

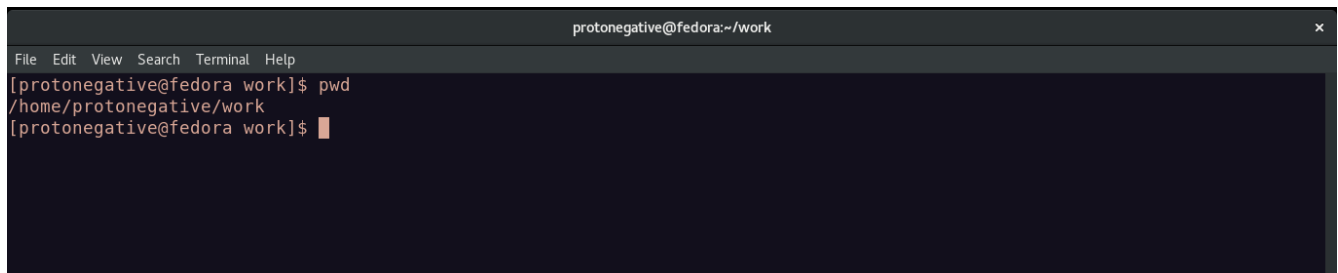
Experiment 3

21th February 2019

Aim: To learn and understand usage of bash commands

1. Display your current directory.

This can be done using the ‘pwd’ command meaning print working directory.

A terminal window titled 'protonegative@fedora:~/work' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the command 'pwd' being executed, resulting in the output '/home/protonegative/work'. The prompt is '[protonegative@fedora work]\$'.

2. Change to the /etc directory.

The change directory(cd) command can be used here.

A terminal window titled 'protonegative@fedora:/etc' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the command 'cd /etc' being executed, resulting in the prompt '[protonegative@fedora etc]\$'.

3. Now, change to your home directory using a single command.

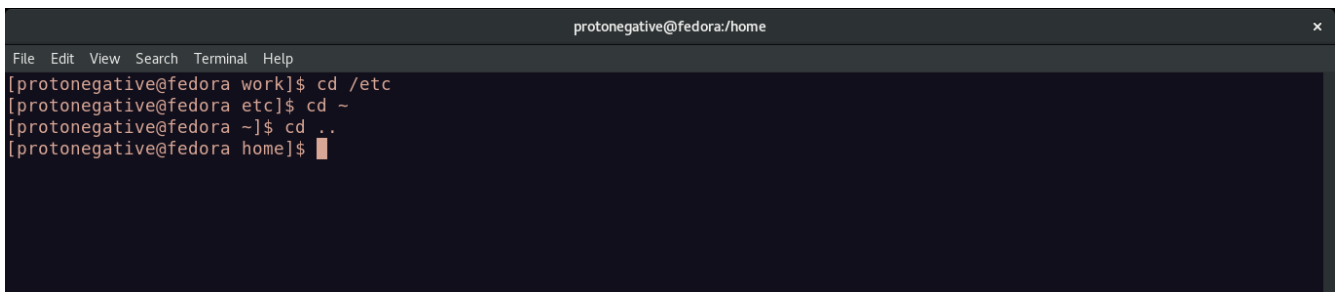
This can be done using the wild card ‘~’ meaning home directory.



```
protonegative@fedora:~
File Edit View Search Terminal Help
[protonegative@fedora work]$ cd /etc
[protonegative@fedora etc]$ cd ~
[protonegative@fedora ~]$
```

4. Change to the parent directory of the current directory.

Parent directory can be accessed using the wildcard ‘..’



```
protonegative@fedora:/home
File Edit View Search Terminal Help
[protonegative@fedora work]$ cd /etc
[protonegative@fedora etc]$ cd ~
[protonegative@fedora ~]$ cd ..
[protonegative@fedora home]$
```

5. Go to the root directory.

Root directory is named ‘/’ and can be used to change directory.



```
protonegative@fedora:/
File Edit View Search Terminal Help
[protonegative@fedora work]$ cd /etc
[protonegative@fedora etc]$ cd ~
[protonegative@fedora ~]$ cd ..
[protonegative@fedora home]$ cd /
[protonegative@fedora /]$
```

