

ASSIGNMENT # 1

ZEESHAN AHMED

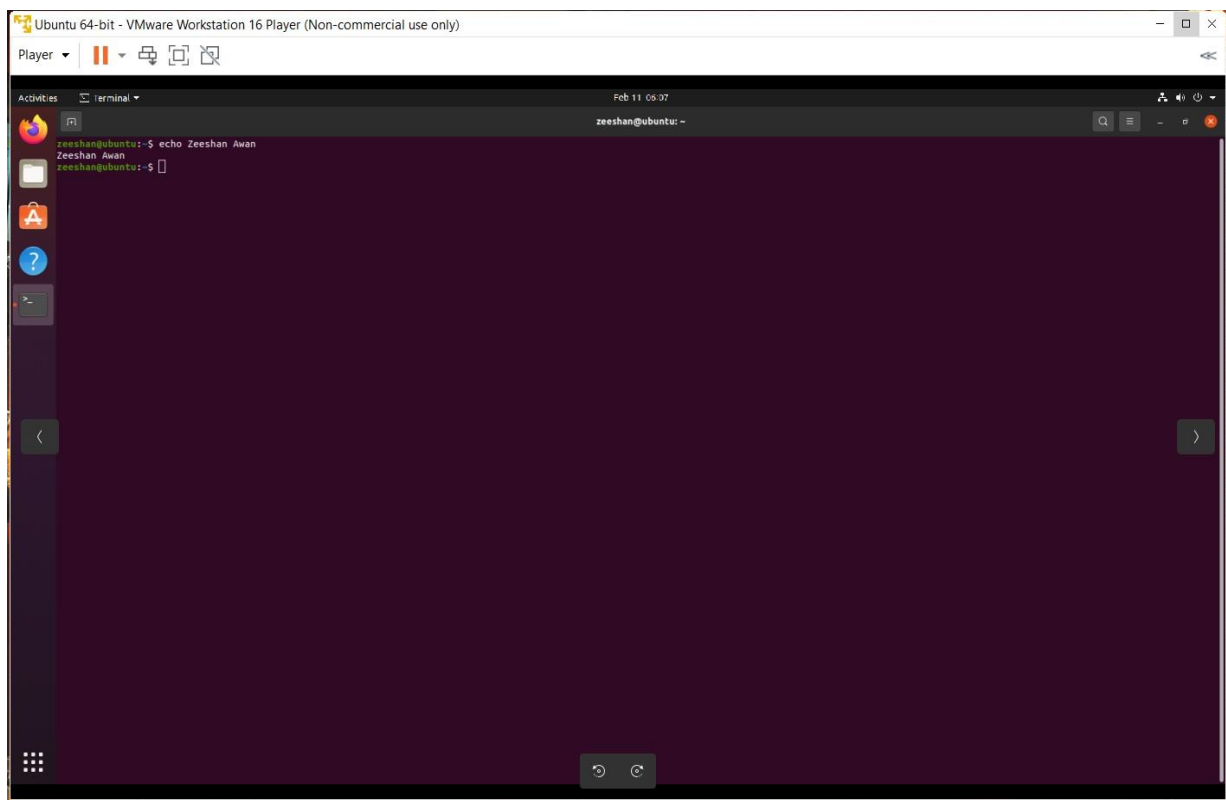
20K-1741

BSE-3B

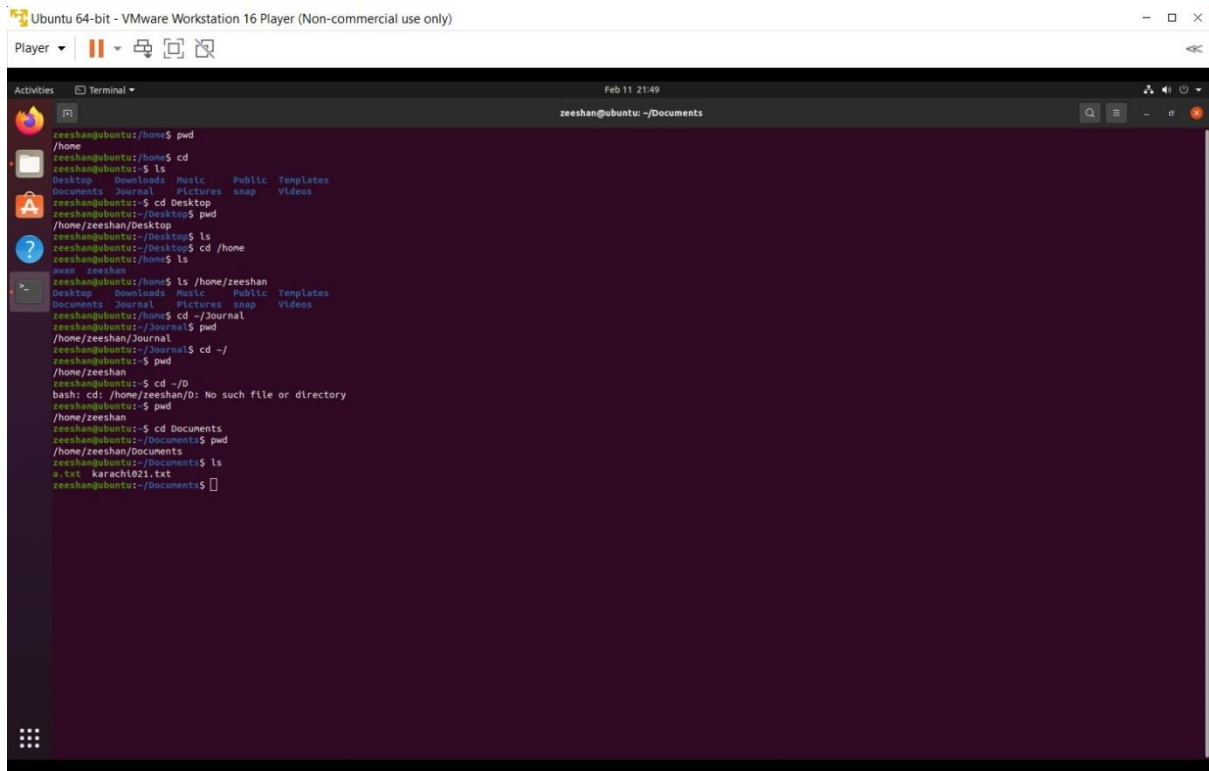
OS LAB – SUMAIYAAH ZAHID

WEEK 1:

TASK 1:

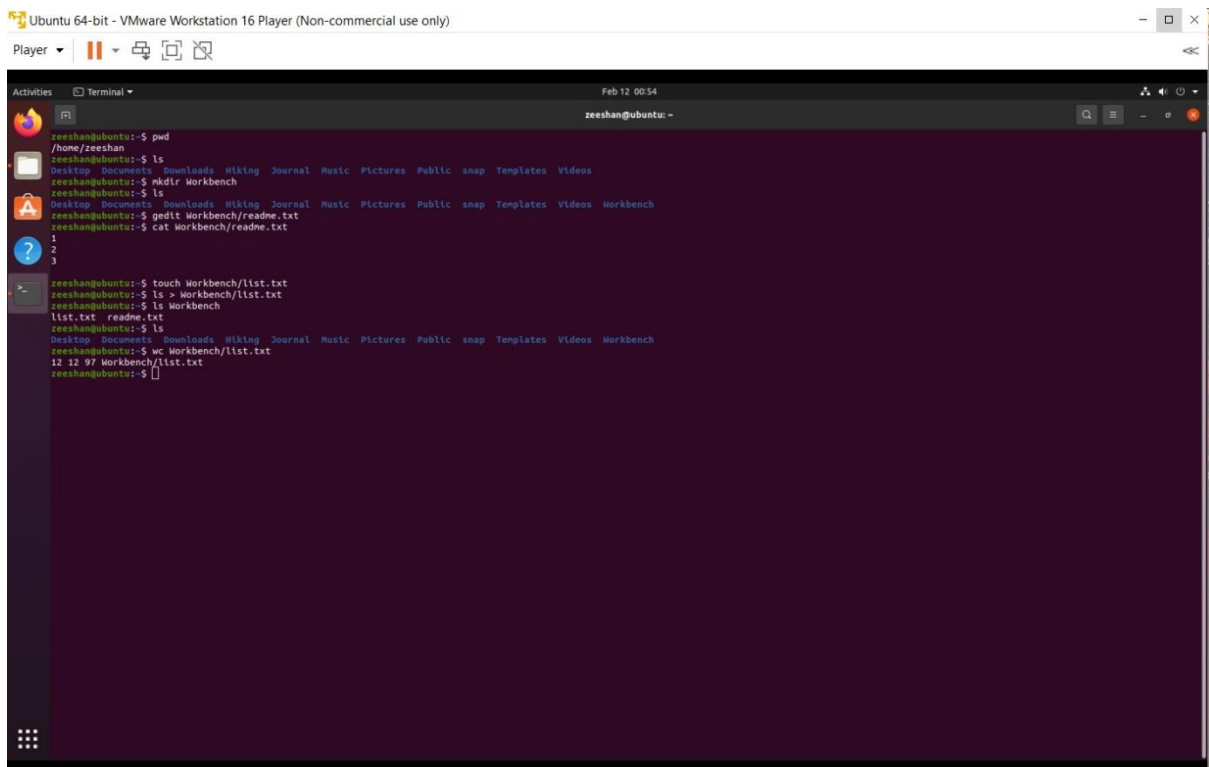


TASK 2:



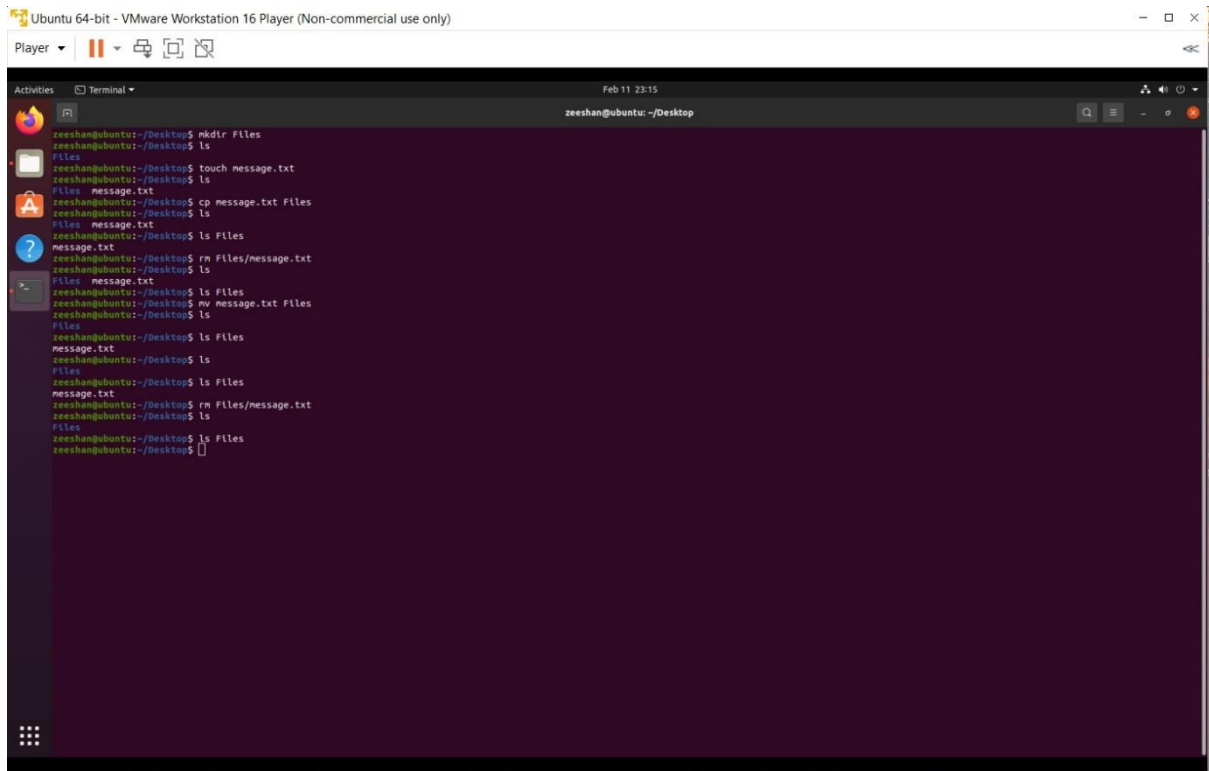
```
zeeshan@ubuntu: /home$ pwd
/home
zeeshan@ubuntu: /home$ cd
zeeshan@ubuntu: /home$ ls
Desktop  Downloads  Music  Public  Templates
Documents  Journal  Pictures  snap  Videos
zeeshan@ubuntu: /home$ cd Desktop
zeeshan@ubuntu: /Desktop$ pwd
/home/zeeshan/Desktop
zeeshan@ubuntu: /Desktop$ ls
zeeshan@ubuntu: /Desktop$ cd /home
zeeshan@ubuntu: /home$ ls
swan  zeeshan
zeeshan@ubuntu: /home$ ls /home/zeeshan
Desktop  Downloads  Music  Public  Templates
Documents  Journal  Pictures  snap  Videos
zeeshan@ubuntu: /home$ cd ~/Journal
zeeshan@ubuntu: /Journal$ pwd
/home/zeeshan/Journal
zeeshan@ubuntu: /Journal$ cd ~/
zeeshan@ubuntu: /$ pwd
/home/zeeshan
zeeshan@ubuntu: /$ cd ~/D
bash: cd: /home/zeeshan/D: No such file or directory
zeeshan@ubuntu: /$ pwd
/home/zeeshan
zeeshan@ubuntu: /$ cd Documents
zeeshan@ubuntu: /Documents$ pwd
/home/zeeshan/Documents
zeeshan@ubuntu: /Documents$ ls
a.txt  karachi021.txt
zeeshan@ubuntu: /Documents$
```

TASK 3:



```
zeeshan@ubuntu: /home/zeeshan$ pwd
/home/zeeshan
zeeshan@ubuntu: /home/zeeshan$ ls
Desktop  Documents  Downloads  Hiking  Journal  Music  Pictures  Public  snap  Templates  Videos
zeeshan@ubuntu: /home/zeeshan$ mkdir Workbench
zeeshan@ubuntu: /home/zeeshan$ ls
Desktop  Documents  Downloads  Hiking  Journal  Music  Pictures  Public  snap  Templates  Videos  Workbench
zeeshan@ubuntu: /home/zeeshan$ gedit Workbench/readme.txt
zeeshan@ubuntu: /home/zeeshan$ cat Workbench/readme.txt
1
2
3
zeeshan@ubuntu: /home/zeeshan$ touch Workbench/list.txt
zeeshan@ubuntu: /home/zeeshan$ ls > Workbench/list.txt
zeeshan@ubuntu: /home/zeeshan$ ls Workbench
list.txt  readme.txt
zeeshan@ubuntu: /home/zeeshan$ ls
Desktop  Documents  Downloads  Hiking  Journal  Music  Pictures  Public  snap  Templates  Videos  Workbench
zeeshan@ubuntu: /home/zeeshan$ wc Workbench/list.txt
12 12 97 Workbench/list.txt
zeeshan@ubuntu: /home/zeeshan$
```

TASK 4:

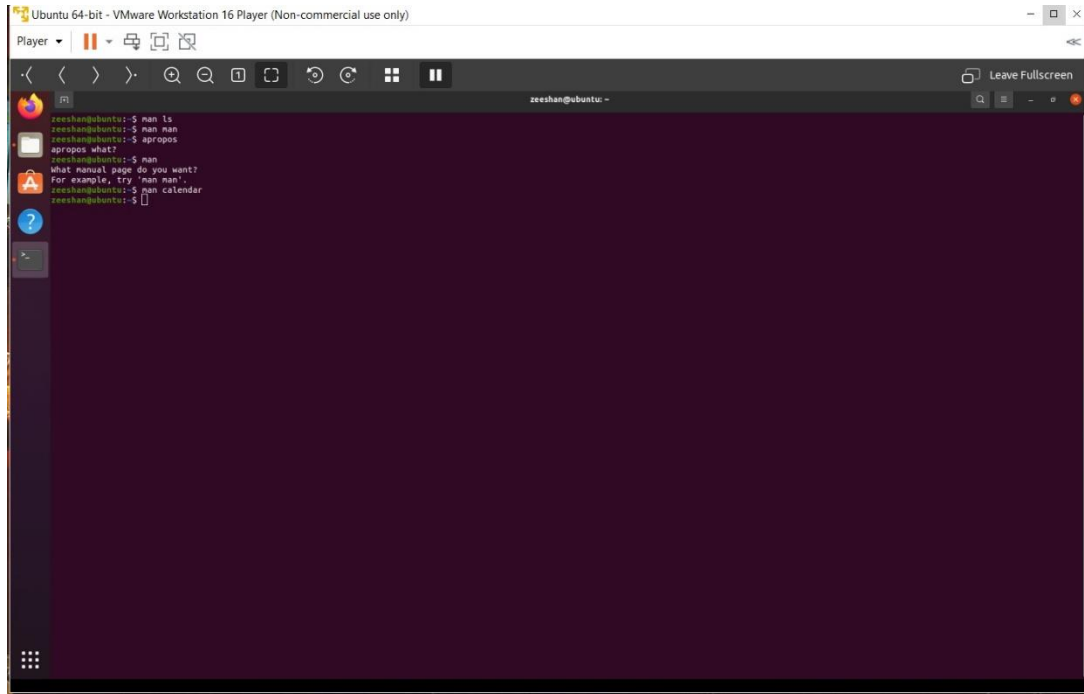


```
Ubuntu 64-bit - VMware Workstation 16 Player (Non-commercial use only)
Player
Activities Terminal Feb 11 23:15 zeeshan@ubuntu: ~/Desktop

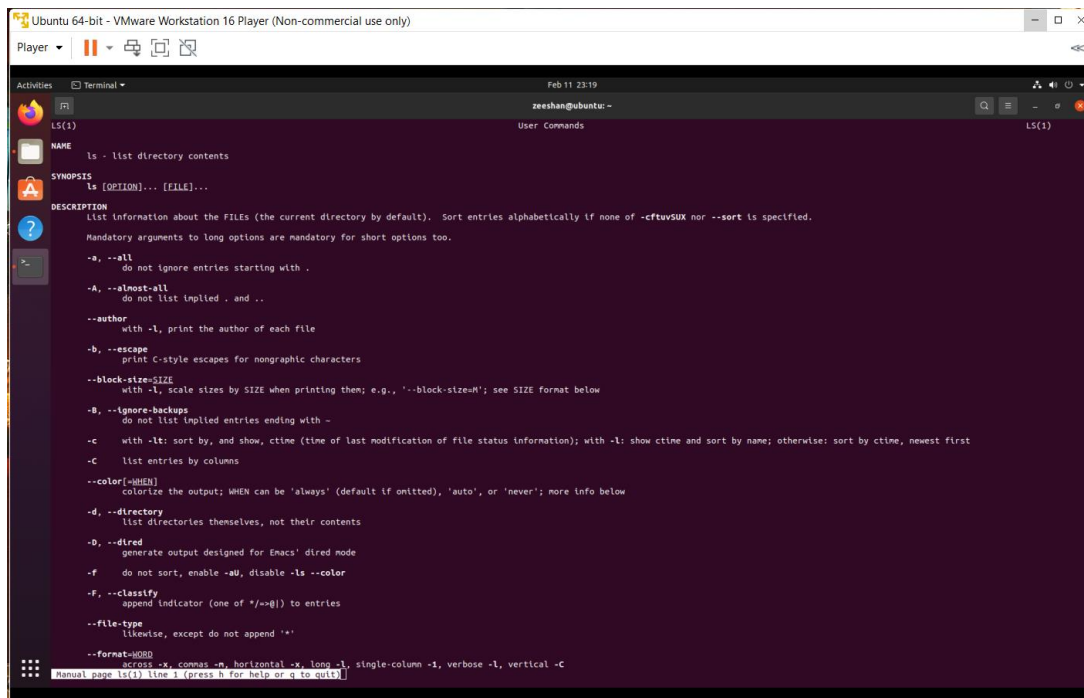
zeeshan@ubuntu:~/Desktop$ mkdir Files
zeeshan@ubuntu:~/Desktop$ ls
Files
zeeshan@ubuntu:~/Desktop$ touch message.txt
zeeshan@ubuntu:~/Desktop$ ls
Files message.txt
zeeshan@ubuntu:~/Desktop$ cp message.txt Files
zeeshan@ubuntu:~/Desktop$ ls
Files message.txt
zeeshan@ubuntu:~/Desktop$ ls Files
message.txt
zeeshan@ubuntu:~/Desktop$ rm Files/message.txt
zeeshan@ubuntu:~/Desktop$ ls
Files message.txt
zeeshan@ubuntu:~/Desktop$ mv message.txt Files
zeeshan@ubuntu:~/Desktop$ ls
Files
zeeshan@ubuntu:~/Desktop$ ls Files
message.txt
zeeshan@ubuntu:~/Desktop$ ls
Files
zeeshan@ubuntu:~/Desktop$ ls Files
message.txt
zeeshan@ubuntu:~/Desktop$ rm Files/message.txt
zeeshan@ubuntu:~/Desktop$ ls
Files
zeeshan@ubuntu:~/Desktop$ ls Files
zeeshan@ubuntu:~/Desktop$
```

WEEK 2:

TASK 1:



```
zeeshan@ubuntu:~$ man ls
zeeshan@ubuntu:~$ man man
zeeshan@ubuntu:~$ apropos what?
zeeshan@ubuntu:~$ man
What manual page do you want?
For example, try 'man man'.
zeeshan@ubuntu:~$ man calendar
zeeshan@ubuntu:~$
```

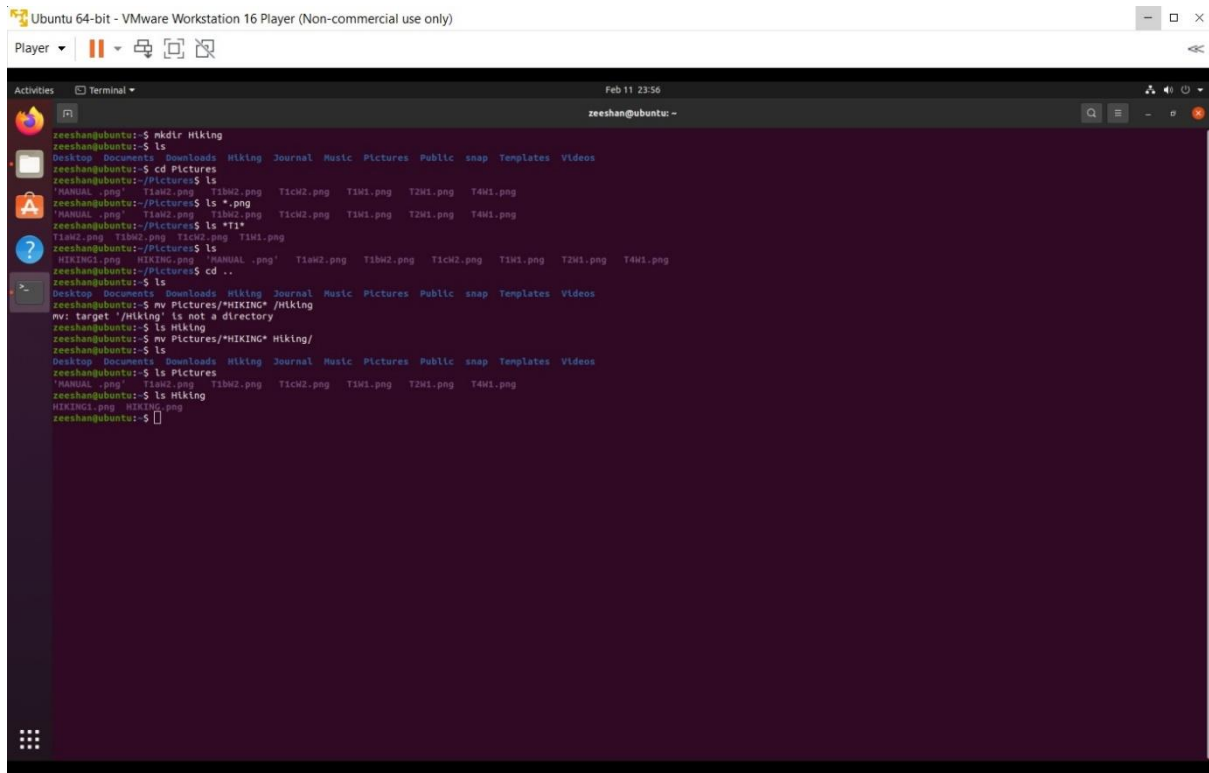


```
ls(1)
NAME
ls - list directory contents
SYNOPSIS
ls [OPTION]... [FILE]...
DESCRIPTION
List information about the FILES (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.
Mandatory arguments to long options are mandatory for short options too.
-a, --all
do not ignore entries starting with .
-A, --almost-all
do not list implied . and ..
--author
with -l, print the author of each file
-b, --escape
print C-style escapes for nongraphic characters
--block-size=SIZE
with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M'; see SIZE format below
-B, --ignore-backups
do not list implied entries ending with ~
-c with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first
-C list entries by columns
--color[=WHEN]
colorize the output; WHEN can be 'always' (default if omitted), 'auto', or 'never'; more info below
-d, --directory
list directories themselves, not their contents
-D, --dired
generate output designed for Emacs' dired mode
-f do not sort, enable -au, disable -ls --color
-F, --classify
append indicator (one of */=>@) to entries
--file-type
likewise, except do not append '*'
--format=WORD
across -x, commas -m, horizontal -x, long -l, single-column -s, verbose -l, vertical -C
Manual page ls(1) line 1 (press h for help or q to quit)
```

```
Ubuntu 64-bit - VMware Workstation 16 Player (Non-commercial use only)
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Activities Terminal Feb 11 22:10 zeshan@ubuntu:~ Manual page utils MAN(1)
NAME
man - an interface to the system reference manuals
SYNOPSIS
man [man options] [section] page ...
man -k [man options] page ...
man -k [man options] [section] term ...
man -f [man options] page ...
man -l [man options] file ...
man -w [-W [man options]] page ...
DESCRIPTION
man is the system's manual pager. Each page argument given to man is normally the name of a program, utility or function. The manual page associated with each of these arguments is then found and displayed. A section, if provided, will direct man to look only in that section of the manual. The default action is to search in all of the available sections following a pre-defined order (see DEFAULTS), and to show only the first page found, even if page exists in several sections.
The table below shows the section numbers of the manual followed by the types of pages they contain.
1 Executable programs or shell commands
2 System calls (functions provided by the kernel)
3 Library calls (functions within program libraries)
4 Special files (usually found in /dev)
5 File formats and conventions, e.g. /etc/passwd
6 Games
7 Miscellaneous (including macro packages and conventions), e.g. man(7), groff(7)
8 System administration commands (usually only for root)
9 Kernel routines [Non standard]
A manual page consists of several sections.
Conventional section names include NAME, SYNOPSIS, CONFIGURATION, DESCRIPTION, OPTIONS, EXIT STATUS, RETURN VALUE, ERRORS, ENVIRONMENT, FILES, VERSIONS, CONFORMING TO, NOTES, BUGS, EXAMPLE, AUTHORS, and SEE ALSO.
The following conventions apply to the SYNOPSIS section and can be used as a guide in other sections.
bold text type exactly as shown.
italic text replace with appropriate argument.
[-abc] any or all arguments within [ ] are optional.
-a|-b options delimited by | cannot be used together.
argument ... argument is repeatable.
[expression] ... entire expression within [ ] is repeatable.
Exact rendering may vary depending on the output device. For instance, man will usually not be able to render italics when running in a terminal, and will typically use underlined or coloured text instead.
The command or function illustration is a pattern that should match all possible invocations. In some cases it is advisable to illustrate several exclusive invocations as is shown in the SYNOPSIS section of this manual page.
EXAMPLES
man ls
Display the manual page for the ls (program) ls.
Manual page man(1) line 1 (press h for help or q to quit)
```

