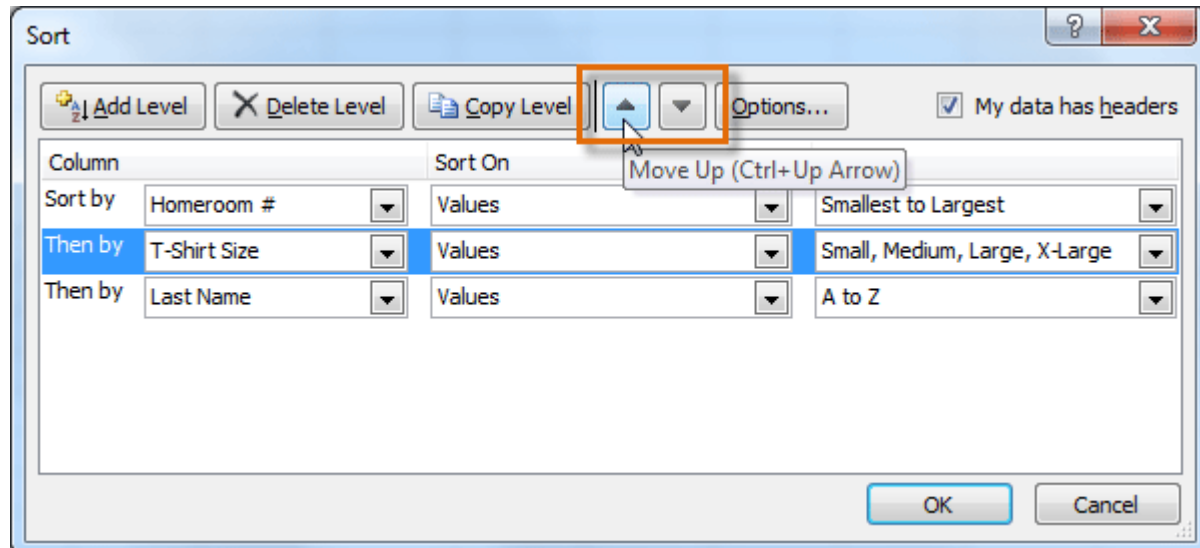
	A	B	C
1	Homeroom #	First Name	Last Name
2	105	Nathan	Albee
3	105	Christiana	Chen
4	105	Sidney	Kelly
5	105	Derek	MacDonald
6	105	Melissa	White
7	105	Esther	Yaron
8	110	Kris	Ackerman
9	110	Matt	Benson
10	110	Gabriel	Del Toro
11	110	Regina	Olivera
12	135	Anisa	Naser
13	135	James	Panarello
14	135	Lia	Richards
15	135	Jordan	Weller
16	135	Chantal	Weller
17	135	Alex	Yuen

Sorted by multiple levels

**Copy Level** will add a level by duplicating the one you have selected, and allowing you to modify the sorting criteria. This is useful if you need to sort multiple levels that share some criteria, such as the same Column, Sort On, or Order.

## To Change the Sorting Priority:

1. From the **Data** tab, click the **Sort** command to open the **Custom Sort** dialog box.
2. Select the **level** you want to re-order.
3. Use the **Move Up** or **Move Down** arrows. The higher the level is on the list, the higher its priority.