6. Give a long listing of the root directory.

List command(ls) along with flags -l(long list) and -a(show hidden files) can be used to have long listing of library.

```
protonegative@fedora:/  
File Edit View Search Terminal Help  
[protonegative@fedora work]$ cd /etc  
[protonegative@fedora etc]$ cd ~  
[protonegative@fedora ~]$ cd ..  
[protonegative@fedora home]$ cd /  
[protonegative@fedora /]$ ls -la  
total 72  
dr-xr-xr-x. 18 root root 4096 Nov 5 2017 .  
dr-xr-xr-x. 18 root root 4096 Nov 5 2017 ..  
lrwxrwxrwx. 1 root root 7 Aug 3 2017 bin -> usr/bin  
dr-xr-xr-x. 7 root root 4096 Mar 15 2018 boot  
drwxr-xr-x. 23 root root 4380 Feb 21 00:17 dev  
drwxr-xr-x. 156 root root 12288 Feb 20 21:05 etc  
drwxr-xr-x. 4 root root 4096 Mar 15 2018 home  
lrwxrwxrwx. 1 root root 7 Aug 3 2017 lib -> usr/lib  
lrwxrwxrwx. 1 root root 9 Aug 3 2017 lib64 -> usr/lib64  
drwx----- 2 root root 16384 Nov 5 2017 lost+found  
drwxr-xr-x. 4 root root 4096 Sep 29 22:18 media  
drwxr-xr-x. 2 root root 4096 Aug 3 2017 mnt  
drwxr-xr-x. 4 root root 4096 May 10 2018 opt  
dr-xr-xr-x. 314 root root 0 Feb 20 16:32 proc  
dr-xr-xr-x. 11 root root 4096 Oct 2 18:57 root  
drwxr-xr-x. 45 root root 1300 Feb 20 21:05 run  
lrwxrwxrwx. 1 root root 8 Aug 3 2017 sbin -> usr/sbin  
drwxr-xr-x. 2 root root 4096 Aug 3 2017 srv  
dr-xr-xr-x. 13 root root 0 Feb 20 11:02 sys  
drwxrwxrwt. 17 root root 440 Feb 21 00:23 tmp  
drwxr-xr-x. 13 root root 4096 May 3 2018 usr  
drwxr-xr-x. 22 root root 4096 May 5 2018 var  
[protonegative@fedora /]$
```

7. Give a listing of the last 10 files in the root directory.

Output of `ls` with flag `-lt`(one file per line with time sorting) is piped to `head` with `-10` as flag.

```
protonegative@fedora:/  
File Edit View Search Terminal Help  
[protonegative@fedora /]$ ls -lt | head -10  
tmp  
dev  
etc  
run  
proc  
sys  
root  
media  
opt  
var  
[protonegative@fedora /]$
```

8. Stay where you are, and list the contents of `/etc`.

`ls <directory>`

```
protonegative@fedora:/
File Edit View Search Terminal Help
proc
sys
root
media
opt
var
[protonegative@fedora /]$ ls /etc/
abrt                environment        java               os-release         setuptool.d
adjtime             ethertypes        jvm               ostree             sgml
aircrack-ng         ettercap          jvm-common        PackageKit         shadow
aliases            exports           jwhois.conf       pacman.conf        shadow-
alsa               exports.d         kde               pacman.d           shells
alternatives       extlinux.conf    kdump.conf        pam.d             skel
anacrontab         favicon.png       kernel            passwd            smi.conf
apt               fedora-release   krb5.conf         passwd-           sos.conf
asound.conf        filesystems      krb5.conf.d       passwdqc.conf     speech-dispatcher
at.deny            firewalld        ld.so.cache       pinforc           ssh
audisp            firewallld       ld.so.conf        pipewire          ssl
audit             flatpak          ld.so.conf.d      pkcs11            sssd
avahi             foomatic         libaudit.conf     pki              statetab
bash_completion.d  fonts           libblockdev       plymouth          statetab.d
bashrc            foomatic        libbverbs.d       pm               subgid
binfmt.d          fprintd.conf    libnl             polkit-1          subgid-
bluetooth         fstab           libreport         popt.d           subuid
brlapi.key        fuse.conf       libuser.conf      ppp              subuid-
brltty            fwupd           libvirt           prelink.conf.d   sudoers
brltty.conf       gconf          locale.conf       printcap         sudoers.d
chkconfig.d       gcrypt          localtime        profile           sysconfig
chrony.conf       gdbinit        login.defs        profile.d         sysctl.conf
chrony.keys       gdbinit.d      logrotate.conf    protocols         sysctl.d
cifs-utils        gdm            logrotate.d       pulse            systemd
```

