Sed Command

In this tutorial we will see examples of how to use the Sed Command which allows us to manipulate text. For example, using a file name SetLab I will do the following...

1. Change the name Jo to Josephine
   a. Original...

   ```
   Jo March:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200
   ```

   b. The Command is **sed s/Jo/Josephine/ SetLab**

   ```
   efelix@192.168.68.70:~$ sed s/Jo/Josephine/ SedLab
   ```

   c. After the command...

   ```
   Josephine March:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200
   ```

   d. You are telling the **Sed** command to search for Jo and replace it with Josephine in its first instance. If we want to find and replace all the Jo's in the file you would need to add a **g** (stands for global) after the command as shown below

   ```
   efelix@192.168.68.70:~$ sed s/Jo/Josephine/g SedLab
   ```

2. Delete the last 5 lines.
   a. We want find what the line numbers are to find out by using **cat -n SedLab** These are the list 5 lines in the SedLab file.

   ```
       49   Daenerys Targaryen:408-724-0140:1222 Oxbow Court,
   Sunnyvale, CA 94087:5/19/66:34200
       50
       51   Molly Weasley:387-827-1095:13 Uno Lane, Ashville,
   NC 23556:7/1/29:57000
       52
       53   Arya Stark:438-910-7449:8235 Maple Street, Wilming
   ton, VM 29085:9/23/63:68900
   ```

   b. Now that we know that lines 49 – 53 are the last lines of the file we want to run the command **sed '49,56d' SedLab** as by using the letter to **d** to instruct the command to delete the range of lines. https://linuxhandbook.com/sed-delete-lines/ was used as a resource. As you can tell in the following illustration the last lines were deleted and we are given a different output...

   ```
   Dorothy Gale:923-835-8745:23 Wimp Lane, Kensington, DL 387
   58:8/31/69:126000

   Popeye Sailor:156-454-3322:945 Bluto Street, NotHere, USA
   29358:3/19/35:22350

   Luna Lovegood:385-898-8357:38 Fife Way, Abilene, TX 39673:
   1/5/58:95600
   ```

3. Print lines 3-15.
   a. Use the following command **sed -n '3,15p' SedLab**

```
efelix@192.168.68.70:~$ sed -n '3,15p' SedLab
Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 914
64:6/23/23:14500

Dorian Gray:385-375-8395:3567 Populus Place, Caldwell, NJ
23875:6/18/68:23400

Holly Golightly:397-857-2735:74 Pine Street, Dearborn, MI
23874:3/28/45:245700

Ebenezer Scrooge:548-834-2348:583 Laurel Ave., Kingsville,
 TX 83745:10/1/35:58900

Hester Prynne:408-253-3122:123 Park St., San Jose, CA 0408
6:7/25/53:85100

Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln ,
NB 92743:7/25/53:85100

Westley Pirate:284-758-2867:23 Edgecliff Place, Lincoln, N
B 92743:11/3/35:58200
```

   b. We are using **-n** to suppress the default output. The letter **p** after the range to instruct sed to print the lines specified. https://www.howtogeek.com/666395/how-to-use-the-sed-command-on-linux/ was used as a resource.
4. Delete lines for people who live in California
   a. Use the following command **sed '/CA/d' SedLab** and it deletes the people living in California

```
efelix@192.168.68.70:~$ sed '/CA/d' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 8
3755:11/12/56:20300

Dorian Gray:385-375-8395:3567 Populus Place, Caldwell, NJ
23875:6/18/68:23400

Holly Golightly:397-857-2735:74 Pine Street, Dearborn, MI
23874:3/28/45:245700
```

   b. By typing in **CA** within back slashes and finishing the command with the letter **d** you are telling **sed** to find a specific word and to delete it.
   https://linuxhandbook.com/sed-delete-lines/

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
   a. Use the following command **sed -n '/^[0-1][0-9]\/[1-7]\/[0-9][0-9]/p' SedLab**

```
efelix@192.168.68.63:~$ sed -n '/[0-1][0-9]\/[1-7]\/[0-9][0-9]/p' SedLab
Ebenezer Scrooge:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900
Westley Pirate:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Westley Pirate:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
Jo March:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200
Meg Murry:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000
Lucy Pevensie:385-573-8326:832 Ponce Drive, Gzary, IN 83756:12/1/46:268500
```

As you can see there is no date past the 7th day of the month. The reason why is because we instructed the sed command to use a pattern of a 2-digit month, 1-digit day and a 2-digit year. Back slashes were used to identify the pattern. We limited the dates from 1-7 as this follows the 1st days of a week. https://likegeeks.com/print-lines-sed-command/ was used a resource.

6. Append three asterisks (*) to the end of lines starting with Sir
   a. By using the command **sed '/^Sir/s/$/***/' SedLab**

```
Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500***
```

   b. The reason it works is because we are telling sed to look for the word that starts with Sir by using **^Sir**. By using **/s/$/***/** we are telling the command to substitute the end of the line with 3 asterisks. https://www.howtogeek.com/666395/how-to-use-the-sed-command-on-linux/ was used as a resource.

