

The Awk Family

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Awk Overview 🧐

Awk is a UNIX programming language used for manipulating data and generating reports .
Nawk is a newer version of awk , and gawk is the GNU version used on Linux.

The data may come from standard input, one or more files, or as output from a process. Awk can be used at the command line for simple operations, or it can be written into programs for larger applications. Because awk can manipulate data, it is an indispensable tool used in shell scripts and for managing small databases.

Awk scans a file (or input) line by line, from the first to the last line, searching for lines that match a specified pattern and performing selected actions (enclosed in curly braces) on those lines. If there is a pattern with no specific action, all lines that match the pattern are displayed; if there is an action with no pattern, all input lines specified by the action are executed upon.

Objectives 🎯

This tutorial will teach you how to write awk commands that will be used on your Linux server. Before getting started, make sure you know the filename and where it is in the Linux directory.

 `cd /directory/file`

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- a. Insert above the first line the title - Great Literary Characters -.✓
- b. Remove the duplicate lines✓
- c. Print the contents of the file with only the last name then the phone number..✓
- d. Append at the end of the file "Happily Ever after. The End".✓
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1: Print all the First Names.✓

 sed 's/Meg/Megan/g' SedLab

- sed is the command.
- s is short for the substitute command.
- g is short for global. The command will change all occurrences of the word you want to replace.
- SedLab is the file we are using.

```
[dave@localhost ~]$ sed 's/Meg/Megan/g' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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 23875:6/18/68:23400
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
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln, NB 92743:7/25/53:85100
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
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 Carlton Lane, Joliet, IL 73858:8/12/20:56700
Megan 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 02133:4/22/62:52600
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 28356:5/13/69:24500
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, NoWhere, 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, UM 29085:9/23/63:68900
[dave@localhost ~]$
```

Example of command line code

2: Print phone numbers for Tom and Frodo after their names. ✓

! wc -l SedLab

- The first thing we need to do is find out how many lines are in the file
- wc is short for word count.
- -l will list line count only.
- SedLab is the file we are using.
- Our word count is 27

i sed '24,27d' SedLab

- sed is the command.
- Since we know 27 is the last line, we will start at line 24 to delete the last 3 lines.
- d stands for delete
- SedLab is the file we are using.

```
[dave@localhost ~]$ sed '24,27d' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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 23875:6/18/68:23400
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
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln , NB 92743:7/25/53:85100
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
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 Carlton Lane, 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 02133:4/22/62:52600
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 28356:5/13/69:24500
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, NoWhere, USA 29358:3/19/35:22350
[dave@localhost ~]$ _
```

Example of command line code

3: Print Peregrin's full name and phone number area code only. ✓

 `sed -n '5,10' SedLab`

- sed is the command.
- -n prints only specified lines.
- Start at 5 and end on 10.
- SedLab is the file we are using.

```
[dave@localhost ~]$ sed -n '5,10p' SedLab
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 92743:7/25/53:85100
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
Lizzie Bennett:674-843-1385:20 Parak Lane, Duluth, MN 23850:4/12/23:780900
[dave@localhost ~]$
```

Example of command line code

4: Print all phone numbers in the 123 area code along with the names ✓

! cat SedLab

- First we need to see how California is spelled out in the addresses.
- We now know it is "CA".

i sed '/CA/d' SedLab

- sed is the command.
- CA is what we want deleted
- d stands for delete
- SedLab is the file we are using.


```
ldave@localhost ~]$ sed '/CA/d' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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
Ebenezer Scrooge:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln , NB 92743:7/25/53:85100
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
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 Carlton Lane, 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 02133:4/22/62:52600
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 28356:5/13/69:24500
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
Molly Weasley:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000
Arya Stark:438-910-7449:8235 Maple Street, Wilmington, UM 29085:9/23/63:68900
ldave@localhost ~]$
```

Example of command line code

5: Print all Last names beginning with either a T or D. ✓

! cat SedLab

- Use the cat command to find out what the date format is. Formatting is very important!
- The date format is (mm/dd/yy).

 sed '/[0-9]\{2\}\V0[0-7]\{1\}\V[0-9]\{2\}/p' SedLab

- sed is the command.
- '/expression/'
 - [0-9]\{2\} will match any month
 - 0[0-7]\{1\} will match any day 0-7 (first week of the month).
 - [0-9]\{2\} will match any year
 - p is for print
- SedLab is the file we are using.

```
[dave@localhost ~]$ sed '/[0-9]\{2\}\V0[0-7]\{1\}\V[0-9]\{2\}/p' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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 23875:6/18/68:23400
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
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln, NB 92743:7/25/53:85100
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
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 Carlton Lane, 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 02133:4/22/62:52600
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 28356:5/13/69:24500
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, UM 29085:9/23/63:68900
[dave@localhost ~]$
```

Example of command line code

6: Print all first names containing four or less characters. ✓

 sed '/^Sir/a****' SedLab

- sed is the command.
- ^ finds the beginning with name of Sir.
- a is for append.

