

Linux commands

Tech Training Team

# Linux Commands – Course Contents

## 1) Introduction

- Linux operating system architecture
- Boot Menu – Grub Menu
- How to log in
- Desktop Snapshot
- Runlevels in Linux
- How to change your password
- How to log out

# Linux Commands – Course Contents

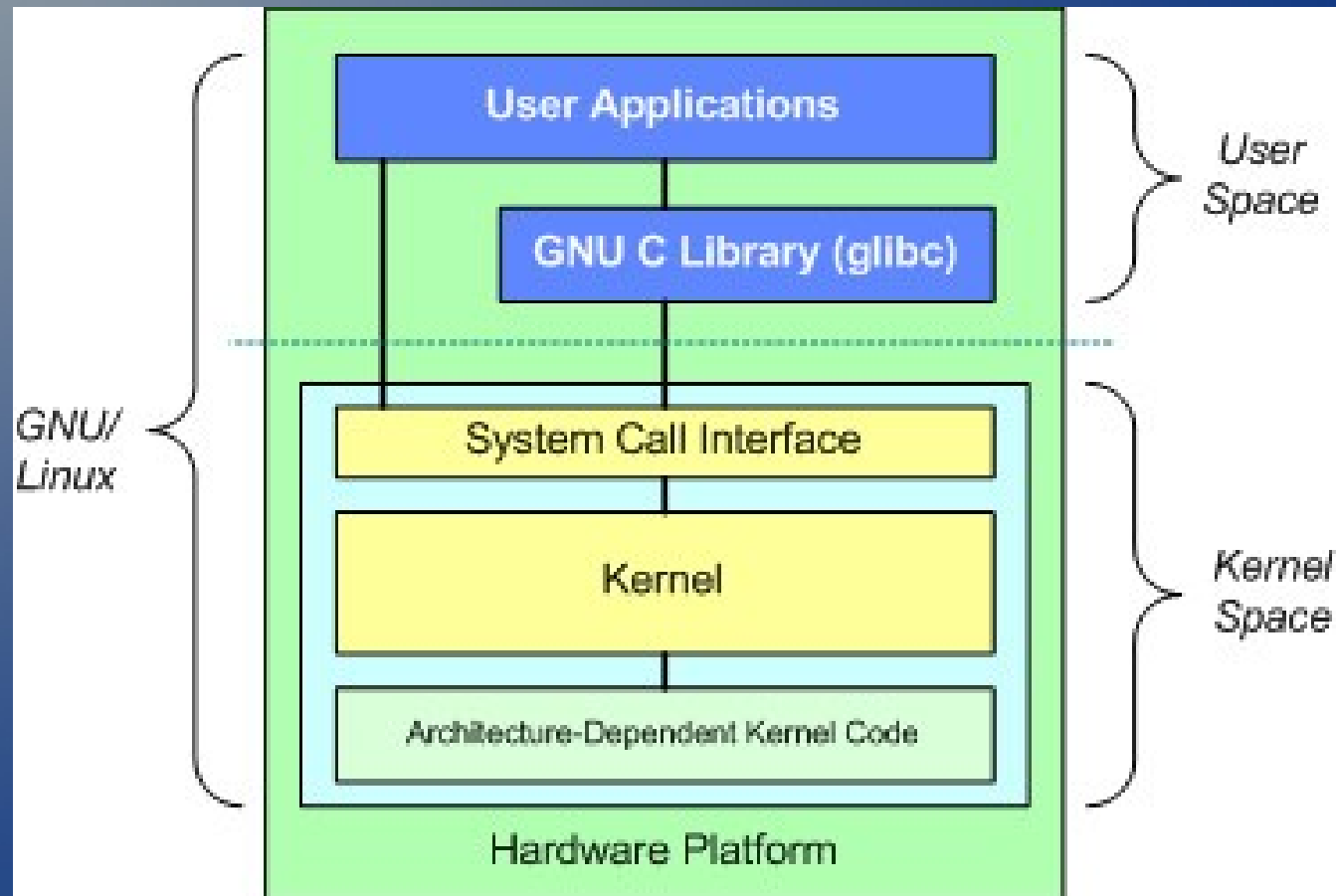
## 2) The file system

- The role of the file system
- Various rules for naming files
- Absolute and relative pathnames
- Working directory and home directory
- File system hierarchy - major directories
- File system commands and major options: pwd, cd, ls, cat, cp, mv,
- rm, mkdir, more, head, tail

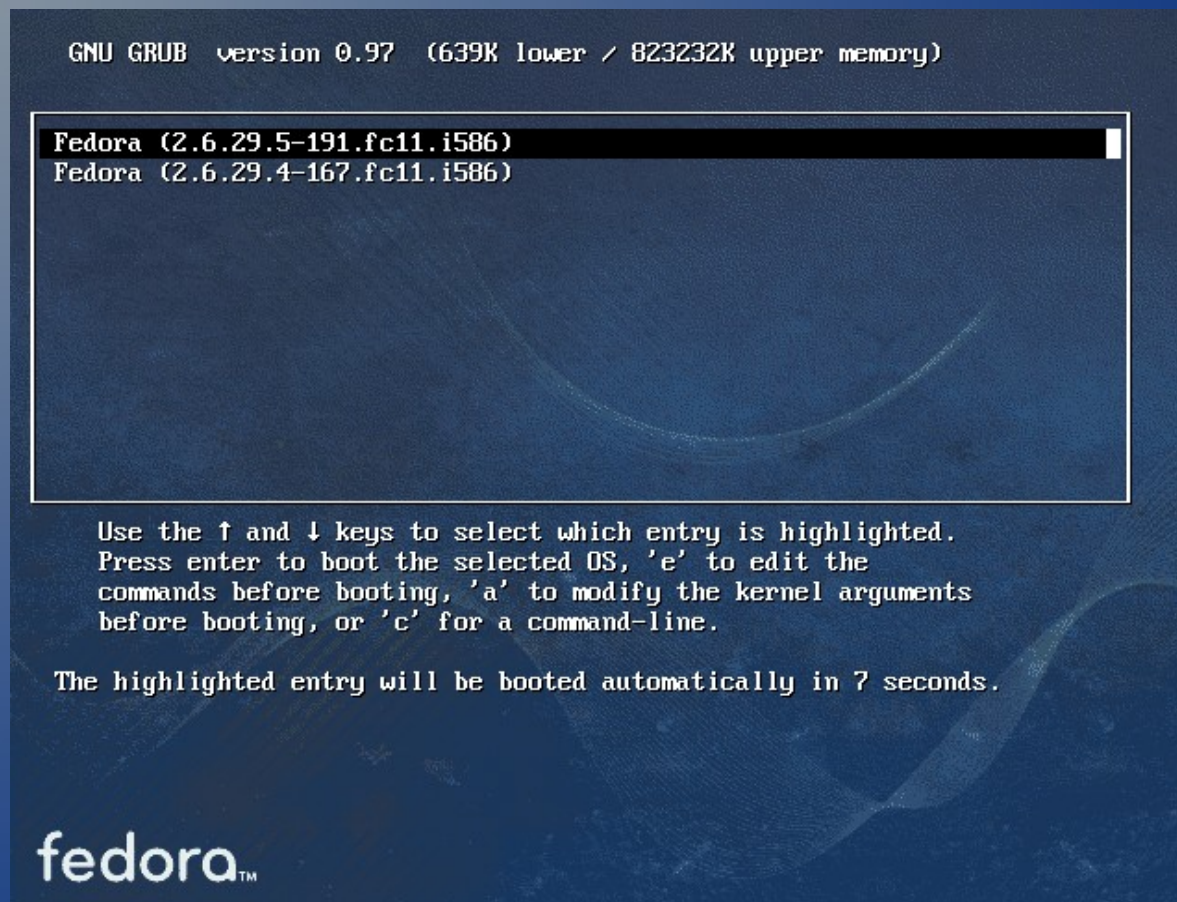
# Linux Commands – Course Contents

- The . and .. and ~ abbreviations
- Hard and symbolic links

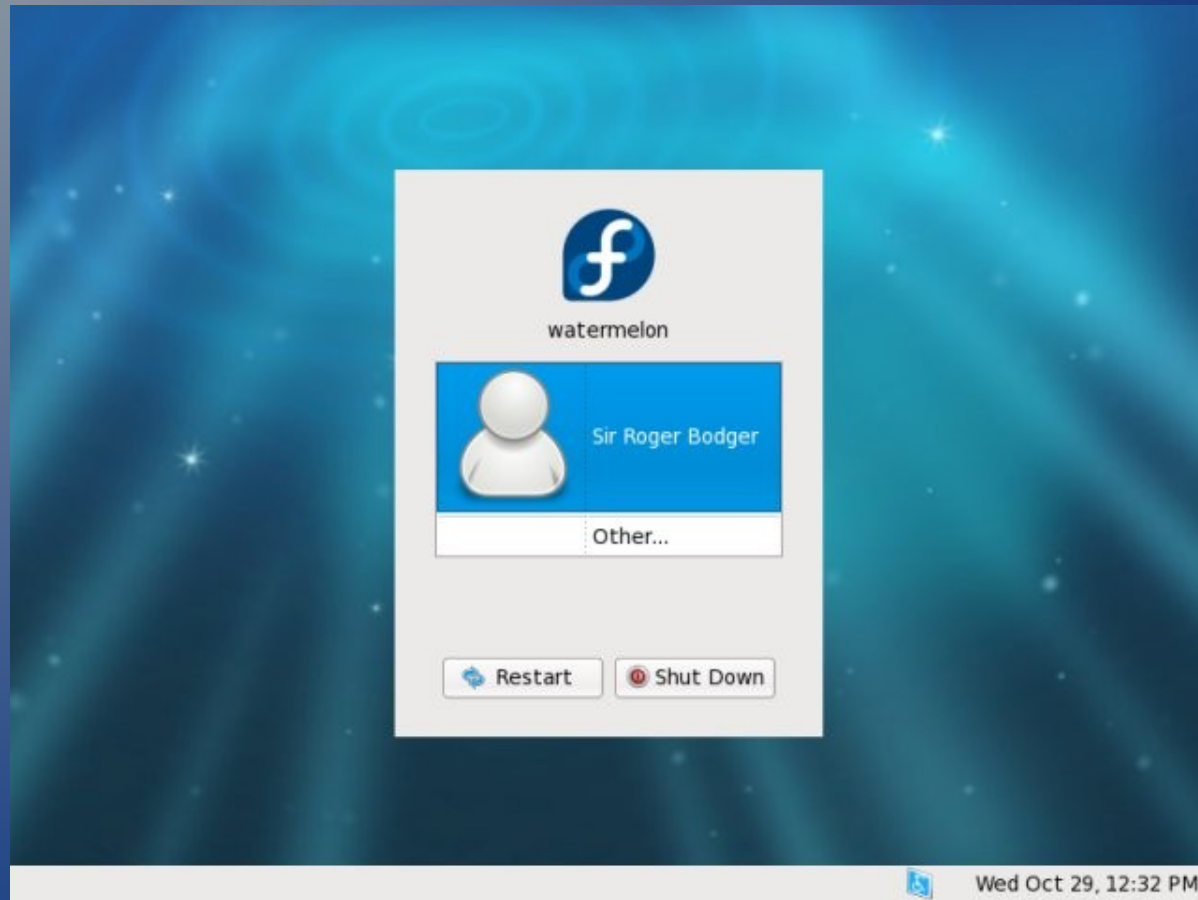
# GNU/Linux Operating System Architecture



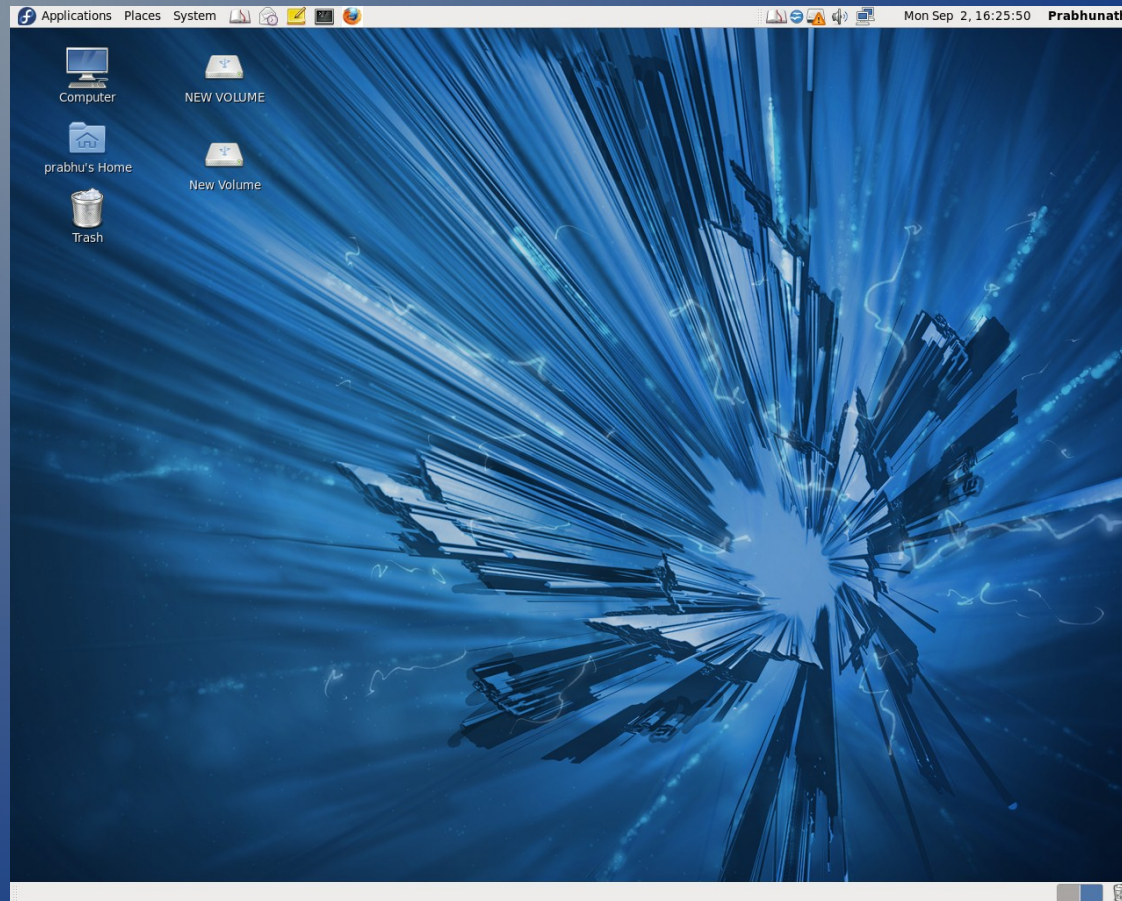
# Boot Menu – Grub Menu



# Logging IN



# Fedora 14 Desktop View

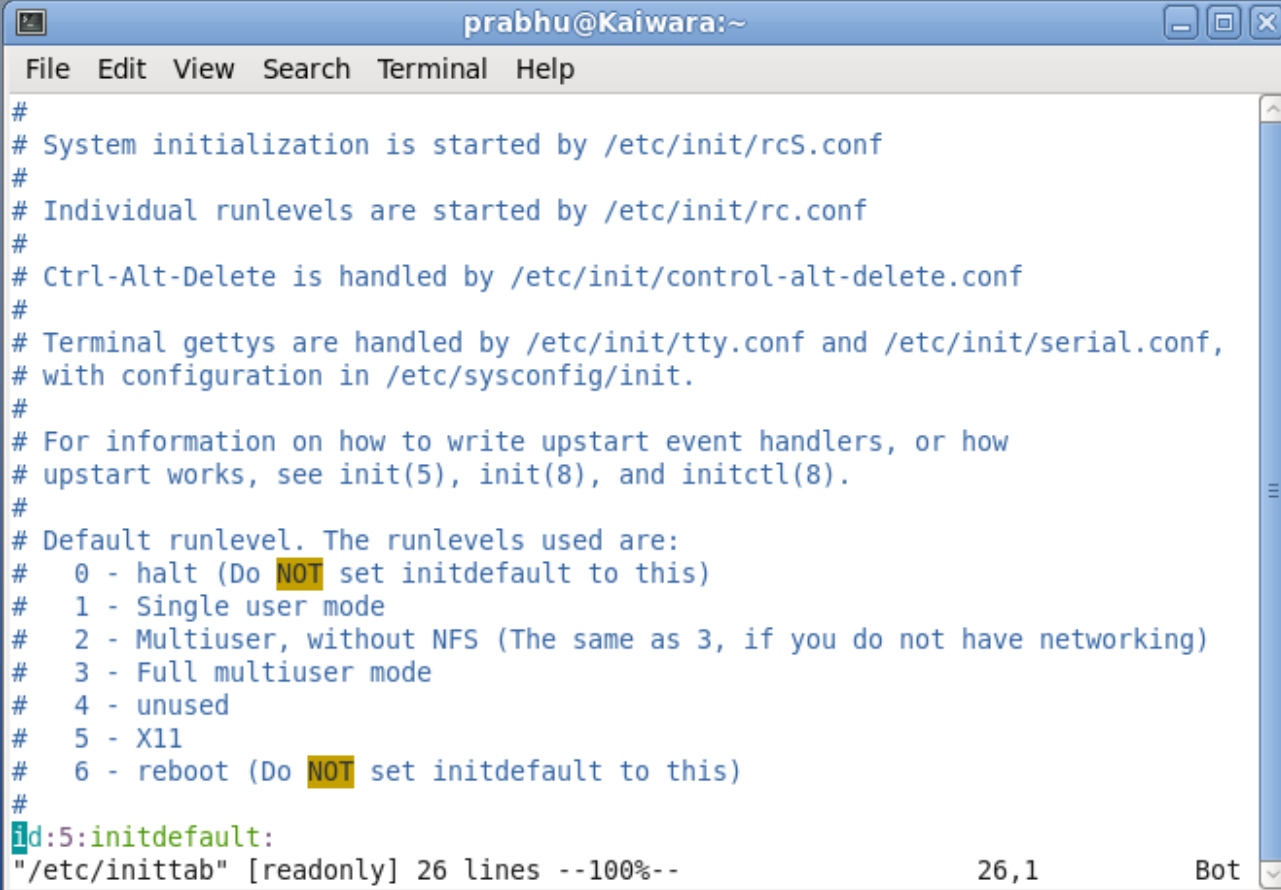




# Runlevels in GNU/Linux

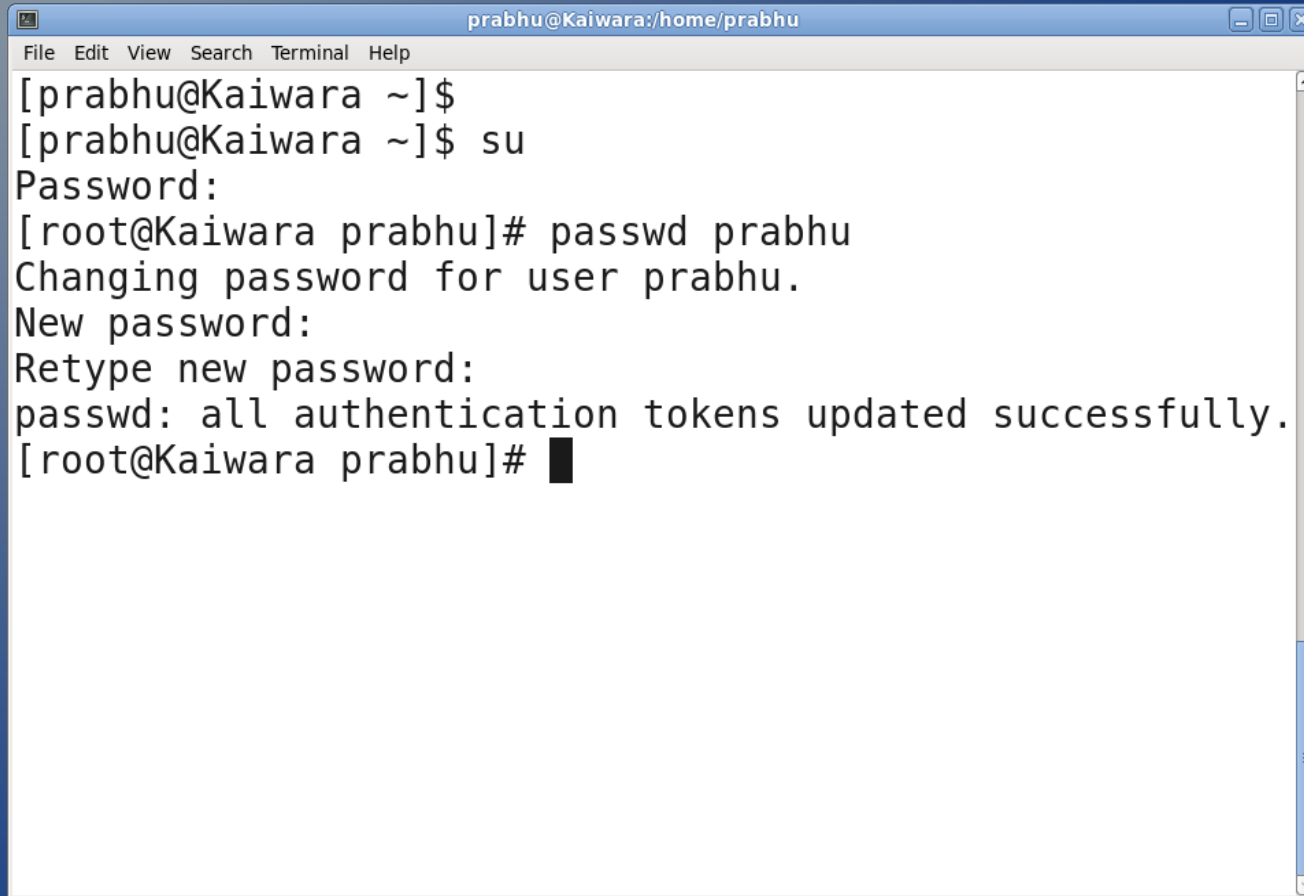
Run Level	Name	Description
<b>0</b>	<i>Halt</i>	Shuts down all services when the system will not be rebooted.
<b>1</b>	<i>Single User</i>	Used for system maintenance. No Networking capabilities.
<b>2</b>	<i>MultiUser</i> <i>No Network Support</i>	Used for maintenance and system testing.
<b>3</b>	<i>MultiUser</i> <i>Network Support</i>	Non-Graphical Text Mode operations for server systems.
<b>4</b>	-	Custom Mode, used by SysAdmin
<b>5</b>	<i>Graphical</i> <i>X11</i>	Graphical login with same usability of Run Level 3.
<b>6</b>	<i>Reboot</i>	Shuts down all services when the system is being rebooted.

