**Name: Oscar Ynoa**

**Student Id: 00308560**

**Course: Linux Administration (CIS-245-O1A)**

**Subject: Sed**

**Professor: Adrianna Holden-Gouveia**

**Due Date: 10/03/2021**

**Important info: While doing this assignment it is important to move to the directory that has the datebook file and type correctly the name of everything. For example, if the file name is called datebook and you type Datebook is another different file. It’s not going to work. Also, In Sed is important to enclose the character with forward slashes for searches and executions.**

1. **Change the name Meg to Megan**

**The command** **is sed -e 's/Meg/Megan/g' datebook**

**sed -e : Means expression. It tells sed to execute the line argument or expression as sed program.**

**s = Substitutes one string for another**

**g = Globally substitutes on a line**

**So, this means. We will replace the name from Meg to Megan by using these expressions.**

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**2. Delete the last 3 lines.**

**The command** **is sed '$d;$d;$d' datebook**

**$ = End-of-line anchor**

**d = delete**

**If we repeat this command $d it will do the same function as much as it is repeated. Then the same command applies at the end making it delete the last 3 lines.**

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**3. Print lines 2 through 4.**

**The command is** **sed -n -e '2,4p' datebook**

**-n = Disables the automatic printing and only prints the lines you do tell to print it.**

**sed -e : Means expression. It tells sed to execute the line argument or expression as sed program.**

**p = print**

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**4. Delete lines containing Place.**

**The command is sed -e '/Place/d' datebook**

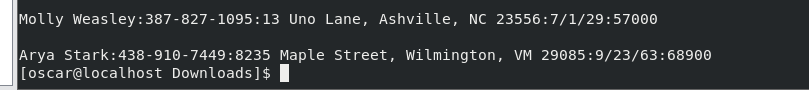
**sed -e : Means expression. It tells sed to execute the line argument or expression as sed program.**

**d=deletes lines.**

**By putting together the word place and the combination of the function d. It will delete the lanes with that pattern.**

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**5. Print all lines where the birthdays are in the first week of the month.  Be careful of the dates for birthdays, the format is MM/DD/YY**

**The command is sed -n -r '/[0-9]{5}\:[0-9]+\/[1-7]\//p' datebook**

**This was a hard one. I need to list all birthdays which begin in the first week of the month.**

**To do this We need to use -n = Disables the automatic printing and only prints the lines you do tell to print it and -r (regex extended) with sed. It matches the first 5 numbers from 0-9 and a colon. I then matched numbers [0-9] for the moth in the birthday. Then it matches 1-7 for the first week of the month. Then it printed the matching lines of the birthdays in the datebook.**

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**6. Append three asterisks to the end of lines starting with Sir**

**The command is** **sed -e '/^Sir/a\asterisks asterisks asterisks ' datebook**

**sed -e : Means expression. It tells sed to execute the line argument or expression as sed program.**

**^** **: Beginning of the word. If we write ^Oscar, any line that contains Oscar at the beginning will be search.**

**a** : **a\ Appending text after a line.**

**So, the combination of ^ at the beginning + a that equals append. Will put any desired word at the beginning of our search. In this asterisk will be added at the beginning of Sir.**

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**The command is** **sed -e '/^Sir/a\\*\*\* ' datebook**

**Did not know how it was so I did both forms**

**This one performs the command like (\*\*\*)**

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**7. Replace the line containing "Westley Pirate" with the phrase "As you wish."**

**The command is sed -e '/Westley Pirate/c\As you Wish' datebook**

**c : Replace the line with text**

**Explanation: We start writing sed -e, to tell sed that we are going to use expression. Then we enclosed the word /Westly Pirate/ with forward slashes. Because that is the word that we want to replace. c\ allows to replace the line that contains Westly Pirate with the following text after the \ back slash.**

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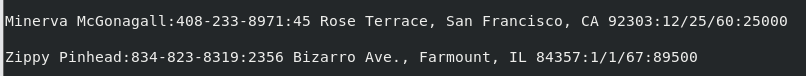
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**8. Change Minerva McGonagall's birthday to 12/25/1960. Assume you don't know Minerva's original birthday. Use a regular expression to search for it.**

**The command is** **sed '/Minerva/s,[0-9]\+/[0-9]\+/[0-9]\+,12/25/60,' datebook**



**Explanation: We start with sed -e to use special expression. Then we start with the pattern /Minerva because that is what we need to look for, then another forward slash and add an ‘s’.**