9. Create a directory testdir in your home directory.

Make directory command(mkdir) can be used.

```
protonegative@fedora:/
File Edit View Search Terminal Help
[protonegative@fedora /]$ mkdir ~/testdir
[protonegative@fedora /]$ ls ~ | grep testdir
testdir
[protonegative@fedora /]$
```

10. Change to the /etc directory, stay there and create a directory newdir in your home directory(using a single command).

```
protonegative@fedora:/etc
File Edit View Search Terminal Help
[protonegative@fedora /]$ cd /etc/
[protonegative@fedora etc]$ mkdir ~/newdir
[protonegative@fedora etc]$ ls ~ | grep newdir
newdir
[protonegative@fedora etc]$
```

11. Create in one command the directories ~/dir1/dir2/dir3 (dir3 is a subdirectory from dir2,)

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ mkdir dir1 dir1/dir2 dir1/dir2/dir3  
[protonegative@fedora ~]$ tree dir1  
dir1  
├── dir2  
│   └── dir3  
2 directories, 0 files  
[protonegative@fedora ~]$
```

12. Display the calendar for April 2019.

Calendar(cal) command can be used here. `cal <month> <year>`

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ cal 4 2019  
April 2019  
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  
[protonegative@fedora ~]$
```

13. Display that ‘There are files in my current directory’ . The should be filled with the count of the files.

The number of file is counted using `ls -l` piped to word count with `-l` flag (line count)

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ echo "There are `ls -l | wc -l` files in $PWD"  
There are 38 files in /home/protonegative  
[protonegative@fedora ~]$
```

14. List all the files (including hidden files) in your home directory.

`-a` flag along with `ls` can be used to show hidden directories.

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ ls -a  
.  
..  
archrice  
ASTPUrjB.html  
.bash_history  
.bash_logout  
.bash_profile  
.bashrc  
BashScr  
BQwbfxBW.html  
.cache  
.config  
contacts_dump_20180503183338.txt  
Desktop  
dirl  
Documents  
Downloads  
.esd_auth  
.fehbg  
get-pip.py  
.gitconfig  
.gnome  
google-chrome-stable_current_x86_64.rpm  
hmnKzsfk.html  
HnxMendn.jpeg  
i3-gaps  
.ICEauthority  
ISO  
Justine  
.keras  
.lessht  
.local  
.mozilla  
.msf4  
msfinstall  
Music  
newdir  
OpenCV.py  
OverTheWire  
Pictures  
.pki  
Programs  
Public  
.python_history  
pywal  
.ssh  
sslstrip.log  
temp  
Templates  
testdir  
tmux.conf  
type3.png  
user  
venv  
Videos  
.vim  
.viminfo  
.vimrc  
.vimrc.swo  
.vimrc.swp  
'VirtualBox VMs'  
VjMYCawp.html  
.vscode  
.w3m  
.weechat  
work  
xjDEceAV.jpeg  
.Xresources  
[protonegative@fedora ~]$
```

