

## Week 5 Assignment: Command Line Operations

This assignment will be a written assignment in MS Word. It will not be a programming assignment. If you have a MAC, you will complete this assignment in your MAC and using the MAC terminal. If you have a Windows PC, you will complete this assignment using your PC and the command line (cmd).

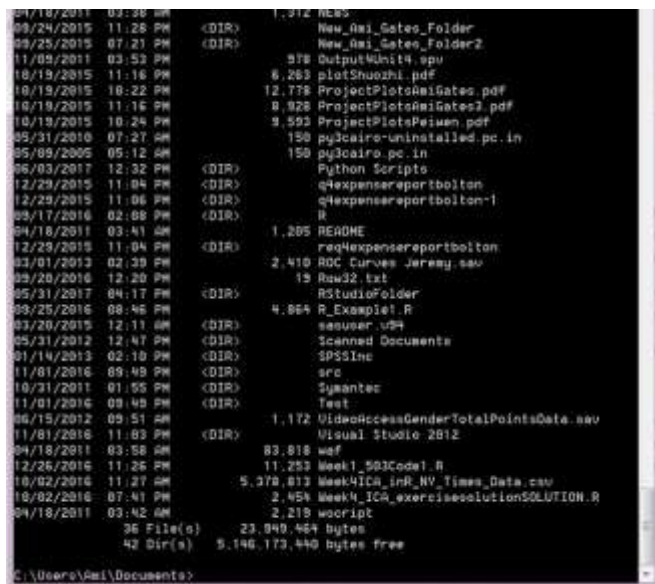
Some parts of this assignment will require you to take screenshots (images of your computer screen) and paste them into the document that you will submit as your assignment.

Answer and complete all portions below. Include screenshots where requested.

### Part 1: Basic Command Line

1) Locate the command line or terminal on your computer. If you are using a PC, you will use Start → cmd. If you are using a MAC, you will use the terminal. Please see PowerPoint Guide for Week 5 for further help. Take a screenshot of your command line/terminal and paste it in the Week 5 Assignment Document for this question.

For example, I would paste:



```
C:\Users\Ami\Documents>dir
04/18/2011 03:28 AM           1,312 README
08/24/2015 11:28 PM          <DIR>      New_Ami_Gates_Folder
08/25/2015 07:21 PM          <DIR>      New_Ami_Gates_Folder2
11/09/2011 03:53 PM             578 OutputUnit4.spv
10/19/2015 11:16 PM             6,265 plotShuoZhi.pdf
10/19/2015 10:22 PM            12,775 ProjectPlotsAmiGates.pdf
10/19/2015 11:16 PM             8,525 ProjectPlotsAmiGates2.pdf
10/19/2015 10:24 PM             3,593 ProjectPlotsPeiwen.pdf
05/31/2010 07:27 AM             150 py3caire-uninstalled.pc.in
05/09/2005 05:12 AM             150 py3caire.pc.in
06/03/2017 12:32 PM          <DIR>      Python Scripts
12/29/2015 11:04 PM          <DIR>      q4expensereportbolton
12/29/2015 11:06 PM          <DIR>      q4expensereportbolton-1
03/17/2016 02:09 PM          <DIR>      R
04/18/2011 03:41 AM             1,205 README
12/29/2015 11:04 PM          <DIR>      req4expensereportbolton
01/01/2013 02:39 PM            2,410 ROC_Curves_Jeremy.sav
03/20/2016 12:20 PM              15 Rnw32.txt
05/31/2017 04:17 PM          <DIR>      RStudioFolder
08/25/2016 08:46 PM             4,864 R_Example1.R
03/20/2015 12:11 AM          <DIR>      sasuser.vfp
05/31/2012 12:47 PM          <DIR>      Scanned Documents
01/14/2013 02:10 PM          <DIR>      SPSSInc
11/01/2016 09:49 PM          <DIR>      src
10/21/2011 01:55 PM          <DIR>      Symantec
11/01/2016 09:49 PM          <DIR>      Test
06/15/2012 09:51 AM            1,172 UidwofAccessGenderTotalPointsData.sav
11/01/2016 11:03 PM          <DIR>      Visual Studio 2012
04/18/2011 03:58 AM            83,818 waf
12/26/2016 11:26 PM            11,253 Week1_503Code1.R
10/02/2016 11:27 AM            5,370,813 Week4ICA_inR_NV_Times_Data.csv
10/02/2016 07:41 PM             2,454 Week4_ICA_exerciseresolutionSOLUTION.R
04/18/2011 03:42 AM             2,219 wocript
             36 File(s)      23,940,464 bytes
             42 Dir(s)   5,146,173,440 bytes free

C:\Users\Ami\Documents>
```

2) Use the correct command operation to list out all the files and folders in your **Python directory**. For example, mine is called Python Scripts. I can cd to that location on my command line and then can list all the files and folders. Take a screenshot of the results and include the command(s) that you used to complete the task (type them here).

3) Create a new folder called MyNewFolder – you can choose the location where you want to create this new folder. Next, once you have created MyNewFolder, change directories to that new folder. Show the command(s) that you used (type them here) and include a screenshot of the new directory (which will be empty).

4) From inside MyNewFolder create a new .bat file using notepad and only command line operations. Create a .bat file that will echo its operations, will go back two (2) directories, and

will list all the files and folders in that new location. Include necessary screenshots AND type out here exactly what your .bat file looks like. Note that your .bat file should be in MyNewFolder, so you should have a screenshot of that area. You will “run” your .bat file by typing in its name. When you run it, all the commands in the .bat file will run. Please see the Week 5 PowerPoint Guide for assistance with .bat files.

