

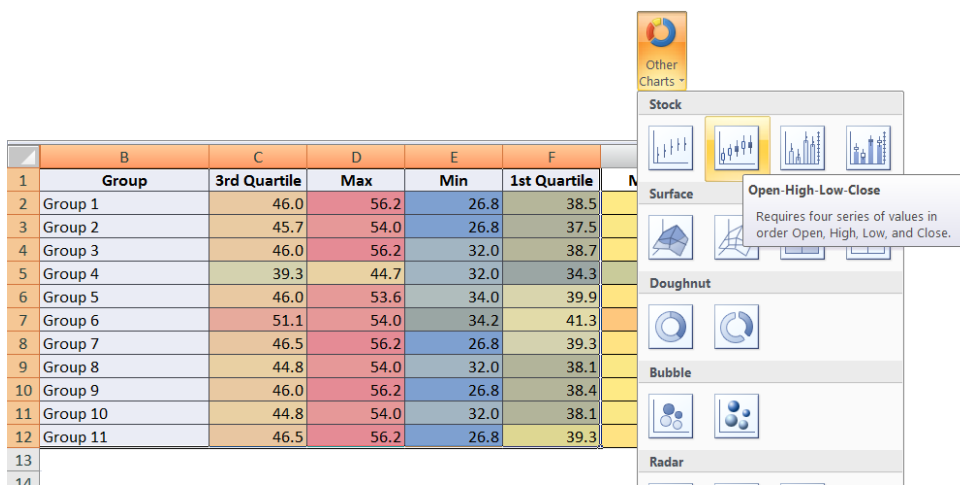
Creating a box and whisker plot in Excel 2007

1. Calculate the minimum & maximum values for each group, as well as the 1st, 2nd and 3rd quartiles, also the mean. (2nd quartile = median).

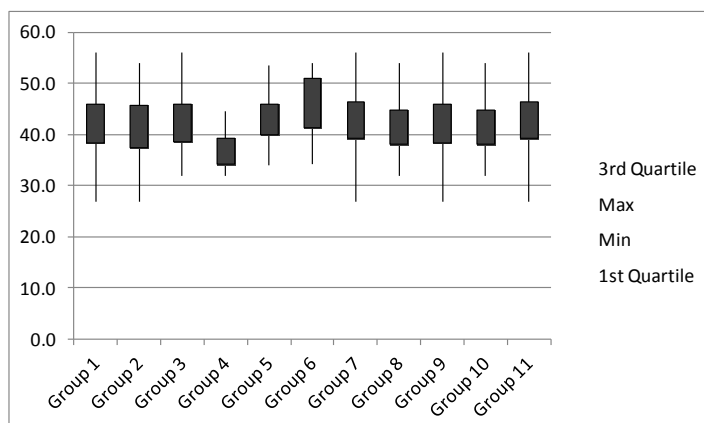
Arrange the columns in the following order:

Group	3rd Quartile	Max	Min	1st Quartile	Mean	Median
Group 1	46.0	56.2	26.8	38.5	42.3	42.4
Group 2	45.7	54.0	26.8	37.5	41.9	42.8
Group 3	46.0	56.2	32.0	38.7	42.7	42.3
Group 4	39.3	44.7	32.0	34.3	37.3	37.3
Group 5	46.0	53.6	34.0	39.9	43.0	43.0
Group 6	51.1	54.0	34.2	41.3	46.2	47.6
Group 7	46.5	56.2	26.8	39.3	43.2	43.6
Group 8	44.8	54.0	32.0	38.1	41.9	41.4
Group 9	46.0	56.2	26.8	38.4	42.3	42.4
Group 10	44.8	54.0	32.0	38.1	41.9	41.4
Group 11	46.5	56.2	26.8	39.3	43.2	43.6

