

RHP Computer Applications Class

12-1 Validating Data Entry in Excel

Name _____



File to save: 12-1 Baseball Scoresheet

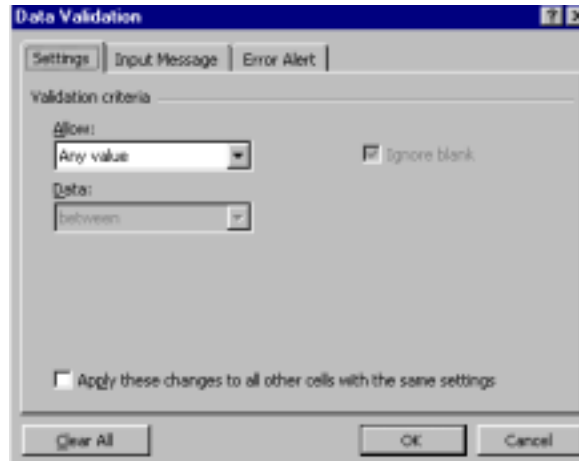
You can control the data that is entered into a cell, as well as give hints to yourself or others using your worksheet as to the data required in a cell by using Validation.

Start by opening a blank worksheet. Select cell A1, and pull down the Data Menu and choose Validation.

The Data Validation window will open.

There are three tabs in the window:

Settings, which allows you to limit the type of data that can be entered into the cell, Input Message, which will explain to the user what to enter in a cell, and Error Alert, which will display an error if the data requirements are not met.



Under the Settings tab, pull down the Allow: choices and select Whole Number. In the data window, pull down the menu and choose the Less Than option. In the Maximum window, enter the number 100.

Next, click on the Input Message Tab. In the Title field, type in **Enter a Number or Die!**. In the Input Message field, type in **Enter a number that is less than 100.**

Next, click on the Error Alert tab. In the Style field, choose Stop. In the Title field, type **Hello?!** In the Error message field, type **Your entry was invalid. You must enter a whole number that is less than 100!**

Click on OK. Now it's time to test it. If you are in cell A1, the input message should appear. Type in some numbers, some less than 100, and some more than 100. Type in a letter as well. The cell should accept any number if it is less than 100, and display the error message if you enter a number greater than 100, a number with a decimal, or a letter or other non-number character. Once you feel you understand what validation does, close this file (it was just for practice).

Open up a new worksheet and get ready for your assignment. You will design a spreadsheet where you will enter baseball/softball stats.

Start by labeling the following columns in Row 1, so that cell A1 reads **Player Name**, B1 reads **On Base**, C1 reads **Left on Base**, etc., using the table below.

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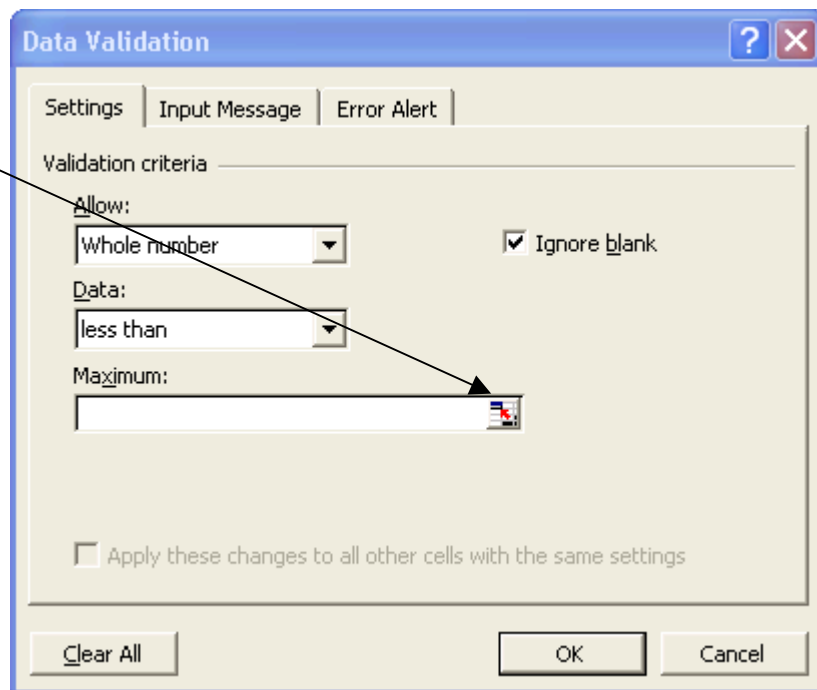
Column	Heading		K	B Avg
A	Player Name		L	Doubles
B	On Base		M	Triples
C	Left on Base		N	Home Runs
D	Out on Base		O	RBI's
E	Runs		P	Putouts
F	Sacrifices		Q	Assists
G	Walks		R	Errors
H	Strikeouts		S	F Avg
I	Hits			
J	At Bats			

Go ahead and save this file to your system folder. Name the file **12-1 Baseball Scoresheet**.

