D Y PATIL INTERNATIONAL UNIVERSITY

SYSTEMS SOFTWARE
SEMESTER-IV
LAB SHEET - 2

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1 AIM:

(A) Explain the following commands:

1. clear
2. cal
3. who
4. date
5. mkdir
6. rm
7. cat8. cd
9. cp
10. grep
11. ls
12. mv
13.rmdir

2 TOOLS/APPARATUS: Linux operating system.

3 STANDARD PROCEDURES:

3.1 Analyzing the Problem:

- Start the Linux and enter the user name and password.

- Now write startx and after that open the terminal.
- At the terminal try the different commands and see the output.

3.2 Designing the Solution:

- At the terminal first perform the command CAL without and with the different options available for it.
- Like $ cal and then enter. The calendar will be displayed at the terminal. $ cal –m and then enter. In the calendar Monday will be displayed as the first day of the week.
- Same way perform the other commands like CLEAR, WHO, DATE, MKDIR, RM etc.

3.3 Implementing the Solution:

3.3.1 Writing Source Code:

1) CAL:

At the terminal write the following:

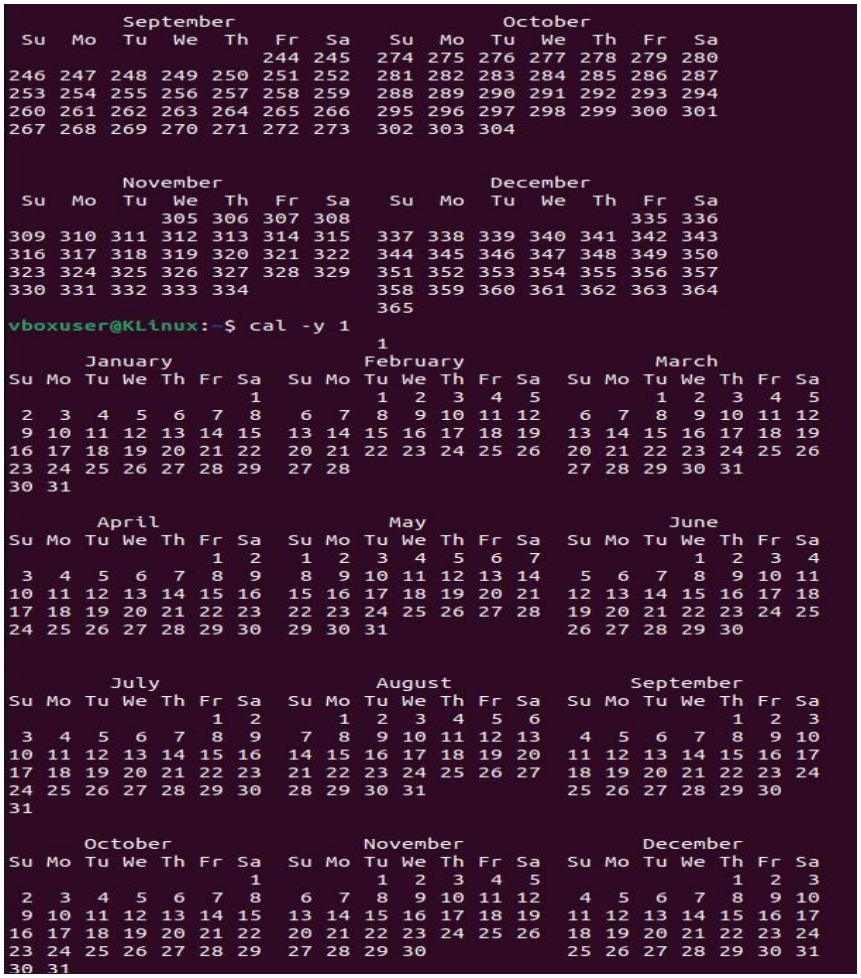
[user1@com]$ cal

[user1@com]$ cal -m

[user1@com]$ cal -j

[user1@com]$ cal –y

```
vboxuser@KLinux:~$ cal
    February 2024
Su Mo Tu We Th Fr Sa
             1  2  3
 4  5  6  7  8  9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29

vboxuser@KLinux:~$ cal -m 1
     January 2024
Su Mo Tu We Th Fr Sa
    1  2  3  4  5  6
 7  8  9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

vboxuser@KLinux:~$ cal -j 2
                                2
            January                         February
 Su   Mo   Tu   We   Th   Fr   Sa    Su   Mo   Tu   We   Th   Fr   Sa
  1    2    3    4    5    6    7                   32   33   34   35
  8    9   10   11   12   13   14    36   37   38   39   40   41   42
 15   16   17   18   19   20   21    43   44   45   46   47   48   49
 22   23   24   25   26   27   28    50   51   52   53   54   55   56
 29   30   31                       57   58   59


             March                           April
 Su   Mo   Tu   We   Th   Fr   Sa    Su   Mo   Tu   We   Th   Fr   Sa
                60   61   62   63                                  91
 64   65   66   67   68   69   70    92   93   94   95   96   97   98
 71   72   73   74   75   76   77    99  100  101  102  103  104  105
 78   79   80   81   82   83   84   106  107  108  109  110  111  112
 85   86   87   88   89   90        113  114  115  116  117  118  119
                                    120

              May                             June
 Su   Mo   Tu   We   Th   Fr   Sa    Su   Mo   Tu   We   Th   Fr   Sa
     121  122  123  124  125  126                   152  153  154
127  128  129  130  131  132  133   155  156  157  158  159  160  161
134  135  136  137  138  139  140   162  163  164  165  166  167  168
141  142  143  144  145  146  147   169  170  171  172  173  174  175
148  149  150  151                  176  177  178  179  180  181


             July                            August
 Su   Mo   Tu   We   Th   Fr   Sa    Su   Mo   Tu   We   Th   Fr   Sa
                          182                 213  214  215  216  217
183  184  185  186  187  188  189   218  219  220  221  222  223  224
190  191  192  193  194  195  196   225  226  227  228  229  230  231
197  198  199  200  201  202  203   232  233  234  235  236  237  238
204  205  206  207  208  209  210   239  240  241  242  243
211  212
```