# Runlevels in GNU/Linux

A terminal window titled 'prabhu@Kaiwara:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal displays the contents of the /etc/inittab file. The text includes comments about system initialization, runlevel configuration, and a list of default runlevels (0-6). The prompt 'id:5:initdefault:' is shown in green. At the bottom, it indicates the file is '/etc/inittab' [readonly], 26 lines, and 100% displayed. The status bar shows '26,1' and 'Bot'.

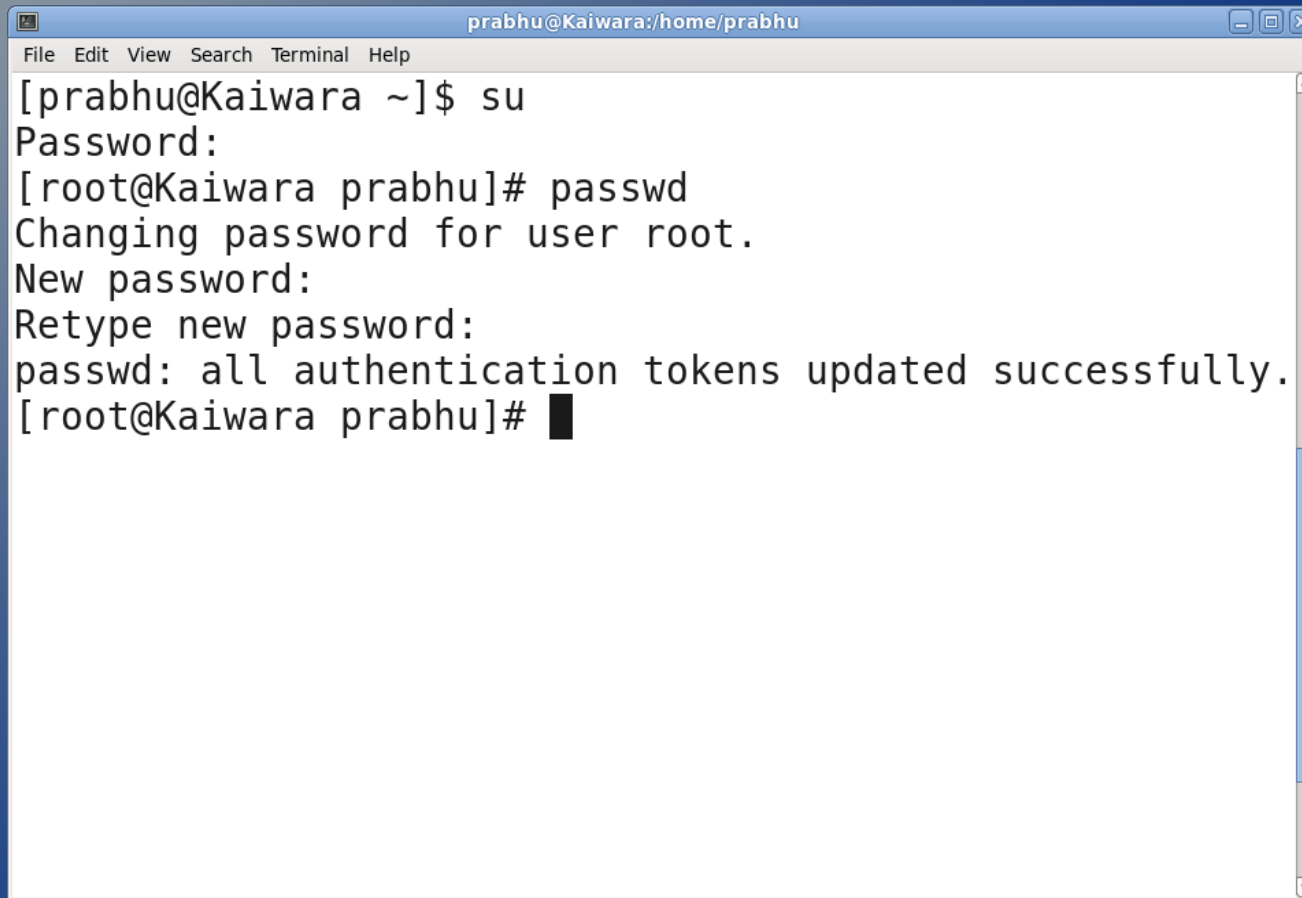
```
prabhu@Kaiwara:~
File Edit View Search Terminal Help
#
# System initialization is started by /etc/init/rcS.conf
#
# Individual runlevels are started by /etc/init/rc.conf
#
# Ctrl-Alt-Delete is handled by /etc/init/control-alt-delete.conf
#
# Terminal gettys are handled by /etc/init/tty.conf and /etc/init/serial.conf,
# with configuration in /etc/sysconfig/init.
#
# For information on how to write upstart event handlers, or how
# upstart works, see init(5), init(8), and initctl(8).
#
# Default runlevel. The runlevels used are:
# 0 - halt (Do NOT set initdefault to this)
# 1 - Single user mode
# 2 - Multiuser, without NFS (The same as 3, if you do not have networking)
# 3 - Full multiuser mode
# 4 - unused
# 5 - X11
# 6 - reboot (Do NOT set initdefault to this)
#
id:5:initdefault:
"/etc/inittab" [readonly] 26 lines --100%--                26,1                Bot
```

# Change user password

A terminal window titled 'prabhu@Kaiwara:/home/prabhu' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a user 'prabhu' at 'Kaiwara' in their home directory. They run 'su' to become root. Then, they run 'passwd prabhu' to change the password for 'prabhu'. The system prompts for the new password and its retype, then confirms the update. The prompt returns to root at 'prabhu'.

```
prabhu@Kaiwara: ~/  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ su  
Password:  
[root@Kaiwara prabhu]# passwd prabhu  
Changing password for user prabhu.  
New password:  
Retype new password:  
passwd: all authentication tokens updated successfully.  
[root@Kaiwara prabhu]#
```

# Change root password



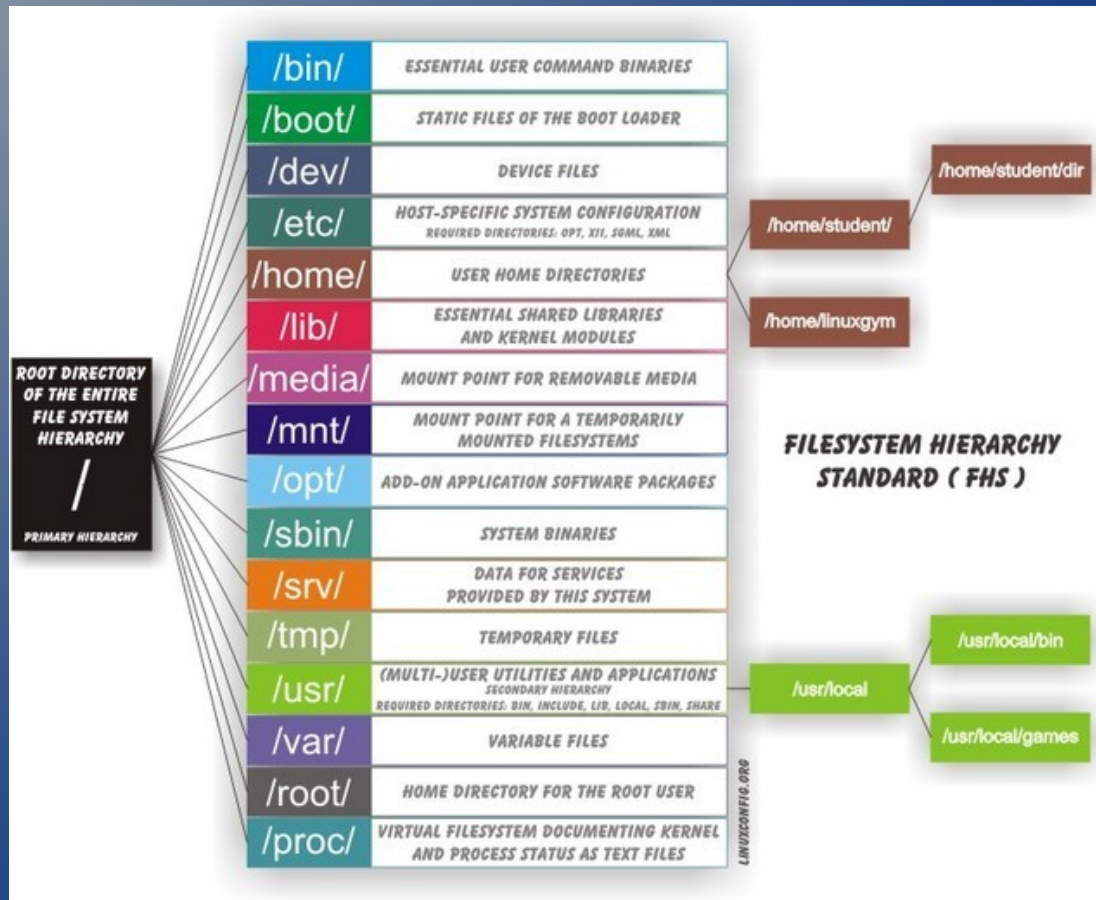
```
prabhu@Kaiwara:/home/prabhu
File Edit View Search Terminal Help
[prabhu@Kaiwara ~]$ su
Password:
[root@Kaiwara prabhu]# passwd
Changing password for user root.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@Kaiwara prabhu]#
```

The image shows a terminal window titled "prabhu@Kaiwara:/home/prabhu". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal content shows a user named "prabhu" at a machine named "Kaiwara" in the directory "~" (home) using the "su" command to switch to the root user. The root user then uses the "passwd" command to change their password. The terminal prompts for the current password (which is hidden), then asks for a new password and to retype it. After successful verification, it displays the message "passwd: all authentication tokens updated successfully." and returns to the root prompt. A cursor is visible at the end of the root prompt line.

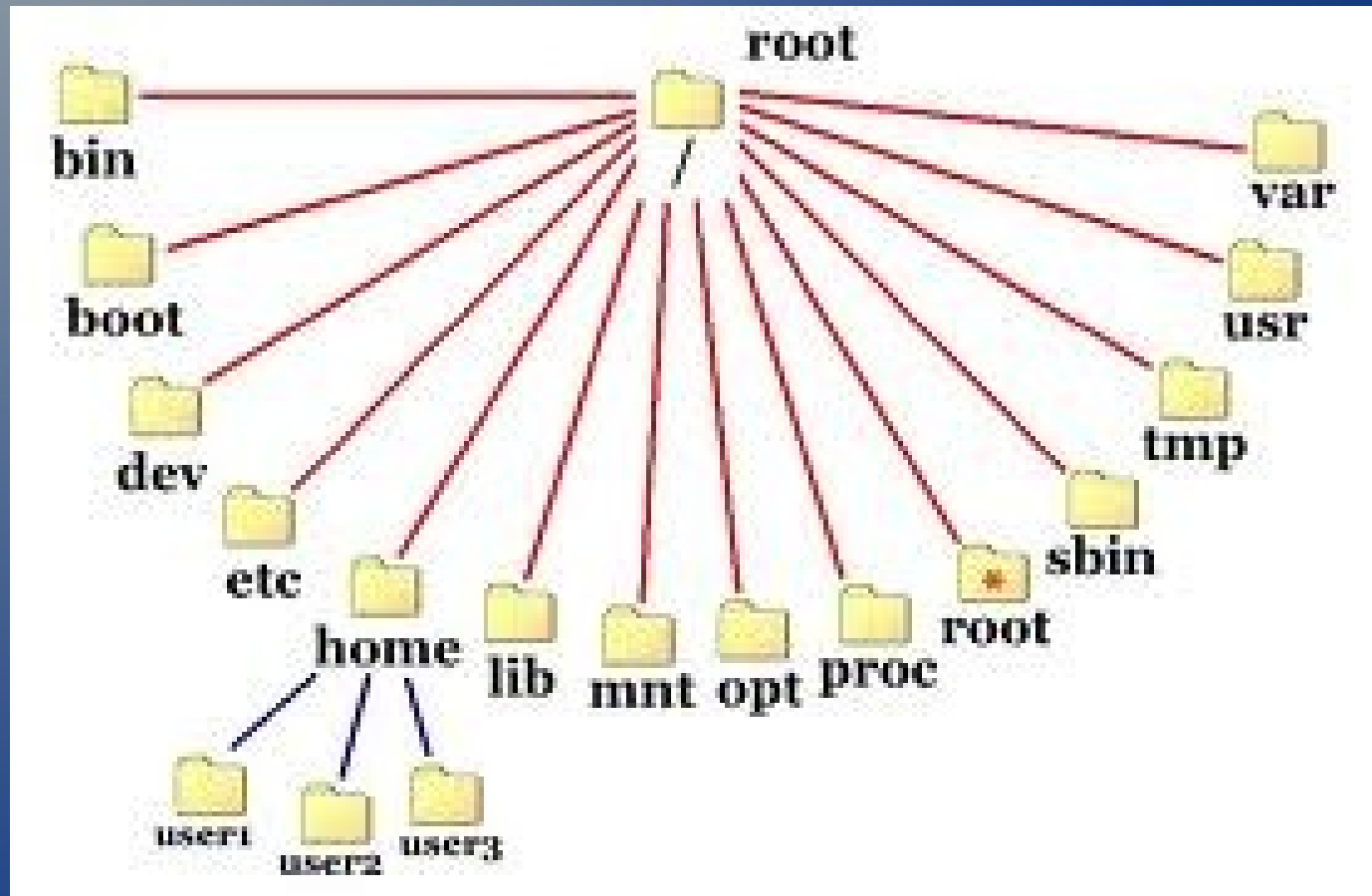
# Logging OUT



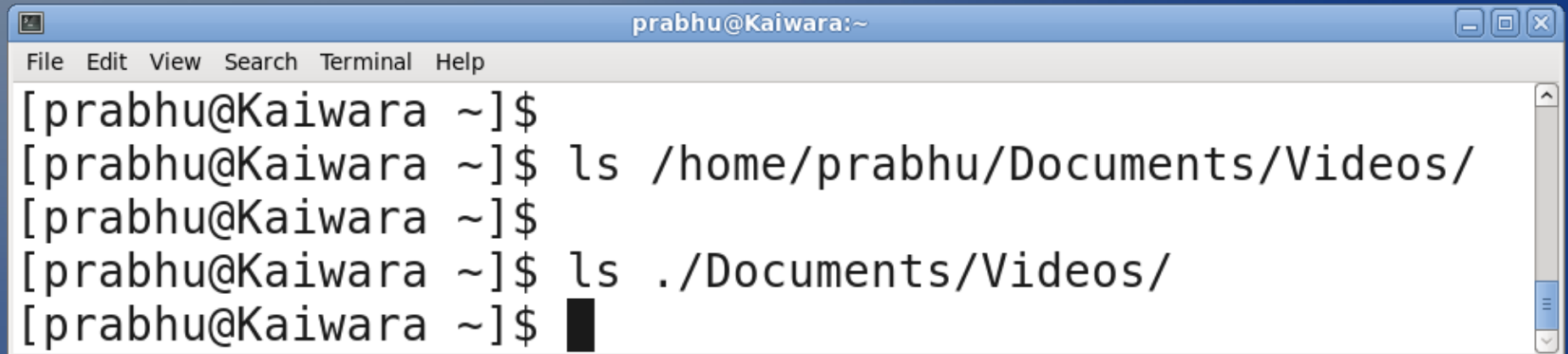
# File system Hierarchy



# File system Hierarchy



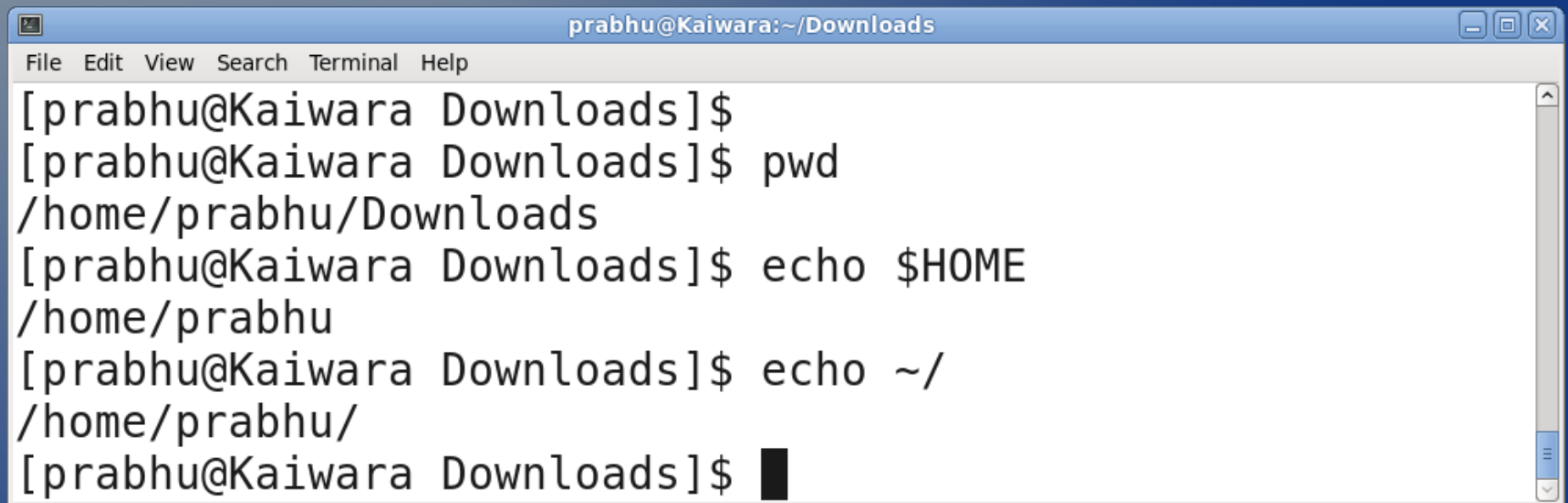
# Absolute and Relative paths

A terminal window titled 'prabhu@Kaiwara:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows four lines of input and output. The first line is a prompt. The second line shows the command 'ls /home/prabhu/Documents/Videos/' and a blank line. The third line is a prompt. The fourth line shows the command 'ls ./Documents/Videos/' and a blank line. The fifth line is a prompt with a black cursor block.

```
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ls /home/prabhu/Documents/Videos/  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ls ./Documents/Videos/  
[prabhu@Kaiwara ~]$
```

