

Arsenia Suero

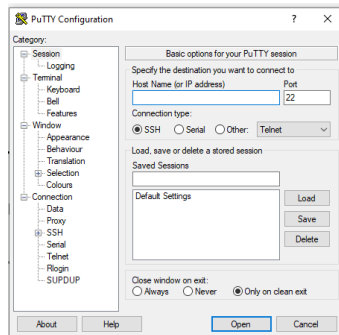
Grep

10/30/2021

The Grep Family

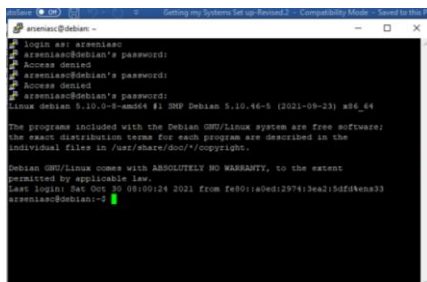
Grep is a tool used to look for specific information around files.

Using putty, I will copy my file into my server. The first thing you are going to be asked for is the domain name or the IP address, I will use my domain name.



PuTTY pscp is useful in systems earlier than Microsoft Windows 10, I have windows 10 and I am going to use putty.

Later you will be on the server and you must type your login information, first the user, and then the password.



Now, I will go to my local command line to copy my files, first, you must go to the directory where you have the file and later. type the following command:

pscp datebook arseniasc@debian:/home/arseniasc then hit enter and you will have to put your password of your virtual machine.

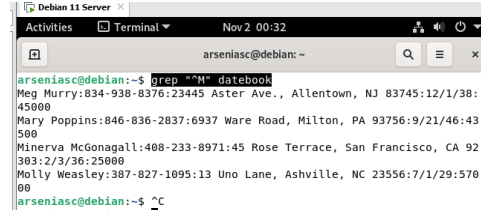
Datebook – name of the file

arseniasc@debian – my user on Debian

/home/arseniasc – where I want to copy my file

- Print all lines where the person's first name starts with M.

For getting the starting of lines with a specific letter we use the option “^”, so you have to type the following: **grep “^M” datebook**, remember that datebook is the filename.



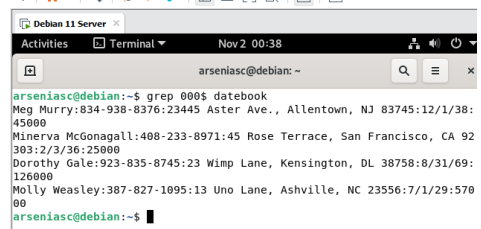
```

arseniasc@debian:~$ grep '^M' datebook
Meg Murry:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000
Mary Poppins:846-836-2837:6937 Ware Road, Milton, PA 93756:9/21/46:43500
Minerva McGonagall:408-233-8971:45 Rose Terrace, San Francisco, CA 92383:2/3/36:25000
Molly Weasley:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000
arseniasc@debian:~$ ^C

```

- Print all lines ending in 000.

For printing the ending of a file all we must do is to use the option “\$”. Type the following **grep 000\$ datebook** you can use the “ ” or you can just do not use it and it will give you the same result in this file we are working.



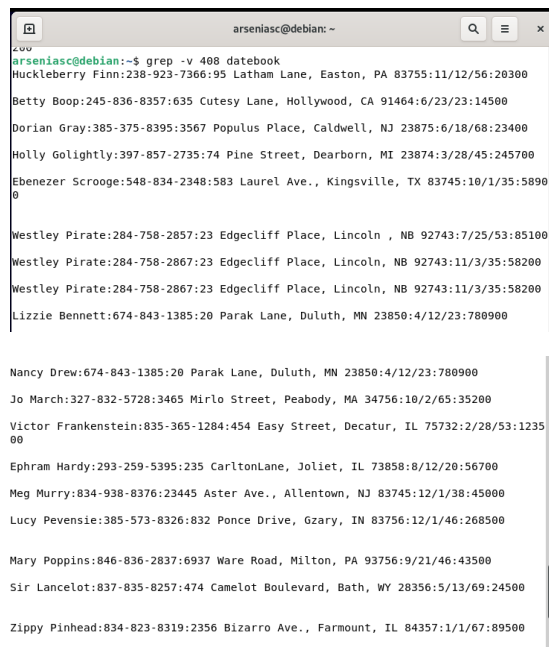
```

arseniasc@debian:~$ grep 000$ datebook
Meg Murry:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000
Minerva McGonagall:408-233-8971:45 Rose Terrace, San Francisco, CA 92383:2/3/36:25000
Dorothy Gale:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000
Molly Weasley:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000
arseniasc@debian:~$