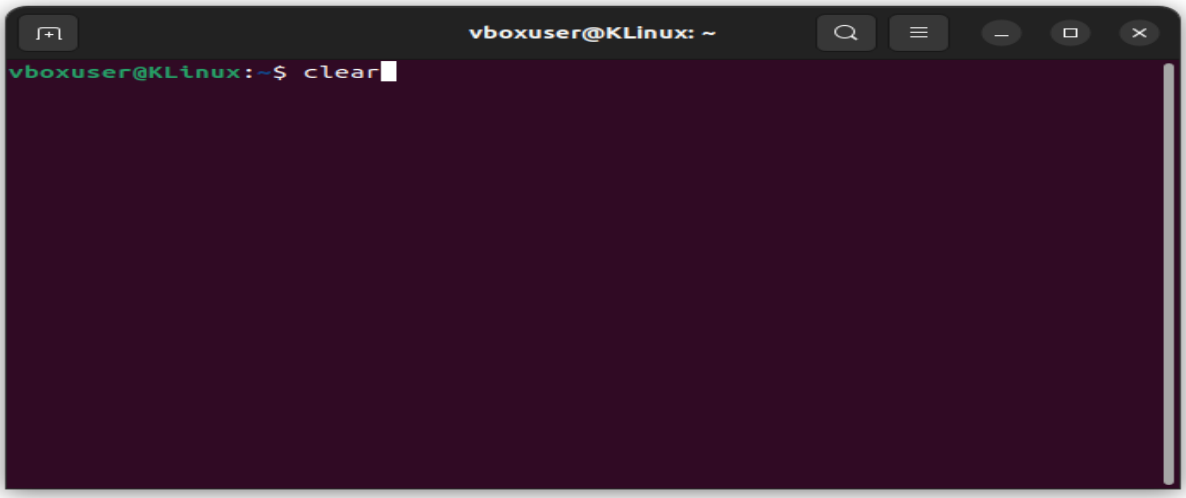


```
          September                      October
 Su  Mo  Tu  We  Th  Fr  Sa   Su  Mo  Tu  We  Th  Fr  Sa
                    244 245  274 275 276 277 278 279 280
246 247 248 249 250 251 252  281 282 283 284 285 286 287
253 254 255 256 257 258 259  288 289 290 291 292 293 294
260 261 262 263 264 265 266  295 296 297 298 299 300 301
267 268 269 270 271 272 273  302 303 304

          November                       December
 Su  Mo  Tu  We  Th  Fr  Sa   Su  Mo  Tu  We  Th  Fr  Sa
            305 306 307 308                  335 336
309 310 311 312 313 314 315  337 338 339 340 341 342 343
316 317 318 319 320 321 322  344 345 346 347 348 349 350
323 324 325 326 327 328 329  351 352 353 354 355 356 357
330 331 332 333 334          358 359 360 361 362 363 364
                             365
vboxuser@KLinux:~$ cal -y 1
                                1
      January                February                March
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                   1           1  2  3  4  5           1  2  3  4  5
 2  3  4  5  6  7  8   6  7  8  9 10 11 12   6  7  8  9 10 11 12
 9 10 11 12 13 14 15  13 14 15 16 17 18 19  13 14 15 16 17 18 19
16 17 18 19 20 21 22  20 21 22 23 24 25 26  20 21 22 23 24 25 26
23 24 25 26 27 28 29  27 28                 27 28 29 30 31
30 31

       April                   May                    June