# Database Management in Excel 2010

Changing the sorting priority

4. Click **OK**.

## Data Integrity

### Restricting Cell Entries to Certain Data Types

1. Open the file that contains the data you wish to use restrict.
2. Select the Cells

	A	B	C	D	E	F
2	Last Name	First Name	Job Title	Hours	Insurance	
3	Barnhill	Josh	Billing Clerk	36		
4	Bourne	Stephanie	Physician	36		
5	Da Silva	Sergio	Physician Assistant	36		
6	Delaney	Aidan	Receptionist	20		
7	Dellamore	Luca	Medical Assistant	36		
8	Giest	Jim	Office Manager	40		
9	Hamilton	David	Medical Assistant	36		
10	Hensien	Kari	File Clerk	20		
11	Hoeing	Helge	Medical Assistant	36		
12	Holliday	Nicole	Physician	36		
13	Kane	John	Registered Nurse	30		
14	Kane	John	Registered Nurse	30		
15	Kennedy	Kevin	File Clerk	15		
16	Laszlo	Rebecca	Physician	36		
17	Metters	Susan	Billing Clerk	25		
18	Metters	Susan	Billing Clerk	25		
19	Moore	Bobby	File Clerk	15		
20	Moreland	Barbara	Billing Clerk	20		
21	Munson	Stuart	Referral Specialist	36		
22	Murray	Billie Jo	Medical Assistant	36		
23	Poland	Carole	Nurse Practitioner	25		
24	Simon	Britta	Administrative Assistant	36		
25	Trenary	Jean	Registered Nurse	30		
26	Valdez	Rachel	Receptionist	30		
27	Wang	Jian	Referral Specialist	36		
28	Wilson	Dan	Physician	36		
29						

3. On the Data Tab, in the Data tool group, click Data Validation.
4. On the Settings tab of the Data Validation dialog box, click on Whole number in the Allow box.
5. Type in a number for the Minimum box and another number in the Maximum box.

Employee Data - Microsoft Excel

Formulas Data Review View

Connections Properties Edit Links Refresh All

Sort Filter Advanced

Text to Columns Remove Duplicates

Data Validation Data Validation... Circle Invalid Data Clear Validation

Prevent invalid data from being entered into a cell.

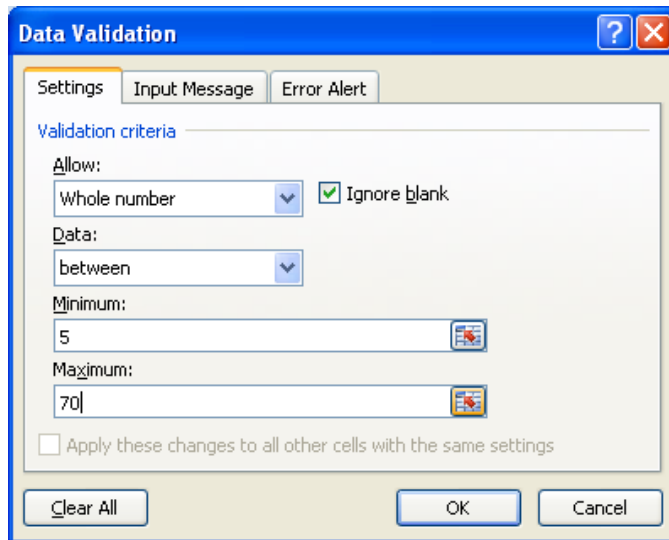
For example, you could reject invalid dates or numbers greater than 1000.

You can also force input to be chosen from a dropdown list of values you specify.

Press F1 for more help.

	C	D	E	F	G	H	I	J
	Job Title	Hours	Insurance					
	Billing Clerk	36						
	Physician	36						
	Physician Assistant	36						
	Receptionist	20						
	Medical Assistant	36						

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6. Click on the Error Alert tab. Type in text into the Title box.
7. Click in the message area box and type in the “error message”
8. Click on OK when finished.
9. To test that your validation rule see if it is working fine.
10. Enter a number greater or smaller than the range you specify.

✚ Depending on what you choose for the style you will get different results:

- Stop



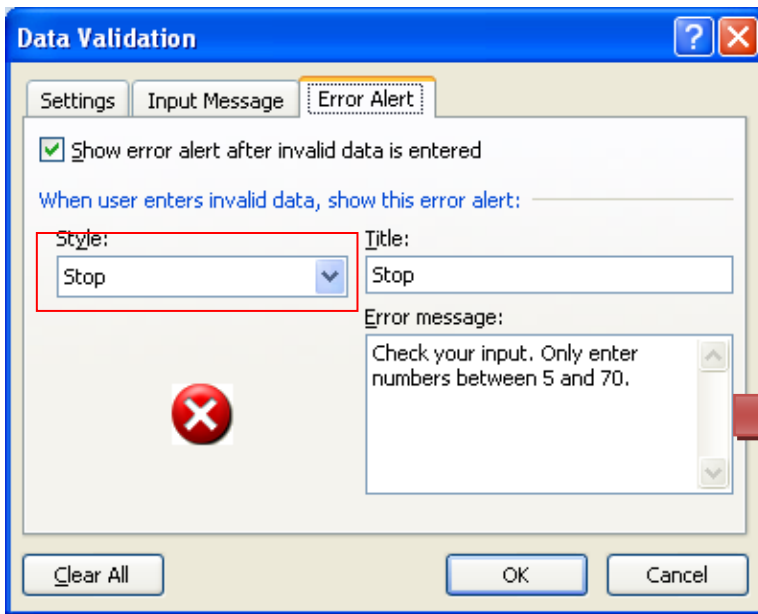
- Warning



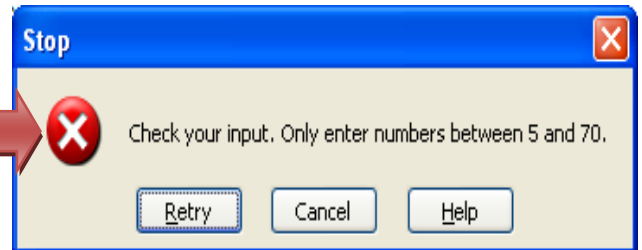
- Information



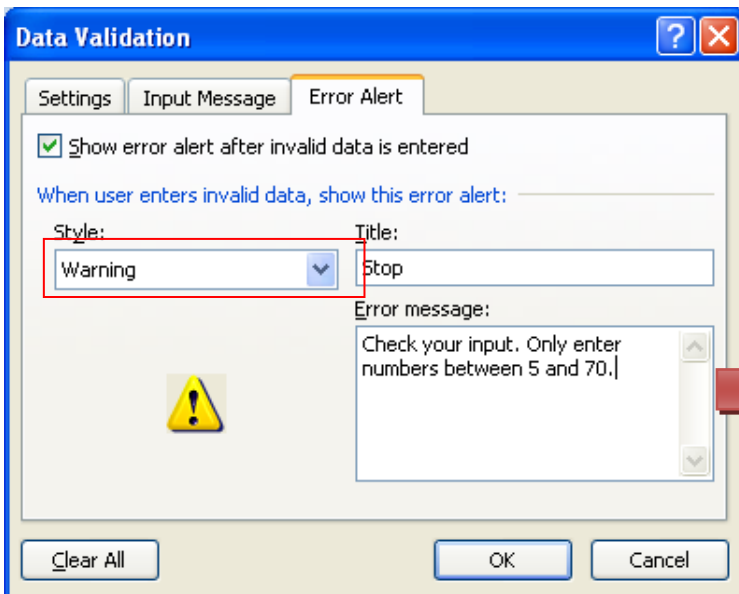
# Database Management in Excel 2010



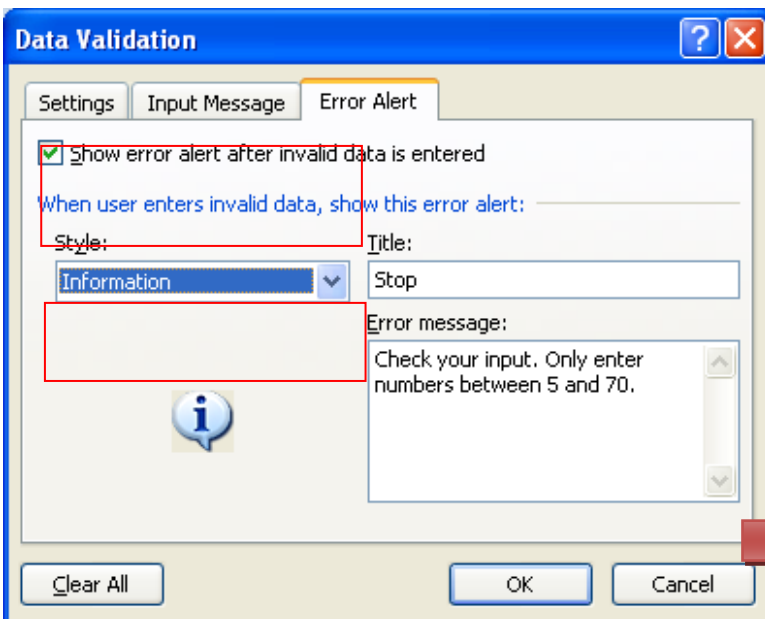
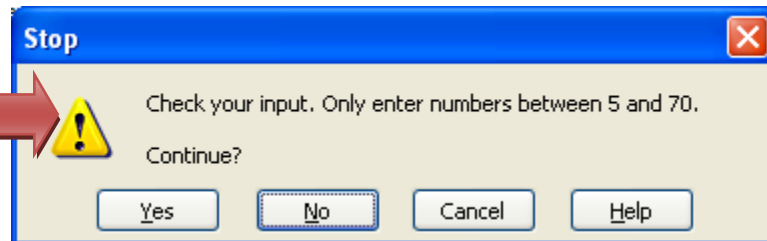
It would **NOT** allow you to enter any other number that is not within the range of accepted numbers. Retry to enter new number or cancel to keep original number



It **WOULD** allow you to enter any other