```

- Print all lines that don't contain 408.

To prints out all the lines that do not matches the pattern you can use the option -v, this option shows the lines that do not match your search.



```

arseniasc@debian:~$ grep -v 408 datebook
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
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
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

```

```

arseniasc@debian: ~
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
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

```

- **Print all lines where birthdays are in the year 1923.**

To print the lines with birthdates are in the year 1923 we can use the -E option to treat the pattern as an irregular expression, please type the following command:

grep -E ':[0-9]\/[0-9]+\23' datebook

the + sign in this case will check if after the first expression for the month [0-9] and the second expression for the day [0-9] there is a 23 For the year.

```

Debian 11 Server
Activities Terminal Nov 4 01:00
arseniasc@debian: ~
arseniasc@debian:~$ grep -E ':[0-9]\/[0-9]+\23' datebook
Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500
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
arseniasc@debian:~$

```

- **Print all lines where the phone number is in an area code that starts with an 8**

To print the lines with a phone number area code that stars with 8 We are going to use the option E as well. Type the following command

grep -E ':8..[0-9]{3}-[0-9]{4}:' datebook

{ } we use it to specify how many numbers will be in the set of the [0-9]

The .. are used to say that there are 2 more numbers after the number 8.

```

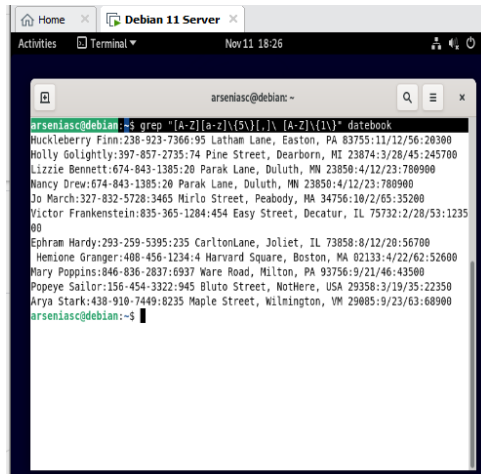
Activities Terminal Nov 4 01:27
arseniasc@debian: ~
arseniasc@debian:~$ grep -E ':8..[0-9]{3}-[0-9]{4}:' datebook
Victor Frankenstein:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:1235
00
Meg Murry:834-938-8376:23445 Aster Ave., Allentown, NJ 83745:12/1/38:45000
Mary Poppins:846-836-2837:6937 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
arseniasc@debian:~$

```

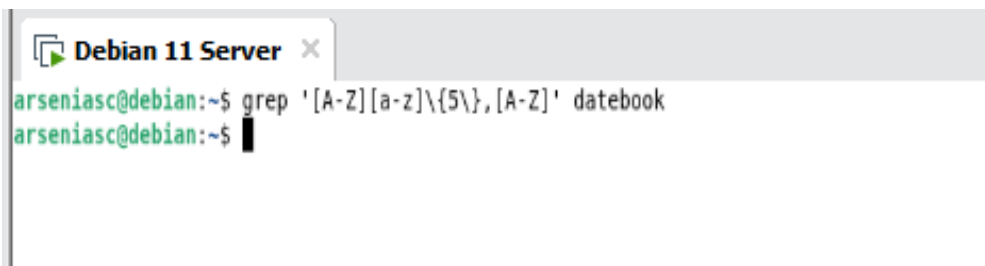
- **Print all lines containing an uppercase letter, followed by 5 lowercase letters, a comma, and one uppercase letter.**

For this one we are going to use metacharacter we are going to type the following command **grep "[A-Z][a-z]\{5\},[A-Z]\{1\}" datebook**, and you will see the matching lines.