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                1  2   1  2  3  4  5  6  7            1  2  3  4
 3  4  5  6  7  8  9   8  9 10 11 12 13 14   5  6  7  8  9 10 11
10 11 12 13 14 15 16  15 16 17 18 19 20 21  12 13 14 15 16 17 18
17 18 19 20 21 22 23  22 23 24 25 26 27 28  19 20 21 22 23 24 25
24 25 26 27 28 29 30  29 30 31              26 27 28 29 30

        July                   August                 September
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                1  2      1  2  3  4  5  6               1  2  3
 3  4  5  6  7  8  9   7  8  9 10 11 12 13   4  5  6  7  8  9 10
10 11 12 13 14 15 16  14 15 16 17 18 19 20  11 12 13 14 15 16 17
17 18 19 20 21 22 23  21 22 23 24 25 26 27  18 19 20 21 22 23 24
24 25 26 27 28 29 30  28 29 30 31           25 26 27 28 29 30
31

      October                November                 December
Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa  Su Mo Tu We Th Fr Sa
                   1           1  2  3  4  5               1  2  3
 2  3  4  5  6  7  8   6  7  8  9 10 11 12   4  5  6  7  8  9 10
 9 10 11 12 13 14 15  13 14 15 16 17 18 19  11 12 13 14 15 16 17
16 17 18 19 20 21 22  20 21 22 23 24 25 26  18 19 20 21 22 23 24
23 24 25 26 27 28 29  27 28 29 30           25 26 27 28 29 30 31
30 31
```

2) CLEAR:

At the terminal write the following:

[user1@com]$ clear



3) WHO:

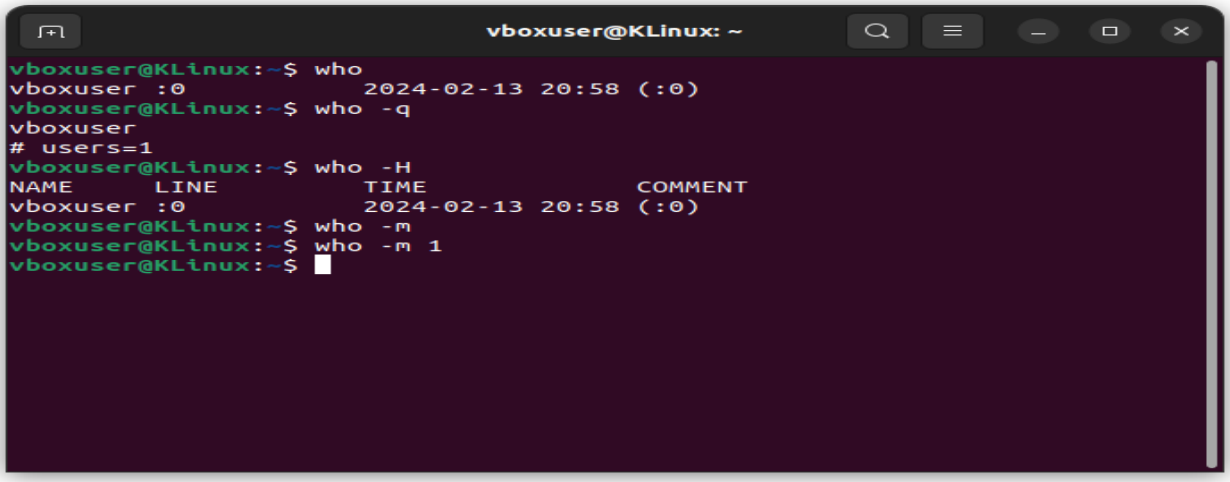
At the terminal write the following:

[user1@com]$ who

[user1@com]$ who -q

[user1@com]$ who -H

[user1@com]$ who –m



4) DATE:

At the terminal write the following:

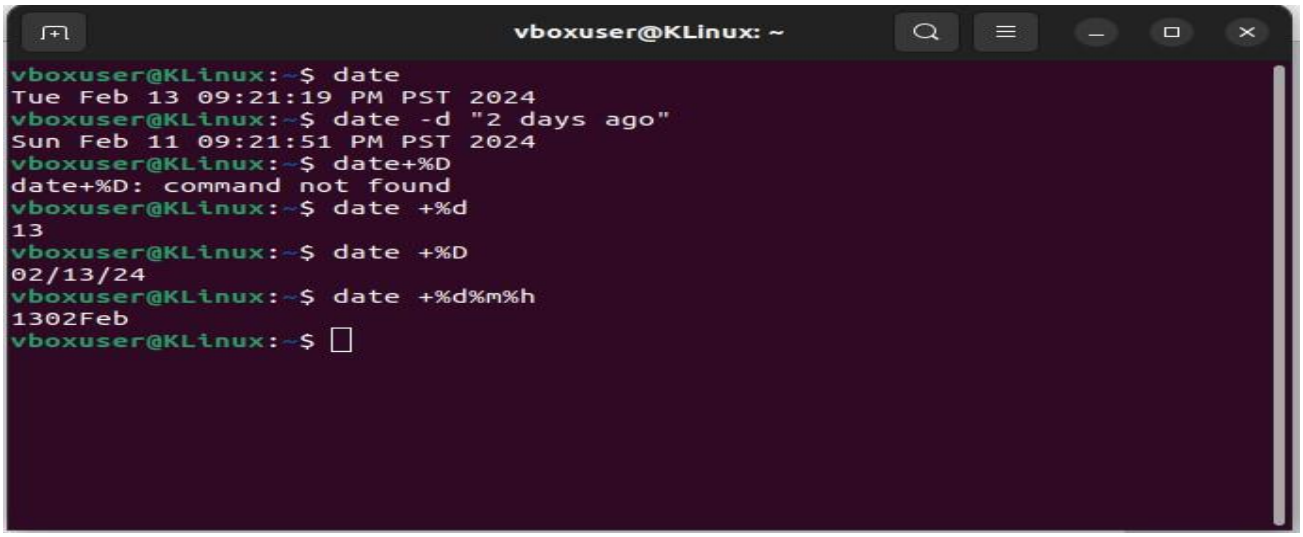
[user1@com]$ date

[user1@com]$ date –d “2 days ago”

[user1@com]$ date +%D

[user1@com]$ date +%d

[user1@com]$ date +%d%m%h



5) MKDIR and RM:

At the terminal write the following:

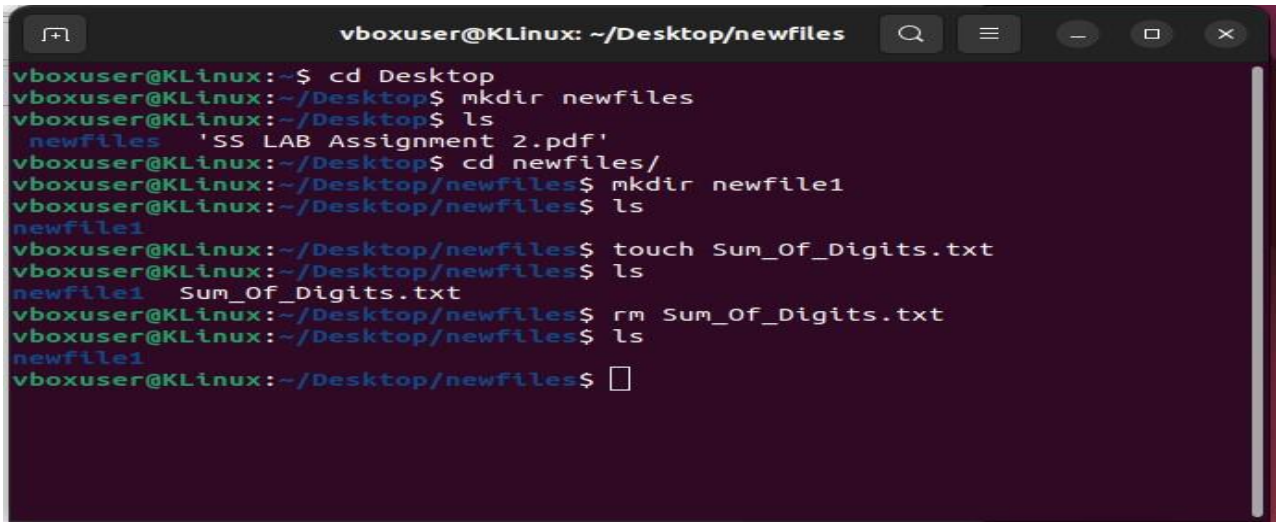
[user1@com]$ cd Desktop/

[user1@com]$ cd newfiles/

[user1@com]$ mkdir newfile1

[user1@com]$ rm Sum_Of_Digits.txt

[user1@com]$ ls

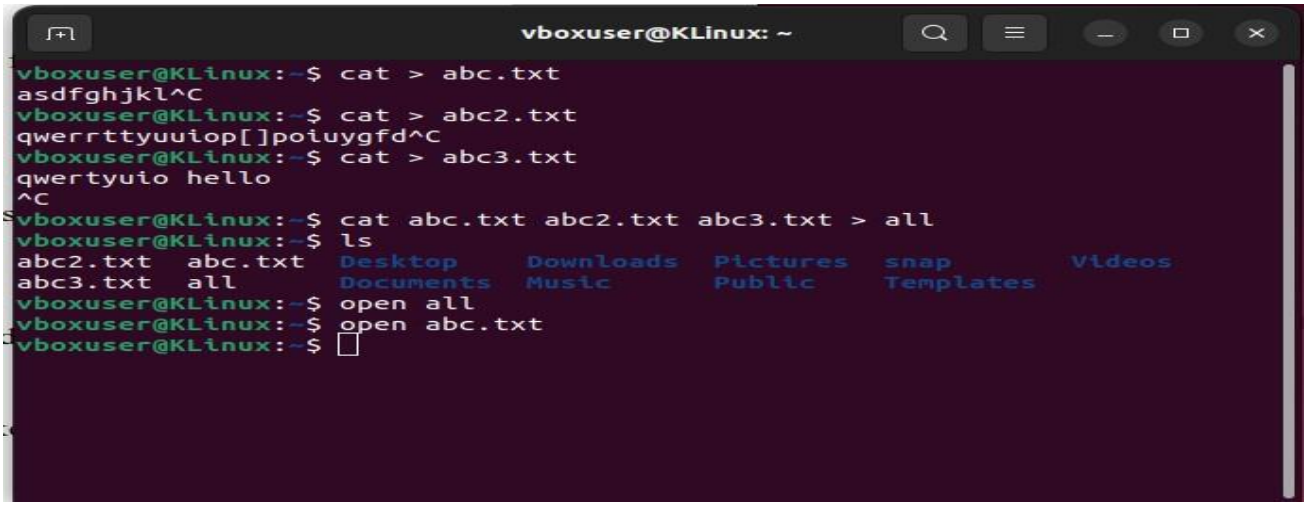


6) cat ***cat*** allows you to read multiple files and then print them out. You can combine files by using the > operator and append files by using >>.