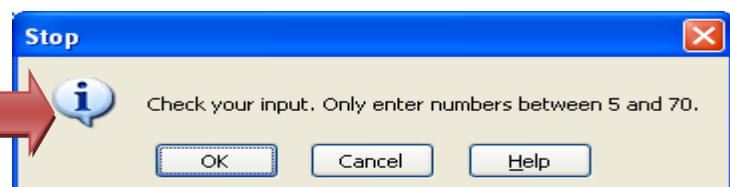
number that is not within the range of accepted numbers by pressing Yes to continue. If you choose NO it would prompt you enter another number (cell highlighted in black). Click on Cancel to keep original number.



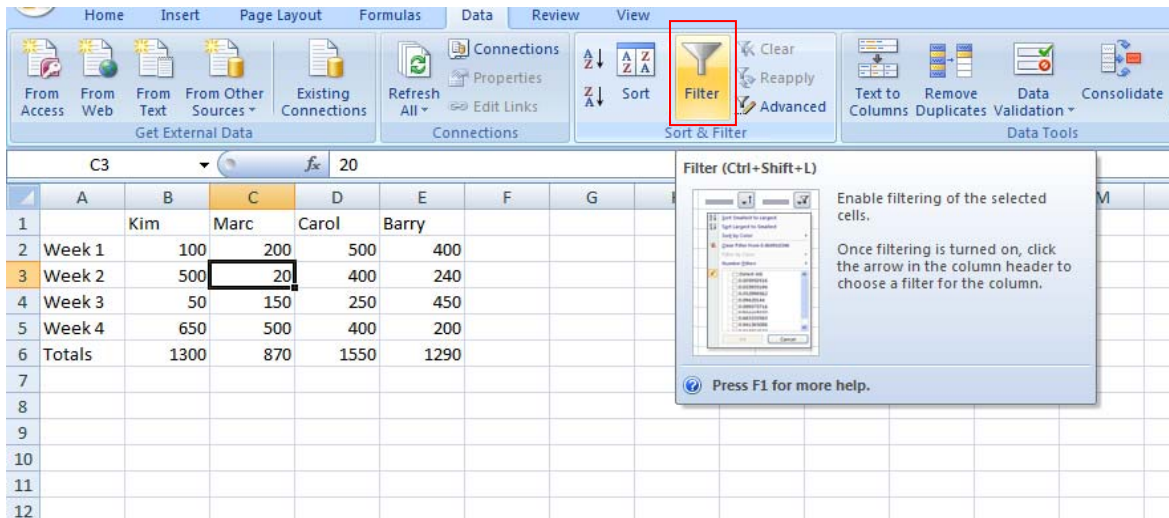
It **WOULD** allow you to enter any other number that is not within the range of accepted numbers by pressing OK. Click on Cancel to keep original number.