2. Highlight the first 5 columns and choose **Insert > Other Charts > Open-High-Low-Close**

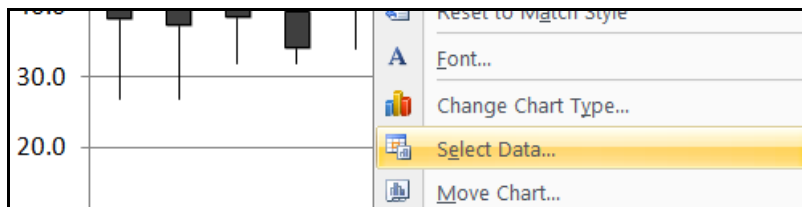


The chart initially looks like this:

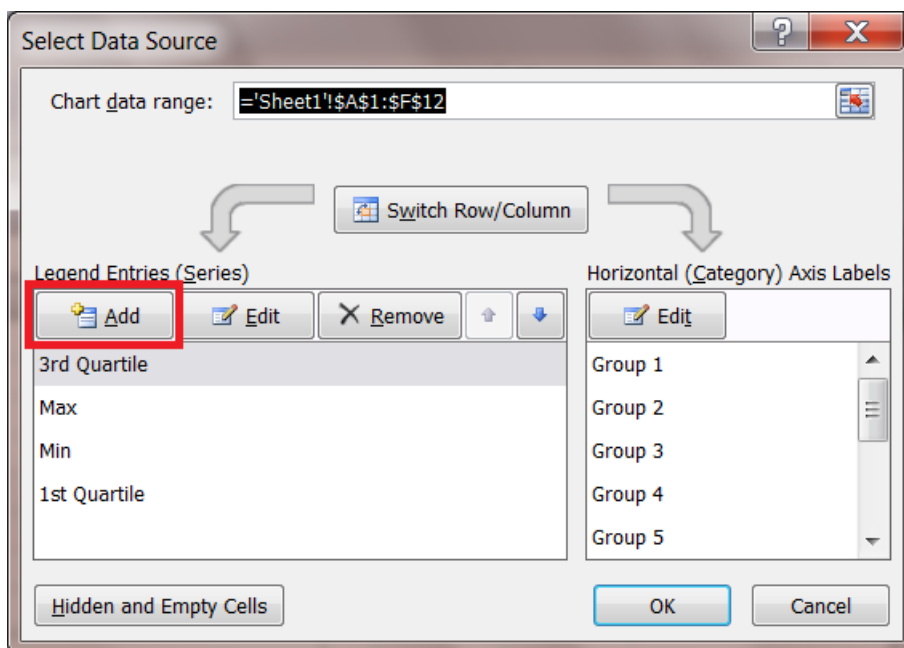


3. Add the mean.

3a. Right-click the chart and choose **Select Data...**



3b. **Add** series

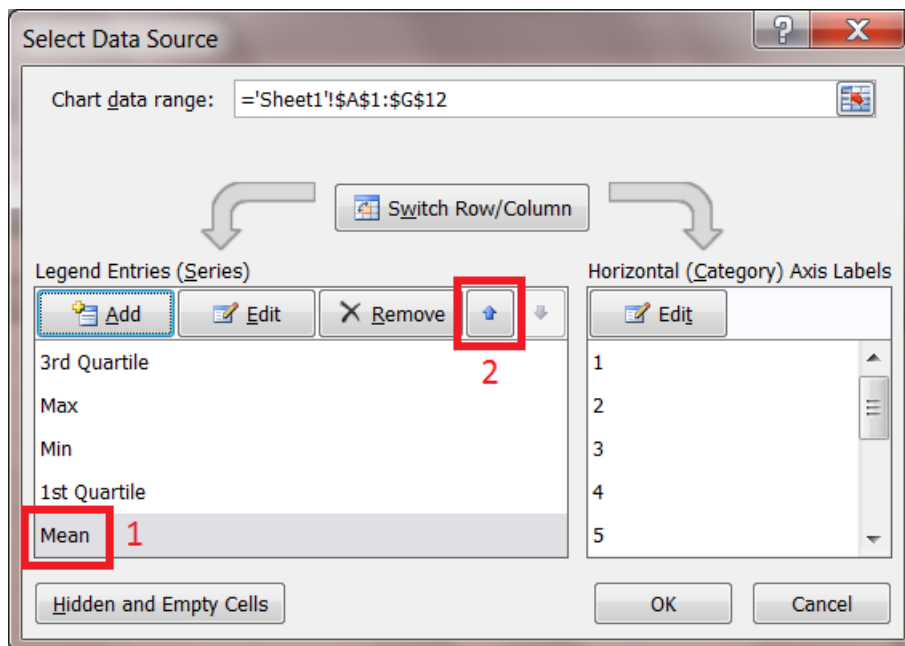


3c. **Series name** is the column heading. **Series values** are the values in the column.

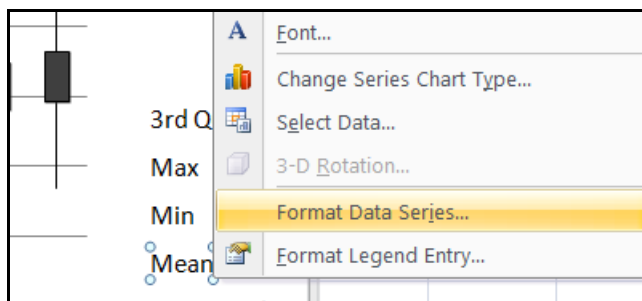
	G	H	I	J	K	L	M	N	O
tile	Mean	Median							
38.5	42.3	42.4							
37.5	41.9	42.8							
38.7	42.7	42.3							
34.3	37.3	37.3							
39.9	43.0	43.0							
41.3	46.2	47.6							
39.3	43.2	43.6							
38.1	41.9	41.4							
38.4	42.3	42.4							
38.1	41.9	41.4							
39.3	43.2	43.6							