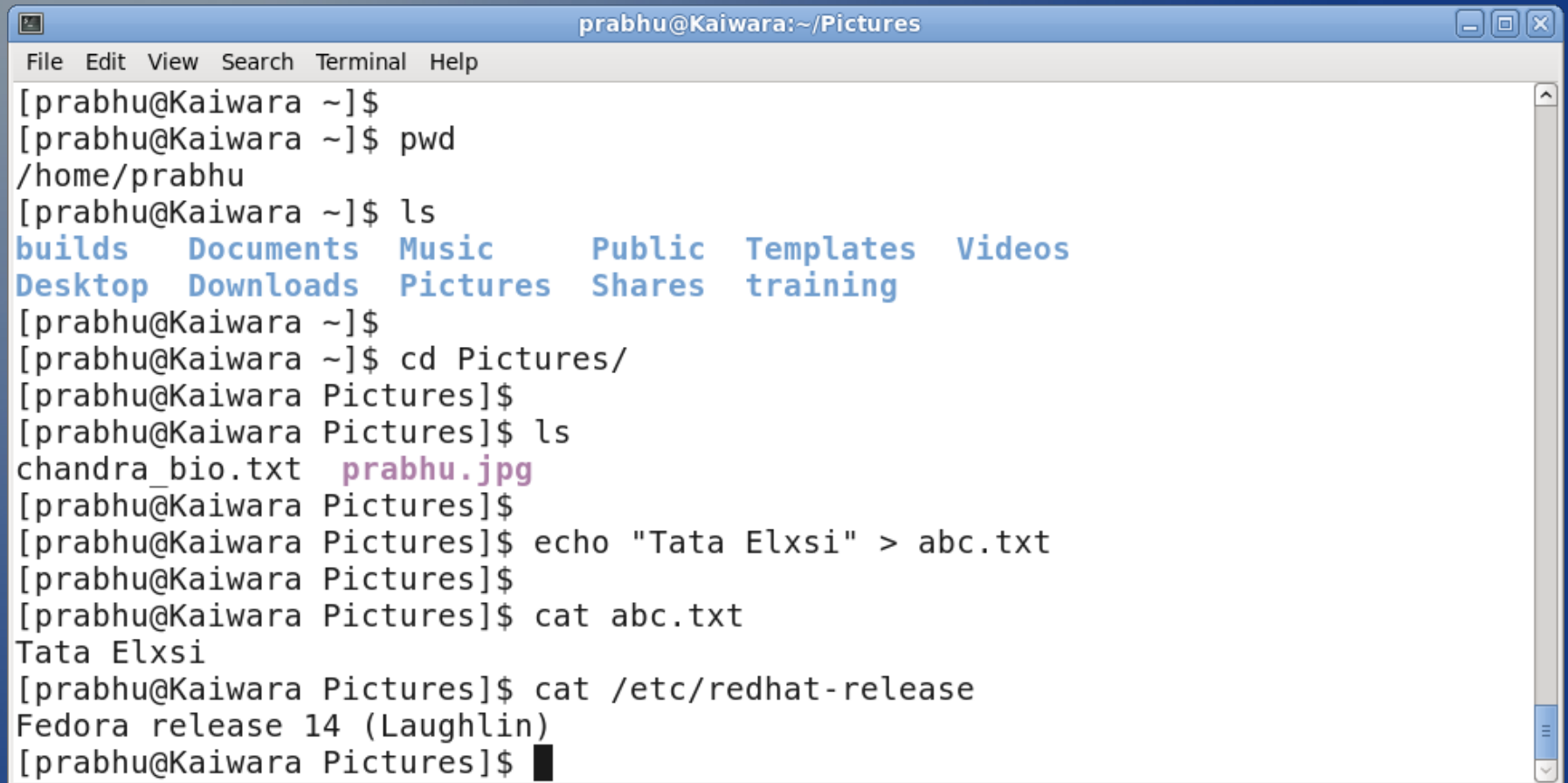


# PWD & HOME dirs



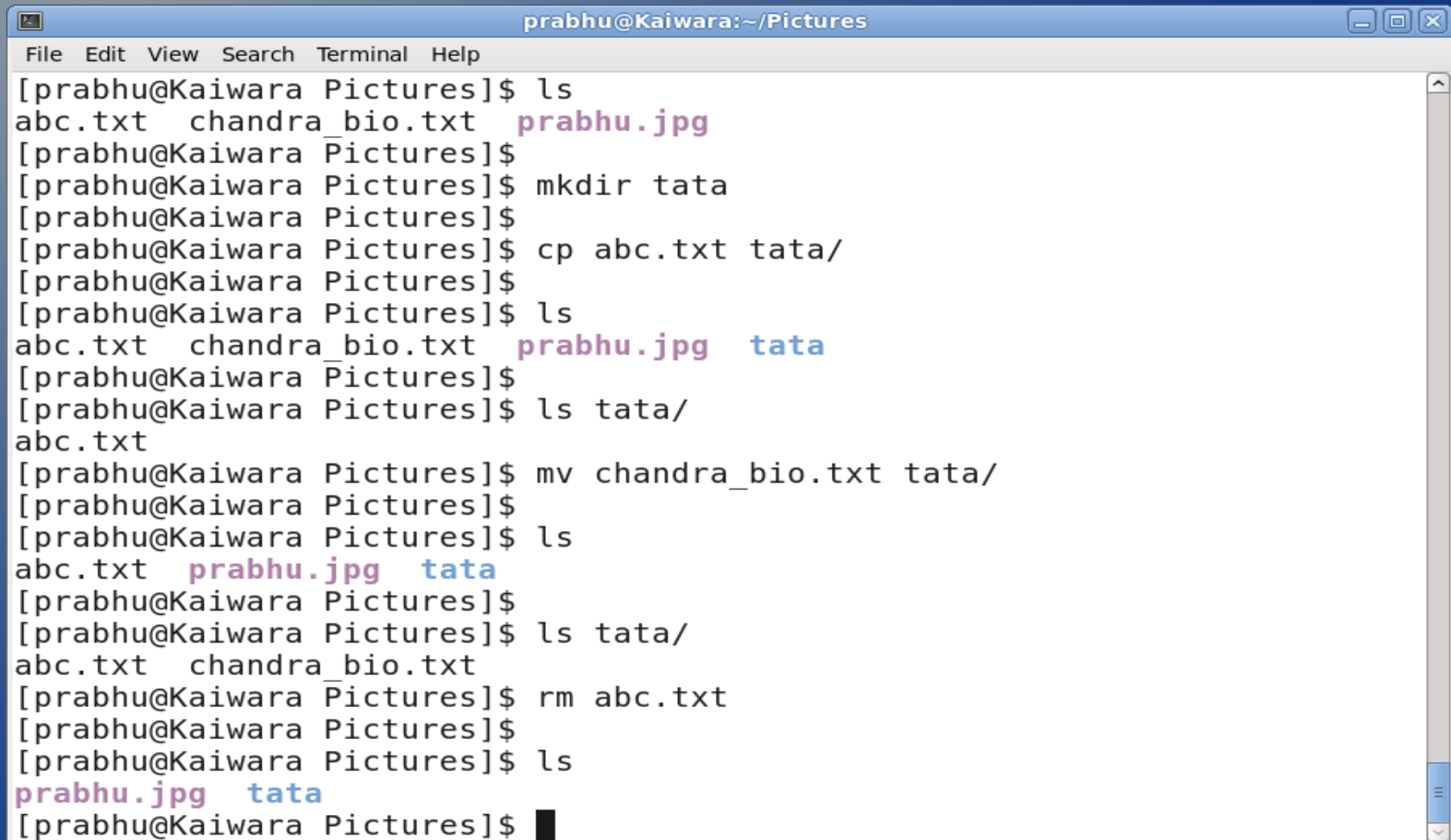
```
prabhu@Kaiwara:~/Downloads
File Edit View Search Terminal Help
[prabhu@Kaiwara Downloads]$
[prabhu@Kaiwara Downloads]$ pwd
/home/prabhu/Downloads
[prabhu@Kaiwara Downloads]$ echo $HOME
/home/prabhu
[prabhu@Kaiwara Downloads]$ echo ~/
/home/prabhu/
[prabhu@Kaiwara Downloads]$
```

# File System commands



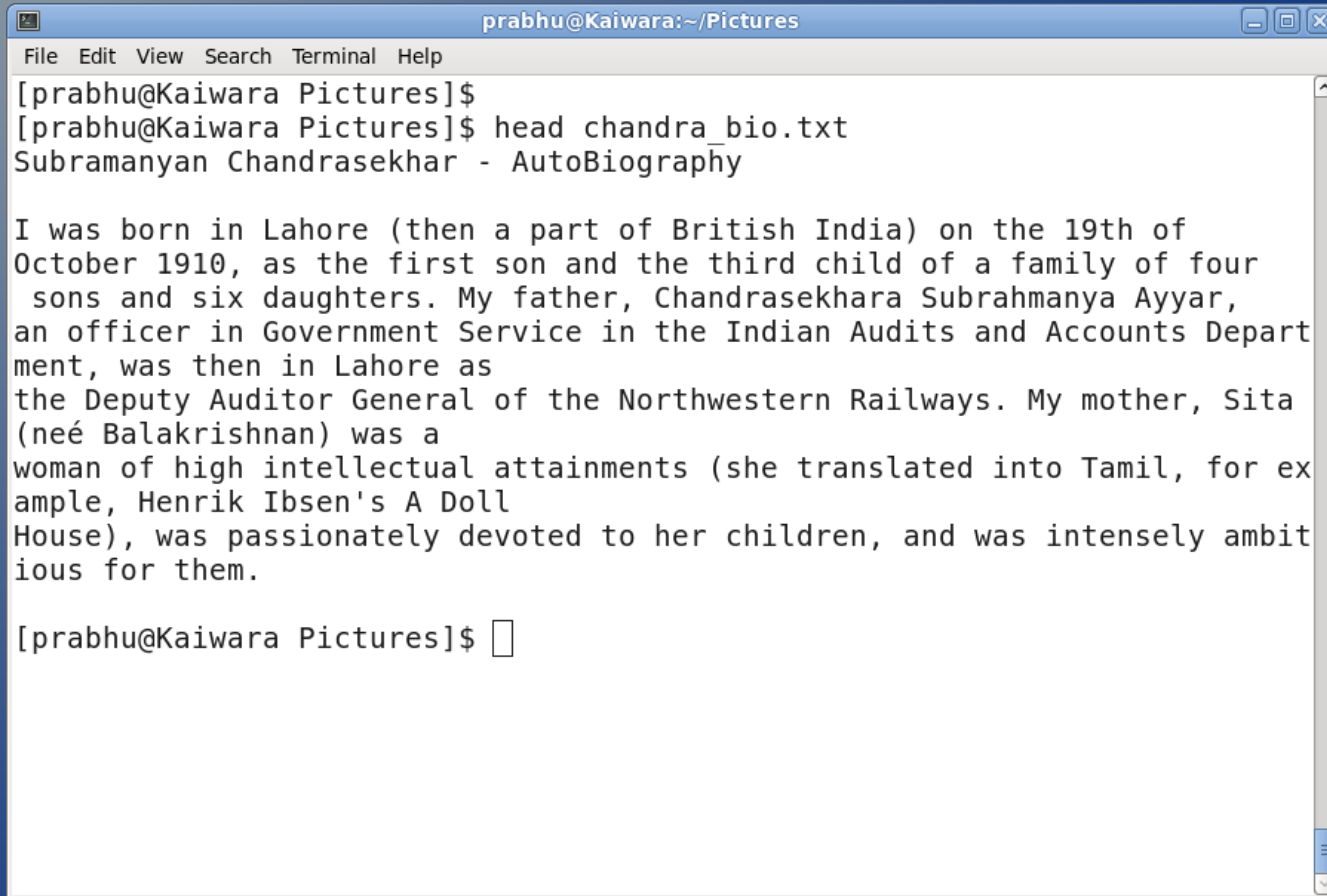
```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
[prabhu@Kaiwara ~]$
[prabhu@Kaiwara ~]$ pwd
/home/prabhu
[prabhu@Kaiwara ~]$ ls
builds  Documents  Music      Public  Templates  Videos
Desktop Downloads  Pictures   Shares  training
[prabhu@Kaiwara ~]$
[prabhu@Kaiwara ~]$ cd Pictures/
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls
chandra_bio.txt  prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ echo "Tata Elxsi" > abc.txt
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ cat abc.txt
Tata Elxsi
[prabhu@Kaiwara Pictures]$ cat /etc/redhat-release
Fedora release 14 (Laughlin)
[prabhu@Kaiwara Pictures]$
```

# File System commands



```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
[prabhu@Kaiwara Pictures]$ ls
abc.txt  chandra_bio.txt  prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ mkdir tata
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ cp abc.txt tata/
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls
abc.txt  chandra_bio.txt  prabhu.jpg  tata
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls tata/
abc.txt
[prabhu@Kaiwara Pictures]$ mv chandra_bio.txt tata/
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls
abc.txt  prabhu.jpg  tata
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls tata/
abc.txt  chandra_bio.txt
[prabhu@Kaiwara Pictures]$ rm abc.txt
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls
prabhu.jpg  tata
[prabhu@Kaiwara Pictures]$
```

# File System commands

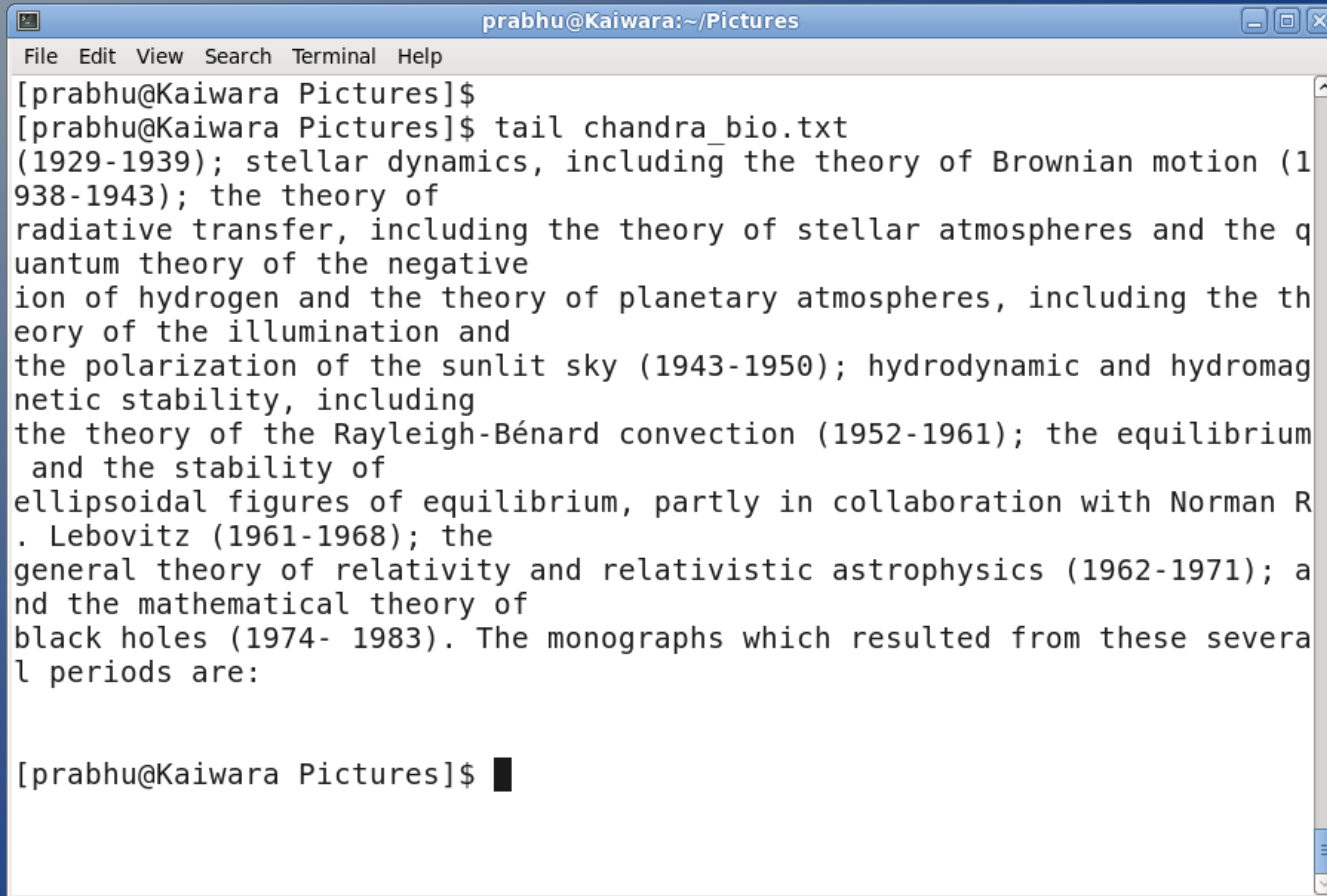
A terminal window titled 'prabhu@Kaiwara:~/Pictures' with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is '[prabhu@Kaiwara Pictures]\$'. The command 'head chandra\_bio.txt' has been executed, displaying the first lines of a file. The output shows the title 'Subramanyan Chandrasekhar - AutoBiography' followed by a paragraph of text about the author's birth and family. The prompt '[prabhu@Kaiwara Pictures]\$' is followed by a cursor.

```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ head chandra_bio.txt
Subramanyan Chandrasekhar - AutoBiography

I was born in Lahore (then a part of British India) on the 19th of
October 1910, as the first son and the third child of a family of four
  sons and six daughters. My father, Chandrasekhara Subrahmanya Ayyar,
an officer in Government Service in the Indian Audits and Accounts Depart
ment, was then in Lahore as
the Deputy Auditor General of the Northwestern Railways. My mother, Sita
(neé Balakrishnan) was a
woman of high intellectual attainments (she translated into Tamil, for ex
ample, Henrik Ibsen's A Doll
House), was passionately devoted to her children, and was intensely ambit
ious for them.

[prabhu@Kaiwara Pictures]$
```


# File System commands

A terminal window titled 'prabhu@Kaiwara:~/Pictures' with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is '[prabhu@Kaiwara Pictures]\$'. The command 'tail chandra\_bio.txt' has been executed, displaying the following text:

(1929-1939); stellar dynamics, including the theory of Brownian motion (1938-1943); the theory of radiative transfer, including the theory of stellar atmospheres and the quantum theory of the negative ion of hydrogen and the theory of planetary atmospheres, including the theory of the illumination and the polarization of the sunlit sky (1943-1950); hydrodynamic and hydromagnetic stability, including the theory of the Rayleigh-Bénard convection (1952-1961); the equilibrium and the stability of ellipsoidal figures of equilibrium, partly in collaboration with Norman R. Lebovitz (1961-1968); the general theory of relativity and relativistic astrophysics (1962-1971); and the mathematical theory of black holes (1974- 1983). The monographs which resulted from these several periods are:

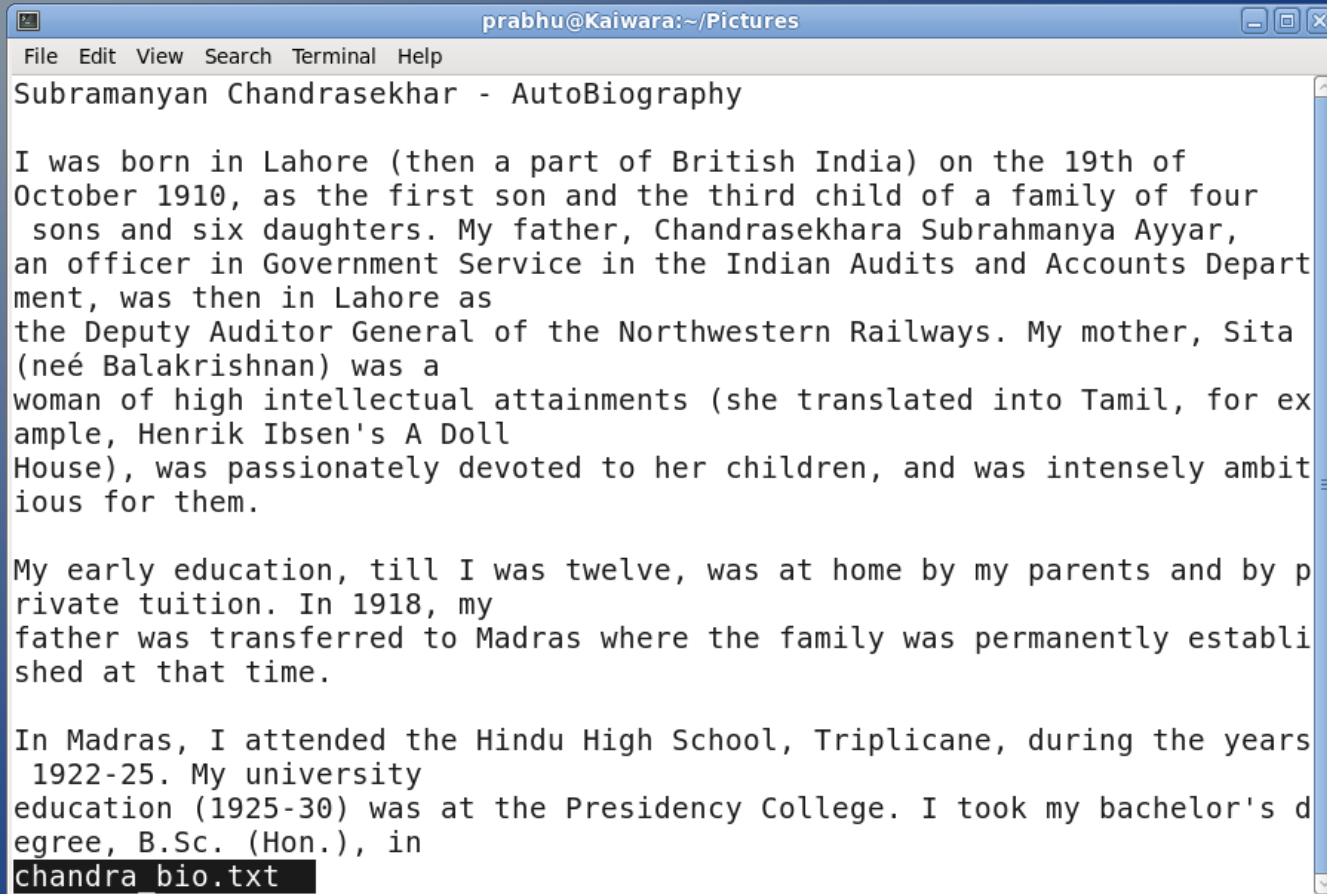
[prabhu@Kaiwara Pictures]\$ █

# File System commands

A screenshot of a terminal window titled 'prabhu@Kaiwara:~/Pictures'. The window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal shows four lines of text: '[prabhu@Kaiwara Pictures]\$', '[prabhu@Kaiwara Pictures]\$ less chandra\_bio.txt', '[prabhu@Kaiwara Pictures]\$', and '[prabhu@Kaiwara Pictures]\$ more chandra\_bio.txt' followed by a black cursor block. The window has standard Linux window controls (minimize, maximize, close) in the top right corner and a scrollbar on the right side.

```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ less chandra_bio.txt
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ more chandra_bio.txt
```

# File System commands



The image shows a terminal window titled "prabhu@Kaiwara:~/Pictures". The window contains the text of an autobiography by Subramanyan Chandrasekhar. The text is displayed in a monospaced font, typical of a terminal. The window has a standard menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The file name "chandra\_bio.txt" is visible in the bottom left corner of the terminal window.