- *** is what is being appended.
- SedLab is the file we are using.

```
ldave@localhost ~]$ sed '/^Sir/a\***' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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 23875:6/18/68:23400
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
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln , NB 92743:7/25/53:85100
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
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 Carlton Lane, 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 02133:4/22/62:52600
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 28356:5/13/69:24500
***
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, NoWhere, 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, UM 29085:9/23/63:68900
ldave@localhost ~]$ _
```

Example of command line code

7: Print the first names and area codes of all those in the 916 area code.



 sed 's/.Westley Pirate*/As you wish./g' SedLab

- sed is the command.
- s is for substitute "Westley Pirate".
- To "As you wish."
- g is for globally replacing each match
- SedLab is the file we are using.

```
[dave@localhost ~]$ sed 's/.*Westley Pirate*/As you wish./g' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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 23875:6/18/68:23400
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.:284-758-2857:23 Edgecliff Place, Lincoln , NB 92743:7/25/53:85100
As you wish.:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
As you wish.:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
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 02133:4/22/62:52600
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 28356:5/13/69:24500
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, NoHere, 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, UM 29085:9/23/63:68900
[dave@localhost ~]$ sed 's/.*Westley Pirate*/As you wish./g' SedLab
```

Example of command line code

8: Print Sacharissa's campaign contributions following her name. Each value should be printed with a leading dollar sign; e.g., \$250 \$100 \$175.



i sed '/Minerva McGonagall/s#[0-9][0-9]*/[0-9][0-9]*/[0-9][0-9]#12/25/60#g'
SedLab

- sed is the command.
- After Minerva McGonagall we want to substitute a birthday we don't know. So look for any number between 0-9.
- Changing it to date given keeping in mind date format mm/dd/yy.
- g is for global
- SedLab is the file we are using.

```
[dave@localhost ~]$ sed '/Minerva McGonagall/s#[0-9]*/[0-9]*/[0-9]*/[0-9]*#12/25/60#g' SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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 23875:6/18/68:23400
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
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Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln , NB 92743:7/25/53:85100
Westley Pirate:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
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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 Carlton Lane, 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 02133:4/22/62:52600
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 28356:5/13/69:24500
Minerva McGonagall:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:12/25/60:25000
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, NoHere, 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, UM 29085:9/23/63:68900
[dave@localhost ~]$ _
```

Example of command line code

9: Print last names followed by a comma and the phone number. Be careful of the last names's format. ✓

 `sed '/^$/d' SedLab`

- sed is the command.
- `^$` means from beginning to end with nothing in between. This will delete any lines that go by that criteria.
- `d` is for delete.
- SedLab is the file we are using.

Blank lines were deleted before starting tutorial.

10: Print the first and last names of those who contributed more than \$110 in the last month. Make sure to include their last month contribution amount after the name ✓

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

vim scripta.sed

- vim is file editor that we will use to create the script.

#/bin/bash

#DB

1i\ Great Literary Characters -

- Press 'i' to input text.
- Type #/bin/bash to initialize the script to be used on command line.
- #DB is user's initials.
- 1i\ stands for insert on line 1.
- After the forward slash, enter what the title is.
- Press colon.
- wq! to save and exit the script file.

```
Arga Stark:438-910-7449:8235 Maple Street, Wilmington, ON 29085:9/23/63:68900
#/bin/bash
#DB
1i\ Great Literary Characters -
```

Example of command line code

sed -f scripta.sed SedLab

- sed is the command.
- -f is the option for running the script file.
- scripta.sed is our script.
- SedLab is the file we are using.


```
"scripta.sed" 6L, 51C written
[dave@localhost ~]$ sed -f scripta.sed SedLab
- Great Literary Characters -
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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 23875:6/18/68:23400
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
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln , NB 92743:7/25/53:85100
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
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 02133:4/22/62:52600
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 28356:5/13/69:24500
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, UM 29085:9/23/63:68900
[dave@localhost ~]$
```

Example of command line code

b. Remove the duplicate lines✓

 vim scriptb.sed

- vim is file editor that we will use to create the script.

 #/bin/bash
#DB

\$!N;/^(\.*)\n\1\$;!P;D

- Press "i" to input text.
- Type #/bin/bash to initialize the script to be used on command line.
- #DB is user's initials.
- Press colon.
- wq! to save and exit the script file.

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

$!N;/^(\.*)\n1$/!P:D
~
~
~
~
```

Example of command line code

 sed -f scriptb.sed SedLab

- sed is the command.
- -f is the option for running the script file.
- scriptb.sed is our script.
- SedLab is the file we are using.

```
[dave@localhost ~]$ sed -f scriptb.sed SedLab
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
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 23875:6/18/68:23400
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
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln , NB 92743:7/25/53:85100
Westley Pirate:284-758-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
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 Carlton Lane, 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 02133:4/22/62:52600
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 28356:5/13/69:24500
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, NoWhere, 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, UM 29085:9/23/63:68900
[dave@localhost ~]$ _
```

Example of command line code

c. Print the contents of the file with only the last name then the phone number..✓

 vim scriptc.sed

- vim is file editor that we will use to create the script.


 #/bin/bash

#DB

\$!N;/^\\(.*)\\n\\1\$!/P;D

- Press 'i' to input text.
- Type #/bin/bash to initialize the script to be used on command line.
- #DB is user's initials.
- Press colon.
- wq! to save and exit the script file.

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

 vim scriptd:.sed

- vim is file editor that we will use to create the script.

 #/bin/bash

#DB

\$!N;/^\\(.*)\\n\\1\$!/P;D

- Press 'i' to input text.
- Type #/bin/bash to initialize the script to be used on command line.
- #DB is user's initials.
- Press colon.
- wq! to save and exit the script file.

Citations 

Sed Overview

<https://flylib.com/books/en/4.356.1.26/1/>

5.1

Sed Commands

https://www.gnu.org/software/sed/manual/html_node/sed-commands-list.html

PDF Template

slite.com

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