Syntax: ***cat [argument] [specific file]***

Example: *cat abc.txt*

If you want to append three files (abc.txt, def.txt, xyz.txt), give the command as, *cat abc.txt def.txt xyz.txt > all*

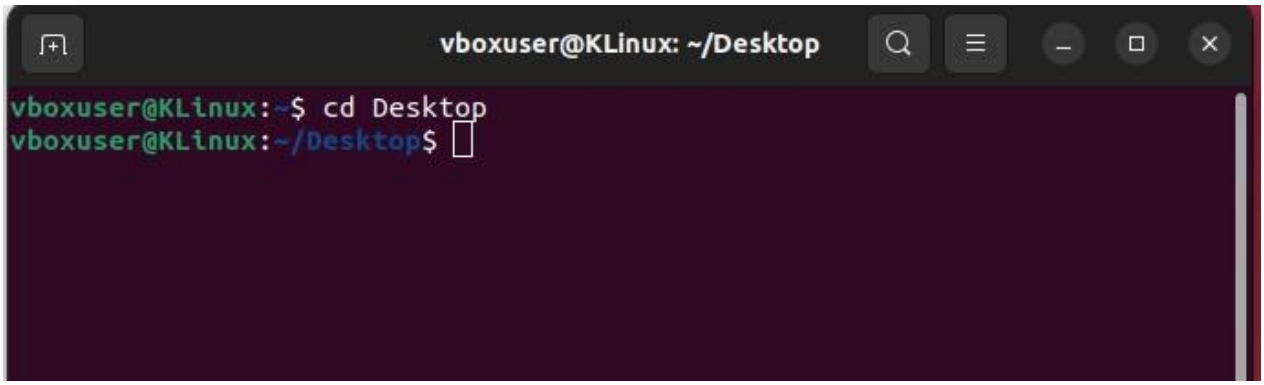


7) cd, chdir

cd (or chdir) stands for "change directory". This command is the key command to move around your file structure.

Syntax: ***cd [name of directory you want to move to]***

When changing directories, start with / and then type the complete file path, like cd /vvs/abc/xyz



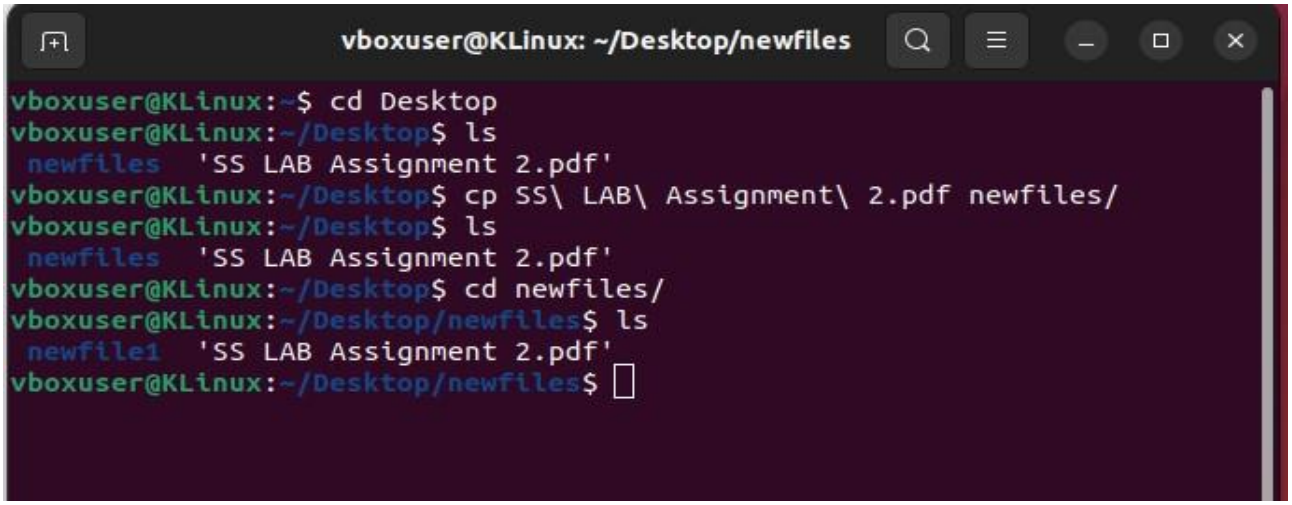
8) cp

The ***cp*** command copies files or directories from one place to another. You can copy a set of files to another file, or copy one or more files under the same name in a directory. If the destination of the file you want to copy is an existing file, then the existing file is overwritten. If the destination is an existing directory, then the file is copied into that directory. Syntax: ***cp [options] file1 file2***

If you want to copy the file ***favourites.html*** into the directory called ***laksh***, you give the command as:

cp favourites.html /vvs/laksh/

A handy option to use with ***cp*** is ***-r***. This recursively copies a particular directory and all of its contents to the specified directory, so you won't have to copy one file at a time.



