HW # 3: Note: download internet (pdf) version of the course text book (if you haven’t already): http://linuxcommand.org/tlcl.php

1. Open a terminal and navigate to your home directory (***cd ~*** *)*
   1. From your home directory, create a subdirectory named *hw3*
   2. Navigate to the hw3 folder and print the working directory (pwd)
   3. Type: **echo "This is text file 1" > file1.txt**
   4. Type: **echo "This is text file 2" > file2.txt**
   5. Type: **ln -s file1.txt current.txt**
   6. Type: **cat current.txt**
   7. Type: **ls -l current.txt**
   8. Type: **rm current.txt**
   9. Type: **ln -s file2.txt current.txt**
   10. Type: **cat current.txt**
   11. Type: **ls -l current.txt**
2. Describe (in a sentence or two) how the text files: file1.txt and file2.txt were created in steps c. and d. (above). Specifically, what does operator (>) do?
3. What is current.txt? (HINT: type: **file current.txt**). Give one reason why current.txt might be useful?
4. Suppose I want detailed information about a given executable command: its options and arguments etc. (e.g. ls). How might I use the shell to retrieve that information about executable commands in terms of usage: options, arguments? What about commands that are built into the shell? (see pages 44-45 in the text).
5. Type*:* ***ls /usr/bin | tee ls.txt | grep ^zip*** and observe the output (see page 65-66 in the text)
   1. Describe what this command does in terms of the flow of data (stdin, stdout) between the individual commands in the pipeline.
   2. Describe (in two or three sentences) the basic difference between the redirection operator (>) and the pipeline (I) operator.
6. Type: **ls -l /bin/usr > error\_output.txt** (The directory “/bin/usr” doesn’t exist in the system so an error message is produced, which is intended to be redirect to error\_output.txt)
   1. Did this command do what you expected? If not, how would you fix the command to redirect the error message?
7. Run the following commands:
   1. **echo “CSE 384” > data1.txt**
   2. **echo “is a fun” > data2.txt**
   3. **echo “class” > data3.txt**
   4. Write a command using the *cat* program to concatenate these three files, redirecting the result output to a file called: combined.txt Note: use *man cat* to view the manual page for the cat program
   5. Use the *chmod* command to make data1.txt readable, and writable only to the file owner. The group and the world should have no permissions set. Verify the output by typing *ls-l data1.txt*
      1. The correct permissions should resemble: -rw- --- ---
   6. Likewise, use *chmod* to make data2.txt readable, writeable, and executable to the owner, the group, and the world:
      1. The correct permissions should resemble: -rwx rwx rwx
8. Type: ***cat*** [with no filename and press *enter].* Enter some text and press *ctrl-d* when finished
   1. Describe how the cat program received its input?
9. Type the following commands:
   1. **cat data1.txt**
   2. **cat < data1.txt**
   3. Describe (in one or two sentences) the difference between 9.a and 9.b? Exactly what is happening in 9.b?
10. Please upload your answers to Blackboard for HW3: due Weds: 2/5