A screenshot of the 'Edit Series' dialog box. The 'Series name' field is set to '=Sheet1!\$G\$1' and the 'Series values' field is set to '=Sheet1!\$G\$2:\$G\$12'. Arrows from the spreadsheet above point to these fields: a green arrow points from the 'Mean' header to the 'Series name' field, and a pink arrow points from the 'Mean' column data to the 'Series values' field. The dialog box also shows '= Mean' next to the name and '= 42.3, 41.9, 42...' next to the values. 'OK' and 'Cancel' buttons are at the bottom.

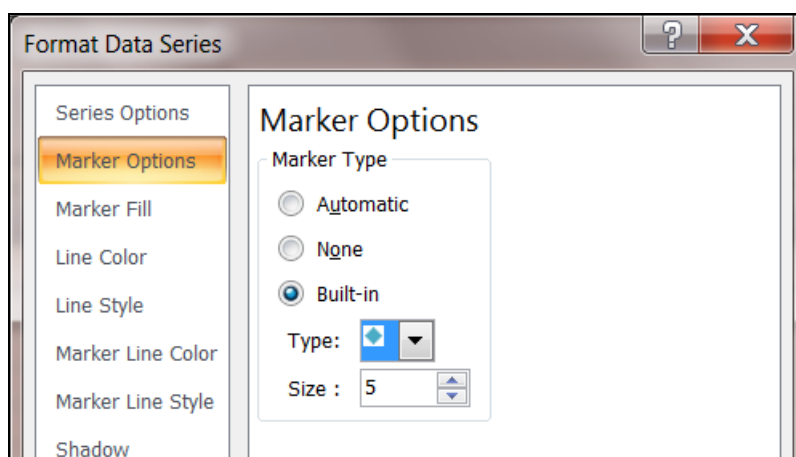
3d. The new series will automatically be added to the bottom of the list, which messes up the box plot. To fix this, highlight the series and move it up one, so that it becomes second from bottom.