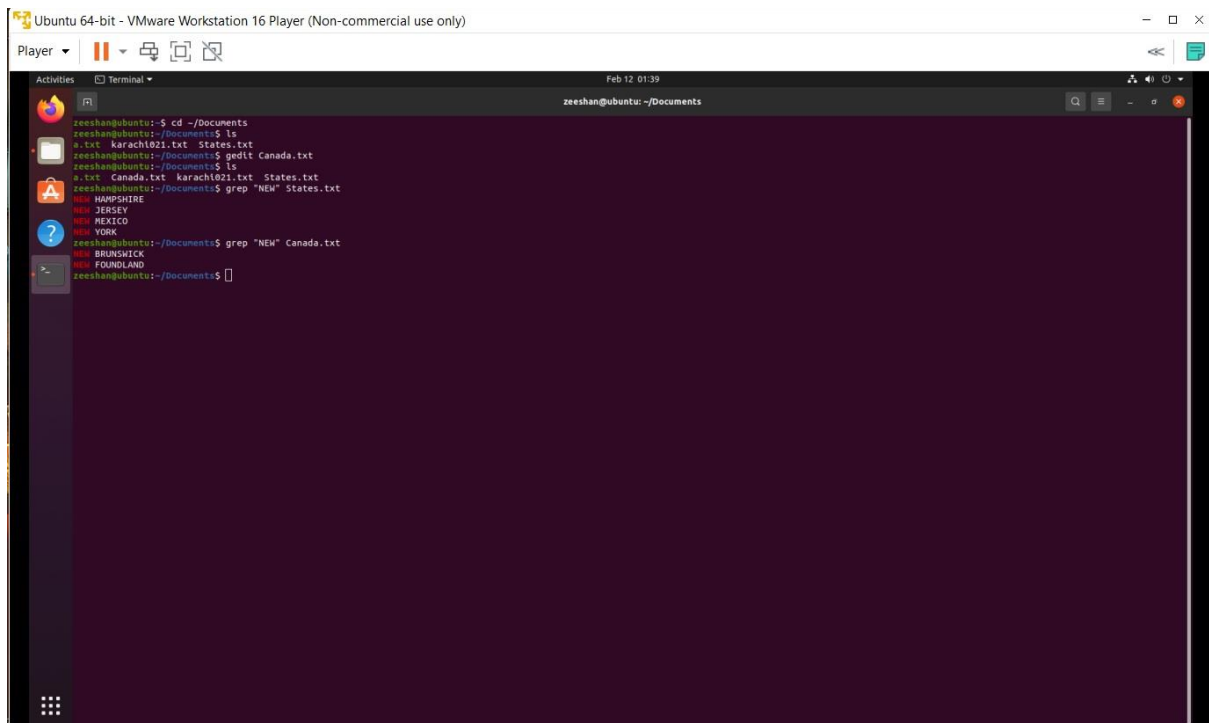
```
Ubuntu 64-bit - VMware Workstation 16 Player (Non-commercial use only)
Player
Activities Terminal Feb 11 22:21 zeshan@ubuntu:~ BSD General Commands Manual CALENDAR(1)
NAME
calendar - reminder service
SYNOPSIS
calendar [-abw] [-A num] [-B num] [-l num] [-e num] [-f calendarfile] [-t [[[cc]yy]mm]dd]]
DESCRIPTION
The calendar utility checks the current directory or the directory specified by the CALENDAR_DIR environment variable for a file named calendar and displays lines that begin with either today's date or tomorrow's. On Fridays, events on Friday through Monday are displayed.
The options are as follows:
-A num Print lines from today and next num days (forward, future). Defaults to one. (same as -l)
-B num Print lines from today and previous num days (backward, past).
-l num Print lines from today and next num days (forward, future). Defaults to one. (same as -A)
-e num Print lines from today and next num days, only if today is Friday (forward, future). Defaults to two, which causes calendar to print entries through the weekend on Fridays.
-f calendarfile Use calendarfile as the default calendar file. If this file is not accessible, the system-wide default is used.
-t [[[cc]yy]mm]dd Act like the specified value is "today" instead of using the current date. If yy is specified, but cc is not, a value for yy between 69 and 99 results in a cc value of 19. Otherwise, a cc value of 20 is used.
-w Print day of the week name in front of each event.
To handle calendars in your national code table you can specify "LANG=<locale name>" in the calendar file as early as possible. To handle national Easter names in the calendars, "Easter=<national name>" (for Catholic Easter) or "Paskha=<national name>" (for Orthodox Easter) can be used.
A special locale name exists: "utf-8". Specifying "LANG=utf-8" indicates that the dates will be read using the C locale, and the descriptions will be encoded in UTF-8. This is usually used for the distributed calendar files. The "CALENDAR" variable can be used to specify the style. Only "Julian" and "Gregorian" styles are currently supported. Use "CALENDAR=" to return to the default (Gregorian).
To enforce special date calculation mode for Cyrillic calendars you should specify "LANG=<local name>" and "BODUN=<body prefix>" where <local name> can be ru_RU.UTF-8, uk_UA.UTF-8 or by_BY.UTF-8.
Note that the locale is reset to the user's default for each new file that is read. This is so that locales from one file do not accidentally carry over into another file.
Other lines should begin with a month and day. They may be entered in almost any format, either numeric or as character strings. If proper locale is set, national months and weekdays names can be used. A single asterisk (*) matches every month. A day without a month matches that day of every week. A month without a day matches the first of that month. Two numbers default to the month followed by the day. Lines with leading tabs default to the last entered date, allowing multiple line specifications for a single date. "Easter" (may be followed by a positive or negative integer) is Easter for this year. "Paskha" (may be followed by a positive or negative integer) is Orthodox Easter for this year. Weekdays may be followed by "-a" ... "-z" (aliases last, first, second, third, fourth) for moving events like "the last Monday in April".
By convention, dates followed by an asterisk (**) are not fixed, i.e., change from year to year.
Manual page calendar(1) line 1 (press h for help or q to quit)
```

TASK 2:



```
zeeshan@ubuntu:~$ mkdir Hiking
zeeshan@ubuntu:~$ ls
Desktop Documents Downloads Hiking Journal Music Pictures Public snap Templates Videos
zeeshan@ubuntu:~$ cd Pictures
zeeshan@ubuntu:~/Pictures$ ls
'MANUAL .png' T1aW2.png T1bW2.png T1cW2.png T1W1.png T2W1.png T4W1.png
zeeshan@ubuntu:~/Pictures$ ls *.png
'MANUAL .png' T1aW2.png T1bW2.png T1cW2.png T1W1.png T2W1.png T4W1.png
zeeshan@ubuntu:~/Pictures$ ls *T1*
T1aW2.png T1bW2.png T1cW2.png T1W1.png
zeeshan@ubuntu:~/Pictures$ ls
HIKING1.png HIKING.png 'MANUAL .png' T1aW2.png T1bW2.png T1cW2.png T1W1.png T2W1.png T4W1.png
zeeshan@ubuntu:~/Pictures$ cd ..
zeeshan@ubuntu:~$ ls
Desktop Documents Downloads Hiking Journal Music Pictures Public snap Templates Videos
zeeshan@ubuntu:~$ mv Pictures/*HIKING* /HIKING
mv: target '/HIKING' is not a directory
zeeshan@ubuntu:~$ ls Hiking
zeeshan@ubuntu:~$ mv Pictures/*HIKING* Hiking/
zeeshan@ubuntu:~$ ls
Desktop Documents Downloads Hiking Journal Music Pictures Public snap Templates Videos
zeeshan@ubuntu:~$ ls Pictures
'MANUAL .png' T1aW2.png T1bW2.png T1cW2.png T1W1.png T2W1.png T4W1.png
zeeshan@ubuntu:~$ ls Hiking
HIKING1.png HIKING.png
zeeshan@ubuntu:~$
```

TASK 3:



```
zeeshan@ubuntu:~$ cd ~/Documents
zeeshan@ubuntu:~/Documents$ ls
a.txt karachi021.txt States.txt
zeeshan@ubuntu:~/Documents$ gedit Canada.txt
zeeshan@ubuntu:~/Documents$ ls
a.txt Canada.txt karachi021.txt States.txt
zeeshan@ubuntu:~/Documents$ grep "NEW" States.txt
NEW HAMPSHIRE
NEW JERSEY
NEW MEXICO
NEW YORK
zeeshan@ubuntu:~/Documents$ grep "NEW" Canada.txt
NEW BRUNSWICK
NEW FOUNDLAND
zeeshan@ubuntu:~/Documents$
```

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Player ▾ | [Icons] | Feb 12 02:23

Activities | Terminal ▾

```
zeeshan@ubuntu: ~/Documents
zeeshan@ubuntu:~/Documents$ ls
a.txt  Canada.txt  karachi021.txt  States.txt  vowel_a.txt  vowel_e.txt  vowel_i.txt  vowel_o.txt  vowel_u.txt
zeeshan@ubuntu:~/Documents$ grep -v "A" States.txt > vowel_a.txt
zeeshan@ubuntu:~/Documents$ cat vowel_a.txt
CONNECTICUT
ILLINOIS
KENTUCKY
MISSISSIPPI
MISSOURI
NEW JERSEY
NEW MEXICO
NEW YORK
OHIO
OREGON
TENNESSEE
VERMONT
WISCONSIN
WYOMING
zeeshan@ubuntu:~/Documents$
```

Ubuntu 64-bit - VMware Workstation 16 Player (Non-commercial use only)

Player ▾ | [Icons] | Feb 12 02:24

Activities | Terminal ▾

```
zeeshan@ubuntu:~/Documents$ grep -v "E" States.txt > vowel_e.txt
zeeshan@ubuntu:~/Documents$ cat vowel_e.txt
ALABAMA
ALASKA
ARIZONA
ARKANSAS
CALIFORNIA
COLORADO
FLORIDA
HAWAII
IDAHO
ILLINOIS
INDIANA
IOWA
KANSAS
LOUISIANA
MARYLAND
MICHIGAN
MISSISSIPPI
MISSOURI
MONTANA
NORTH CAROLINA
NORTH DAKOTA
OHIO
OKLAHOMA
SOUTH CAROLINA
SOUTH DAKOTA
UTAH
VIRGINIA
WASHINGTON
WISCONSIN
WYOMING
zeeshan@ubuntu:~/Documents$
```

Player ▾ | Feb 12 02:26 | zeeshan@ubuntu: ~/Documents

```

zeeshan@ubuntu:~/Documents$ grep -v "I" States.txt > vowel_l.txt
zeeshan@ubuntu:~/Documents$ cat vowel_l.txt
ALABAMA
ALASKA
ARKANSAS
COLORADO
DELAWARE
KANSAS
KENTUCKY
MARYLAND
MASSACHUSETTS
MONTANA
NEBRASKA
NEVADA
NEW JERSEY
NEW YORK
NORTH DAKOTA
OKLAHOMA
OREGON
SOUTH DAKOTA
TENNESSEE
TEXAS
UTAH
VERMONT
zeeshan@ubuntu:~/Documents$

```

Player ▾ | Feb 12 02:28 | zeeshan@ubuntu: ~/Documents

```

zeeshan@ubuntu:~/Documents$ grep -v "O" States.txt > vowel_o.txt
zeeshan@ubuntu:~/Documents$ cat vowel_o.txt
ALABAMA
ALASKA
ARKANSAS
DELAWARE
HAWAII
INDIANA
KANSAS
KENTUCKY
MAINE
MARYLAND
MASSACHUSETTS
MICHIGAN
MISSISSIPPI
NEBRASKA
NEVADA
NEW HAMPSHIRE
NEW JERSEY
PENNSYLVANIA
TENNESSEE
TEXAS
UTAH
VIRGINIA
WEST VIRGINIA
zeeshan@ubuntu:~/Documents$

```


Ubuntu 64-bit - VMware Workstation 16 Player (Non-commercial use only)

Player ▾

Activities Terminal Feb 12 02:29 zeeshan@ubuntu: ~/Documents

```
zeeshan@ubuntu:~/Documents$ grep -v "u" States.txt > vowel_u.txt
zeeshan@ubuntu:~/Documents$ cat vowel_u.txt
ALABAMA
ALASKA
ARIZONA
ARKANSAS
CALIFORNIA
COLORADO
DELAWARE
FLORIDA
GEORGIA
HAWAII
IDAHO
ILLINOIS
INDIANA
IOWA
KANSAS
MAINE
MARYLAND
MICHIGAN
MINNESOTA
MISSISSIPPI
MONTANA
NEBRASKA
NEVADA
NEW HAMPSHIRE
NEW JERSEY
NEW MEXICO
NEW YORK
NORTH CAROLINA
NORTH DAKOTA
OHIO
OKLAHOMA
OREGON
PENNSYLVANIA
RHODE ISLAND
TENNESSEE
TEXAS
VERMONT
VIRGINIA
WASHINGTON
WEST VIRGINIA
WISCONSIN
WYOMING
zeeshan@ubuntu:~/Documents$
```

TASK 4:

Ubuntu 64-bit - VMware Workstation 16 Player (Non-commercial use only)

Player ▾

Activities Terminal Feb 12 01:15 zeeshan@ubuntu: ~/Documents

```
zeeshan@ubuntu:~/Documents$ cat States.txt
ALABAMA
ALASKA
ARIZONA
ARKANSAS
CALIFORNIA
COLORADO
CONNECTICUT
DELAWARE
FLORIDA
GEORGIA
HAWAII
IDAHO
ILLINOIS
INDIANA
IOWA
KANSAS
KENTUCKY
LOUISIANA
MAINE
MARYLAND
MASSACHUSETTS
MICHIGAN
MINNESOTA
MISSISSIPPI
MISSOURI
MONTANA
NEBRASKA
NEVADA
NEW HAMPSHIRE
NEW JERSEY
NEW MEXICO
NEW YORK
NORTH CAROLINA
NORTH DAKOTA
OHIO
OKLAHOMA
OREGON
PENNSYLVANIA
RHODE ISLAND
SOUTH CAROLINA
SOUTH DAKOTA
TENNESSEE
TEXAS
UTAH
VERMONT
VIRGINIA
WASHINGTON
WEST VIRGINIA
WISCONSIN
WYOMING
zeeshan@ubuntu:~/Documents$ cat States.txt | grep 'NEW'
NEW HAMPSHIRE
NEW JERSEY
NEW MEXICO
NEW YORK
```

Ubuntu 64-bit - VMware Workstation 16 Player (Non-commercial use only)

Player ▾

Activities Terminal Feb 12 01:22 zeeshan@ubuntu: ~

```
zeeshan@ubuntu:~$ history
1 man man
2 cd Documents
3 \
4 catgetid
5 cat getid
6 ls
7 Documents
8 cd Documents
9 User
10 date
11 datek
12 date %
13 date +%H
14 date +%T
15 date +%M
16 ls /home
17 ls /home/
18 ls /home/zeeshan
19 cd /home
20 cd /home/student
21 ls /home
22 cd /home/student
23 ls /home..
24 home ..
25 ls /home ..
26 cd /home/zeeshan
27 useradd
28 cd ..
29 useradd
30 sudo useradd mustafa
31 adduser
32 sudo adduser awan
33 ls /home
34 su awan
35 ls /home/downloads
36 ls /home/zeeshan/downloads
37 ls /home
38 ls /home/zeeshan
39 ls /home/zeeshan/Music
40 cd ..
41 addgroup
42 adduser --ingroup
43 adduser --ingroup
44 sudo adduser --ingroup
45 cd ..
46 -f
47 sudo -f
48 sudo reboot
49 del awan
50 deluser awan
51 ls
52 cd Music
53 cd ..
54 pwd
55 ls /home/zeeshan/Music
```

Ubuntu 64-bit - VMware Workstation 16 Player (Non-commercial use only)

Player ▾

Activities Terminal Feb 12 01:22 zeeshan@ubuntu: ~

```
707 ls Hiking
708 mv Pictures/*HIKING* Hiking/
709 ls
710 ls Pictures
711 ls Hiking
712 clear
713 pwd
714 ls
715 mkdir Workbench
716 ls
717 gedit Workbench/readme.txt
718 cat Workbench/readme.txt
719 touch Workbench/list.txt
720 ls > Workbench/list.txt
721 ls Workbench
722 ls
723 wc Workbench/list.txt
724 cd
725 clear
726 cd ~/Documents
727 gedit States.txt
728 cat States.txt
729 cat States.txt | grep 'NEW'
730 gedit States.txt
731 clear
732 cat States.txt
733 cat States.txt | grep 'NEW'
734 ~/.bash_history
735 sudo ~/.bash_history
736 history
737 clear
738 history | ~/.bash
739 history | bash
740 clear
741 cd ..
742 history
743 clear
744 history
zeeshan@ubuntu:~$ history | grep 'cat'
4 cat getid
5 cat getid
435 cat Workbench/readme.txt
437 cat Workbench/list.txt
440 cat Workbench/list.txt
470 cat Workbench/readme.txt
472 cat Workbench/list.txt
486 cat list.txt
553 cat home
718 cat Workbench/readme.txt
728 cat States.txt
729 cat States.txt | grep 'NEW'
732 cat States.txt
733 cat States.txt | grep 'NEW'
745 history | grep 'cat'
zeeshan@ubuntu:~$
```