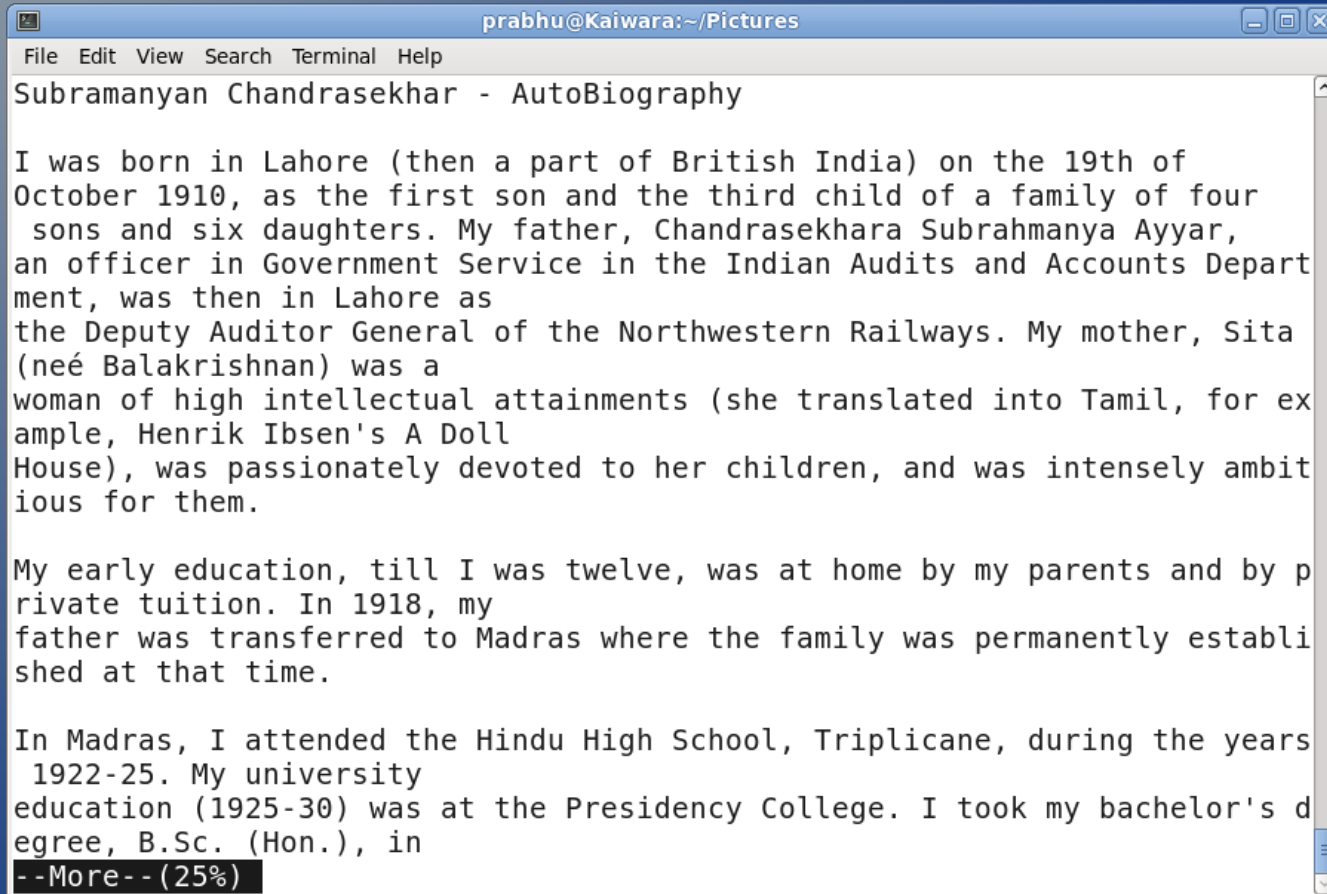
```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
Subramanyan Chandrasekhar - AutoBiography

I was born in Lahore (then a part of British India) on the 19th of
October 1910, as the first son and the third child of a family of four
  sons and six daughters. My father, Chandrasekhara Subrahmanya Ayyar,
an officer in Government Service in the Indian Audits and Accounts Depart
ment, was then in Lahore as
the Deputy Auditor General of the Northwestern Railways. My mother, Sita
(neé Balakrishnan) was a
woman of high intellectual attainments (she translated into Tamil, for ex
ample, Henrik Ibsen's A Doll
House), was passionately devoted to her children, and was intensely ambit
ious for them.

My early education, till I was twelve, was at home by my parents and by p
rivate tuition. In 1918, my
father was transferred to Madras where the family was permanently establi
shed at that time.

In Madras, I attended the Hindu High School, Triplicane, during the years
  1922-25. My university
education (1925-30) was at the Presidency College. I took my bachelor's d
egree, B.Sc. (Hon.), in
chandra_bio.txt
```

# File System commands



```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
Subramanyan Chandrasekhar - AutoBiography

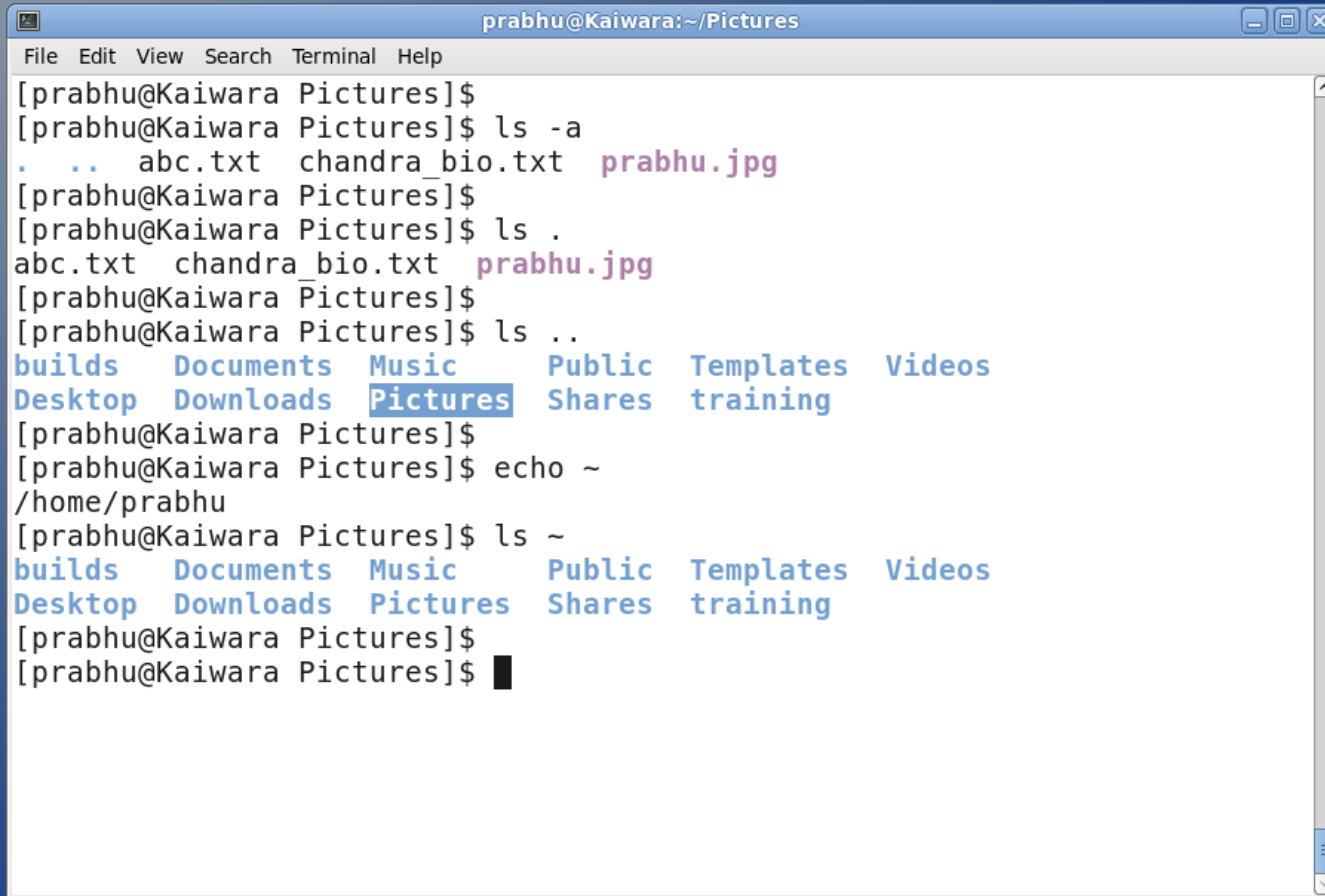
I was born in Lahore (then a part of British India) on the 19th of
October 1910, as the first son and the third child of a family of four
sons and six daughters. My father, Chandrasekhara Subrahmanya Ayyar,
an officer in Government Service in the Indian Audits and Accounts Depart
ment, was then in Lahore as
the Deputy Auditor General of the Northwestern Railways. My mother, Sita
(neé Balakrishnan) was a
woman of high intellectual attainments (she translated into Tamil, for ex
ample, Henrik Ibsen's A Doll
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ious for them.

My early education, till I was twelve, was at home by my parents and by p
rivate tuition. In 1918, my
father was transferred to Madras where the family was permanently establi
shed at that time.

In Madras, I attended the Hindu High School, Triplicane, during the years
1922-25. My university
education (1925-30) was at the Presidency College. I took my bachelor's d
egree, B.Sc. (Hon.), in
--More-- (25%)
```

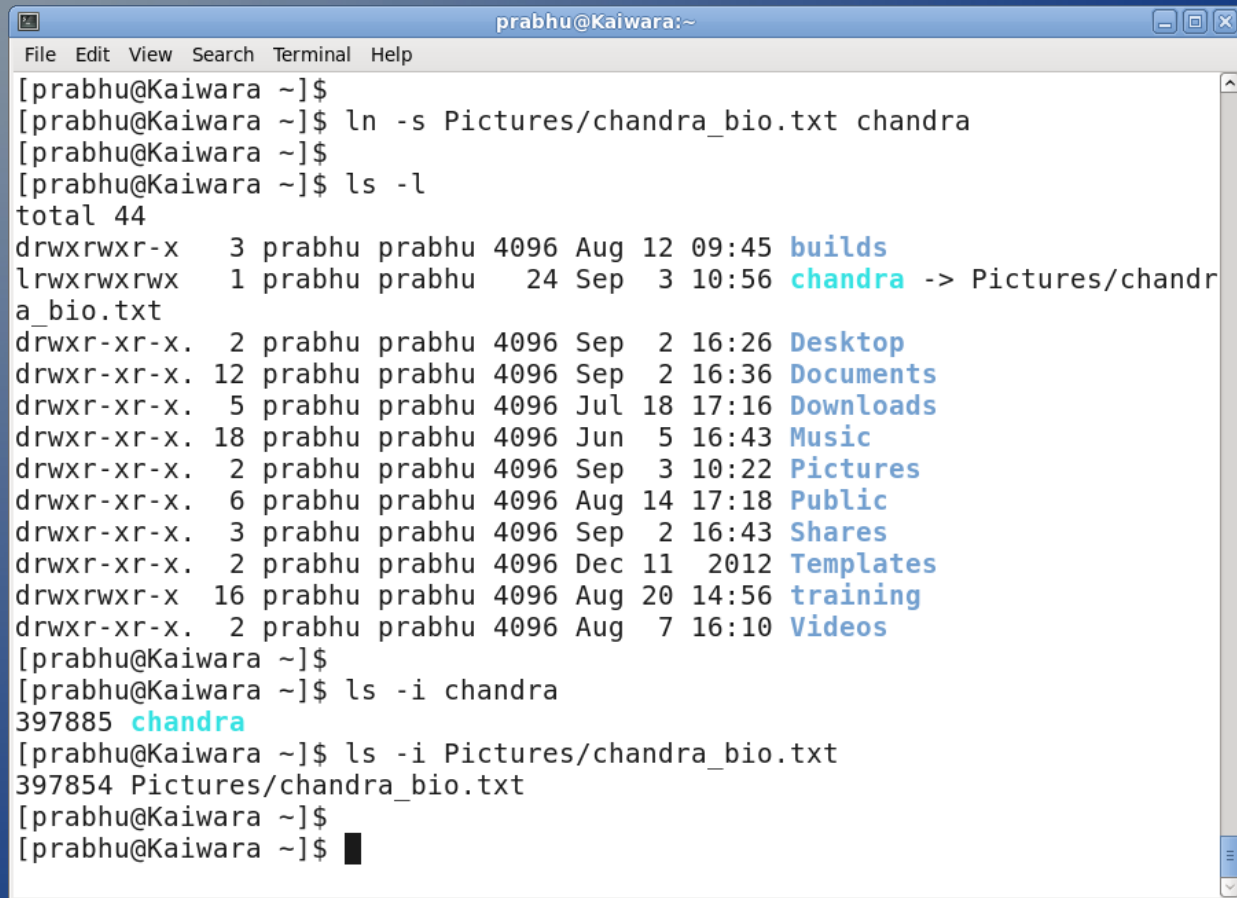


# File System commands

A terminal window titled 'prabhu@Kaiwara:~/Pictures' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a series of commands and their outputs. The 'ls' command is used with various flags to list files and directories. The output of 'ls -a' shows hidden files and 'prabhu.jpg'. The output of 'ls .' shows the current directory's contents. The output of 'ls ..' shows the parent directory's contents, including standard Linux directories like 'builds', 'Documents', 'Music', 'Public', 'Templates', 'Videos', 'Desktop', 'Downloads', 'Pictures', 'Shares', and 'training'. The 'echo ~' command outputs the home directory path '/home/prabhu'. The final 'ls ~' command shows the same directory listing as 'ls ..'.

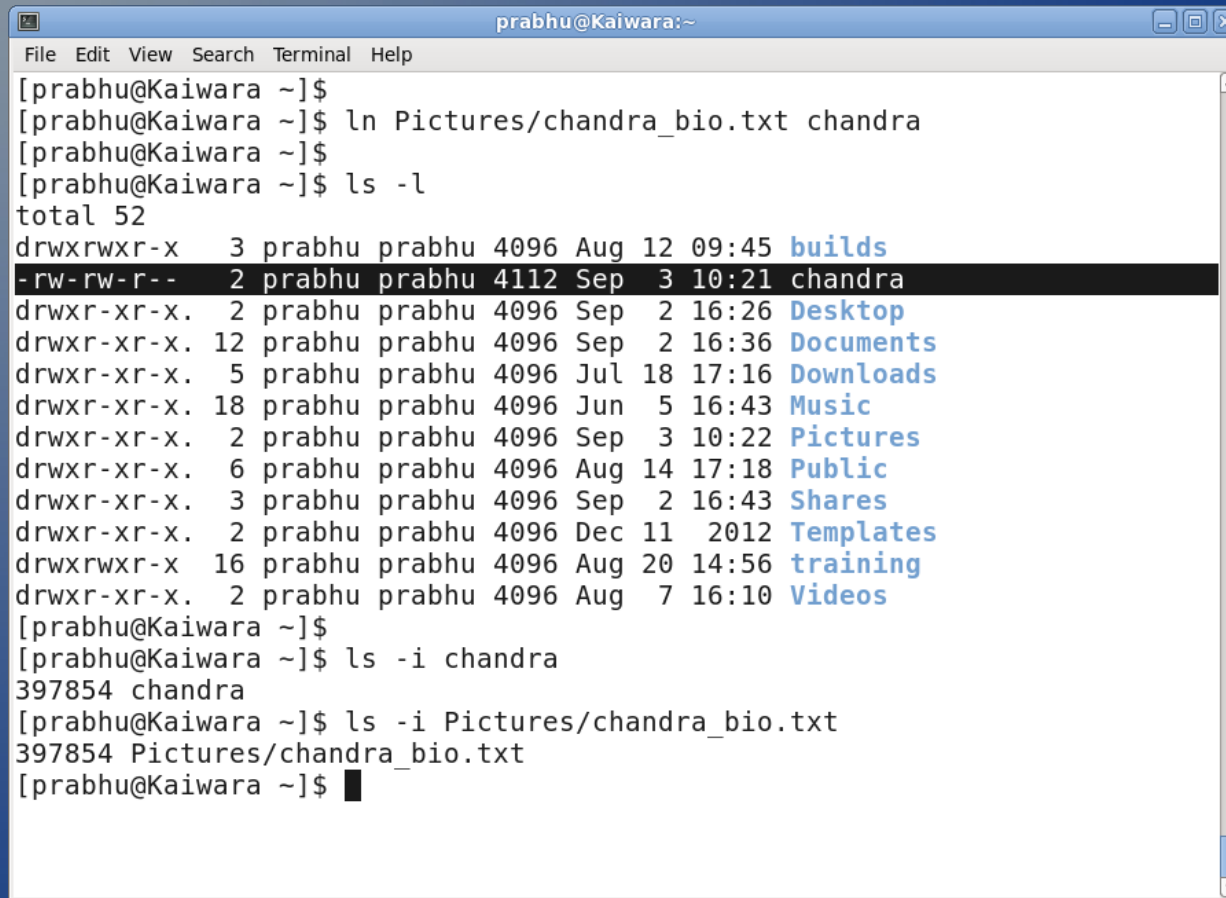
```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls -a
.  ..  abc.txt  chandra_bio.txt  prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls .
abc.txt  chandra_bio.txt  prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls ..
builds  Documents  Music  Public  Templates  Videos
Desktop  Downloads  Pictures  Shares  training
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ echo ~
/home/prabhu
[prabhu@Kaiwara Pictures]$ ls ~
builds  Documents  Music  Public  Templates  Videos
Desktop  Downloads  Pictures  Shares  training
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$
```

# File System commands



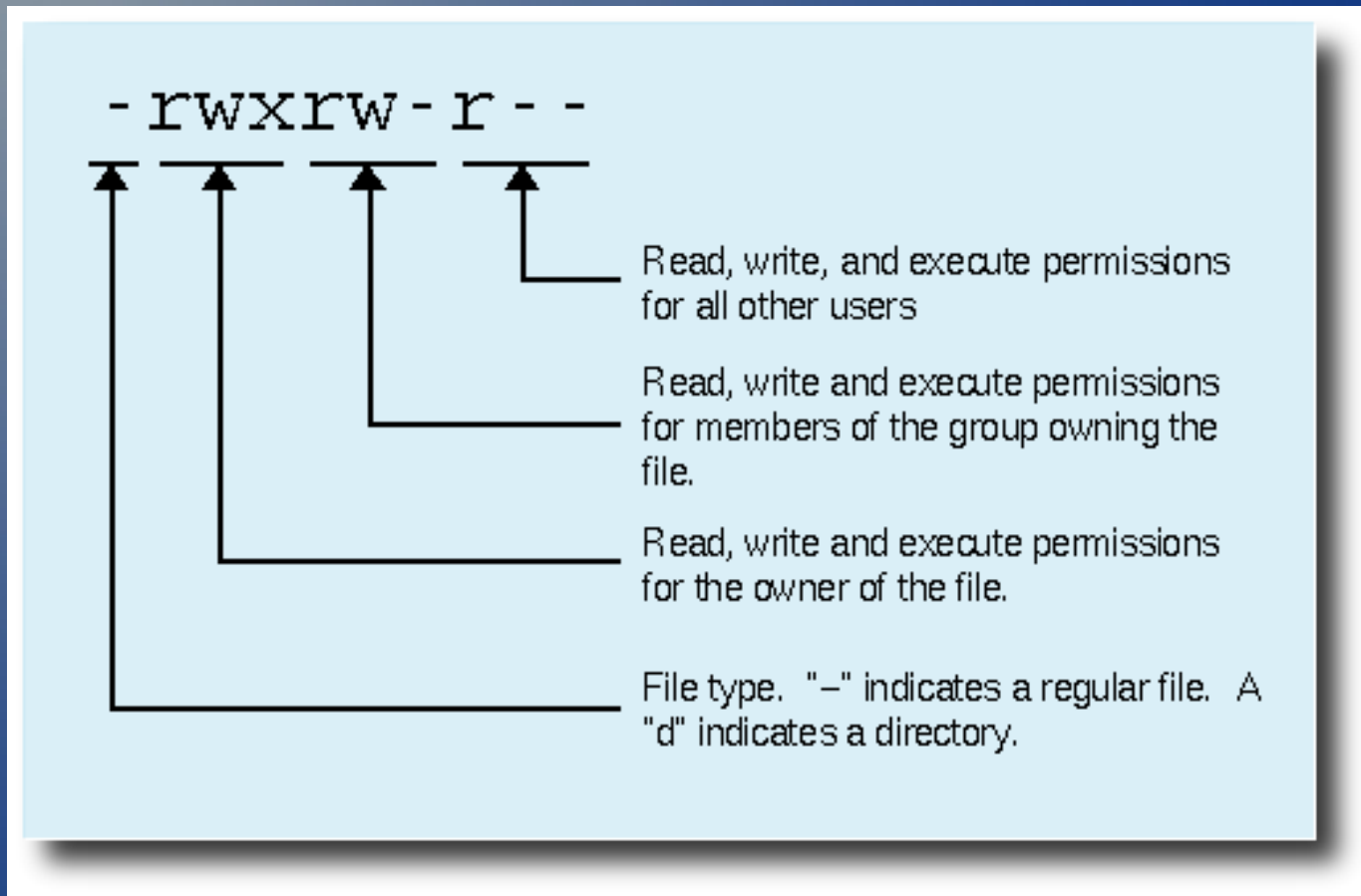
```
prabhu@Kaiwara:~  
File Edit View Search Terminal Help  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ln -s Pictures/chandra_bio.txt chandra  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ls -l  
total 44  
drwxrwxr-x  3 prabhu prabhu 4096 Aug 12 09:45 builds  
lrwxrwxrwx  1 prabhu prabhu   24 Sep  3 10:56 chandra -> Pictures/chandra_bio.txt  
drwxr-xr-x.  2 prabhu prabhu 4096 Sep  2 16:26 Desktop  
drwxr-xr-x. 12 prabhu prabhu 4096 Sep  2 16:36 Documents  
drwxr-xr-x.  5 prabhu prabhu 4096 Jul 18 17:16 Downloads  
drwxr-xr-x. 18 prabhu prabhu 4096 Jun  5 16:43 Music  
drwxr-xr-x.  2 prabhu prabhu 4096 Sep  3 10:22 Pictures  
drwxr-xr-x.  6 prabhu prabhu 4096 Aug 14 17:18 Public  
drwxr-xr-x.  3 prabhu prabhu 4096 Sep  2 16:43 Shares  
drwxr-xr-x.  2 prabhu prabhu 4096 Dec 11 2012 Templates  
drwxrwxr-x 16 prabhu prabhu 4096 Aug 20 14:56 training  
drwxr-xr-x.  2 prabhu prabhu 4096 Aug  7 16:10 Videos  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ls -i chandra  
397885 chandra  
[prabhu@Kaiwara ~]$ ls -i Pictures/chandra_bio.txt  
397854 Pictures/chandra_bio.txt  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$
```

