Evan Miller

Assignment 4

CS140U

5/2/18

If the files do not exist, please create dummy ones.  
  
1. Create this sample file, you can call it student grades  
John Doe 3.54 ECE  
James Davis 3.71 ECE  
Al Davis 2.63 CS  
Ahmad Rashid 3.74 MBA  
Sam Chu 3.68 ECE  
Arun Roy 3.06 SS  
Rick Marsh 2.34 CS  
James Adam 2.77 CS  
Art Pohm 4.00 ECE  
John Clark 2.68 ECE  
Nabeel Ali 3.56 EE  
Tom Nelson 3.81 ECE  
Pat King 2.77 SS  
Jake Zulu 3.00 CS  
John Lee 2.64 EE  
Sunil Raj 3.36 ECE  
Charles Right 3.31 EECS  
Diane Rover 3.87 ECE  
Aziz Inan 3.75 EECS  
Lu John 3.06 CS  
Lee Chow 3.74 EE  
Adam Giles 2.54 SS  
Andy John 3.98 EECS  
  
The file above contains student records. Use a command line to display the records for the top five students in descending (sorted) order, i.e., with the highest GPA student’s record displayed first. Show your session.

> sort -grk 3 studentGrades.txt|head -n 5   
Art Pohm 4.00 ECE  
Andy John 3.98 EECS  
Diane Rover 3.87 ECE  
Tom Nelson 3.81 ECE  
Aziz Inan 3.75 EECS

2. Create sample files lab1, lab2, lab3 and lab4. They can be created using vi, or doing something like who > lab1, etc. Once you have created the file, display its content with the cat command. Show your session.

> touch lab1 lab2 lab3 lab4  
 > echo "sample lab 1 text" >> lab1  
 > cat lab1 lab2 lab3 lab4  
 lab1 content  
 lab2 content  
 lab3 content  
 lab4 content  
  
Combine the lab files: lab1, lab2, lab3, and lab4 appending them >> to a file called all.labs . Any errors (pretend one of those lab files do not exist) should be redirected to an error.log file. Since you will have all the files, once you redirect the error 2>, assume that you do not have one of the files that consequently would generate an error, in this case the error.log file will be empty, but to build the command include the 2> as if one of the files did not exist. This whole command will be in one line. Show your session.

> cat lab1 lab2 lab3 lab4 > all.labs 2> error.log  
  
> cat all.labs  
> cat error.log   
> rm lab4  
> cat lab1 lab2 lab3 lab4 > all.labs 2> error.log   
> cat error.log //does not exist   
cat: lab4: No such file or directory  
  
3. How many soft links are there in the /usr directory. Show the command and its output.

> ls -l /usr | awk 'NR != 1 {sum += $2} END {print sum}'  
718  
  
Create a file named students containing the following data in your current directory. Each line in this file represents a student's first name, last name, and 3 exam scores. Each line should be regarded as a record containing 5 fields separated by one or more tab characters. You must use the awk command to answer the questions below  
  
Tom Jones 100 90 80  
Nancy Jones 70 80 90   
Terry Sims 55 65 75   
John Terry 75 76 77   
Ruth Maier 100 100 100   
Mike Wolfe 90 95 98   
Dennis Cole 70 80 89   
Ron Maier 90 85 89   
Susan Miller 65 80 90   
Mad Bill 75 65 77  
  
some help with awk  
http://cdn.ttgtmedia.com/searchEnterpriseLinux/downloads/Sobell\_ch12.pdf  
  
4. Use AWK. What command line would display the contents of students file such that first names and last names are swapped?

> awk '{print $2, $1, $3, $4, $5}' students

5. Use AWK. What command line would display the first and last names of those who got 100 on their first exam (there are examples in the book)?

> awk '$3 == 100 {print $1, $2}' students

6. Use AWK. What command line would display the contents of the students file with line numbers in front of each line?

> awk '{printf "%3s %s\n", NR, $0}' students