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## 1. Setup Notes

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- These notes cover several “How To” issues related to Biostatistics 624 including **Stata**, PS sample size software, NCSS probability calculator , and the QuickCalc statistical calculator
  - Setup course folder and select Windows options for folders  
(There is a separate handout for Mac users)
  - Download files from the course website
  - Customize **Stata**'s Application windows
  - Start **Stata** and set the working directory
  - Create, run, and modify a **Stata** do-file
  - Update **Stata** to latest version – VERY IMPORTANT TO DO NOW
  - Download the StataQuest menu system – VERY HANDY
  - Download the Epicalc menu system – FOR EPIDMIOLOGIC CALCS FROM MENUS
  - Download the PS sample size freeware by Dupont and Plummer
  - Download the NCSS free probability calculator
  - Access the QuickCalcs free statistical calculator

## 1. Setup Notes (cont'd)

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### SET UP COURSE FOLDERS AND SELECT WINDOWS FOLDER OPTIONS

1. Open "My Documents" folder
2. Create subfolder  
    "My Documents\bio624"
3. Create more subfolders:  
    "My Documents\bio624\eq1"  
    "My Documents\bio624\eq2"  
    "My Documents\bio624\eq3"  
    "My Documents\bio624\eq4"  
    "My Documents\bio624\eq5"  
    "My Documents\bio624\project"
4. Open "My Documents" and, from the Toolbar, select  
    View / Details
5. Next, select  
    Tools / Folder Options / View  
    Check boxes:  
        Display full path in address bar  
        Display full path in title bar  
  
    Uncheck box:  
        Hide extensions of known file types  
  
    Click "Apply to All Folders"  
    Click OK

## 1. Setup Notes (cont'd)

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### DOWNLOAD FILES FOR E-QUIZ 1

1. Use the Internet Explorer to go to the course website

<http://www.biostat.jhsph.edu/courses/bio624/>

2. Click "e-Quizzes"

3. Enter the course userid and password -- given out with the class 1 website handout

4. Download the fem.dat raw data file (not a **Stata** dataset):

Right click (DO NOT double click) the link to fem.dat

Select "Save Target As..."

Navigate to the "My Documents\bio624\eq1" folder

Click Save

5. Download profile.do :

Follow the same procedure as for fem.dat above

## 1. Setup Notes (cont'd)

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### CUSTOMIZE STATA APPLICATION WINDOWS

1. Start **Stata**
2. Use the re-size controls on the corners of the overall **Stata** window and the windows within it to expand **Stata** to cover all or nearly all the desktop
3. Click the Control Menu icon -- upper left corner of **Stata** Results window -- and select **Fonts**  
  
Select the "Courier New" font  
  
Select "Bold" font style  
  
Set the font size to "9"  
  
Click OK  
  
-- experiment with other fonts/styles/sizes until satisfied
4. Click the "Prefs" Menu item  
  
Select "Manage Preferences -- Save Preferences - New Preference Set... "  
  
Enter your initials or whatever  
  
Later, you can load your saved layout:  
  
Select "Manage Preferences -Load Preferences"  
  
Click the Preference corresponding to your initials or whatever (save above)  
  
Note: You can also select Factory Settings, Maximized, or Compact Preferences, if you wish
5. Select the "s2color" look for graphs -- rather than the default  
  
Click the "Prefs -- Graph Preferences..." from the menu  
  
On the "General" tab:  
  
Change the "Scheme" Scheme to "s2color"  
  
Change the "Font" to "Arial"  
  
On the "Clipboard" tab:  
  
Select "Arial" font  
  
Select "Automatic" Color Changing

## 1. Setup Notes (cont'd)

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### START STATA FOR e-QUIZ 1

1. Open the folder:

"My Documents\bio624\eq1"

2. Double-click profile.do

3. **Stata** should start and run the commands in profile.do

Note that the working directory, shown on the lower right side of the **Stata** window is the "eq1" folder

If you are using Windows XP, you will see

"c:\Documents and Settings\username\My Documents\eq1"

-- that's where Windows stores the "My Documents" folder

Mac users: The name of the working directory does not show on the lower left. To see the working directory name,

shell dirs -l

You will see:

"Users/your userid/Documents/bio624/eq1"

4. To change the working directory when Stata is already running:  
(rarely needed if you Start Stata by double-clicking a do-file)

Windows users:

cd " path ... to folder "

Mac users:

Much easier: "File – Change Working Directory" from the menu. Navigate to the working folder and choose it

or,

cd " path ... to folder "

also works

5. Proceed with the commands and analyses shown in e-Quiz 1 below

## 1. Setup Notes (cont'd)

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### CREATE, RUN, AND MODIFY A DO-FILE

The two most common ways to create a do file are:

- o Copy an existing do-file and make changes to suit the new task.
- o Use **Stata** interactively, then save the commands to a do-file from which you remove errors and/or unnecessary commands or add new commands

To illustrate the creation of a do-file interactively do the following:

1. Start **Stata** -- double click profile.do in the ...\\eq1 folder
2. Enter some commands -- first few commands of e-Quiz 1 for example, enter a few of these -- see the e-Quiz for all the commands:

```
clear      -- always a good idea to clear the workspace
```

```
infile id age iq anx depress sleep sex life weight using fem.dat
```

```
label var life "Recent Suicide Thoughts"
```

```
label define lifelab 1 "Without" 2 "With"
```

```
describe
```

```
codebook
```

```
sort life
```

```
by life: stem age
```

```
by life: lv age
```

```
by life: summarize age, detail
```

```
tabstat age, by(life) statistics (n mean median sd sem q iqr min max)
```

```
graph box age, over(life) marker(1,mfab(id))
```

3. Save your commands in a do-file named test.do

## 1. Setup Notes (cont'd)

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Right click anywhere in the "Review" window

Select "Save Review Contents"

Navigate "My Documents\bio624\eq1" and save under the file name:

test.do

Mac Users: Use Control+Click instead of right click and "Documents" instead of "My Documents"

### 4. Open the do-file in the Do-file editor

Click the Do-file editor on the toolbar -- little envelope

Click the "Open" icon and navigate to the folder containing

test.do

Select the file and click "Open" -- commands should appear in the editor

### 5. To run the do-file:

Click the "Do current file" icon -- the left icon of the two

icons with down arrows. (The one on the right runs the commands, but only writes results to the log -- no commands)

### 6. You can now edit the do-file by changing or adding commands

Note the Search and Search/Replace options on the Do-file editor's "Search" menu -- very handy for making global changes such as variable names, etc.

### 7. You can run the whole do-file or highlight 1 or more commands and do only those -- click the same down arrow icon -- i.e., you can submit commands interactively, but from the do-file editor rather than the command window

### 8. You can enter commands interactively and then cut and paste them into the do-file

### 9. You can save commands in another file and add them into to do-file using the "File / Insert" option of the do-file editor.

**1. Setup Notes (cont'd)**

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10. Save the do-file. Exit **Stata**

Re-start **Stata** by double-clicking the test.do do-file.

This starts **Stata**, changes the working directory to the folder containing test.do, and then runs the do-file

## 1. Setup Notes (cont'd)

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### UPDATE STATA

1. Start **Stata**
2. You can update the "ado" files, "executable" or both.  
"ado" files are (mostly) the **Stata** statistical commands and the "executable" is the kernel program that controls the **Stata** system
3. You must have an open internet connection to do the updating
4. To see which, if any need updating, type:  
update query
5. Follow instructions for updating, or just type:  
update all  
If this is your FIRST update to Stata, use:  
update executeable  
update swap  
update all  
update swap
6. Follow instructions for "swapping" in the new executable  
update swap
7. When Stata restarts (it will do this automatically) type:  
update query  
-- should show that updates are not needed
8. In RARE CASES the "update swap" at the end of the process does not work for some reason. ONLY if this happens to you, there are two things to try:
  1. Use "query update" to see if you need an update -- follow instructions for updating Start Stata and give the "update swap" command again.  
Stata should shut down and then restart it automatically -- it takes a minute or so to complete. Type "update query" to see that no updates are now needed. If this does not work for you, then try:
  2. Change to the new version of Stata MANUALLY -- might want to have a TA walk you through this one, since there is a SLIGHT chance you could make Stata inaccessible, if you make a slip up.  
Instructions:
    1. Exit Stata
    2. Change to the folder where Stata was installed, usually C:\Program Files\STATA\
    3. Copy wstata.exe to wstata.old
    4. Copy wstata.bin to wstata.exe (the date of wstata.bin must be newer than wstata.exe)
    5. Start Stata
    6. Issue "query update" to verify update was successful
    7. Later, erase wstata.old if satisfied or copy wstata.old back to wstata.exe to return to the prior version
9. Other problems with the download? See: <http://www.stata.com/support/faqs/web/errors.html>