# File System commands

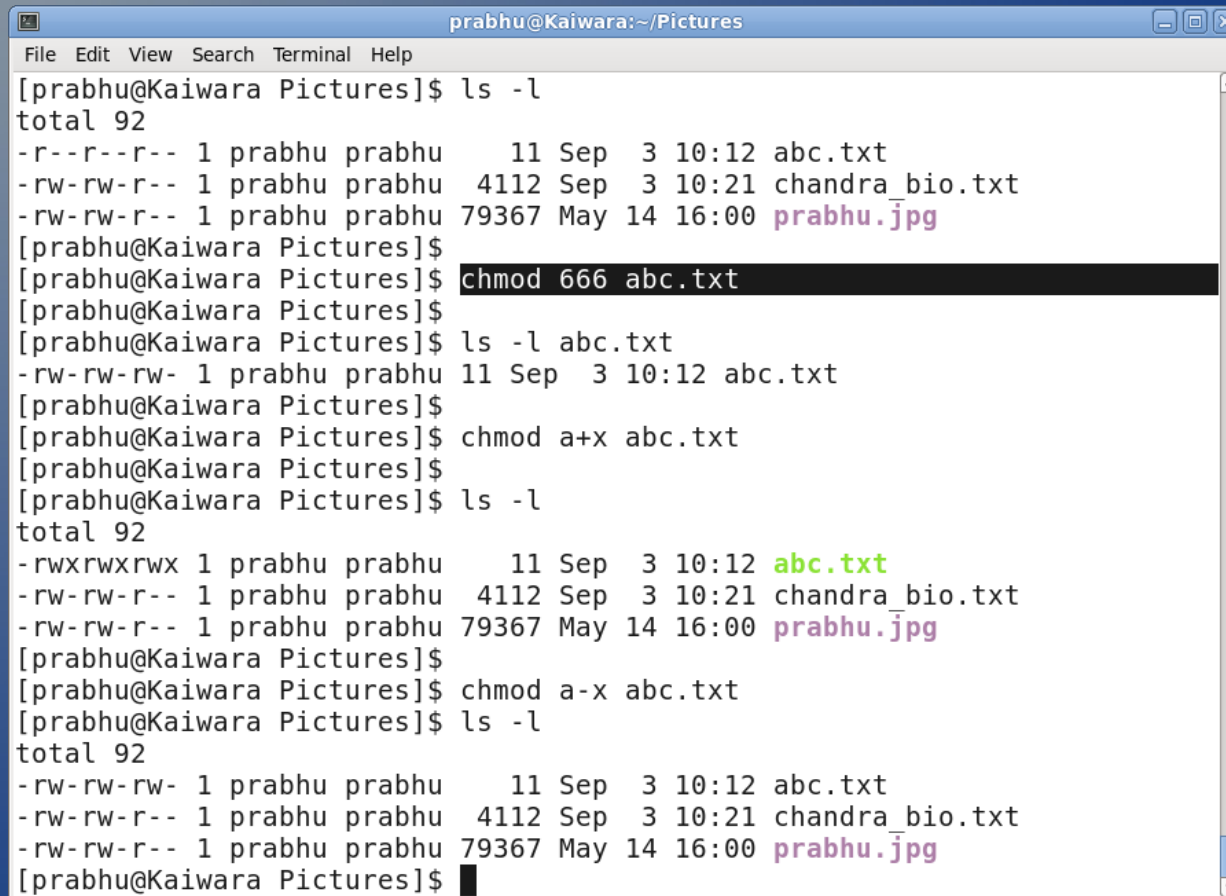


```
prabhu@Kaiwara:~  
File Edit View Search Terminal Help  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ln Pictures/chandra_bio.txt chandra  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ls -l  
total 52  
drwxrwxr-x  3 prabhu prabhu 4096 Aug 12 09:45 builds  
-rw-rw-r--  2 prabhu prabhu 4112 Sep  3 10:21 chandra  
drwxr-xr-x.  2 prabhu prabhu 4096 Sep  2 16:26 Desktop  
drwxr-xr-x. 12 prabhu prabhu 4096 Sep  2 16:36 Documents  
drwxr-xr-x.  5 prabhu prabhu 4096 Jul 18 17:16 Downloads  
drwxr-xr-x. 18 prabhu prabhu 4096 Jun  5 16:43 Music  
drwxr-xr-x.  2 prabhu prabhu 4096 Sep  3 10:22 Pictures  
drwxr-xr-x.  6 prabhu prabhu 4096 Aug 14 17:18 Public  
drwxr-xr-x.  3 prabhu prabhu 4096 Sep  2 16:43 Shares  
drwxr-xr-x.  2 prabhu prabhu 4096 Dec 11 2012 Templates  
drwxrwxr-x 16 prabhu prabhu 4096 Aug 20 14:56 training  
drwxr-xr-x.  2 prabhu prabhu 4096 Aug  7 16:10 Videos  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ls -i chandra  
397854 chandra  
[prabhu@Kaiwara ~]$ ls -i Pictures/chandra_bio.txt  
397854 Pictures/chandra_bio.txt  
[prabhu@Kaiwara ~]$
```

# File System Security



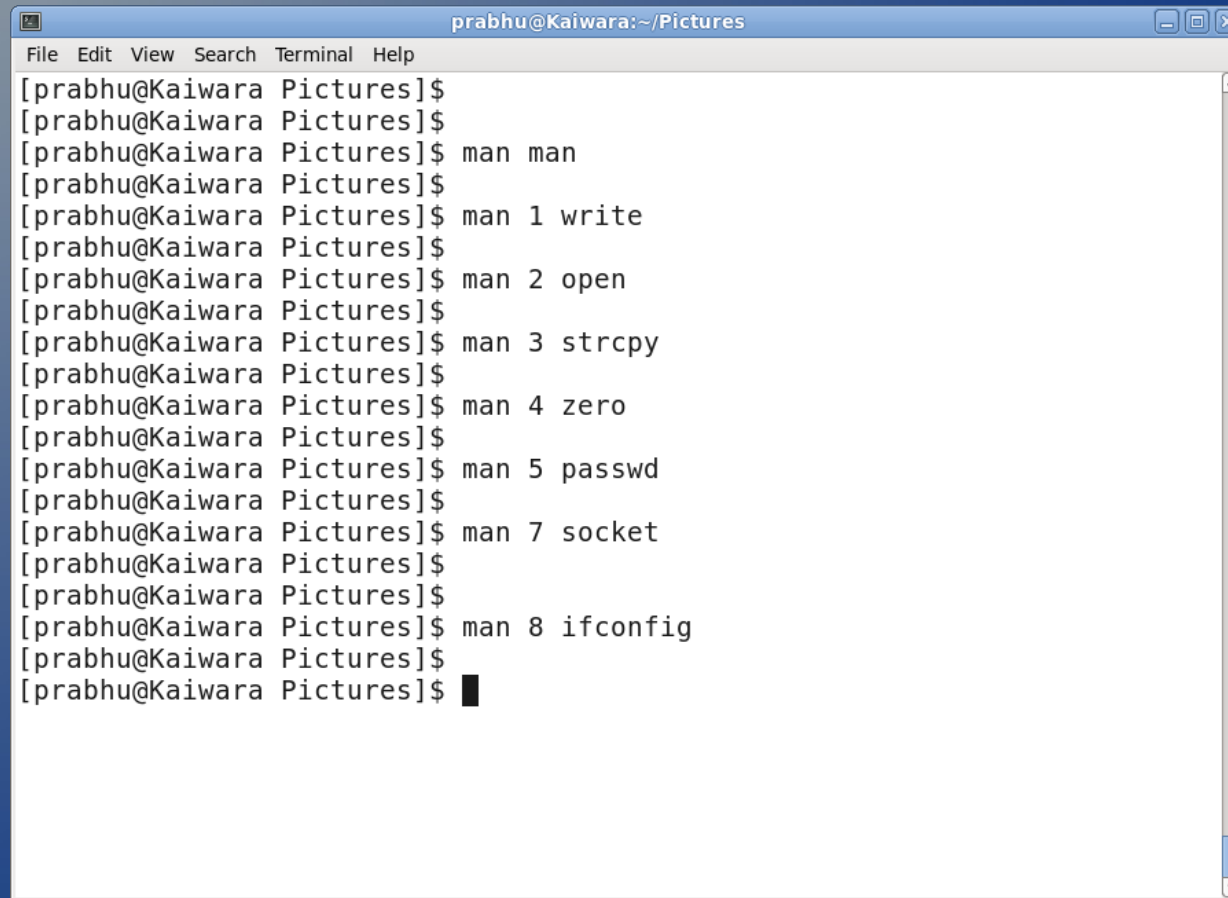
# File System security



A terminal window titled "prabhu@Kaiwara:~/Pictures" with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a series of commands and their outputs:

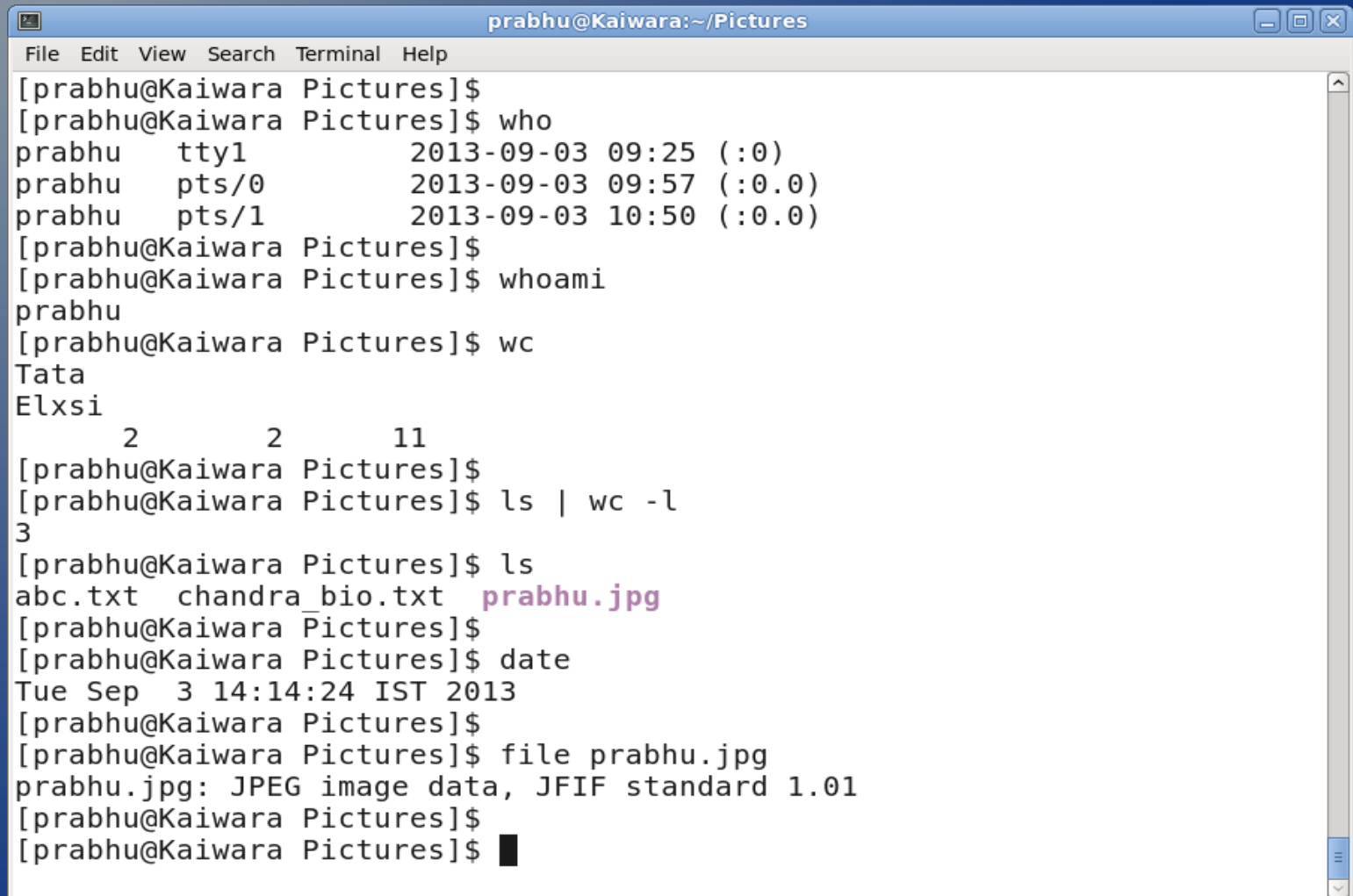
```
[prabhu@Kaiwara Pictures]$ ls -l
total 92
-r--r--r-- 1 prabhu prabhu      11 Sep  3 10:12 abc.txt
-rw-rw-r-- 1 prabhu prabhu    4112 Sep  3 10:21 chandra bio.txt
-rw-rw-r-- 1 prabhu prabhu 79367 May 14 16:00 prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ chmod 666 abc.txt
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls -l abc.txt
-rw-rw-rw- 1 prabhu prabhu    11 Sep  3 10:12 abc.txt
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ chmod a+x abc.txt
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls -l
total 92
-rwxrwxrwx 1 prabhu prabhu      11 Sep  3 10:12 abc.txt
-rw-rw-r-- 1 prabhu prabhu    4112 Sep  3 10:21 chandra bio.txt
-rw-rw-r-- 1 prabhu prabhu 79367 May 14 16:00 prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ chmod a-x abc.txt
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls -l
total 92
-rw-rw-rw- 1 prabhu prabhu      11 Sep  3 10:12 abc.txt
-rw-rw-r-- 1 prabhu prabhu    4112 Sep  3 10:21 chandra bio.txt
-rw-rw-r-- 1 prabhu prabhu 79367 May 14 16:00 prabhu.jpg
[prabhu@Kaiwara Pictures]$
```

# Linux Generic Commands

A screenshot of a Linux terminal window. The window title is 'prabhu@Kaiwara:~/Pictures'. The menu bar includes 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal shows a series of commands and their outputs. The prompt is '[prabhu@Kaiwara Pictures]\$'. The commands entered are: an empty line, another empty line, 'man man', an empty line, 'man 1 write', an empty line, 'man 2 open', an empty line, 'man 3 strcpy', an empty line, 'man 4 zero', an empty line, 'man 5 passwd', an empty line, 'man 7 socket', an empty line, 'man 8 ifconfig', an empty line, and finally a cursor on a new line.

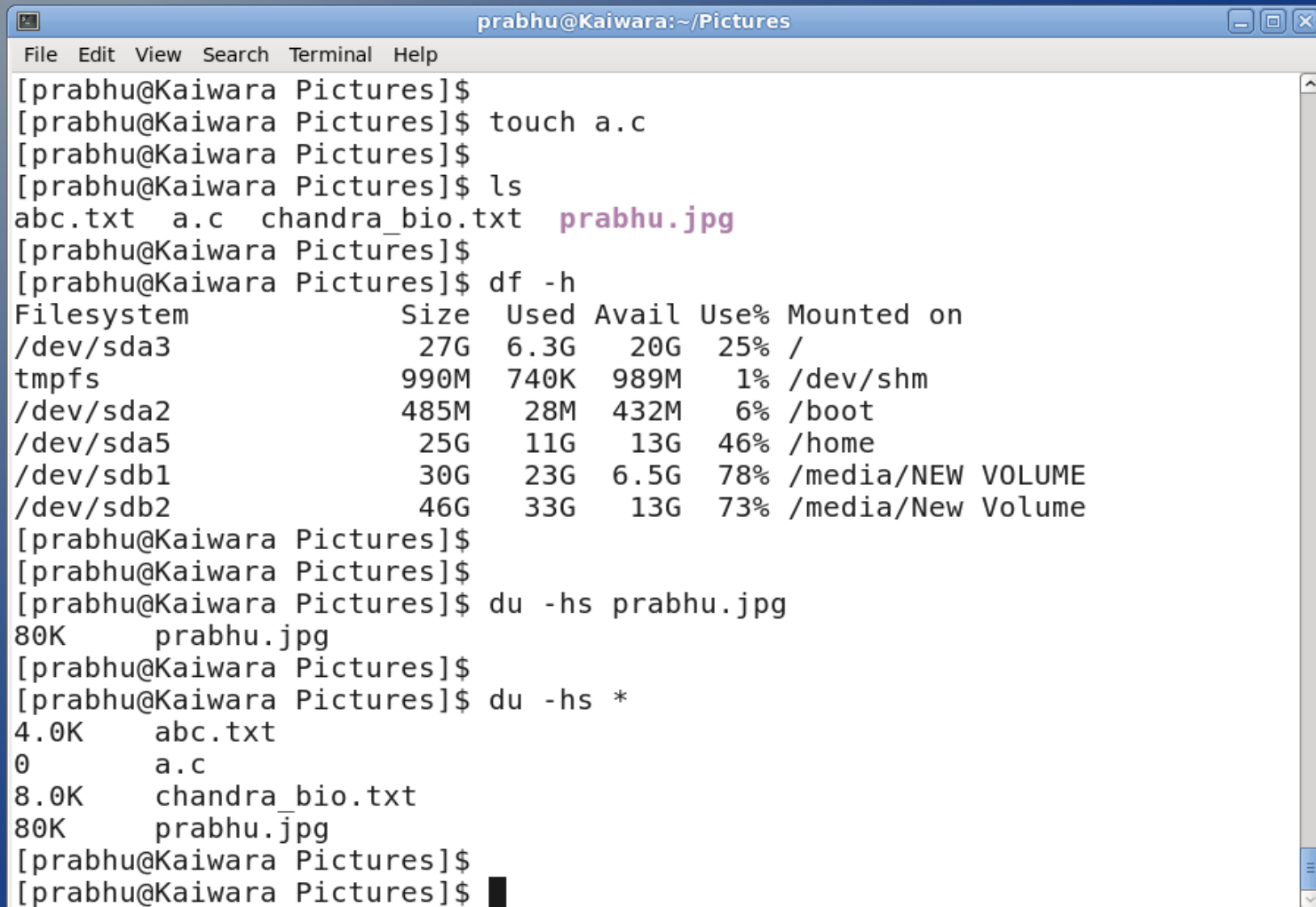
```
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ man man  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ man 1 write  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ man 2 open  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ man 3 strcpy  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ man 4 zero  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ man 5 passwd  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ man 7 socket  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ man 8 ifconfig  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$
```

# Linux Generic Commands



```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ who
prabhu    tty1          2013-09-03 09:25 (:0)
prabhu    pts/0          2013-09-03 09:57 (:0.0)
prabhu    pts/1          2013-09-03 10:50 (:0.0)
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ whoami
prabhu
[prabhu@Kaiwara Pictures]$ wc
Tata
Elxsi
      2      2      11
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls | wc -l
3
[prabhu@Kaiwara Pictures]$ ls
abc.txt  chandra_bio.txt  prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ date
Tue Sep  3 14:14:24 IST 2013
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ file prabhu.jpg
prabhu.jpg: JPEG image data, JFIF standard 1.01
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$
```

