Minitab lab session

## 1. Minitab basics:

(a) Start a *Minitab* session. In the first column of the empty Worksheet, enter the variable name **Salaries A** and the following data values:

Annual salaries (in thousands of dollars) for 14 employees at Company A 137.3 201.2 78.2 71.0 54.2 95.3 113.2 74.6 20.5 44.2 18.3 49.9 208.7 91.8

- (b) Go to Graphs: Histogram.... In the dialog box that opens, choose the option Simple. In the next dialog box, enter a choice for Graph variables: by doubleclicking on the name Salaries A in the list of available variables. After you have done this, hit the OK button. A histogram for this distribution should open in a graphics window.
- (c) Experiment with changing the number of bins. To do this, double-click on the horizontal axis of the histogram to open a dialog box entitled **Edit Scale**. Click the *Binning* tab in this dialog box and look at the available options. Experiment to get a histogram with six bins.
- (d) Make a stemplot for this distribution by going to **Graph: Stem-and-Leaf...** Note that the stemplot will be produced in the **Session** window and that the stemplot will have three columns. You can ignore the first column.
- (e) Make a boxplot for this distribution by going to **Graph: Boxplot...** Use the option **Simple** under **One Y**.
- (f) Get basic descriptive statistics for this distribution by going to Stat: Basic Statistics: Display Descriptive Statistics... and entering the relevant Variable. Before you hit OK, hit the Statistics... button and select only the items we've talked about so far in this course.
- (g) In the second column of your Worksheet, enter the variable name **Salaries B** and the following data values:

 $\begin{array}{c} \mbox{Annual salaries (in thousands of dollars) for 14 employees at Company B} \\ 29.5 & 43.3 & 26.4 & 61.6 & 27.5 & 52.8 & 31.6 \\ 43.6 & 41.5 & 52.4 & 35.5 & 24.8 & 34.8 & 40.7 \end{array}$ 

- (h) Make side-by-side boxplots by going to **Graph: Boxplot...** and using the option **Simple** under **Multiple Y's**.
- Minitab graphs into Word: For your course assignments, it's likely you will use Minitab to generate graphs and Word for your word processing. If you have a graph in Minitab, you can click in the graph window and then copy (using the key combination Ctrl+C or the menu item Edit: Copy Graph. Now open a Word document and put the cursor at the place you want the graph inserted. You can try pasting directly (Ctrl+V or Edit: Paste) but this might not work. If not, use the menu item Edit: Paste Special.... In the dialog box, you will see several graphics formats. Select Bitmap and then hit OK.

As practice, create a Word document and insert into it one of the *Minitab* graphs you have created today.

- 3. The stats share on Alexandria: *Minitab* files for data sets from the textbook are available in several places. The most convenient source might be the server Alexandria here on campus. Follow these steps to connect to Alexandria:
  - (a) Under the Windows Start menu, choose My Computer
  - (b) In the **My Computer** window, find the **Tools** menu and choose **Map Network Drive...**
  - (c) In the Map Network Drive dialog box, find Folder: and type \\alexandria\stats
    You don't need to change the label in Drive: but you can if you want.
  - (d) Click on the **"Reconnect at logon"** option if you want this share to automatically be reconnected each time you logon.
  - (e) Hit the **Finish** button.

You should now see something like 'stats' on Alexandria (J:) under the Network Drives section of the My Computer window. You can navigate to this like any other drive. If you are working with a partner today, you should log off the account you started with. Then, log on to the partner's account and map to stats on Alexandria again.

## 4. Textbook data files

To get *Minitab* files for the textbook data sets, go to **stats** on **Alexandria** and navigate to the folder labeled **Jackson** and then to the folder labeled **Textbook Data**. In that folder are folders for individual chapters and for the data appendix.

There are three types of *Minitab* files:

- *Minitab* worksheets that end with the extension .mtw. A worksheet file contains only data.
- *Minitab* portable that end with the extension .mtp. A portable file is a compact version of a worksheet file so it contains only data that is read into a worksheet window.
- *Minitab* projects that end with the extension .mpj. A project file bundles together all of the pieces of a project. It contains a record of actions in the session window, one or more worksheets, and any plots for a project.

Most of the textbook data files are in the "Minitab portable" format. If you are in *Minitab* and go to **File: Open Worksheet...**, you will need to change **Files of type:** to Minitab Portable (\*.mtp) in order to see *Minitab* portable files.

The textbook data files are named with a system in which names begin with EG for "example", EX for "exercise", or TA for "table". The rest of the file names gives the chapter and item number.

As practice, open the data file for Table 1.8. This data is guinea pig survival times (in days) for a certain medical experiment. Make a histogram of this data distribution.

5. Your share on Alexandria: Everyone on campus has their own share on Alexandria. Your account should be configured to automatically connect you to your share each time you logon. If not, follow the instructions above but use your Puget Sound login name in place of stats. (That is, you will type

\\alexandria\yourloginname rather than \\alexandria\stats). You can use your share on Alexandria to make a backup copy of files from your own computer. It's also a good place to save your files when you are working on a university computer. You can then access your files from any other computer on the university network.