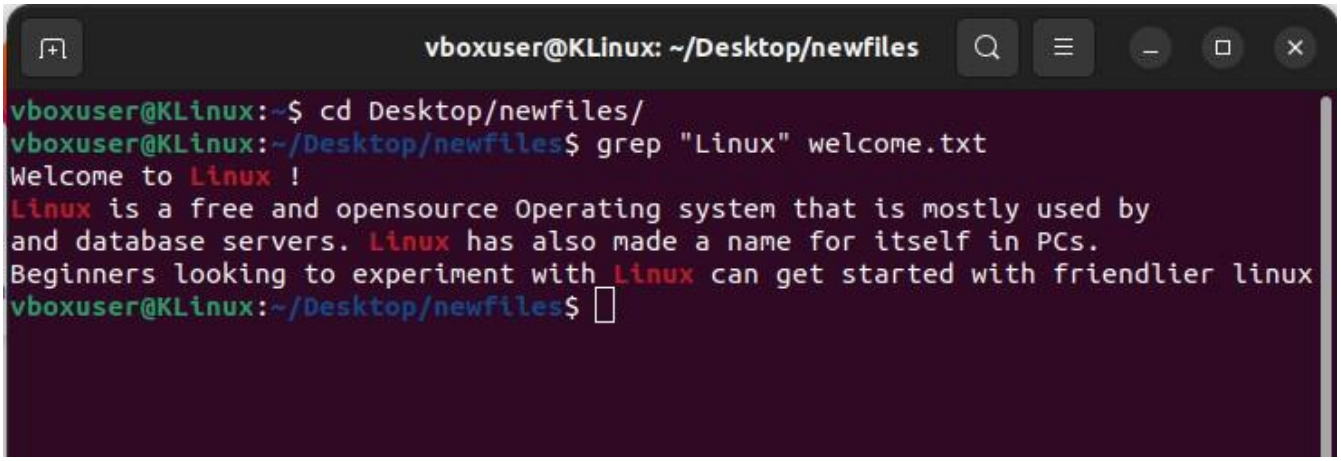
9) grep

The ***grep*** command searches a file or files for lines that match a provided regular expression ("grep" comes from a command meaning to **g**lobally search for a **r**egular **e**xpression and then **p**rint the found matches). Syntax: ***grep [options] regular expression [files]***

To exit this command, type 0 if lines have matched, 1 if no lines match, and 2 for errors. This is very useful if you need to match things in several files. If you wanted to find out which files in our ***vvs***directory contained the word "***mca***" you could use ***grep*** to search the directory and match those files with that word. All that you have to do is give the command as shown:

grep 'mca' /vvs/*

The * used in this example is called a meta-character, and it represents matching zero or more of the preceding characters. In this example, it is used to mean "all files and directories in this directory". So, ***grep*** will search all the files and directories in ***vvs***and tell you which files contain "***mca"***.



10) ls

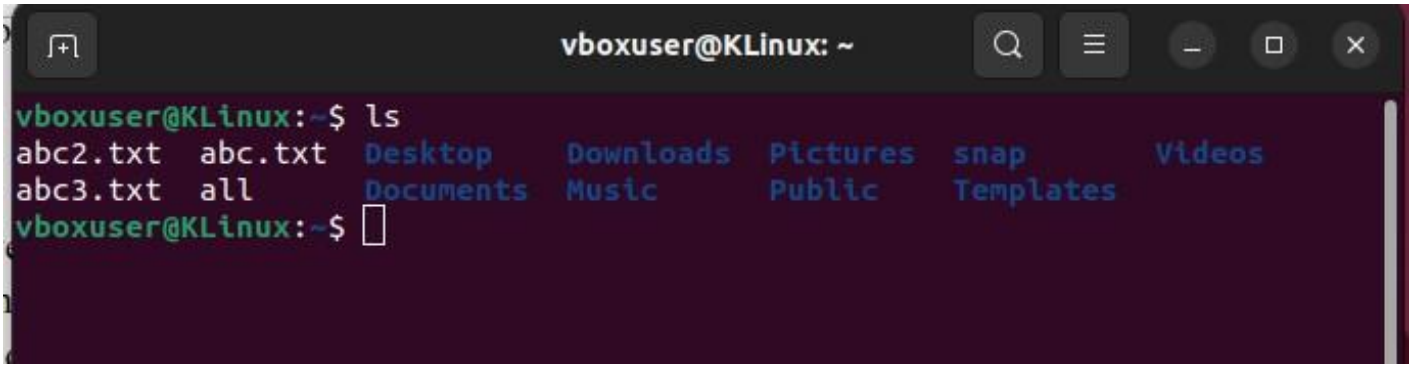
lswill list all the files in the current directory. If one or more files are given, ***ls*** will display the files contained within "name" or list all the files with the same name as "name". The files can be displayed in a variety of formats using various options.
Syntax: ***ls [options] [names] ls***is a command you'll end up using all the time. It simply stands for list. If you are in a directory and you want to know what files and directories are inside that directory, type ***ls***. Sometimes the list of files is very long and it flies past your screen so quickly you miss the file you want. To overcome this problem give the command as shown below: ***ls | more***