# Linux Generic Commands

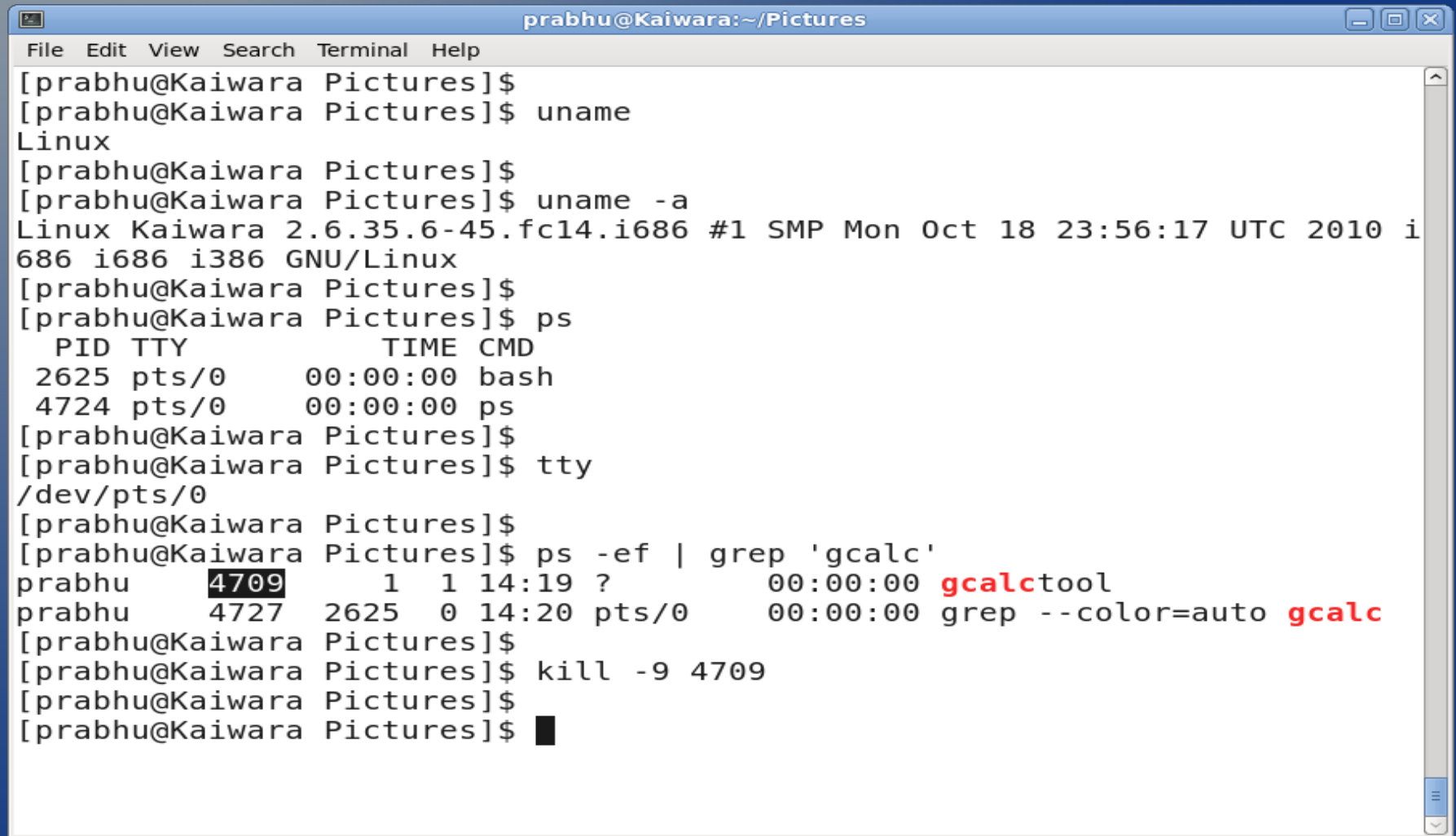


A terminal window titled "prabhu@Kaiwara:~/Pictures" showing a series of Linux commands and their outputs. The commands include creating a file, listing files, checking disk space, and checking file sizes.

```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ touch a.c
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ls
abc.txt  a.c  chandra_bio.txt  prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda3        27G   6.3G   20G   25% /
tmpfs            990M   740K   989M    1% /dev/shm
/dev/sda2        485M   28M   432M    6% /boot
/dev/sda5        25G    11G   13G   46% /home
/dev/sdb1        30G    23G   6.5G   78% /media/NEW VOLUME
/dev/sdb2        46G    33G   13G   73% /media/New Volume
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ du -hs prabhu.jpg
80K    prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ du -hs *
4.0K    abc.txt
0       a.c
8.0K    chandra_bio.txt
80K     prabhu.jpg
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$
```

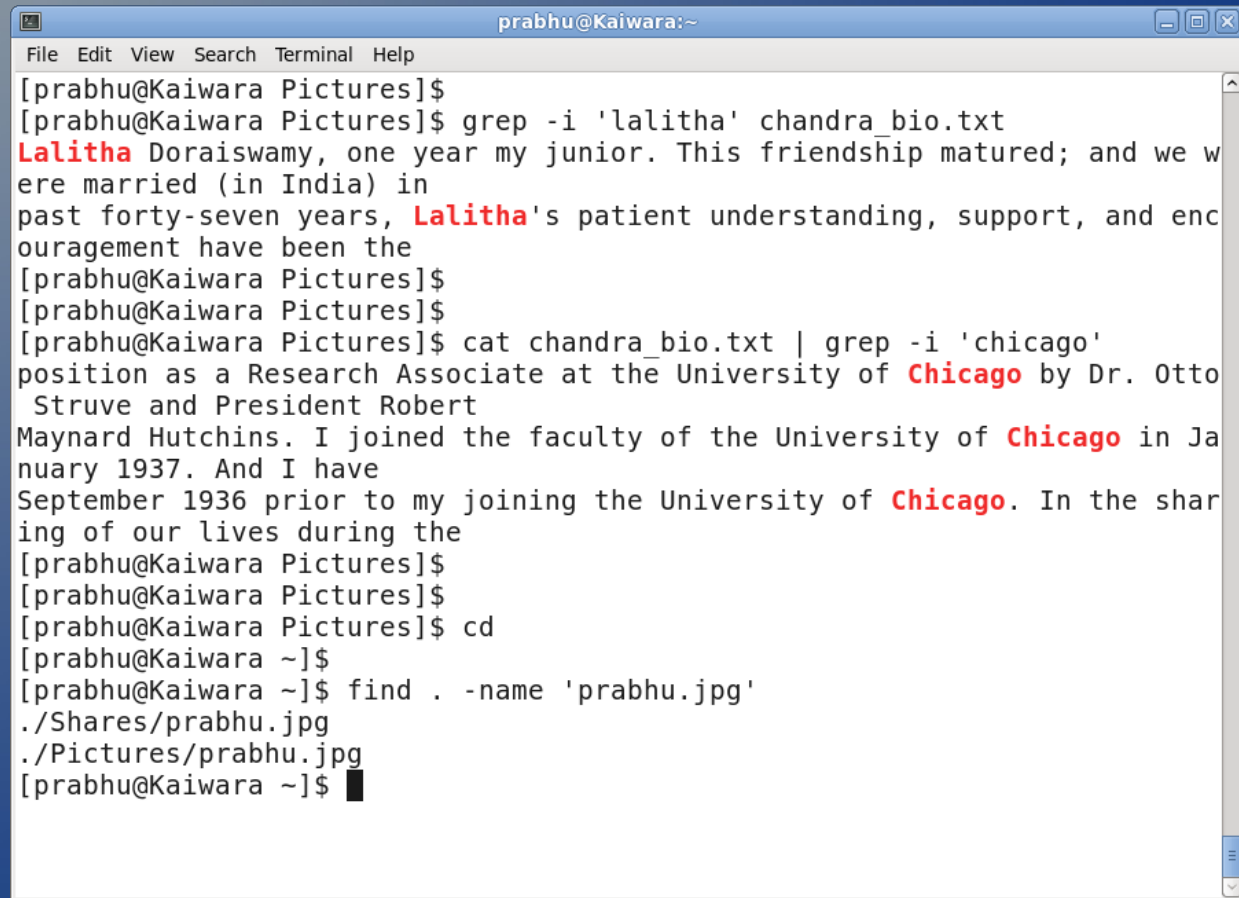


# Linux Generic Commands



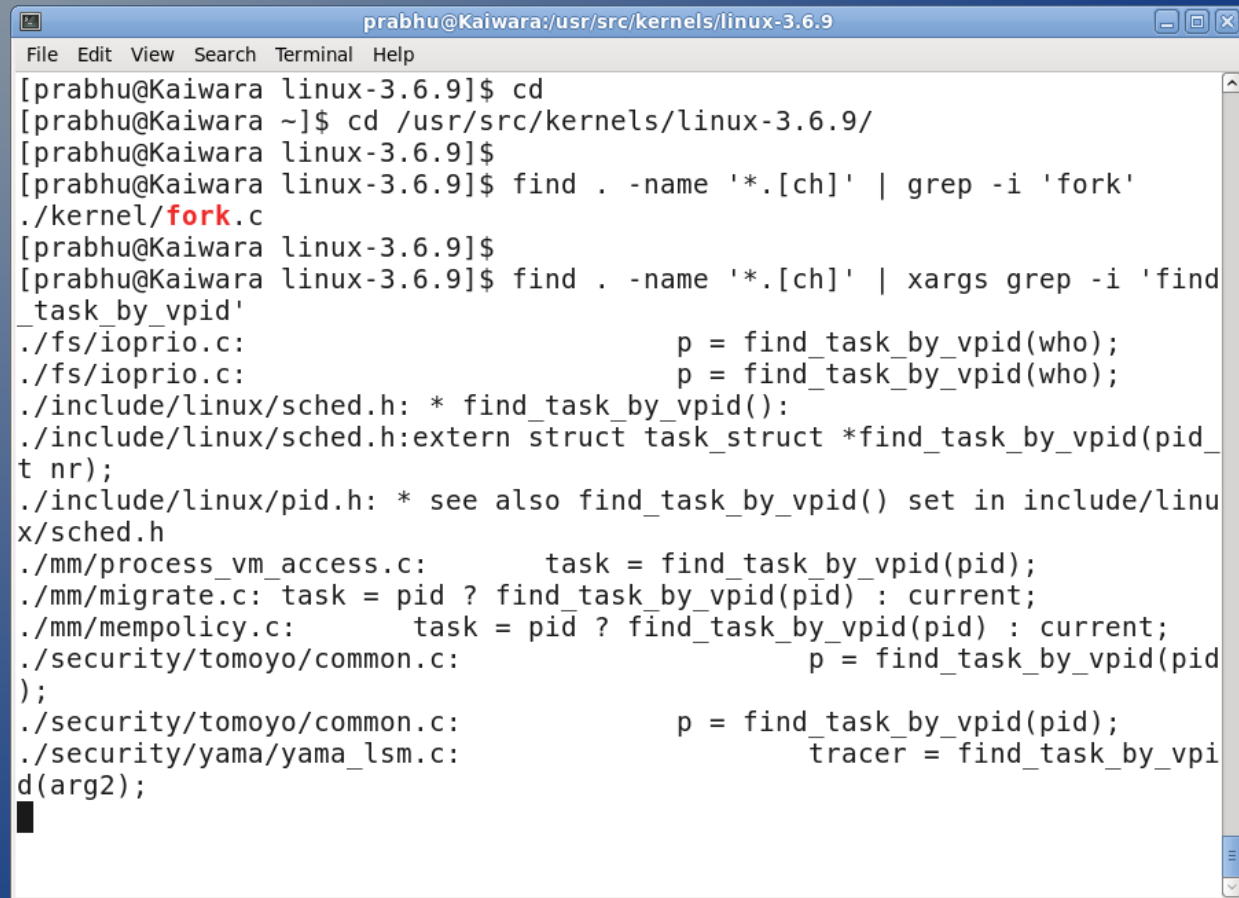
```
prabhu@Kaiwara:~/Pictures
File Edit View Search Terminal Help
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ uname
Linux
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ uname -a
Linux Kaiwara 2.6.35.6-45.fc14.i686 #1 SMP Mon Oct 18 23:56:17 UTC 2010 i
686 i686 i386 GNU/Linux
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ps
  PID TTY          TIME CMD
 2625 pts/0        00:00:00 bash
 4724 pts/0        00:00:00 ps
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ tty
/dev/pts/0
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ ps -ef | grep 'gcalc'
prabhu    4709      1   1 14:19 ?           00:00:00 gcalctool
prabhu    4727  2625   0 14:20 pts/0      00:00:00 grep --color=auto gcalc
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$ kill -9 4709
[prabhu@Kaiwara Pictures]$
[prabhu@Kaiwara Pictures]$
```

# Linux Generic Commands



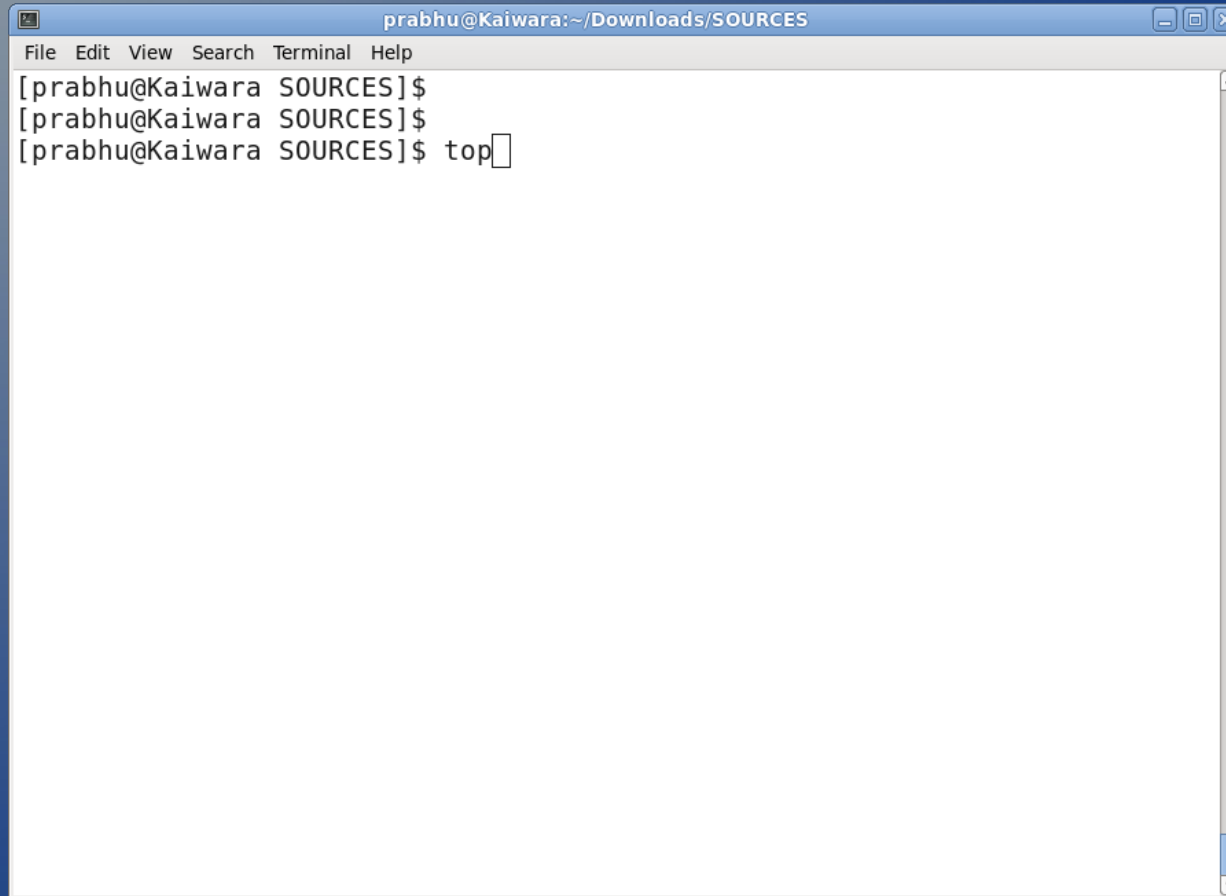
```
prabhu@Kaiwara:~  
File Edit View Search Terminal Help  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ grep -i 'lalitha' chandra_bio.txt  
Lalitha Doraiswamy, one year my junior. This friendship matured; and we w  
ere married (in India) in  
past forty-seven years, Lalitha's patient understanding, support, and enc  
ouragement have been the  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ cat chandra_bio.txt | grep -i 'chicago'  
position as a Research Associate at the University of Chicago by Dr. Otto  
Struve and President Robert  
Maynard Hutchins. I joined the faculty of the University of Chicago in Ja  
nuary 1937. And I have  
September 1936 prior to my joining the University of Chicago. In the shar  
ing of our lives during the  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$  
[prabhu@Kaiwara Pictures]$ cd  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ find . -name 'prabhu.jpg'  
./Shares/prabhu.jpg  
./Pictures/prabhu.jpg  
[prabhu@Kaiwara ~]$
```

# Linux Generic Commands

A terminal window titled 'prabhu@Kaiwara:/usr/src/kernels/linux-3.6.9' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a series of commands and their outputs. The first command is 'cd', which changes the directory to '~'. The second command is 'cd /usr/src/kernels/linux-3.6.9/'. The third command is 'find . -name '\*..[ch]' | grep -i 'fork'', which finds files named 'fork.c' in the current directory and its subdirectories. The fourth command is 'find . -name '\*..[ch]' | xargs grep -i 'find\_task\_by\_vpid'', which finds files containing the function 'find\_task\_by\_vpid' in the current directory and its subdirectories. The output of the fourth command is a list of files and the function name they contain, with some files listed multiple times.

```
prabhu@Kaiwara:/usr/src/kernels/linux-3.6.9
File Edit View Search Terminal Help
[prabhu@Kaiwara linux-3.6.9]$ cd
[prabhu@Kaiwara ~]$ cd /usr/src/kernels/linux-3.6.9/
[prabhu@Kaiwara linux-3.6.9]$
[prabhu@Kaiwara linux-3.6.9]$ find . -name '*..[ch]' | grep -i 'fork'
./kernel/fork.c
[prabhu@Kaiwara linux-3.6.9]$
[prabhu@Kaiwara linux-3.6.9]$ find . -name '*..[ch]' | xargs grep -i 'find
_task_by_vpid'
./fs/ioprio.c:                p = find_task_by_vpid(who);
./fs/ioprio.c:                p = find_task_by_vpid(who);
./include/linux/sched.h: * find_task_by_vpid():
./include/linux/sched.h:extern struct task_struct *find_task_by_vpid(pid_
t nr);
./include/linux/pid.h: * see also find_task_by_vpid() set in include/linu
x/sched.h
./mm/process_vm_access.c:        task = find_task_by_vpid(pid);
./mm/migrate.c: task = pid ? find_task_by_vpid(pid) : current;
./mm/mempolicy.c:        task = pid ? find_task_by_vpid(pid) : current;
./security/tomoyo/common.c:                p = find_task_by_vpid(pid
);
./security/tomoyo/common.c:                p = find_task_by_vpid(pid);
./security/yama/yama_lsm.c:                tracer = find_task_by_vpi
d(arg2);
```

# Linux Generic Commands



A screenshot of a Linux terminal window. The window title bar shows the user 'prabhu@Kaiwara' and the current directory '~/Downloads/SOURCES'. The terminal has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The command prompt shows three lines of input: '[prabhu@Kaiwara SOURCES]\$', '[prabhu@Kaiwara SOURCES]\$', and '[prabhu@Kaiwara SOURCES]\$ top'. The cursor is at the end of the third line, ready for the command to be executed. The terminal area is currently empty, as the output of the 'top' command has not yet been displayed.

