



# Graphical Display of Statistics

Spring 2011

# Common Display of Statistical Info

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- Two common ways to graphically display statistical information is through the use of bar charts and pie charts.
- A bar chart graphically displays a bar graph where the lengths of the bars are proportional to the values that they represent.

# Sample CS120 Dataset

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- Consider the following CS120 class information:

<b>ID</b>	<b>Year</b>	<b>Age</b>
0001	FR	18
0002	FR	18
0003	SR	22
0004	JR	22
0005	SO	19
0006	FR	19
0007	SR	23
0008	SO	19
0009	SR	22

If this data was in PASW, what would be the Type and Measure for each variable?

# Exercise

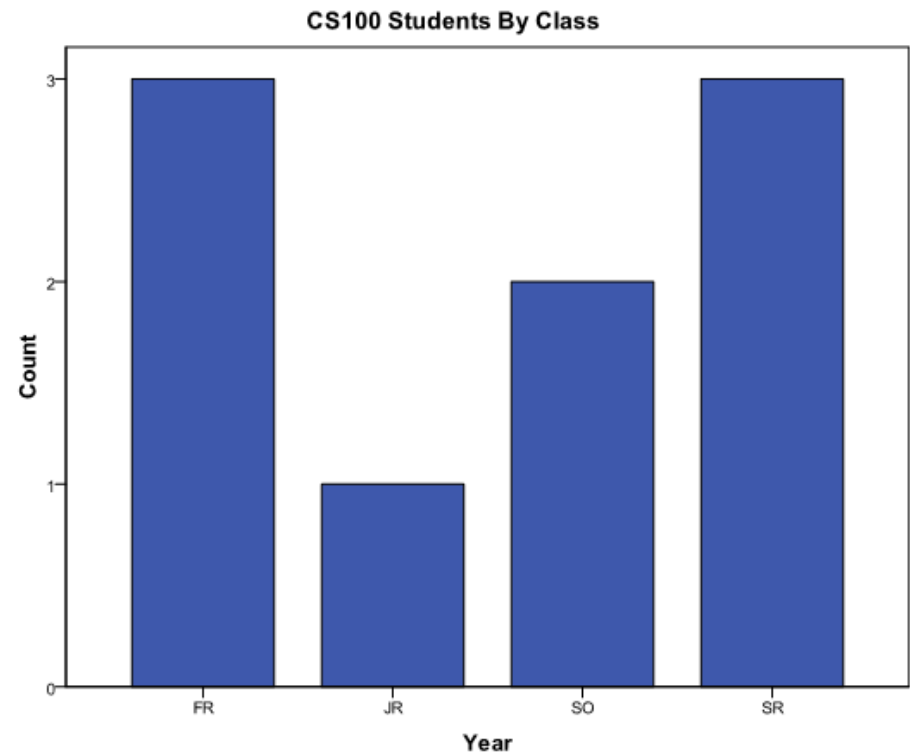
Copy CS120.sav from CS 130 Public to your Desktop.

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- Let's discuss the variable definitions and data.
- Create a **Bar Chart** to show how many students in each Year took CS 120.
- Create a **Pie Chart** to show how many students in each Year took CS 120.
- Create a **Bar Chart** to show the **median age** of students in each Year.
- Create a Word document called **graphs.docx** that has all three graphs in the document properly labeled and looking professional. Let me see the results.
- Enter this data into Excel and build the three charts above.

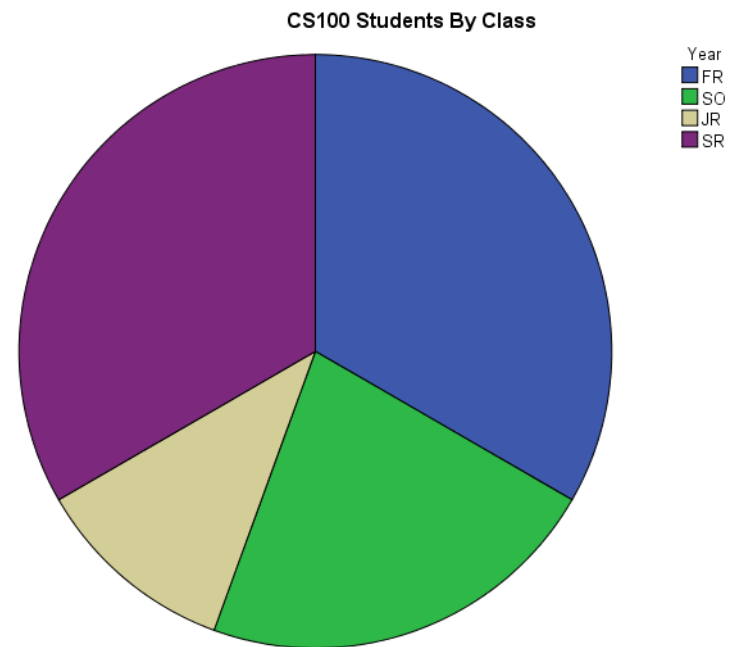
# Bar Chart

We could take the above information and show using a bar chart a graphical representation of the number of students that are FR, SO, JR, and SR.



# Pie Chart

- Notice with a pie chart we get a better visualization of the frequency of occurrence as a percent. The amount of arc in the above example is proportional to the represented quantity.



# More PASW practice

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- Compare the mean, standard deviation, and median for age by year
- Add the Report to the Word document from earlier

Report

Age	Mean	N	Std. Deviation	Median
Year				
FR	18.33	3	.577	18.00
SO	19.00	2	.000	19.00
JR	22.00	1	.	22.00
SR	22.33	3	.577	22.00
Total	20.22	9	1.986	19.00