## Creating Filters

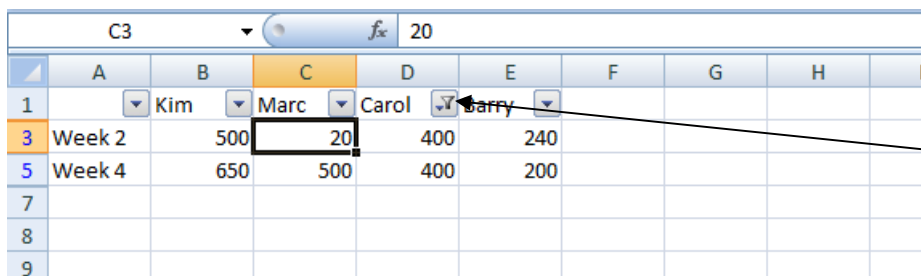
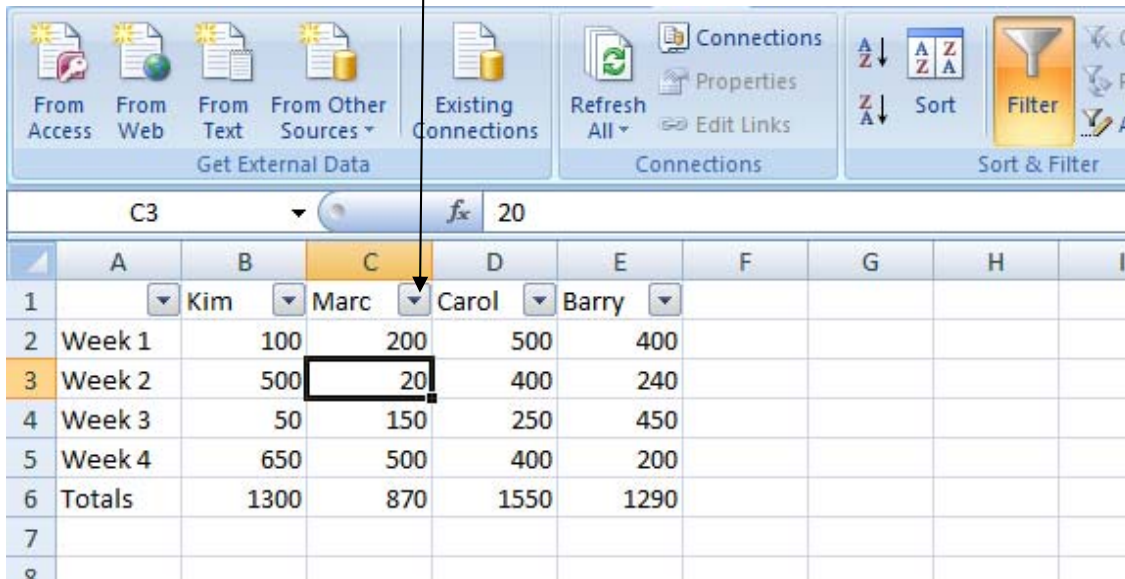
Click inside a table, and then choose Filter in the Sort & Filter group of the Data tab.



# Database Management in Excel 2010



Click the filter arrow beside the column heading for the column you want to filter.



Example of Carol filter for 400.

# Database Management in Excel 2010

Remove the check mark from Select All.

	A	B	C	D	E	F
1		Kim	Marc	Carol	Barry	
3	Week 2	500	20	400	240	
5	Week 4	650	500	400	200	
7						
8						
9						

	D	E	F
	Carol	Barry	
	400	240	
	400	200	

	A	B	C	D	E	F
1		Kim	Marc	Carol	Barry	
3	Week 2				240	
5	Week 4				200	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						

Click on Clear Filter from "Carol"(or what was use for the Filter).