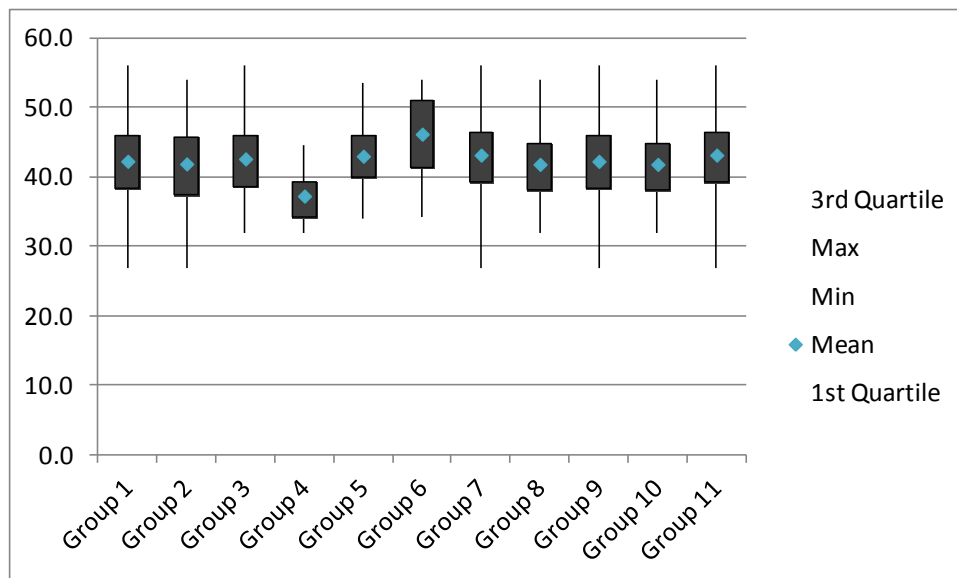
3e. Select the series: Since it is still invisible at this point, I found the easiest way to select it is by right-clicking the series name in the legend. Then choose **Format Data Series**.



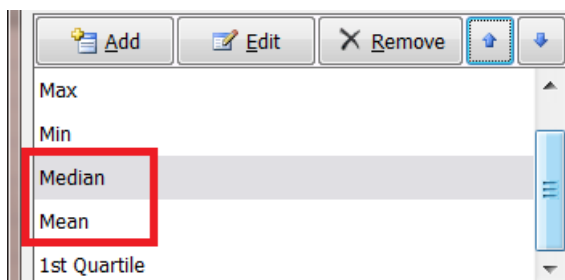
3f. Format the series: I use a diamond-shaped marker for the mean.



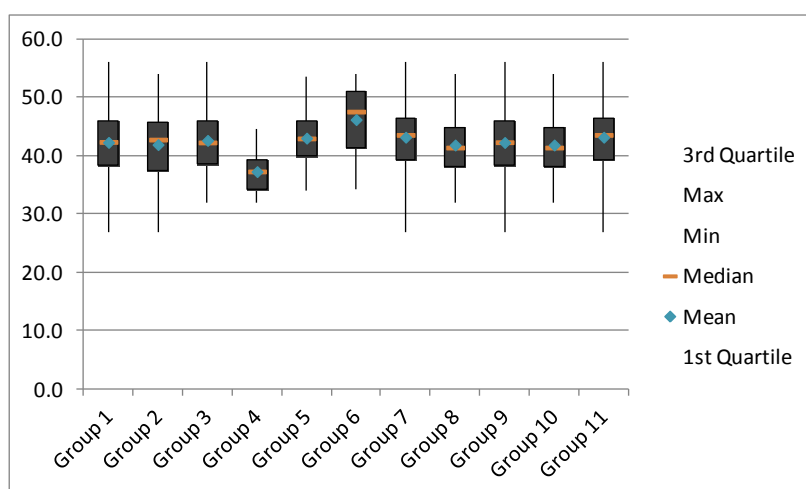
The chart now looks like this:



4. Add the median in the same way, but using a different marker style (I use a horizontal line). Also ensure that Median is positioned **above** Mean in the series order, so that it doesn't overlap and obscure it.



The chart now looks like this:



5. Finally, style the chart to improve its appearance.

e.g.

- Remove the legend
- Format axis labels  Rotate Text Up
- Change Y axis minimum value
- Change colours / line thickness etc.

The final version looks like this:

