

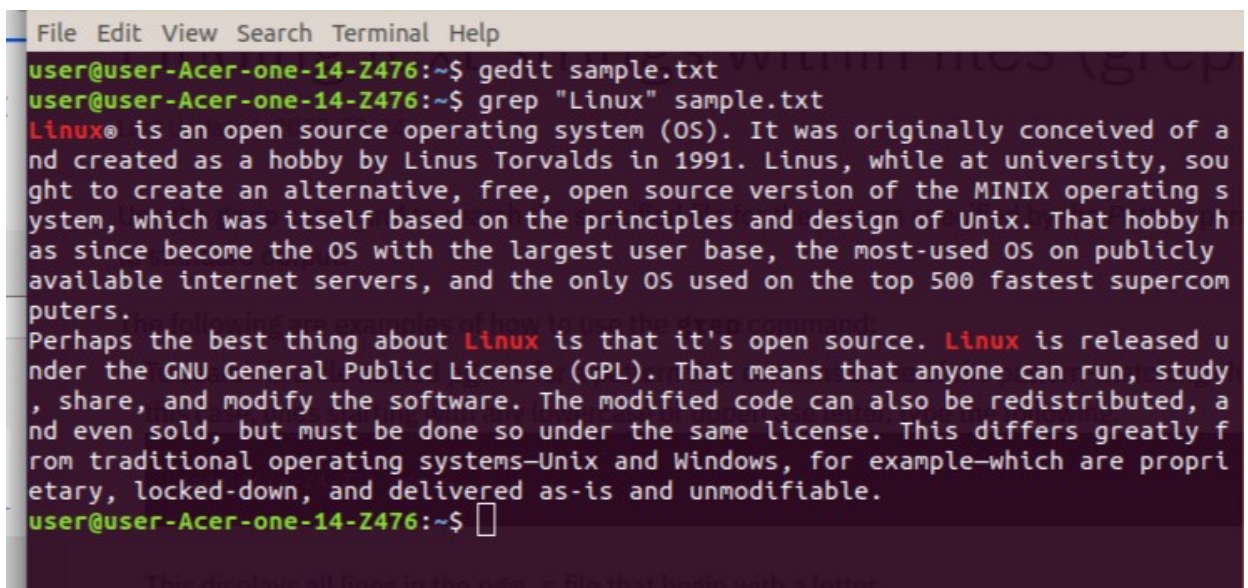
## 2. Linux File Management:

### Task 1: File Permissions

```
user@user-Acer-one-14-Z476:~/testdir$ ls -l
total 0
-rw-r--r-- 1 user user 0 May 13 10:06 file1.txt
-rw-rw-r-- 1 user user 0 May 13 10:07 file2.txt
user@user-Acer-one-14-Z476:~/testdir$
```

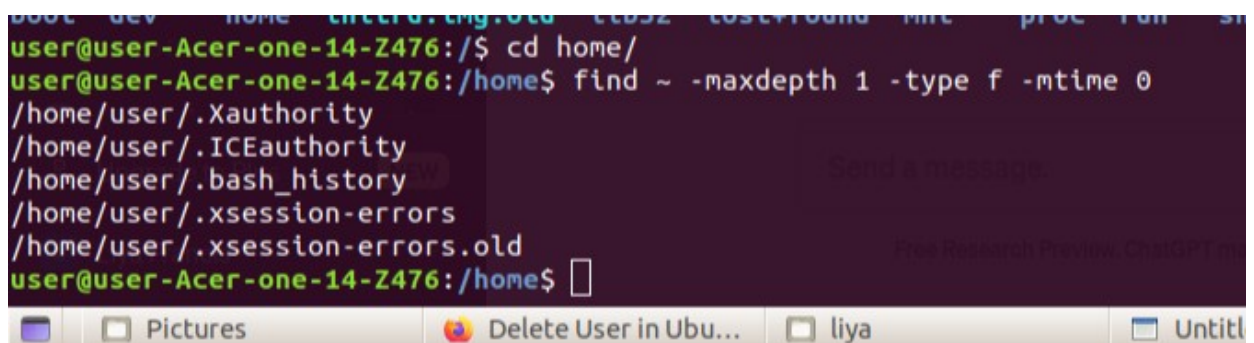
### Task 2: Text and File Search

#### ➤ grep command



```
File Edit View Search Terminal Help
user@user-Acer-one-14-Z476:~$ gedit sample.txt
user@user-Acer-one-14-Z476:~$ grep "Linux" sample.txt
Linux® is an open source operating system (OS). It was originally conceived of a
nd created as a hobby by Linus Torvalds in 1991. Linus, while at university, sou
ght to create an alternative, free, open source version of the MINIX operating s
ystem, which was itself based on the principles and design of Unix. That hobby h
as since become the OS with the largest user base, the most-used OS on publicly
available internet servers, and the only OS used on the top 500 fastest supercom
puters.
Perhaps the best thing about Linux is that it's open source. Linux is released u
nder the GNU General Public License (GPL). That means that anyone can run, study
, share, and modify the software. The modified code can also be redistributed, a
nd even sold, but must be done so under the same license. This differs greatly f
rom traditional operating systems—Unix and Windows, for example—which are propri
etary, locked-down, and delivered as-is and unmodifiable.
user@user-Acer-one-14-Z476:~$
```

#### ➤ find command



```
user@user-Acer-one-14-Z476:/$ cd home/
user@user-Acer-one-14-Z476:/home$ find ~ -maxdepth 1 -type f -mtime 0
/home/user/.Xauthority
/home/user/.ICEauthority
/home/user/.bash_history
/home/user/.xsession-errors
/home/user/.xsession-errors.old
user@user-Acer-one-14-Z476:/home$
```

## ➤ locate command

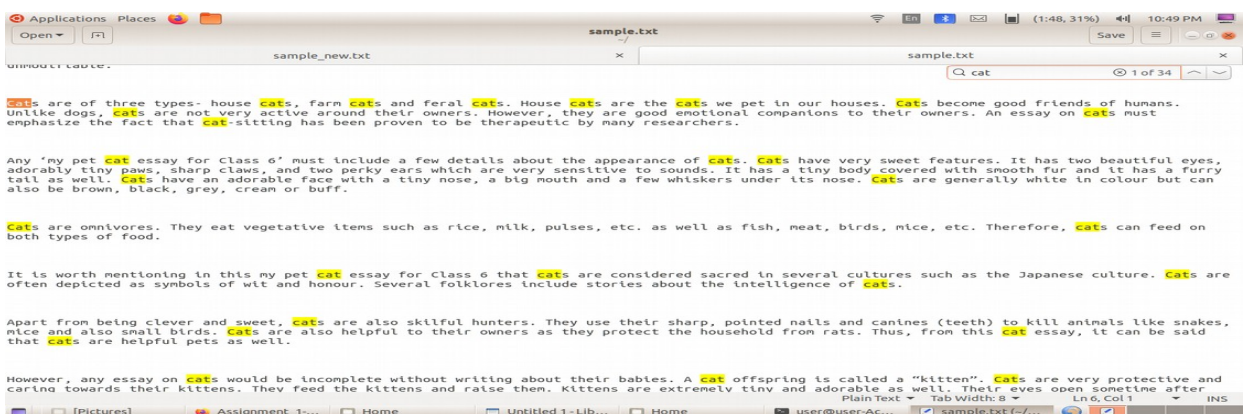
```
/bin/bash
user@user-Acer-one-14-Z476:~$ locate -b '\bash'
/bin/bash
/etc/apparmor.d/abstractions/bash
/home/user/Downloads/postman-linux-x64/Postman/app/resources/app/node_modules/@postman/hermes/tests/unit/bash
/snap/core18/2721/bin/bash
/snap/core18/2721/etc/apparmor.d/abstractions/bash
/snap/core18/2721/usr/share/doc/bash
/snap/core18/2721/usr/share/lintian/overrides/bash
/snap/core18/2721/usr/share/menu/bash
/snap/core18/2745/bin/bash
/snap/core18/2745/etc/apparmor.d/abstractions/bash
/snap/core18/2745/usr/share/doc/bash
/snap/core18/2745/usr/share/lintian/overrides/bash
/snap/core18/2745/usr/share/menu/bash
/snap/postman/204/usr/share/postman/resources/app/node_modules/@postman/hermes/tests/unit/bash
/snap/snapd/19122/usr/lib/snapd/apparmor.d/abstractions/bash
/usr/share/code/resources/completions/bash
/usr/share/doc/bash
/usr/share/lintian/overrides/bash
/usr/share/menu/bash
user@user-Acer-one-14-Z476:~$
```

## Task 3: Text and File Processing

### ➤ sed command



```
user@user-Acer-one-14-Z476:~$ mkdir newdir
user@user-Acer-one-14-Z476:~$ cd newdir/
user@user-Acer-one-14-Z476:~/newdir$ touch sample_new.txt
user@user-Acer-one-14-Z476:~/newdir$ cd
user@user-Acer-one-14-Z476:~$ sed 's/cat/dog/g' /home/user/sample.txt >/home/user/newdir/sample_new.txt
user@user-Acer-one-14-Z476:~$
```



Cats are of three types- house cats, farm cats and feral cats. House cats are the cats we pet in our houses. Cats become good friends of humans. Unlike dogs, cats are not very active around their owners. However, they are good emotional companions to their owners. An essay on cats must emphasize the fact that cat-sitting has been proven to be therapeutic by many researchers.

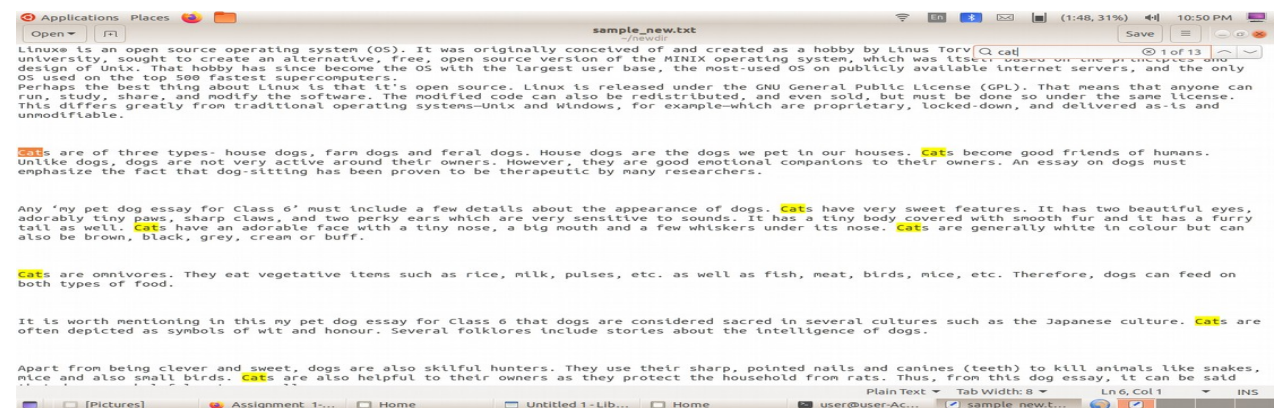
Any 'my pet cat essay for Class 6' must include a few details about the appearance of cats. Cats have very sweet features. It has two beautiful eyes, adorably tiny paws, sharp claws, and two perky ears which are very sensitive to sounds. It has a tiny body covered with smooth fur and it has a furry tail as well. Cats have an adorable face with a tiny nose, a big mouth and a few whiskers under its nose. Cats are generally white in colour but can also be brown, black, grey, cream or buff.

Cats are omnivores. They eat vegetative items such as rice, milk, pulses, etc. as well as fish, meat, birds, mice, etc. Therefore, cats can feed on both types of food.

It is worth mentioning in this my pet cat essay for Class 6 that cats are considered sacred in several cultures such as the Japanese culture. Cats are often depicted as symbols of wit and honour. Several folklores include stories about the intelligence of cats.

Apart from being clever and sweet, cats are also skilful hunters. They use their sharp, pointed nails and canines (teeth) to kill animals like snakes, mice and also small birds. Cats are also helpful to their owners as they protect the household from rats. Thus, from this cat essay, it can be said that cats are helpful pets as well.

However, any essay on cats would be incomplete without writing about their babies. A cat offspring is called a "kitten". Cats are very protective and caring towards their kittens. They feed the kittens and raise them. Kittens are extremely tiny and adorable as well. Their eyes open sometime after



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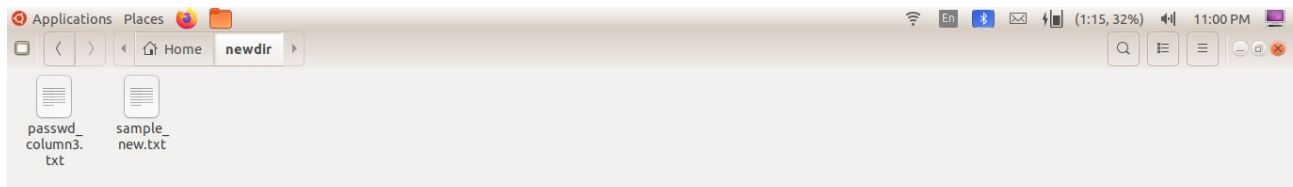
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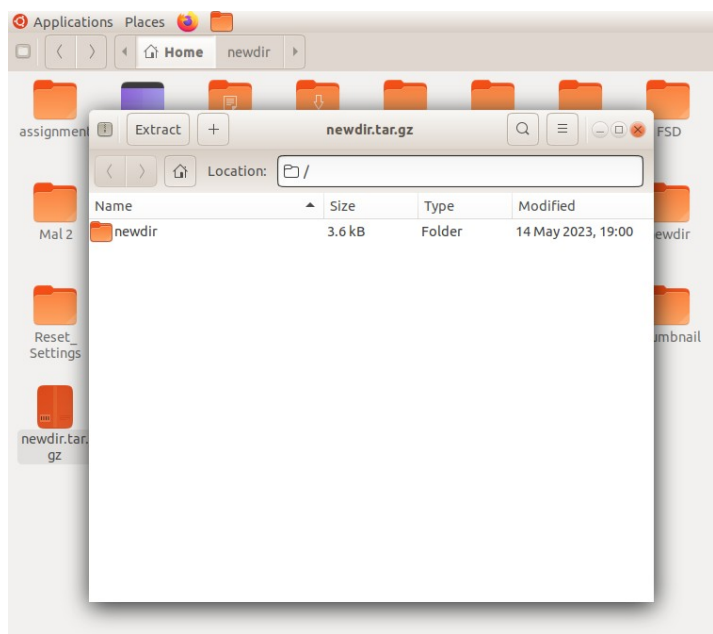
### ➤ cut command

```
File Edit View Search Terminal Help
user@user-Acer-one-14-Z476:~$ cut -d: -f3 /etc/passwd > newdir/passwd_column3.tx
t
user@user-Acer-one-14-Z476:~$
```



## ➤ tar command

```
File Edit View Search Terminal Help
user@user-Acer-one-14-Z476:~$ tar -czvf newdir.tar.gz newdir
newdir/
newdir/sample_new.txt
newdir/passwd_column3.txt
user@user-Acer-one-14-Z476:~$
```



## 3. User and Group Management

### Task 1: User Management



```
Applications Places user@user-Acer-one-14-Z476: ~
File Edit View Search Terminal Help
user@user-Acer-one-14-Z476:~$ getent passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailling List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,:/run/systemd/netif:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,:/run/systemd/resolve:/usr/sbin/nologin
syslog:x:102:106:/home/syslog:/usr/sbin/nologin
messagebus:x:103:107:/nonexistent:/usr/sbin/nologin
_apt:x:104:65534:/nonexistent:/usr/sbin/nologin
uuidd:x:105:111:/run/uuidd:/usr/sbin/nologin
avahi-autoipd:x:106:112:Avahi autoip daemon,,:/var/lib/avahi-autoipd:/usr/sbin/nologin
usbmux:x:107:46:usbmux daemon,,:/var/lib/usbmux:/usr/sbin/nologin
dnsmasq:x:108:65534:dnsmasq,,:/var/lib/misc:/usr/sbin/nologin
rtkit:x:109:114:RealtimeKit,,:/proc:/usr/sbin/nologin
cups-pk-helper:x:110:116:user for cups-pk-helper service,,:/home/cups-pk-helper:/usr/sbin/nologin
speech-dispatcher:x:111:29:Speech Dispatcher,,:/var/run/speech-dispatcher:/bin/false
whoopie:x:112:117:/nonexistent:/bin/false
kernoops:x:113:65534:Kernel Oops Tracking Daemon,,:/usr/sbin/nologin
saned:x:114:119:/var/lib/saned:/usr/sbin/nologin
pulse:x:115:120:PulseAudio daemon,,:/var/run/pulse:/usr/sbin/nologin
avahi:x:116:122:Avahi mDNS daemon,,:/var/run/avahi-daemon:/usr/sbin/nologin
```

```
Applications Places user@user-Acer-one-14-Z476: ~
File Edit View Search Terminal Help
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailling List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,:/run/systemd/netif:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,:/run/systemd/resolve:/usr/sbin/nologin
syslog:x:102:106:/home/syslog:/usr/sbin/nologin
messagebus:x:103:107:/nonexistent:/usr/sbin/nologin
_apt:x:104:65534:/nonexistent:/usr/sbin/nologin
uuidd:x:105:111:/run/uuidd:/usr/sbin/nologin
avahi-autoipd:x:106:112:Avahi autoip daemon,,:/var/lib/avahi-autoipd:/usr/sbin/nologin
usbmux:x:107:46:usbmux daemon,,:/var/lib/usbmux:/usr/sbin/nologin
dnsmasq:x:108:65534:dnsmasq,,:/var/lib/misc:/usr/sbin/nologin
rtkit:x:109:114:RealtimeKit,,:/proc:/usr/sbin/nologin
cups-pk-helper:x:110:116:user for cups-pk-helper service,,:/home/cups-pk-helper:/usr/sbin/nologin
speech-dispatcher:x:111:29:Speech Dispatcher,,:/var/run/speech-dispatcher:/bin/false
whoopie:x:112:117:/nonexistent:/bin/false
kernoops:x:113:65534:Kernel Oops Tracking Daemon,,:/usr/sbin/nologin
saned:x:114:119:/var/lib/saned:/usr/sbin/nologin
pulse:x:115:120:PulseAudio daemon,,:/var/run/pulse:/usr/sbin/nologin
avahi:x:116:122:Avahi mDNS daemon,,:/var/run/avahi-daemon:/usr/sbin/nologin
colord:x:117:123:colord colour management daemon,,:/var/lib/colord:/usr/sbin/nologin
hplip:x:118:7:HPLIP system user,,:/var/run/hplip:/bin/false
geoclue:x:119:124:/var/lib/geoclue:/usr/sbin/nologin
gdm:x:121:125:Gnome Display Manager:/var/lib/gdm3:/bin/false
lightdm:x:122:126:Light Display Manager:/var/lib/lightdm:/bin/false
sshd:x:120:65534:/run/ssh:/usr/sbin/nologin
timidity:x:123:130:Timidity++ MIDI sequencer service:/etc/timidity:/usr/sbin/nologin
user:x:1000:1000:user,,:/home/user:/bin/bash
mysql:x:999:999:/home/mysql:/bin/sh
testuser:x:1001:1001:TESTUSER,,:/home/testuser:/bin/bash
user@user-Acer-one-14-Z476:~$
```

## Task 2: Group Management

```
Applications Places user@user-Acer-one-14-Z476: ~/testdir
File Edit View Search Terminal Help
user@user-Acer-one-14-Z476:~/testdir$ ls -l
total 4
-rw-r--r-- 1 user user 11 May 14 07:42 file1.txt
-rw-rw-r-- 1 user user 0 May 13 10:07 file2.txt
user@user-Acer-one-14-Z476:~/testdir$
```

**3. User and Group Management**

**Task 1: User Management**

- Create a new user account named "testuser".