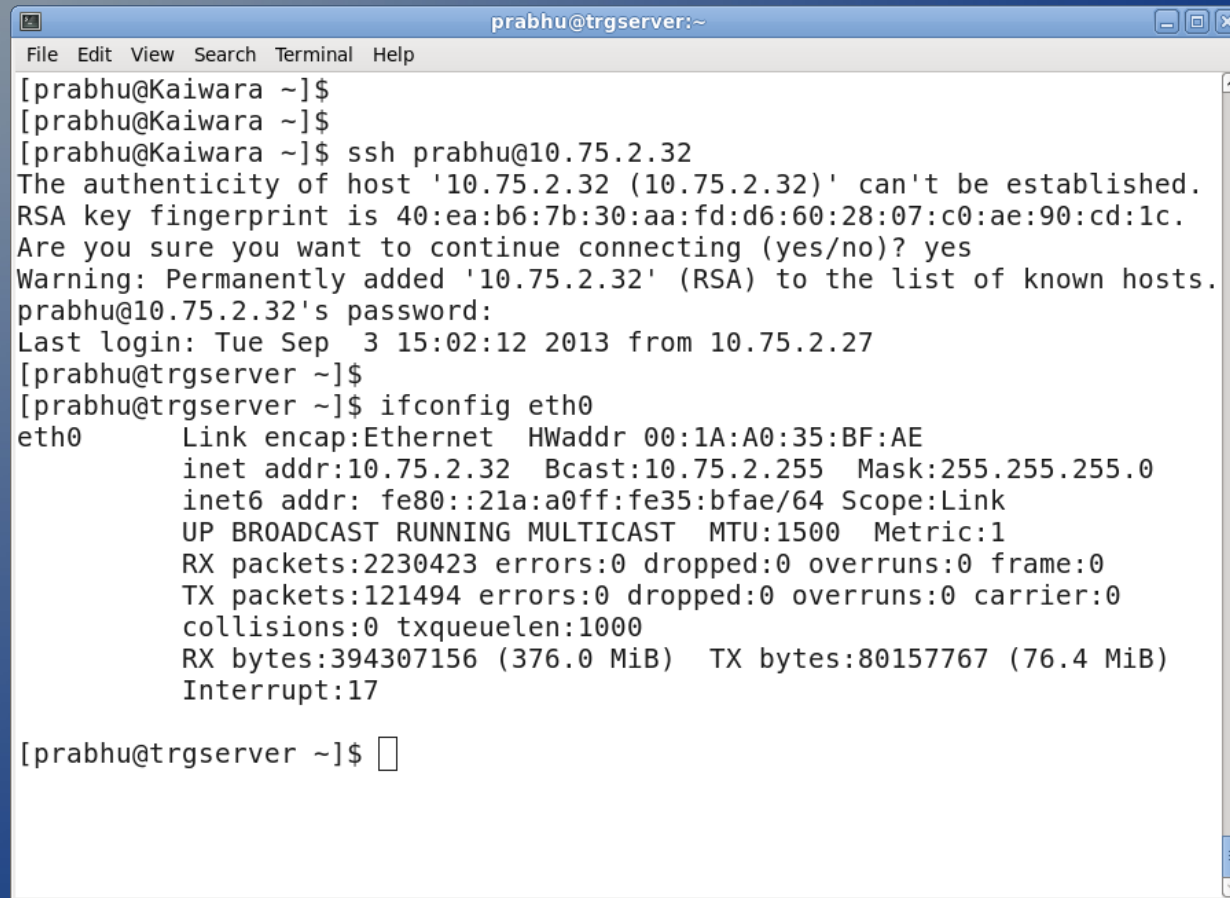
```
prabhu@Kaiwara:~/Downloads/SOURCES
File Edit View Search Terminal Help
[prabhu@Kaiwara SOURCES]$
[prabhu@Kaiwara SOURCES]$
[prabhu@Kaiwara SOURCES]$ top
```

# Linux Generic Commands

```
prabhu@Kaiwara:~/Downloads/SOURCES
File Edit View Search Terminal Help
top - 14:58:34 up 5:36, 3 users, load average: 1.01, 0.74, 0.79
Tasks: 173 total, 1 running, 172 sleeping, 0 stopped, 0 zombie
Cpu(s): 7.5%us, 2.2%sy, 0.1%ni, 88.9%id, 1.3%wa, 0.0%hi, 0.0%si, 0
Mem: 2026940k total, 1944360k used, 82580k free, 96084k buffers
Swap: 2047996k total, 8k used, 2047988k free, 999680k cached

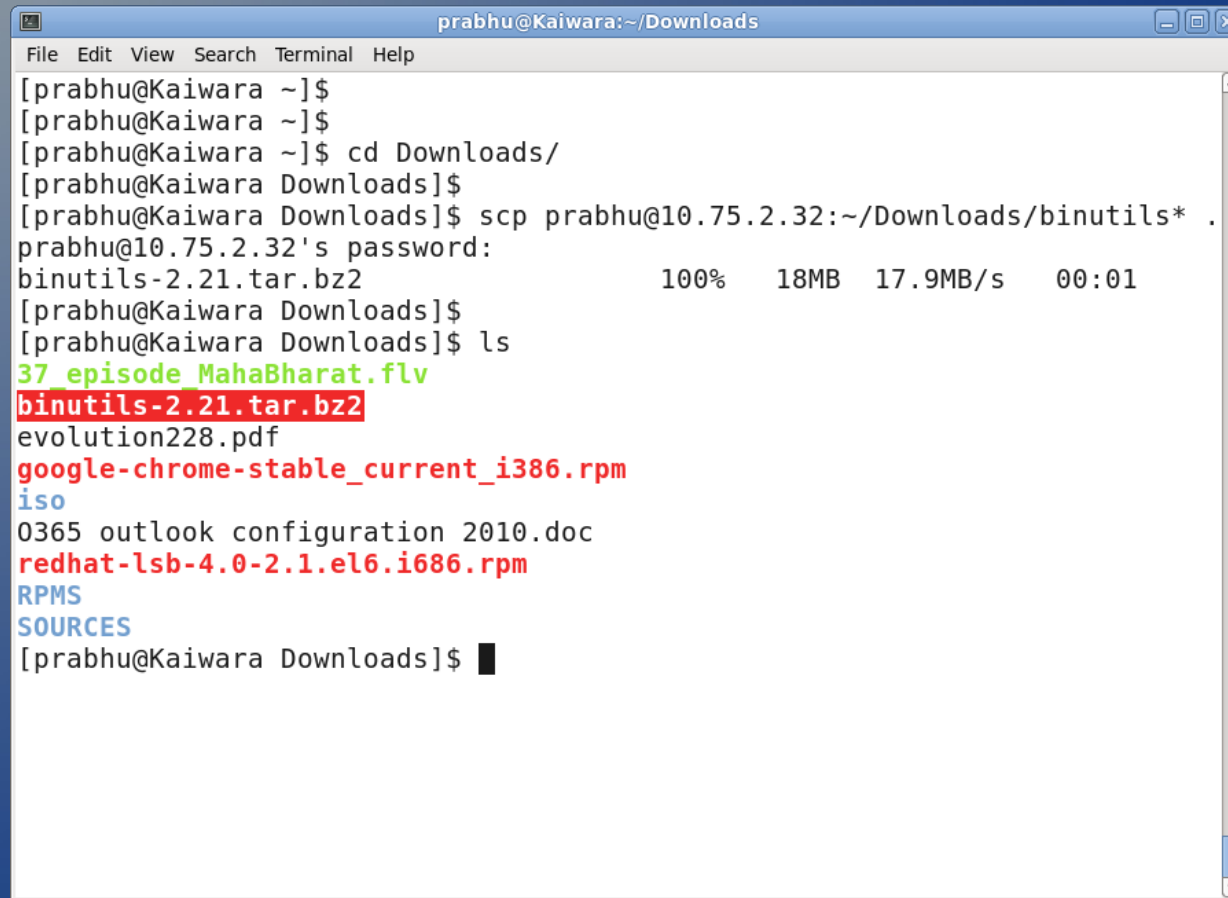
  PID USER      PR  NI  VIRT  RES  SHR  S  %CPU  %MEM    TIME+  COMMAND
 2089 prabhu    20   0   957m 269m  40m  S   2.0  13.6   24:08.96 firefox
     1 root       20   0   2932 1396 1188  S   0.0   0.1    0:02.74 init
     2 root       20   0     0     0     0  S   0.0   0.0    0:00.00 kthreadd
     3 root       20   0     0     0     0  S   0.0   0.0    0:00.99 ksoftirqd/0
     4 root       RT   0     0     0     0  S   0.0   0.0    0:00.02 migration/0
     5 root       RT   0     0     0     0  S   0.0   0.0    0:00.00 watchdog/0
     6 root       RT   0     0     0     0  S   0.0   0.0    0:00.05 migration/1
     7 root       20   0     0     0     0  S   0.0   0.0    0:00.55 ksoftirqd/1
     8 root       RT   0     0     0     0  S   0.0   0.0    0:00.00 watchdog/1
     9 root       20   0     0     0     0  S   0.0   0.0    0:02.48 events/0
    10 root       20   0     0     0     0  S   0.0   0.0    0:01.84 events/1
    11 root       20   0     0     0     0  S   0.0   0.0    0:00.00 cpuset
    12 root       20   0     0     0     0  S   0.0   0.0    0:00.00 khelper
    13 root       20   0     0     0     0  S   0.0   0.0    0:00.00 netns
    14 root       20   0     0     0     0  S   0.0   0.0    0:00.00 async/mgr
    15 root       20   0     0     0     0  S   0.0   0.0    0:00.00 pm
    16 root       20   0     0     0     0  S   0.0   0.0    0:00.04 sync_supers
    17 root       20   0     0     0     0  S   0.0   0.0    0:00.05 bdi-default
    18 root       20   0     0     0     0  S   0.0   0.0    0:00.00 kintegrityd/
```

# Linux Generic Commands

A terminal window titled 'prabhu@trgserver:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a sequence of commands and their outputs. The user starts at a shell prompt, then runs 'ssh prabhu@10.75.2.32'. This triggers an SSH warning about the host's authenticity, which the user accepts. After a successful login, the user runs 'ifconfig eth0', which displays detailed network statistics for the 'eth0' interface, including IP address, broadcast address, MTU, and packet/byte counts for both RX and TX.

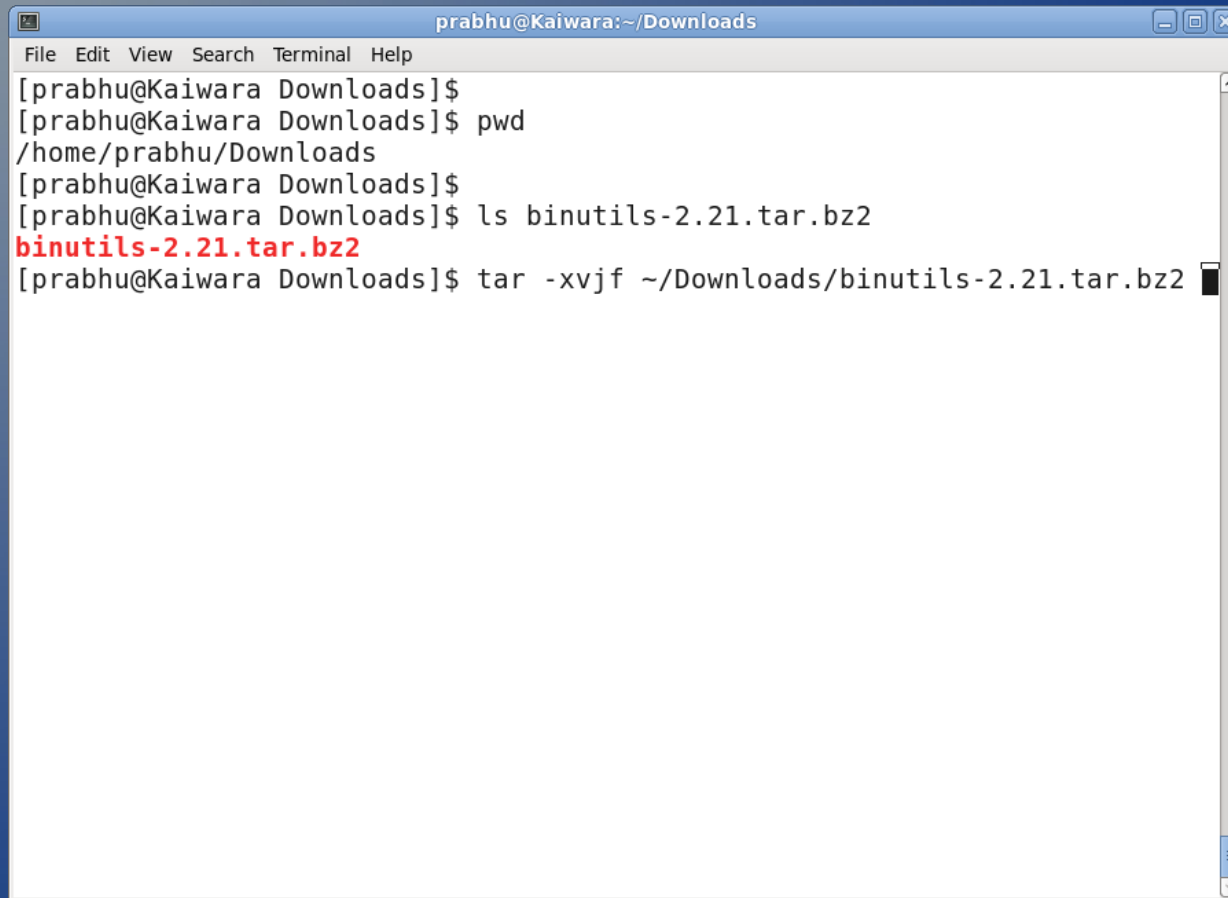
```
prabhu@trgserver:~  
File Edit View Search Terminal Help  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ ssh prabhu@10.75.2.32  
The authenticity of host '10.75.2.32 (10.75.2.32)' can't be established.  
RSA key fingerprint is 40:ea:b6:7b:30:aa:fd:d6:60:28:07:c0:ae:90:cd:1c.  
Are you sure you want to continue connecting (yes/no)? yes  
Warning: Permanently added '10.75.2.32' (RSA) to the list of known hosts.  
prabhu@10.75.2.32's password:  
Last login: Tue Sep  3 15:02:12 2013 from 10.75.2.27  
[prabhu@trgserver ~]$  
[prabhu@trgserver ~]$ ifconfig eth0  
eth0      Link encap:Ethernet  HWaddr 00:1A:A0:35:BF:AE  
          inet addr:10.75.2.32  Bcast:10.75.2.255  Mask:255.255.255.0  
          inet6 addr: fe80::21a:a0ff:fe35:bfae/64 Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:2230423 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:121494 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:394307156 (376.0 MiB)  TX bytes:80157767 (76.4 MiB)  
          Interrupt:17  
  
[prabhu@trgserver ~]$
```

# Linux Generic Commands

A terminal window titled 'prabhu@Kaiwara:~/Downloads' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a series of commands and their outputs. The 'ls' command output is color-coded: green for flv files, red for rpm files, blue for iso and SOURCES, and black for pdf and doc files. The file 'binutils-2.21.tar.bz2' is highlighted in red in the original image.

```
prabhu@Kaiwara:~/Downloads
File Edit View Search Terminal Help
[prabhu@Kaiwara ~]$
[prabhu@Kaiwara ~]$
[prabhu@Kaiwara ~]$ cd Downloads/
[prabhu@Kaiwara Downloads]$
[prabhu@Kaiwara Downloads]$ scp prabhu@10.75.2.32:~/Downloads/binutils* .
prabhu@10.75.2.32's password:
binutils-2.21.tar.bz2          100%  18MB  17.9MB/s   00:01
[prabhu@Kaiwara Downloads]$
[prabhu@Kaiwara Downloads]$ ls
37_episode_MahaBharat.flv
binutils-2.21.tar.bz2
evolution228.pdf
google-chrome-stable_current_i386.rpm
iso
0365 outlook configuration 2010.doc
redhat-lsb-4.0-2.1.el6.i686.rpm
RPMs
SOURCES
[prabhu@Kaiwara Downloads]$
```

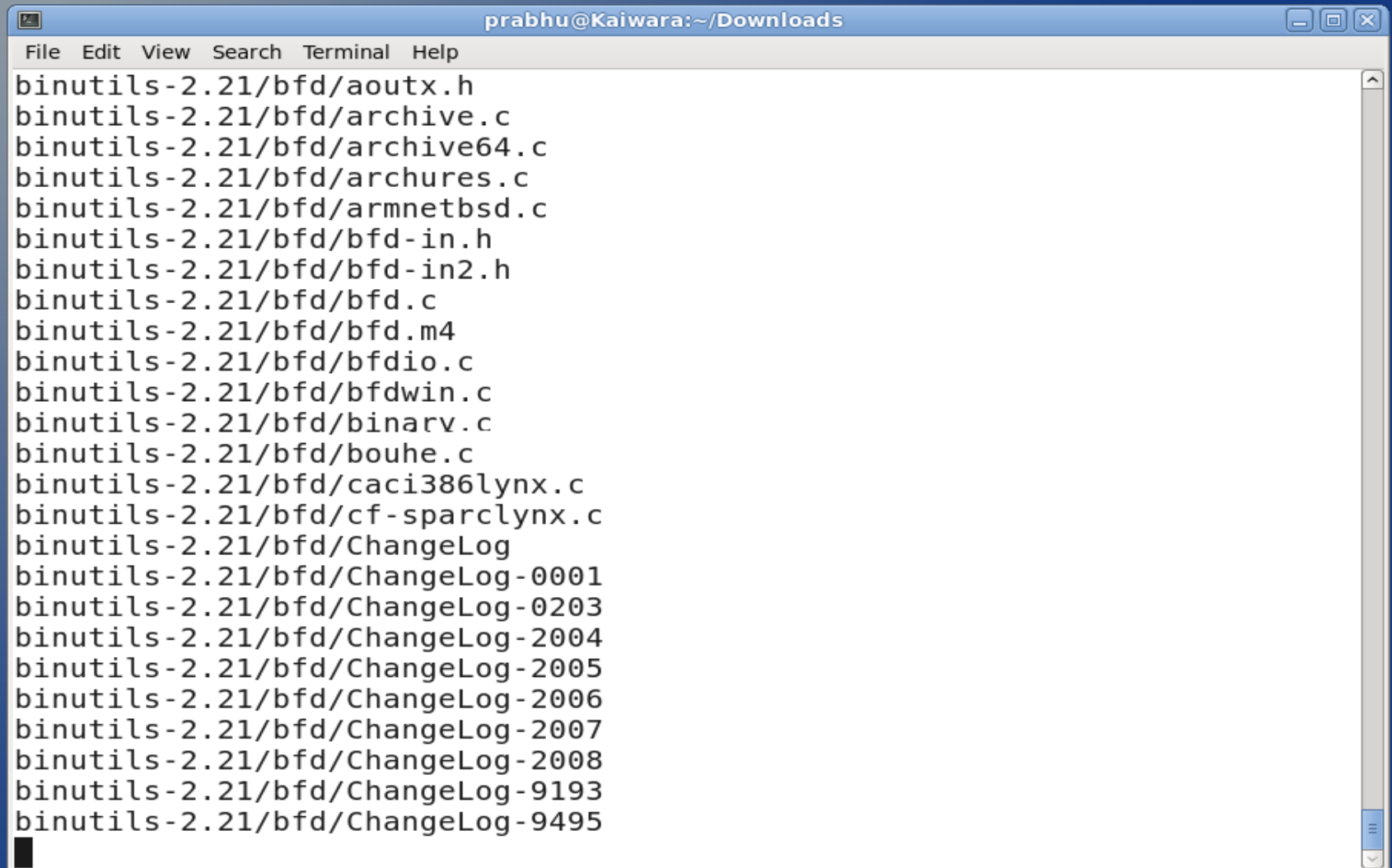
# Linux Generic Commands

A terminal window titled 'prabhu@Kaiwara:~/Downloads' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a series of commands and their outputs: a blank prompt, 'pwd' returning '/home/prabhu/Downloads', another blank prompt, 'ls binutils-2.21.tar.bz2' returning 'binutils-2.21.tar.bz2' in red, and 'tar -xvjf ~/Downloads/binutils-2.21.tar.bz2' followed by a cursor.

```
prabhu@Kaiwara:~/Downloads
File Edit View Search Terminal Help
[prabhu@Kaiwara Downloads]$
[prabhu@Kaiwara Downloads]$ pwd
/home/prabhu/Downloads
[prabhu@Kaiwara Downloads]$
[prabhu@Kaiwara Downloads]$ ls binutils-2.21.tar.bz2
binutils-2.21.tar.bz2
[prabhu@Kaiwara Downloads]$ tar -xvjf ~/Downloads/binutils-2.21.tar.bz2
```



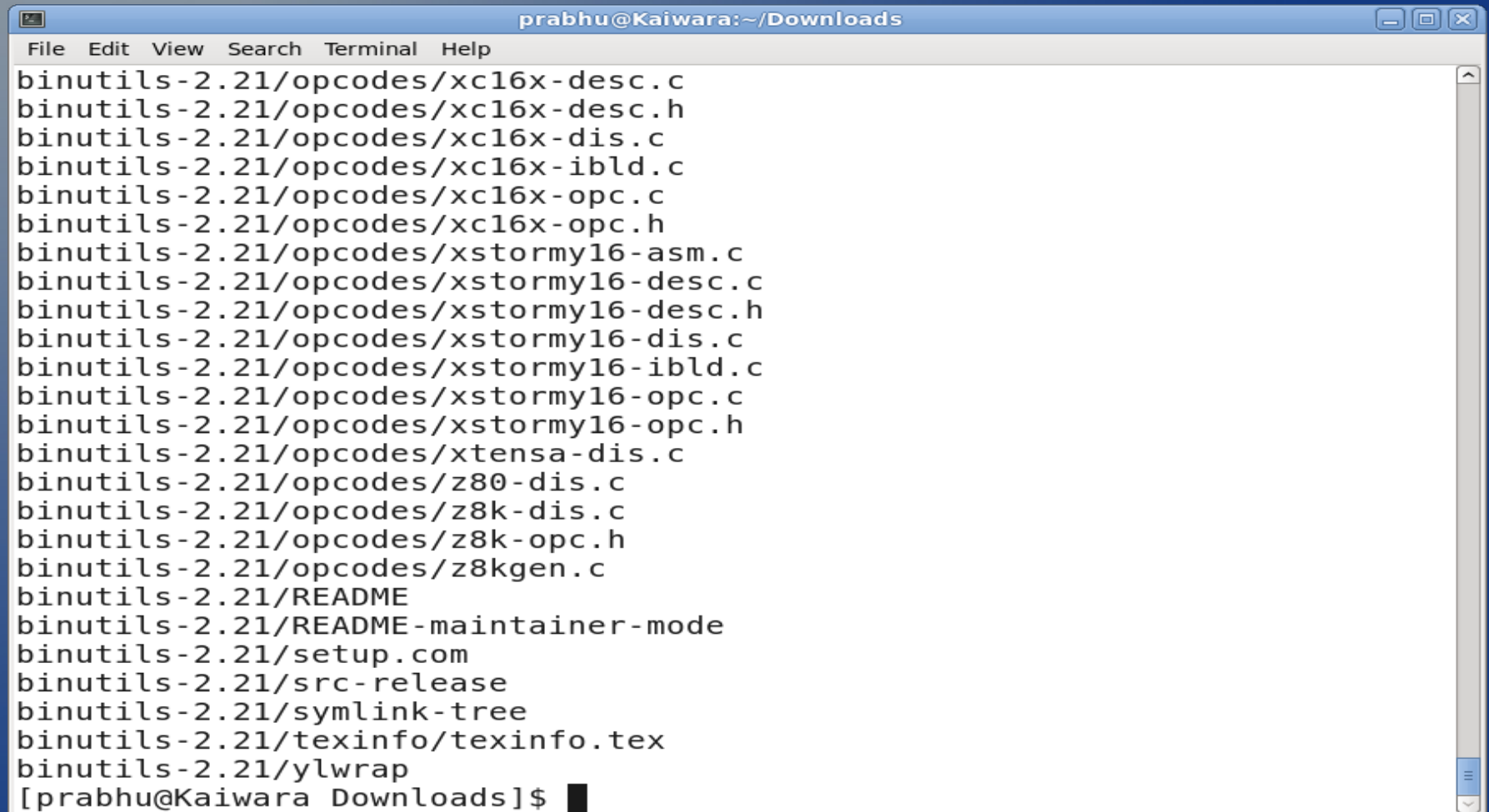
# Linux Generic Commands



A screenshot of a Linux terminal window. The title bar shows the user 'prabhu@Kaiwara' and the current directory '~/Downloads'. The terminal has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The main content area displays a list of files and directories in the 'binutils-2.21/bfd' directory. The files listed are: aoutx.h, archive.c, archive64.c, archures.c, armnetbsd.c, bfd-in.h, bfd-in2.h, bfd.c, bfd.m4, bfdio.c, bfdwin.c, binarv.c, bouhe.c, caci386lynx.c, cf-sparclynx.c, ChangeLog, ChangeLog-0001, ChangeLog-0203, ChangeLog-2004, ChangeLog-2005, ChangeLog-2006, ChangeLog-2007, ChangeLog-2008, ChangeLog-9193, and ChangeLog-9495. A cursor is visible at the end of the last line.

```
prabhu@Kaiwara:~/Downloads
File Edit View Search Terminal Help
binutils-2.21/bfd/aoutx.h
binutils-2.21/bfd/archive.c
binutils-2.21/bfd/archive64.c
binutils-2.21/bfd/archures.c
binutils-2.21/bfd/armnetbsd.c
binutils-2.21/bfd/bfd-in.h
binutils-2.21/bfd/bfd-in2.h
binutils-2.21/bfd/bfd.c
binutils-2.21/bfd/bfd.m4
binutils-2.21/bfd/bfdio.c
binutils-2.21/bfd/bfdwin.c
binutils-2.21/bfd/binarv.c
binutils-2.21/bfd/bouhe.c
binutils-2.21/bfd/caci386lynx.c
binutils-2.21/bfd/cf-sparclynx.c
binutils-2.21/bfd/ChangeLog
binutils-2.21/bfd/ChangeLog-0001
binutils-2.21/bfd/ChangeLog-0203
binutils-2.21/bfd/ChangeLog-2004
binutils-2.21/bfd/ChangeLog-2005
binutils-2.21/bfd/ChangeLog-2006
binutils-2.21/bfd/ChangeLog-2007
binutils-2.21/bfd/ChangeLog-2008
binutils-2.21/bfd/ChangeLog-9193
binutils-2.21/bfd/ChangeLog-9495
```