**The ‘s’ stands for substitute. After the s we add a comma to write the old data.**

**After the s, we type the old date, but we do not know the Minerva’s date. For this reason, we use the command [0-9], to tell sed to search for numerical character from a range of 0-9. The date format is written as mm/dd/yy. We type [0-9] +\. +\ Means followed by. Therefore, we end up typing [0-9]\+/[0-9]. This translates to 0-9/0-9/0-9.**

**Then we enclosed the new data with commas. Ex: , 12/25/60, . Remember that we start the substitute command as “ s, “. If we would use the s# symbol, we would enclose the new date as #12/25/60#. The results would be the same. You can use different symbols for the substitute command.**

**[0-9] : We are telling sed to search for numerical character from a rage of 0-9**

**/+ : Followed by a …**

**9. Delete all blank lines.**

**The command is** **sed '/^$/d' datebook**

**Explanation: If we combine the commands, “^ beginning go the line” without any text, plus the command “$ at the end of the line” followed by the “command d”, which is the delete command, all the blank lines will be deleted.**

**^ : Beginning of the line anchor**

**$ : End of the Line anchor**

**d = delete**

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**10. Write a sed script that will (actual sed script, NOT just the commands on the command line)**

**a. Insert above the first line the title - Great Literary Characters -.**

**1i\ - Great Literary Characters – The expression 1i means insert above the first line. \ This slash is used as the separator to start writing the desired text.**

**b. Remove the duplicate lines sed -nE 'G;/^([^:]:).\n\1/d;P;h' Sed -n disables the automatic printing, and the “E” is used to tell Sed that we are going to use expressions. The expression G. Gets what is in the holding buffer and copies it into the pattern buffer, appending to what was there. ^ At the beginning of the line. ( ) to remember the matched pattern. [^ ] This is used to match one character that it is not in the set. n Reads the next input line and starts processing the newline with the next command rather than the first command .1 inserts the contents of the first capture group which is what matches between the first set of parentheses. d for deleting the lines. P print lines and h Copies the contents of the pattern space to a holding buffer. In summary This full command allows me to enclose a pattern , matched it, read through it, and print the outcome eliminating the duplicate lines. The downside is that I was not able to use it in the script and used it to pipe instead through the sed script. I am not mad or anything because the command worked and let me get the desired result. Instead, I am happy because I was able to get an answer that solves the problem. All of this just to be able to remove duplicate lines.**

**c. Print the contents of the file with the first name then the phone number. sed 's/:/\t/g' | cut -f -2’ This one is kind of funny. The command s Substitutes one string for another. We use / to enclose the pattern. The t Instead of replacing tab characters, it's replacing t characters. And the g Gets what is in the holding buffer and copies it into the pattern buffer, overwriting what was there. In summary I am using this command to enclose a certain pattern in this case name and phone number so it will not be deleted plus the cut command to eliminate the rest of the pattern just letting displayed the name and the phone number. This to be able to print the names and phone numbers from the file.**

**d. Append at\ the end of the file "Happily Ever after. The End"**

**$a\Happily Ever after. The End The expression $ means at the end of the line anchor and a appends. The combination of this makes it be at the end of the line append this text. \ This slash is used as the separator to start writing the desired text.**

**Extra information before the script. I used a command to eliminate blank space in my script.**

**/^$/d I don’t need to write sed because is already written at the beginning of the script.**

**Explanation: If we combine the commands, “^ beginning go the line” without any text, plus the command “$ at the end of the line” followed by the “command d”, which is the delete command, all the blank lines will be deleted.**

**^ : Beginning of the line anchor**

**$ : End of the Line anchor**

**d = delete**

**Now that all is explained. The instructions on how to run the script.**

**sed -f game datebook |sed -nE 'G;/^([^:]\*:).\*\n\1/d;P;h'| sed 's/:/\t/g' | cut -f -2**

**We start with sed -f to run the script + the name of the script that is going to be used .In this case game + the name of the file that is going to be searched. In this case datebook**

**|sed -nE 'G;/^([^:]\*:).\*\n\1/d;P;h' This part allows me to eliminate duplicated lines and I need the use of the other command| sed 's/:/\t/g' | cut -f -2 To be able to print just names and phone numbers. All of this to run the script.**

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**I named my script game. Just because.**

**This is how it looks when you run the script with the commands and pipe through it.**

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References

<https://flylib.com/books/en/4.356.1.40/1/>

<https://youtu.be/YMqOocY0ovs>

<https://www.opensourceforu.com/2011/04/sed-explained-part-1/>

<https://www.linuxquestions.org/questions/programming-9/removing-duplicate-lines-with-sed-276169/>

<https://www.geeksforgeeks.org/cut-command-linux-examples/>