Next, add validation for all the cells in Row 2. First, select cell A2. Next, pull down the Data menu and choose Validation. Go to the Input Message tab, and in the title field, type **Enter Player's Name**. Under Input message, type **Enter a player's name in this cell, last name first, followed by a comma, and then the first name (i.e. Smith, John)**.

Click on OK. Test to make sure the input message works. If so, move on through the columns on Row 2. Make sure your input message is clear, so that a user not familiar with baseball/softball will know what an RBI, an assist, etc. is. The table below tells you which columns require an input message, and which columns require data validation.

Let's use Left on Base as an example of how to do Data Validation. Click on cell C2. Get into the Validation window. Under the settings tab, Allow field, select Whole number. Under data, select Less than or equal to. Under Maximum, click on the icon with the little red arrow, and click on cell B2 (the On Base field). Hit ENTER to accept this cell. Notice the cell's address that appears in that window. This will make sure the number of times left on base will not exceed the number of times on base (obviously).



Under the Input message tab, fill out the required title and message.

Under the Error Alert tab, make sure Stop is selected (under style), and under title type **Entry Error**. Under message, type **Number of times left on base must be less than or equal to the number of times on base**.

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Click on OK and test by entering a number in B2, and various numbers in C2.

Check the table below to see whether an input message and/or data validation is required.

Heading	Input Msg Req'd?	Validation Req'd?	Validation
Player Name	Y	N	
On Base	Y	N	
Left on Base	Y	Y	Cannot be greater than On Base
Out on Base	Y	Y	Cannot be greater than On Base
Runs	Y	Y	Cannot be greater than On Base
Sacrifices	Y	N	
Walks	Y	N	
Strikeouts	Y	N	
Hits	Y	Y	Cannot be greater than On Base
At Bats	Y	N	
B Avg	N	N	
Doubles	Y	Y	Cannot be greater than Hits
Triples	Y	Y	Cannot be greater than Hits
Home Runs	Y	Y	Cannot be greater than Hits
RBI's	Y	N	
Putouts	Y	N	
Assists	Y	N	
Errors	Y	N	
F Avg	N	N	

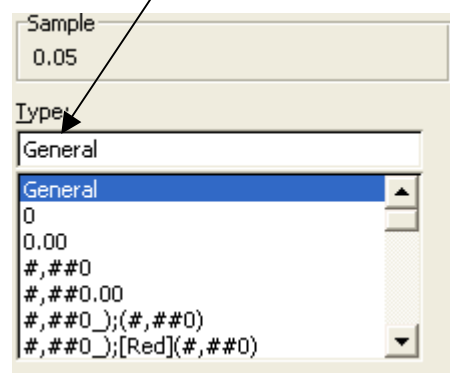
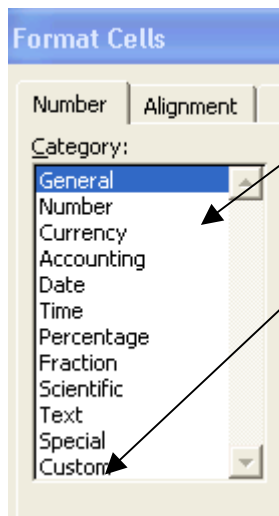
Next, add the proper formulas for batting average and fielding average in row 2. Batting avg = Hits/At Bats, Field Avg = (Putouts + Assists) / (Putouts + Assists + Errors). You will have to use parenthesis in the fielding avg. formula to force the cell to add the numbers first, and then divide. Remember, all formulas must start with the equal sign (=), followed by the cell references you want to use. Don't type in Bavg=Hits/AtBats; Excel doesn't know what that means. You must type in the cell location where Hits and At Bats are kept, like H2 or I2, etc.

And now, a word about cell formatting. Baseball/softball averages are tricky. Averages can go from 0 to 1.000 (when you are fielding 1,000, you are actually fielding 1.000). If you are batting 100, it should be displayed as .100 (or one-tenth, followed by two zeros). There is not a format you can choose that will display this correctly.

However, you can make what is called a "mask" by selecting the Custom option.

Select the word 'General' in the field type window. Now type in your mask. To type a mask, use the #, 0, and . characters. A '#' sign means a number will print only if there is one available to print. A 0 (that's a zero) will print a number of available,

or a zero if a number is not available. I have included a list of masks and the results below. Use this to make your own mask so that the averages are displayed properly.



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Original Number	Mask	Result of Mask
1.75	#.##	1.75
0.75	#.##	.75
0.75	0.##	0.75
0.75	0.000	0.750

Masks are used often when printing or displaying numbers. Programmers often code masks into programs to format output in a way that looks good to a user.

Once you have entered your masks, it's time to copy all that validation and formatting to rows 3 through 14 (unless you want to type it all again 9 more times).

Select cells B2 to S2. Click on the little black square on the bottom right hand corner of S2 and drag it down to S14. All of your validation and formatting has now been copied!

Save your file one more time.
Email it to me. The subject is **compapp 12-1 lastname.**