**NOTE: MAC computers cannot use .bat files. I believe the MAC equivalent is an .sh file or .command. Each MAC OS may be a little different. Do some quick research on the web to complete (4) above using a file extension that works for MAC.**

5) Inside of MyNewFolder, using notepad, create a new text file that contains your name and email. Call the new file, “MyInfo.txt”. Take a screenshot showing the new file inside of MyNewFolder AND type here the command(s) that you used to create the new text file. Remember that everything you do here is all command line. Next, delete the new file. Type the command(s) you used to delete the file and include another screenshot showing MyNewFolder without the textfile.

6) Choose a package/module in Python that you do NOT already have. You can check to see what packages you do have with, “conda list” typed into your command line. First, type **conda list** into your command line and include a screenshot. Next, find a package that you do not already have. For example, you may not have package “PIL” installed or you may not have wordcloud or imageio.

The goal here is to find a package that you do not have that is also a challenge to install. In Python, some packages are easy to install. Other packages require a search and a special install. I want you to perform the search and the install on the command line so that you know how.

Recall - The search string is:

***anaconda search -t conda packagename***

Next, you will have to look at the options. Once you choose an option, the installation from the command line is:

***install -c foldername packagename=versionnumber***

For example:

## INSTALLING NEW PACKAGES/MODULES IN ANACONDA.

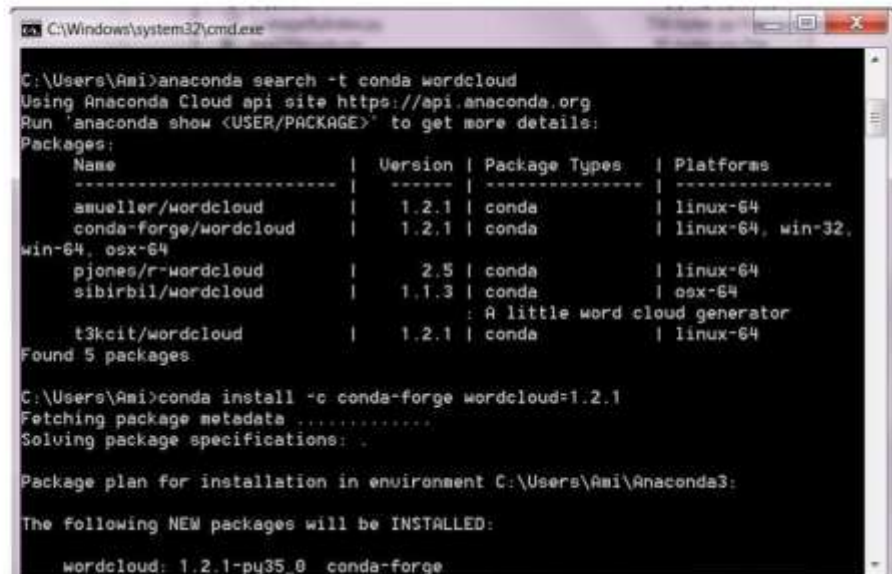
See here that I have typed:  
**anaconda search -t conda wordcloud**

Next, it brings up the options.  
I need to find an option for win-64 because that is the type of OS I have.

Once I find it (if I do), I can install it with this command.

**install -c conda-forge wordcloud=1.2.1**

The format is critical!



```
C:\Windows\system32\cmd.exe
C:\Users\Ami>anaconda search -t conda wordcloud
Using Anaconda Cloud api site https://api.anaconda.org
Run 'anaconda show <USER/PACKAGE>' to get more details:
Packages:
-----|-----|-----|-----
Name | Version | Package Types | Platforms
-----|-----|-----|-----
asueeller/wordcloud | 1.2.1 | conda | linux-64
conda-forge/wordcloud | 1.2.1 | conda | linux-64, win-32,
win-64, osx-64
pjones/r-wordcloud | 2.5 | conda | linux-64
sibirbil/wordcloud | 1.1.3 | conda | osx-64
: A little word cloud generator
t3kcit/wordcloud | 1.2.1 | conda | linux-64
Found 5 packages

C:\Users\Ami>conda install -c conda-forge wordcloud=1.2.1
Fetching package metadata .....
Solving package specifications: .
Package plan for installation in environment C:\Users\Ami\Anaconda3:

The following NEW packages will be INSTALLED:

wordcloud: 1.2.1-py35_0  conda-forge
```

[For this question](#) – I want you to first do the search for a new package that you do not have and include a screenshot that shows the results.

Next, do the search and then the installation of the new package and include one or more screenshots to show the process.

Then repeat **conda list** to see that you now have the package.

### Part 2: Unix/Linux command line

For this part, I want you to read and research some basic Unix/Linux command line operations. Because most students do not have access to Unix/Linux, this will just be a written review. Please answer all of the following questions. Screenshots will not be required for this part. Place Part 2 on the same Word document as Part 1 above.

- 1) In one paragraph or less, describe what ssh and telnet are.
- 2) In one paragraph or less, describe what Cygwin is and what it does.
- 3) For all of the following Unix/Linux commands, use 2-4 sentences to describe each command and include an example of how you might use it: **ls, rm, mv, cp, cat, du, df, and quota**.
- 4) For **grep**, create/invent one or two sentences. Next, use a grep regular expression to match a pattern and discuss what the result would be. In other words, show that you understand what grep can do and use an example to illustrate your understanding.

**Deliverables:**

**For this assignment, you will create ONE (1) MS Word document. Into that one document, you will place all answers and screenshots as required above. Separate the document into Part 1 and Part 2.**

**Email the document to the TA and cc me.**

**The title of the email must be Week 5 Assignment.**

**Your name must appear in the email.**