The **A-Z** will match the upper letter and the **a-z** will match the lower letter the number on the { } represent the number of letters that will match.



```
arseniasc@debian:~$ grep "[A-Z][a-z]\{5\}.\ [A-Z]\{1\}" datebook
Huckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20380
Holly Golightly:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/26/45:245700
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 75732:2/28/53:1235
00
Ephram Hardy:293-259-5395:235 CarltonLane, Joliet, IL 73858:8/12/20:56700
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
Popeye Sailor:156-454-3322:945 Bluto Street, NoWhere, USA 29358:3/19/35:22350
Arya Stark:438-910-7449:8235 Maple Street, Wilmington, VM 29085:9/23/63:68900
arseniasc@debian:~$
```



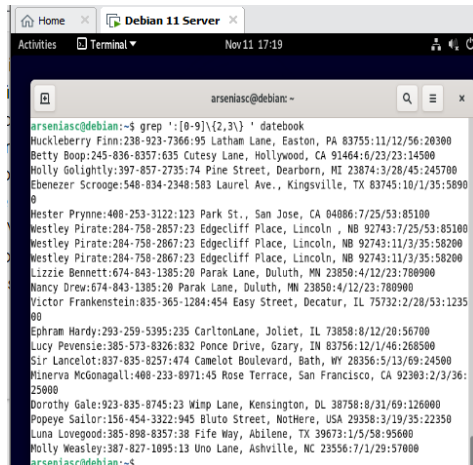
```
arseniasc@debian:~$ grep '[A-Z][a-z]\{5\},[A-Z]' datebook
arseniasc@debian:~$
```

- **Print lines where the address begins with a two- or three-digit number (so this would be 12 main st. or 123 main street but not 1234 main street).**

To look for this specific information in a file we must specify what is information we are looking for. For this example, we have different numbers but not all of them are about the address, so we must let the command line know what the number is related to the address, so type this command

```
grep ':[0-9]\{2,3\} ' datebook
```

we are saying with the **:** that will start after it and that then the numbers and that after the numbers will be a space.