The character | (called pipe) is typed by using shift and the \ key. | ***more*** will show as many files as will fit on your screen, and then display a highlighted ***"more"*** at the bottom. If you want to see the next screen, hit enter (for moving one line at a time) or the spacebar (to move a screen at a time). | ***more***can be used anytime you wish to view the output of a command in this way.

A useful option to use with ***ls*** command is ***-l***. This will list the files and directories in a long format. This means it will display the permissions (see chmod), owners, group, size, date and time the file was last modified, and the filename. drwxrwxr-xvvs staff 512 Apr 5 09:34 sridhar.txt -rwx-rw-r- vvs staff 4233 Apr 1 10:20 resume.txt

-rwx-r--r-- vvs staff 4122 Apr 1 12:01 favourites.html

There are several other options that can be used to modify the ls command, and many of these options can be combined. ***-a*** will list all files in a directory, including those files normally hidden. ***-F*** will flag filenames by putting / on directories, @ on symbolic links, and * on executable files.



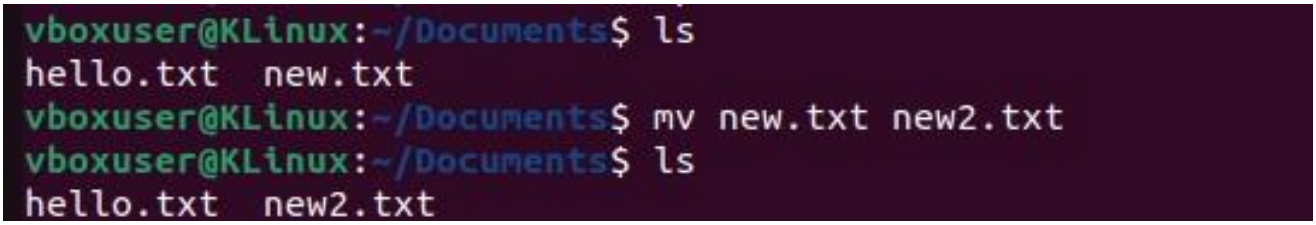
11) mv mv moves files and directories. It can also be used to rename files or directories.

Syntax: mv [options] source target

If you wanted to rename vvs.txt to vsv.txt, you should give the command as:

mv vvs.txt vsv.txt

After executing this command, vvs.txt would no longer exist, but a file with name vsv.txt would now exist with the same contents.



12) rm ***rm*** removes or deletes files from a directory. Syntax: ***rm [options] files***

In order to remove a file, you must have write permission to the directory where the file is located. While removing a which does't have write permission on, a prompt will come up asking you whether or not you wish to override the write protection. The ***-r*** option is very handy and very dangerous. ***-r*** can be used to remove a directory and all its contents. If you use the ***-i*** option, you can possibly catch some disastrous mistakes because it'll ask you to confirm whether you really want to remove a file before going ahead and doing it.

13) rmdir ***rmdir***allows you to remove or delete directories but not their contents. A directory must be empty in order to remove it using this command.

Syntax: ***rmdir [options] directories***

If you wish to remove a directory and all its contents, you should use rm -r.

Conclusion: We try the different commands on terminal on linux and analysis the output.