### DOWNLOAD THE STATAQUEST MENU SYSTEM

1. To download the free StataQuest menuing system, follow the instructions in the Class 1 class notes by starting **Stata** while connected to the internet:

## 1. Setup Notes (cont'd)

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```
net cd http://www.stata.com
net cd quest7
net install quest1
net install quest2
net install quest3
```

Mac Users: Sorry, you are SOL on this one - ie, not available for Macs

Test the download, by typing the command:

```
quest on
    StataQuest menu should show under the "User" main menu (at the top)
```

Also type:

```
quest off
    Stataquest menu should disappear from the "User" main menu
```

2. Download a **Stata** dataset for the demo into the "My Documents\bio624" folder:  

```
use alt3-lex.dta    (from Class 1)
```
3. Go through and click the options in all the StataQuest Menus, trying those of interest.
4. HIDDEN DIALOGS. Occasionally, **Stata** will appear to lock-up or freeze while running Stataquest. This is caused by a Dialog box that is hidden behind other windows.  
  
FIX: Drag the bottom of the "Results" window up until the dialog box shows. Click "Cancel" and then re-size the "Results" window

## 1. Setup Notes (cont'd)

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### DOWNLOAD THE EPICALC MENU SYSTEM

1. To download the free Epicalc menuing system, follow the instructions in the Class 1 class notes or start **Stata** and type the command  
findit sbe35

Click [sbe35](#)

Click [Click here to install](#)

Test the download, by typing the command:

```
calcmenu on
```

Epicalc menu should show under the "User" main menu (at the top)

Also type:

```
calcmenu off
```

Epicalc menu should disappear from the "User" main menu (at the top)

Ignore the warning that StataQuest and Epicalc cannot be present together - they can in Stata 8

2. HIDDEN DIALOGS. Occasionally, **Stata** will appear to lock-up or freeze while running Stataquest. This is caused by a Dialog box that is hidden behind other windows.

FIX: Drag the bottom of the "Results" window up until the dialog box shows. Click "Cancel" and then re-size the "Results" window

## **1. Setup Notes (cont'd)**

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DOWNLOAD PS SAMPLE SIZE FREWARE BY DUPONT AND PLUMMER

1. Browse to <http://biostat.mc.vanderbilt.edu/twiki/bin/view/Main/PowerSampleSize>

Click the link to download PS in the text portion of the window

Follow the installation prompts, taking all the defaults

Test the download, by starting PS from the Start Menu

Try out the sample size problems from e-Quiz 1

Note that clicking on terms in the PS display provides definitions for the terms

## 1. Setup Notes (cont'd)

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DOWNLOAD free NCSS probability calculator

1. Browse to the course home page [www.biostat.jhsph.edu/courses/bio624/](http://www.biostat.jhsph.edu/courses/bio624/)

Click "Other links"

Click "Free Probability Calculator from NCSS"

Click "Save"

Save to the Desktop as "ncsscalc.zip"

Create a folder under "My Documents" named "PROBCALC"

Drag the "ncsscalc.zip" file into the "PROBCALC" folder

Unzip the "ncsscalc.zip" file into the PROBCALC folder

Right click "ncsscalc.exe"

Select "Create Shortcut"

Drag the "Shortcut" onto the Desktop

Start the calculator by double-clicking the "Shortcut"

Test the download by trying:

Prob( $Z \geq 1.96$ )

You should get 0.0249978952

Inverse Prob(0.9725)

You should get 1.9599639846

Also test using the problems at the end of e-Quiz 1

Inverse Prob(0.9725)

You should get 1.9599639846

Also test using the problems at the end of e-Quiz 1

## 1. Setup Notes (cont'd)

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ACCESS the QuickCalcs free statistical calculator

1. Browse to the course home page [www.biostat.jhsph.edu/courses/bio624/](http://www.biostat.jhsph.edu/courses/bio624/)

Click "Other links"

Click "Free Statistical Calculator"

Try any of the calculator functions of interest to you

Test the calculator by trying:

Prob( $Z > 1.96$ )

You should get 0.0249978952

Inverse Prob(0.9725)

You should get 1.9599639846

Other things to try:

Randomize 40 patients to either treatment A or treatment B

Generate a random sample of size 100 from a Normal distribution  
with mean 100 and SD=15

You should get 1.9599639846

Also test using the problems at the end of e-Quiz 1