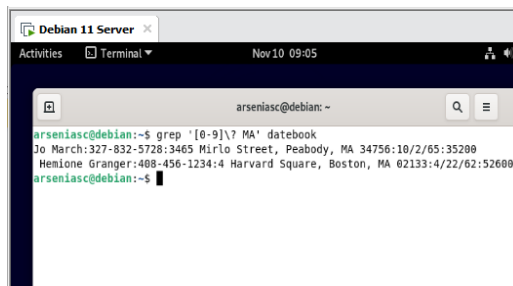
A terminal window titled 'Debian 11 Server' with a date of Nov 11 17:19. The prompt is 'arseniasc@debian:~'. The command 'grep -n '[0-9]\{2,3\}' datebook' has been executed. The output lists 20 lines from a file named 'datebook', each starting with a line number followed by a colon and a line of text containing a name, phone number, and address. The addresses include locations like Easton, PA; Hollywood, CA; Dearborn, MI; Kingsville, TX; San Jose, CA; Lincoln, NB; Duluth, MN; Decatur, IL; Joliet, IL; Gzary, IN; Bath, WY; San Francisco, CA; Kensington, DL; NoHere, USA; Abilene, TX; and Asheville, NC.

```
arseniasc@debian:~$ grep -n '[0-9]\{2,3\}' datebook
1 Muckleberry Finn:238-923-7366:95 Latham Lane, Easton, PA 83755:11/12/56:20300
2 Betty Boop:245-836-8357:635 Cutesy Lane, Hollywood, CA 91464:6/23/23:14500
3 Holly Golightly:397-857-2735:74 Pine Street, Dearborn, MI 23874:3/28/45:245700
4 Ebenezer Scrooge:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:58900
5
6 Hester Prynne:400-253-3122:123 Park St., San Jose, CA 04006:7/25/53:85100
7 Westley Pirate:284-750-2857:23 Edgecliff Place, Lincoln, NB 92743:7/25/53:85100
8 Westley Pirate:284-750-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
9 Westley Pirate:284-750-2867:23 Edgecliff Place, Lincoln, NB 92743:11/3/35:58200
10 Lizzie Bennett:674-843-1385:20 Parak Lane, Duluth, MN 23850:4/12/23:780900
11 Nancy Drew:674-843-1385:20 Parak Lane, Duluth, MN 23850:4/12/23:780900
12 Victor Frankenstein:835-365-1284:454 Easy Street, Decatur, IL 75732:2/28/53:1235
13
14 Ephram Hardy:293-259-5395:235 Carlton Lane, Joliet, IL 73858:8/12/20:56700
15 Lucy Pevensie:385-573-8326:832 Ponce Drive, Gzary, IN 83756:12/1/46:268500
16 Sir Lancelot:837-835-8257:474 Camelot Boulevard, Bath, WY 28356:5/13/69:24500
17 Minerva McGonagall:408-233-8971:45 Rose Terrace, San Francisco, CA 92303:2/3/36:
18 25900
19 Dorothy Gale:923-835-8745:23 Wimp Lane, Kensington, DL 38758:8/31/69:126000
20 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
Molly Weasley:387-827-1095:13 Uno Lane, Asheville, NC 23556:7/1/29:57000
arseniasc@debian:~$
```

- **Print lines preceded by a line number where the person is from Massachusetts (or MA)**

To print the lines preceded with a line number where the person is from MA we are going to use the `\?` for matching the preceding character. Please type the following command:

grep -n '[0-9]\? MA' datebook

A terminal window titled 'Debian 11 Server' with a date of Nov 10 09:05. The prompt is 'arseniasc@debian:~'. The command 'grep -n '[0-9]\? MA' datebook' has been executed. The output shows two lines from the 'datebook' file, each preceded by a line number and a colon. The addresses are 'Peabody, MA' and 'Boston, MA'.

```
arseniasc@debian:~$ grep -n '[0-9]\? MA' datebook
10 Jo March:327-832-5728:3465 Mirlo Street, Peabody, MA 34756:10/2/65:35200
11 Hermione Granger:408-456-1234:4 Harvard Square, Boston, MA 02133:4/22/62:52600
arseniasc@debian:~$
```

- **Print lines containing an address that doesn't include Street or St**

For looking for a non-existing matching we use the `-v` to invert the matching, it means that by using this option you will print the lines that do not contain the word you specify. Also, we are going to use the option `-e` that can be used multiple times. Type the following:

grep -v -e "St" -e "Street" datebook

```
arseniasc@debian: ~  
arseniasc@debian:~$ grep -v -e "St" -e "Street" datebook  
arseniasc@debian:~$ grep -v -e "St" -e "Street" datebook  
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  
  
Ebenezer Scrooge:548-834-2348:583 Laurel Ave., Kingsville, TX 83745:10/1/35:5896  
0  
  
Westley Pirate:284-758-2857:23 Edgecliff Place, Lincoln, NB 92743:7/25/53:85106  
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  
  
Nancy Drew:674-843-1385:20 Parak Lane, Duluth, MN 23850:4/12/23:780900  
  
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  
  
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 94087:5/19/66:34  
200  
  
Molly Weasley:387-827-1095:13 Uno Lane, Ashville, NC 23556:7/1/29:57000  
arseniasc@debian:~$
```

Source:

<https://www.gnu.org/software/grep/manual/grep.html>

<https://phoenixnap.com/kb/grep-multiple-strings>

<https://flylib.com/books/en/4.356.1.32/1/> (The chapter provided by the teacher.)

<https://www.youtube.com/watch?v=lif-DjWYoWY> (Addrianna video)