15. Redirect the output of the above command to a new file FileList.txt.

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ ls -a  
.  
..  
archrice  
ASTPUrjB.html  
.bash_history  
.bash_logout  
.bash_profile  
.bashrc  
BashScr  
BQwbfxBW.html  
.cache  
.config  
contacts_dump_20180503183338.txt  
Desktop  
dirl  
Documents  
Downloads  
.esd_auth  
.fehbg  
get-pip.py  
.gitconfig  
.gnome  
google-chrome-stable_current_x86_64.rpm  
hmnKzsfk.html  
HnxMendn.jpeg  
i3-gaps  
.ICEauthority  
ISO  
Justine  
.keras  
.lessht  
.local  
.mozilla  
.msf4  
msfinstall  
Music  
newdir  
OpenCV.py  
OverTheWire  
Pictures  
.pki  
Programs  
Public  
.python_history  
pywal  
.ssh  
sslstrip.log  
temp  
Templates  
testdir  
tmux.conf  
type3.png  
user  
venv  
Videos  
.vim  
.viminfo  
.vimrc  
.vimrc.swo  
.vimrc.swp  
'VirtualBox VMs'  
VjMYCawp.html  
.vscode  
.w3m  
.weechat  
work  
xjDEceAV.jpeg  
.Xresources  
[protonegative@fedora ~]$ ls -a > FileList.txt  
[protonegative@fedora ~]$ cat FileList.txt  
.  
..  
archrice  
ASTPUrjB.html  
.bash_history  
.bash_logout  
.bash_profile  
.bashrc  
BashScr  
BQwbfxBW.html  
.cache  
.config  
contacts_dump_20180503183338.txt  
.dbus  
Desktop
```

16. Redirect the number of lines of FileList.txt to CountFile.txt.

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
pywal  
.ssh  
sslstrip.log  
temp  
Templates  
testdir  
tmux.conf  
type3.png  
user  
venv  
Videos  
.vim  
.viminfo  
.vimrc  
.vimrc.swo  
.vimrc.swp  
VirtualBox VMs  
VjMYCawp.html  
.vscode  
.w3m  
.weechat  
work  
xjDEceAV.jpeg  
.Xresources  
[protonegative@fedora ~]$ wc FileList.txt -l  
70 FileList.txt  
[protonegative@fedora ~]$ wc FileList.txt -l | awk {'print $1'} >> CountFile.txt  
[protonegative@fedora ~]$ cat CountFile.txt  
70  
[protonegative@fedora ~]$
```

17. List all the files in your home directory starting with ‘s’ .

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ ls ~ | grep "^s"  
sslstrip.log  
[protonegative@fedora ~]$
```

18. List all the file-names starting with “a”, “b” or “s” .

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ ls ~ | egrep -i "^a|^b|^c"  
archrice  
ASTPUrjB.html  
BashScr  
BQwbfxBW.html  
contacts_dump_20180503183338.txt  
CountFile.txt  
[protonegative@fedora ~]$
```

19. Create two files ‘Countries.txt’, containing country names and their corresponding capital cities and ‘Story.txt’ contains some arbitrary lines of text.

Creating a new file Story.txt using nano text editor.



```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ nano Story.txt
```

Writing text into Story.txt using nano editor.



```
protonegative@fedora:~  
File Edit View Search Terminal Help  
GNU nano 2.8.7 File: Story.txt  
eside the decade stops a valley. The workload speculates into a paradox. The dip lusts. Your operator experiments past a wee cat. The symmetry pulpss  
When can the playground thirst beneath the one material? A romance retracts inside the extraordinary silver. Its guiding biscuit informs her notable.$  
A refrain consumes her trapped bass on top of the event. Her universal meat smokes the cracking cathedral. A curse aborts over an answer. The enterpr$  
A refrain consumes her trapped bass on top of the event. Her universal meat smokes the cracking cathedral. A curse aborts over an answer. The enterpr$  
The reign rebuilds an appraisal. Its dirt roundabout poses before the defensive religion. Every politician equips the scientific father past an ideal$  
Why won't the spokesman transform the annual computer? When will the blast peer? In the rear refrains the monopoly. A chair multiplies! A button veins$  
An anguish advances behind the absolute bridge. The executable chain computerizes the substance. Before an adjective cooperates a capital. A litter es$
```

Creating new file Countries.txt using vim editor.



```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ vim Countries.txt
```