7. Replace the line containing "Westley Pirate" with the phrase "As you wish." Make sure you replace the whole line not just the name
   a. By using the command **sed '/Westley Pirate/c\As you wish.' SedLab** as shown below you will see entire lines replaced with the phrase requested.

```
Dorian Gray:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:23400

Holly Golightly:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700

Ebenezer Scrooge:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900

Hester Prynne:408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100

As you wish.

As you wish.

As you wish.

Lizzie Bennett:674-843-1385:20 Parak Lane, Duluth, MN 23850:4/12/23:780900

Nancy Drew:674-843-1385:20 Parak Lane, Duluth, MN 23850:4/12/23:780900

Jo March:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200
```

b. In the 1st portion of the command we are searching for Westley Pirate. By using /c\As you wish. you are replacing all the lines with the phrase requested. https://tecadmin.net/sed-command-in-linux-with-examples/ as a resource.

8. Change Minerva McGonagall's birthday to 10/04/1935. Assume you don't know Minerva's original birthday. Use a regular expression to search for it.
   a. Command will be **sed -i '/Minerva McGonagall/s/[0-1][0-9]\/[0-3][0-9]\/[0-9][0-9][0-9][0-9]/10\/04\/1935/' SetLab**

```
Minerva McGonagall:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:25000

Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:89500

Dorothy Gale:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000

Popeye Sailor:156-454-3322:945 Bluto Street, NotHere, USA 29358:3/19/35:22350

Luna Lovegood:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600

Daenerys Targaryen:408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/66:34200

Molly Weasley:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000

Arya Stark:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900
efelix@192.168.68.63:~$ sed -i '/Minerva McGonagall/s/[0-1][0-9]\/[0-3][0-9]\/[0-9][0-9][0-9][0-9]/10\/04\/1935/' SetLab
```

   b. Although I couldn't get it to work. According to the command it is looking at the date format and is supposed to replace it since I'm using the **/s** switch. https://tecadmin.net/sed-command-in-linux-with-examples/ was used a source.

9. Delete all blank lines.
    a. Command will be **sed '/^$/d' SedLab** This works as the expression **/^$/** identifies all empty lines. **d** deletes them as shown below... https://linuxhandbook.com/sed-delete-lines/ was the resource.

```
efelix@192.168.68.86:~$ sed '/^$/d' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:2030
0
Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500
Dorian Gray:385-375-8395:3567 Populus Place, Caldwell, NJ 23875:6/18/68:2340
0
Holly Golightly:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:2457
00
Ebenezer Scrooge:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:
58900
Hester Prynne:408-253-3122:123 Park St., San Jose, CA 04086:7/25/53:85100
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln , NB 92743:7/25/53:8
5100
Westley Pirate:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58
200
Westley Pirate:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58
200
Lizzie Bennett:674-843-1385:20 Parak Lane, Duluth, MN 23850:4/12/23:780900
Nancy Drew:674-843-1385:20 Parak Lane, Duluth, MN 23850:4/12/23:780900
Jo March:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200
Victor Frankenstein:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:
123500
Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700
Meg Murry:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000
Lucy Pevensie:385-573-8326:832 Ponce Drive, Gzary, IN 83756:12/1/46:268500
Hemione Granger:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:5260
0
Mary Poppins:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500
Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:2450
0
Minerva McGonagall:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3
/36:25000
Zippy Pinhead:834-823-8319:2356 Bizarro Ave., Farmount, IL 84357:1/1/67:8950
0
Dorothy Gale:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000
Popeye Sailor:156-454-3322:945 Bluto Street, NotHere, USA 29358:3/19/35:2235
0
Luna Lovegood:385-898-8357:38 Fife Way, Abilene, TX 39673:1/5/58:95600
Daenerys Targaryen:408-724-0140:1222 Oxbow Court, Sunnyvale, CA 94087:5/19/6
6:34200
Molly Weasley:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000
Arya Stark:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:6890
0
```

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 -. (b) Print the contents of the file, but instead of the phone number starting with an area code, have it start with a 1+, then include the area code and number. For example, (603)123-1234 would turn into 1+(603)123-1234 (c) Append at the end of the file "Happily Ever after. The End

a) Started by creating a script as shown below by typing **vim SetLab.sh**

```
# SedScript.sh
# Written by Eliud Felix
#
# (a) Insert above the first line the title - Great Literacy Characters -
1i\- Great Literacy Characters -
#
# (b) Print the contents of the file, but instead of the phone number
# starting with an area code, have it start with a 1+, then include the
# area code and number.
s/([0-9]{3}-[0-9]{3}-[0-9]{4})/1+\1/g
#
# (c) Append at the end of the file "Happily Ever after. The End"
$a\Happily Ever after. The End
```

b) Tested the commands individually by using the **sed** command. Once I saw them work using the following parameters **sed -E -f Sedscript.sh SetLab**. -f is telling the sed command that the following is a script. As the image below shows the script worked.
https://www.howtogeek.com/666395/how-to-use-the-sed-command-on-linux/ was used as a resource.

```
efelix@192.168.68.76:~$ sed -E -f SedScript.sh SedLab
- Great Literacy Characters -
Huckleberry Finn:1+238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20
300
Arya Stark:1+438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68
900
Happily Ever after. The End
```