Writing into file Countries.txt using vim.


```
protonegative@fedora:~  
File Edit View Search Terminal Help  
1 Afghanistan Kabul  
2 Albania Tirana  
3 Algeria Algiers  
4 Andorra Andorra la Vella  
5 Angola Luanda  
6 Antigua and Barbuda Saint John's  
7 Argentina Buenos Aires  
8 Armenia Yerevan  
9 Australia Canberra  
10 Austria Vienna  
11 Azerbaijan Baku  
12 The Bahamas Nassau  
13 Bahrain Manama  
14 Bangladesh Dhaka  
15 Barbados Bridgetown  
16 Belarus Minsk  
17 Belgium Brussels  
18 Belize Belmopan  
19 Benin Porto-Novo  
20 Bhutan Thimphu  
21 Bolivia La Paz (administrative); Sucre (judicial)  
22 Bosnia and Herzegovina Sarajevo  
23 Botswana Gaborone  
24 Brazil Brasilia  
25 Brunei Bandar Seri Begawan  
26 Bulgaria Sofia  
27 Burkina Faso Ouagadougou  
28 Burundi Gitega (changed from Bujumbura in December 2018)  
29 Cambodia Phnom Penh  
30 Cameroon Yaounde  
31 Canada Ottawa  
32 Cape Verde Praia  
33 Central African Republic Bangui  
34 Chad N'Djamena  
35 Chile Santiago  
36 China Beijing  
"Countries.txt" 51L, 1132C 1,1 Top
```

20. Convert all lowercase characters from ‘Story.txt’ to uppercase and store it in a file ‘Capstory.txt’.

Translate and replace(tr) command is used to convert lowercase to uppercase.

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ cat Story.txt | tr '[:lower:]' '[:upper:]' > Capstory.txt  
[protonegative@fedora ~]$ cat Capstory.txt  
BESIDE THE DECADE STOPS A VALLEY. THE WORKLOAD SPECULATES INTO A PARADOX. THE DIP LUSTS. YOUR OPERATOR EXPERIMENTS PAST A WEE CAT. THE SYMMETRY PULPS  
AN ORIGIN. THE VULNERABLE EXPLOSIVE LOWERS THE PHYSIC PIPELINE.  
WHEN CAN THE PLAYGROUND THIRST BENEATH THE ONE MATERIAL? A ROMANCE RETRACTS INSIDE THE EXTRAORDINARY SILVER. ITS GUIDING BISCUIT INFORMS HER NOTABLE.  
A RIDING INJUSTICE STACKS THE BASE BOOKSHOP. THE ACOUSTIC PUZZLE REITERATES HER SUNDRY BENEATH THE KINDLY TERRORIST. A QUIBBLE SPITS THE WIDTH.  
A REFRAIN CONSUMES HER TRAPPED BASS ON TOP OF THE EVENT. HER UNIVERSAL MEAT SMOKES THE CRACKING CATHEDRAL. A CURSE ABORTS OVER AN ANSWER. THE ENTERPRI  
SE GROWS NEAR THE THREE PROSTITUTE. THE FORMER RAZOR SEASONS THE CERTIFICATE.  
A REFRAIN CONSUMES HER TRAPPED BASS ON TOP OF THE EVENT. HER UNIVERSAL MEAT SMOKES THE CRACKING CATHEDRAL. A CURSE ABORTS OVER AN ANSWER. THE ENTERPRI  
SE GROWS NEAR THE THREE PROSTITUTE. THE FORMER RAZOR SEASONS THE CERTIFICATE.  
THE REIGN REBUILDS AN APPRAISAL. ITS DIRT ROUNDABOUT POSES BEFORE THE DEFENSIVE RELIGION. EVERY POLITICIAN EQUIPS THE SCIENTIFIC FATHER PAST AN IDEAL.  
THE SCREW CAKES A STEAM. A SPIRAL ACCUSTOMS A WEATHER JARGON BELOW AN ACID. THE ARCADE TRANSFORMS THE SCARCE SCHEME.  
WHY WON'T THE SPOKESMAN TRANSFORM THE ANNUAL COMPUTER? WHEN WILL THE BLAST PEER? IN THE REAR REFRAINS THE MONOPOLY. A CHAIR MULTIPLIES! A BUTTON VEINS  
THIS SUCCEEDING ECHO AROUND THE FLOUR. HIS MILK LURKS NEXT TO THE ASSET!  
AN ANGUISH ADVANCES BEHIND THE ABSOLUTE BRIDGE. THE EXECUTABLE CHAIN COMPUTERIZES THE SUBSTANCE. BEFORE AN ADJECTIVE COOPERATES A CAPITAL. A LITTER EV  
IDENCES THE WITNESSED SAINT. AN ALLIANCE EXPLOITS AN OPENING BELT AGAINST EVERY ALGORITHM.  
[protonegative@fedora ~]$
```

21. Toggle the cases in ‘Story.txt’ and store it in a file ‘Togglegstory.txt’.

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ cat Story.txt | tr '[:lower:][:upper:]' '[:upper:][:lower:]' > Togglestory.txt  
[protonegative@fedora ~]$ cat Togglestory.txt  
BESIDE THE DECADE STOPS A VALLEY. THE WORKLOAD SPECULATES INTO A PARADOX. THE DIP LUSTS. YOUR OPERATOR EXPERIMENTS PAST A WEE CAT. THE SYMMETRY PULPS  
AN ORIGIN. THE VULNERABLE EXPLOSIVE LOWERS THE PHYSIC PIPELINE.  
WHEN CAN THE PLAYGROUND THIRST BENEATH THE ONE MATERIAL? a ROMANCE RETRACTS INSIDE THE EXTRAORDINARY SILVER. ITS GUIDING BISCUIT INFORMS HER NOTABLE.  
a RIDING INJUSTICE STACKS THE BASE BOOKSHOP. THE ACOUSTIC PUZZLE REITERATES HER SUNDRY BENEATH THE KINDLY TERRORIST. a QUIBBLE SPITS THE WIDTH.  
a REFRAIN CONSUMES HER TRAPPED BASS ON TOP OF THE EVENT. HER UNIVERSAL MEAT SMOKES THE CRACKING CATHEDRAL. a CURSE ABORTS OVER AN ANSWER. THE ENTERPRI  
SE GROWS NEAR THE THREE PROSTITUTE. THE FORMER RAZOR SEASONS THE CERTIFICATE.  
a REFRAIN CONSUMES HER TRAPPED BASS ON TOP OF THE EVENT. HER UNIVERSAL MEAT SMOKES THE CRACKING CATHEDRAL. a CURSE ABORTS OVER AN ANSWER. THE ENTERPRI  
SE GROWS NEAR THE THREE PROSTITUTE. THE FORMER RAZOR SEASONS THE CERTIFICATE.  
THE REIGN REBUILDS AN APPRAISAL. ITS DIRT ROUNDABOUT POSES BEFORE THE DEFENSIVE RELIGION. eVERY POLITICIAN EQUIPS THE SCIENTIFIC FATHER PAST AN IDEAL.  
THE SCREW CAKES A STEAM. a SPIRAL ACCUSTOMS A WEATHER JARGON BELOW AN ACID. THE ARCADE TRANSFORMS THE SCARCE SCHEME.  
WHY WON'T THE SPOKESMAN TRANSFORM THE ANNUAL COMPUTER? WHEN WILL THE BLAST PEER? IN THE REAR REFRAINS THE MONOPOLY. a CHAIR MULTIPLIES! a BUTTON VEINS  
THIS SUCCEEDING ECHO AROUND THE FLOUR. HIS MILK LURKS NEXT TO THE ASSET!  
an ANGUISH ADVANCES BEHIND THE ABSOLUTE BRIDGE. THE EXECUTABLE CHAIN COMPUTERIZES THE SUBSTANCE. BEFORE AN ADJECTIVE COOPERATES A CAPITAL. a LITTER EV  
IDENCES THE WITNESSED SAINT. an ALLIANCE EXPLOITS AN OPENING BELT AGAINST EVERY ALGORITHM.  
[protonegative@fedora ~]$
```

22. Sort the contents of ‘Countries.txt’ with Capital as the primary sort key and write the sorted output to ‘SortCountry.txt’.

Showing contents of file Countries.txt using cat

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ cat Countries.txt  
Congo, Republic of the: Brazzaville  
Andorra: Andorra la Vella  
Burkina Faso: Ouagadougou  
Brunei: Bandar Seri Begawan  
Albania: Tirana  
Djibouti: Djibouti  
Australia: Canberra  
Chad: N'Djamena  
Belize: Belmopan  
Algeria: Algiers  
Belarus: Minsk  
Canada: Ottawa  
Bulgaria: Sofia  
Bolivia: La Paz  
Armenia: Yerevan  
China: Beijing  
Croatia: Zagreb  
Benin: Porto-Novo  
The Bahamas: Nassau  
Burundi: Gitega  
Argentina: Buenos Aires  
Cote d'Ivoire: Yamoussoukro  
Azerbaijan: Baku  
Costa Rica: San Jose  
Congo, Democratic Republic of the: Kinshasa  
Botswana: Gaborone  
Denmark: Copenhagen  
Brazil: Brasilia  
Central African Republic: Bangui  
Cyprus: Nicosia  
Dominican Republic: Santo Domingo  
Bhutan: Thimphu  
Barbados: Bridgetown  
Cameroon: Yaounde  
Dominica: Roseau  
Bangladesh: Dhaka
```

Now piping contents of file to sort command with flags -t(delimiter) -k (column)

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ cat Countries.txt | sort -t ":" -k 2 > SortCountry.txt  
[protonegative@fedora ~]$ cat SortCountry.txt  
Algeria: Algiers  
Andorra: Andorra la Vella  
Azerbaijan: Baku  
Brunei: Bandar Seri Begawan  
Central African Republic: Bangui  
China: Beijing  
Belize: Belmopan  
Colombia: Bogota  
Brazil: Brasilia  
Congo, Republic of the: Brazzaville  
Barbados: Bridgetown  
Belgium: Brussels  
Argentina: Buenos Aires  
Australia: Canberra  
Denmark: Copenhagen  
Bangladesh: Dhaka  
Djibouti: Djibouti  
Botswana: Gaborone  
Burundi: Gitega  
Cuba: Havana  
Afghanistan: Kabul  
Congo, Democratic Republic of the: Kinshasa  
Bolivia: La Paz  
Angola: Luanda  
Bahrain: Manama  
Belarus: Minsk  
Comoros: Moroni  
The Bahamas: Nassau  
Chad: N'Djamena  
Cyprus: Nicosia  
Canada: Ottawa  
Burkina Faso: Ouagadougou  
Cambodia: Phnom Penh  
Benin: Porto-Novo  
Czech Republic: Prague  
Cape Verde: Praia
```

23. Display only the capital cities from ‘Countries.txt’.

Awk can be used to retrieve the

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ cat Countries.txt | awk -F ":" {'print $2'}  
Brazzaville  
Andorra la Vella  
Ouagadougou  
Bandar Seri Begawan  
Tirana  
Djibouti  
Canberra  
N'Djamena  
Belmopan  
Algiers  
Minsk  
Ottawa  
Sofia  
La Paz  
Yerevan  
Beijing  
Zagreb  
Porto-Novo  
Nassau  
Gitega  
Buenos Aires  
Yamoussoukro  
Baku  
San Jose  
Kinshasa  
Gaborone  
Copenhagen  
Brasilia  
Bangui  
Nicosia  
Santo Domingo  
Thimphu  
Bridgetown  
Yaounde  
Roseau  
Dhaka
```

24. Locate all ‘.txt’ and ‘.doc’ files in the current directory .

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ ls ./ | egrep "*.txt|*.doc"  
Capstory.txt  
contacts_dump_20180503183338.txt  
CountFile.txt  
Countries.txt  
file.doc  
FileList.txt  
SortCountry.txt  
Story.txt  
Togglestory.txt  
[protonegative@fedora ~]$
```

25. Count the number of occurrence of 'the' in 'Story.txt'.

```
protonegative@fedora:~  
File Edit View Search Terminal Help  
[protonegative@fedora ~]$ cat Story.txt | grep -i -o the | wc -l  
46  
[protonegative@fedora ~]$
```

Result: Understood the usage of certain bash commands

eof