# Linux Generic Commands

A terminal window titled 'prabhu@Kaiwara:~/Downloads' with a menu bar (File, Edit, View, Search, Terminal, Help). It displays a list of files and directories in the current directory. The files include various opcodes and source code files for binutils-2.21, such as xc16x, xstormy16, xtensa, and z8k. The prompt '[prabhu@Kaiwara Downloads]\$' is at the bottom.

```
prabhu@Kaiwara:~/Downloads
File Edit View Search Terminal Help
binutils-2.21/opcodes/xc16x-desc.c
binutils-2.21/opcodes/xc16x-desc.h
binutils-2.21/opcodes/xc16x-dis.c
binutils-2.21/opcodes/xc16x-ibld.c
binutils-2.21/opcodes/xc16x-opc.c
binutils-2.21/opcodes/xc16x-opc.h
binutils-2.21/opcodes/xstormy16-asm.c
binutils-2.21/opcodes/xstormy16-desc.c
binutils-2.21/opcodes/xstormy16-desc.h
binutils-2.21/opcodes/xstormy16-dis.c
binutils-2.21/opcodes/xstormy16-ibld.c
binutils-2.21/opcodes/xstormy16-opc.c
binutils-2.21/opcodes/xstormy16-opc.h
binutils-2.21/opcodes/xtensa-dis.c
binutils-2.21/opcodes/z80-dis.c
binutils-2.21/opcodes/z8k-dis.c
binutils-2.21/opcodes/z8k-opc.h
binutils-2.21/opcodes/z8kgen.c
binutils-2.21/README
binutils-2.21/README-maintainer-mode
binutils-2.21/setup.com
binutils-2.21/src-release
binutils-2.21/symlink-tree
binutils-2.21/texinfo/texinfo.tex
binutils-2.21/ylwrap
[prabhu@Kaiwara Downloads]$
```

# Linux Generic Commands

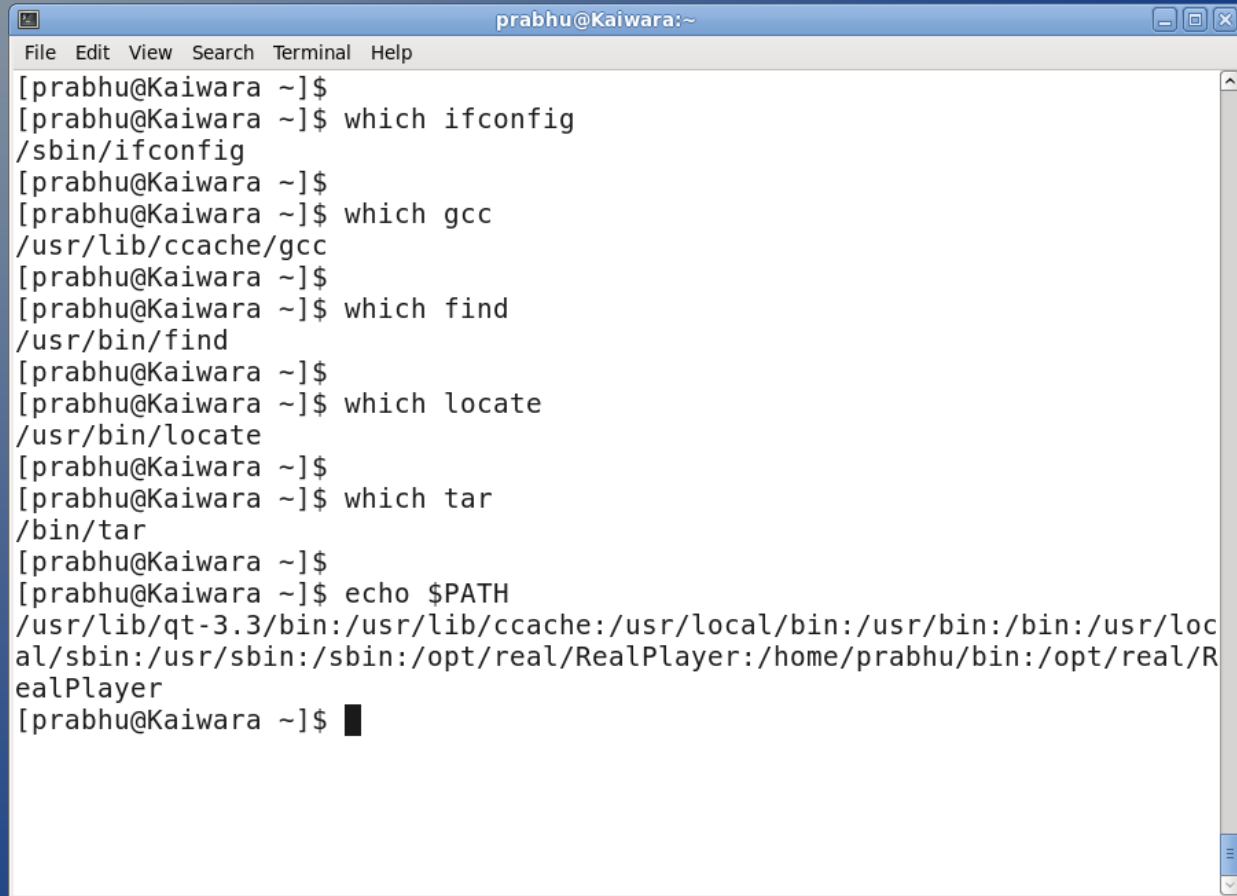
```
prabhu@Kaiwara:~/builds/binutils-2.21
File Edit View Search Terminal Help
[prabhu@Kaiwara builds]$
[prabhu@Kaiwara builds]$ ls
binutils-2.21  firefox
[prabhu@Kaiwara builds]$ cd binutils-2.21/
[prabhu@Kaiwara binutils-2.21]$ ls
bfd          COPYING3.LIB  libiberty    md5.sum
binutils     COPYING.LIB   libtool.m4   missing
ChangeLog    cpu           ltgcc.m4     mkdep
compile      depcomp       ltmain.sh    mkinstalldirs
config       elfcpp        lt~obsolete.m4  move-if-change
config.guess etc           ltoptions.m4  opcodes
config-m1.in gas           ltsugar.m4    README
config.rpath gold          ltversion.m4  README-maintainer-mode
config.sub   gprof         MAINTAINERS   setup.com
configure    include       Makefile.def  src-release
configure.ac install-sh    Makefile.in   symlink-tree
COPYING      intl          Makefile.tpl  texinfo
COPYING3     ld            makefile.vms  ylwrap
[prabhu@Kaiwara binutils-2.21]$
[prabhu@Kaiwara binutils-2.21]$ ctags -R *
[prabhu@Kaiwara binutils-2.21]$ ls tags
tags
[prabhu@Kaiwara binutils-2.21]$ vim -t find_section_by_address
```

# Linux Generic Commands

A terminal window titled 'prabhu@Kaiwara:/usr/include' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows three lines of commands: '[prabhu@Kaiwara ~]\$ cd /usr/include/', '[prabhu@Kaiwara include]\$', and '[prabhu@Kaiwara include]\$ vim -t FILE' with a cursor at the end of the last line. The window has standard Linux window controls (minimize, maximize, close) in the top right corner.

```
prabhu@Kaiwara:/usr/include
File Edit View Search Terminal Help
[prabhu@Kaiwara ~]$ cd /usr/include/
[prabhu@Kaiwara include]$
[prabhu@Kaiwara include]$ vim -t FILE
```

# Linux Generic Commands

A screenshot of a Linux terminal window titled 'prabhu@Kaiwara:~'. The window has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal shows a series of commands and their outputs. The commands are: 'which ifconfig', 'which gcc', 'which find', 'which locate', 'which tar', and 'echo \$PATH'. The outputs are: '/sbin/ifconfig', '/usr/lib/ccache/gcc', '/usr/bin/find', '/usr/bin/locate', '/bin/tar', and a long path string: '/usr/lib/qt-3.3/bin:/usr/lib/ccache:/usr/local/bin:/usr/bin:/bin:/usr/local/sbin:/usr/sbin:/sbin:/opt/real/RealPlayer:/home/prabhu/bin:/opt/real/RealPlayer'. The terminal ends with a prompt '[prabhu@Kaiwara ~]\$' followed by a cursor.

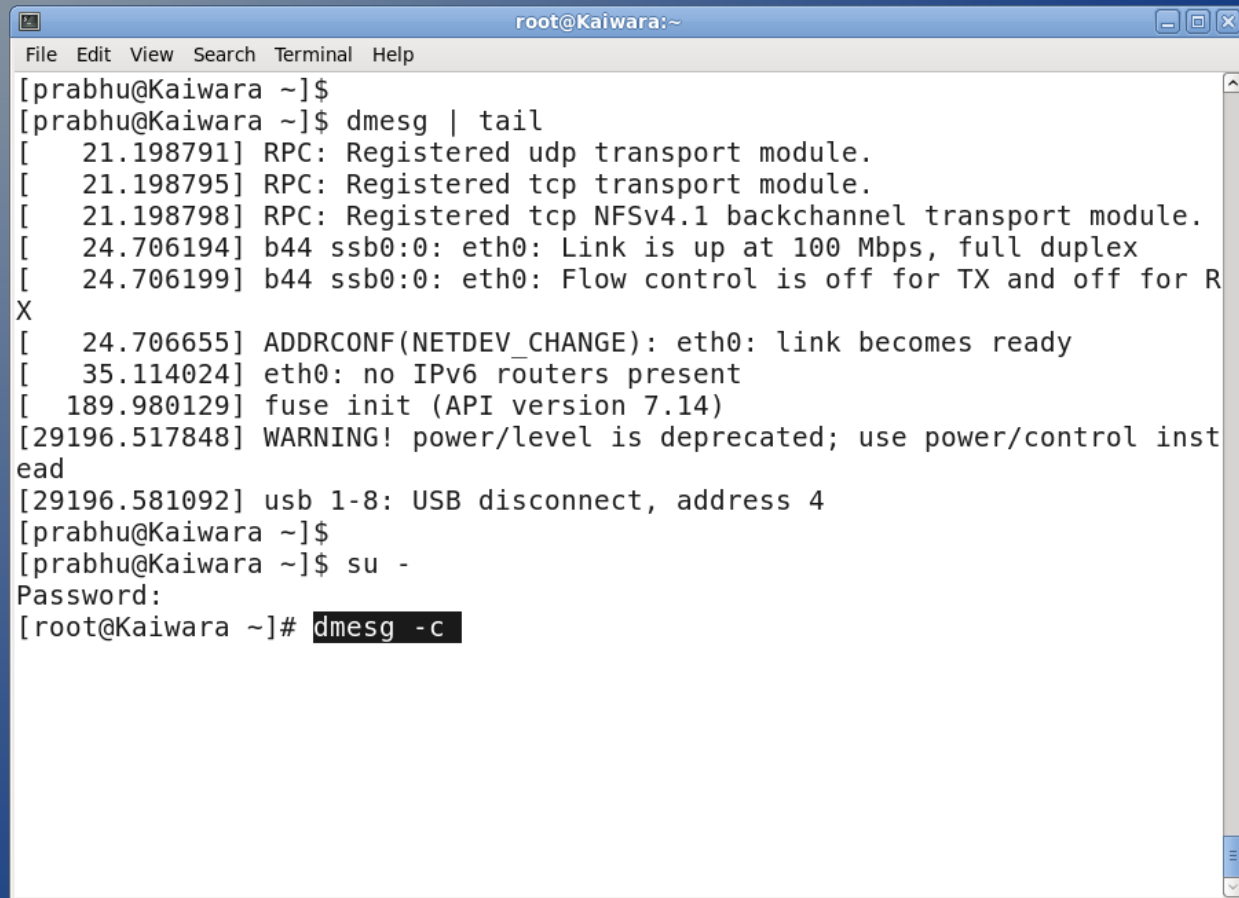
```
prabhu@Kaiwara:~  
File Edit View Search Terminal Help  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ which ifconfig  
/sbin/ifconfig  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ which gcc  
/usr/lib/ccache/gcc  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ which find  
/usr/bin/find  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ which locate  
/usr/bin/locate  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ which tar  
/bin/tar  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ echo $PATH  
/usr/lib/qt-3.3/bin:/usr/lib/ccache:/usr/local/bin:/usr/bin:/bin:/usr/local/sbin:/usr/sbin:/sbin:/opt/real/RealPlayer:/home/prabhu/bin:/opt/real/RealPlayer  
[prabhu@Kaiwara ~]$
```

# Linux Generic Commands



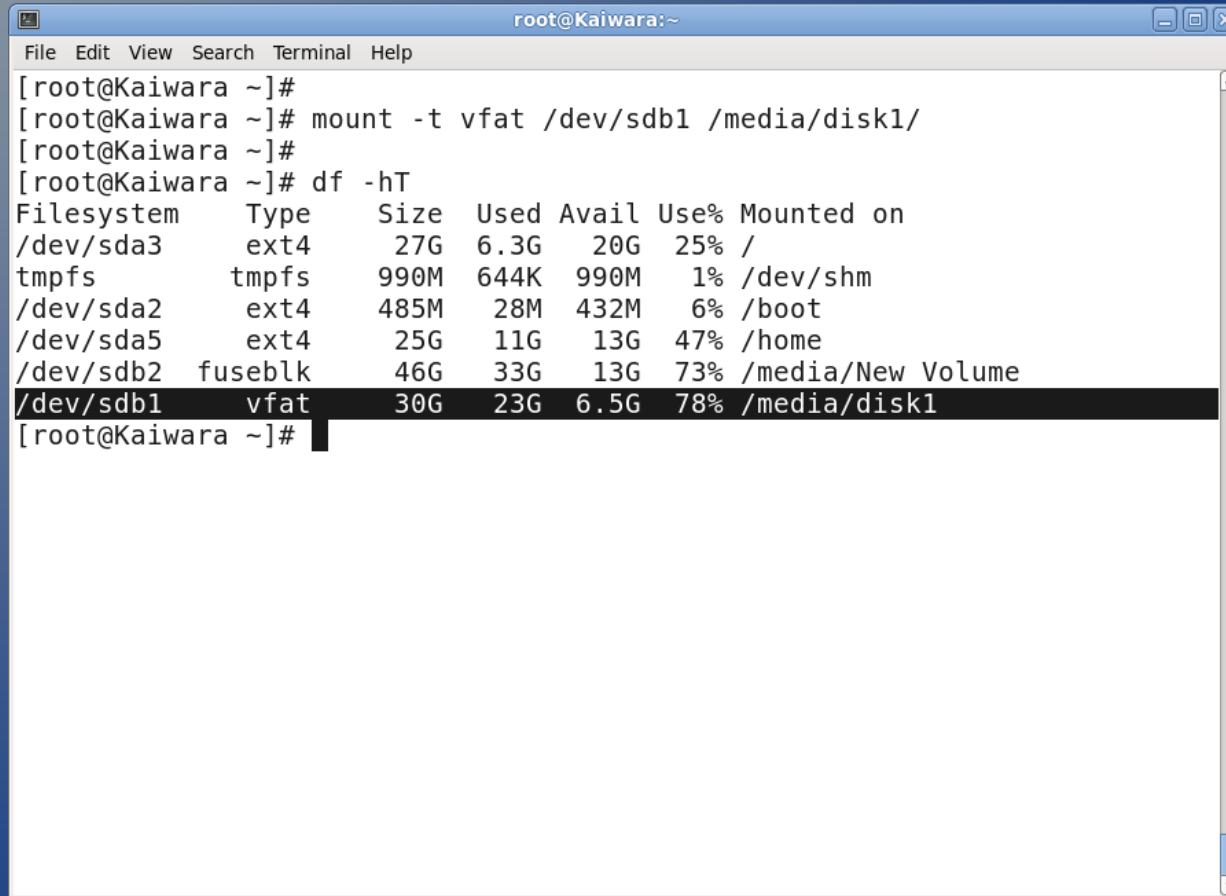
```
prabhu@Kaiwara:~  
File Edit View Search Terminal Help  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ locate bunzip  
/usr/bin/bunzip2  
/usr/share/man/man1/bunzip2.1.gz  
/usr/src/kernels/2.6.35.6-45.fc14.i686/include/linux/decompress/bunzip2.h  
/usr/src/kernels/linux-3.6.9/include/linux/decompress/bunzip2.h  
/usr/src/kernels/linux-3.6.9/lib/decompress_bunzip2.c  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$
```

# Linux Generic Commands



```
root@Kaiwara:~  
File Edit View Search Terminal Help  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ dmesg | tail  
[ 21.198791] RPC: Registered udp transport module.  
[ 21.198795] RPC: Registered tcp transport module.  
[ 21.198798] RPC: Registered tcp NFSv4.1 backchannel transport module.  
[ 24.706194] b44 ssb0:0: eth0: Link is up at 100 Mbps, full duplex  
[ 24.706199] b44 ssb0:0: eth0: Flow control is off for TX and off for RX  
[ 24.706655] ADDRCONF(NETDEV_CHANGE): eth0: link becomes ready  
[ 35.114024] eth0: no IPv6 routers present  
[ 189.980129] fuse init (API version 7.14)  
[29196.517848] WARNING! power/level is deprecated; use power/control instead  
[29196.581092] usb 1-8: USB disconnect, address 4  
[prabhu@Kaiwara ~]$  
[prabhu@Kaiwara ~]$ su -  
Password:  
[root@Kaiwara ~]# dmesg -c
```

# Linux Generic Commands



A terminal window titled "root@Kaiwara:~" with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
[root@Kaiwara ~]#  
[root@Kaiwara ~]# mount -t vfat /dev/sdb1 /media/disk1/  
[root@Kaiwara ~]#  
[root@Kaiwara ~]# df -hT
```

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda3	ext4	27G	6.3G	20G	25%	/
tmpfs	tmpfs	990M	644K	990M	1%	/dev/shm
/dev/sda2	ext4	485M	28M	432M	6%	/boot
/dev/sda5	ext4	25G	11G	13G	47%	/home
/dev/sdb2	fuseblk	46G	33G	13G	73%	/media/New Volume
/dev/sdb1	vfat	30G	23G	6.5G	78%	/media/disk1

```
[root@Kaiwara ~]#
```



# Vim Editor

- VIM - Text editor
  - A text editor used to useful for editing programs like C, C++, Java,
  - and scripting languages like shell, PERL, PYTHON, TCL.
- 
- \* How to open a file
  - \$ vim hello.c

# Vim Editor

- Vim operates in two modes.
  - insert mode
    - Data can be entered, edited...
  - Command mode
    - operate on the data like cut, copy, paste, navigate...

# Vim Commands

- Basics
- `:e filename` Open filename for edition
- `:w` Save file
- `:q` Exit Vim
- `:q!` Quit without saving
- `:x` Write file (if changes has been made) and exit
- `:sav filename` Saves file as filename
- `.` Repeats the last change made in normal

# Vim Commands – Moving in the file

- `k` or Up Arrow move the cursor up one line
- `j` or Down Arrow move the cursor down one line
- `e` move the cursor to the end of the word
- `b` move the cursor to the beginning of the word
- `0` move the cursor to the beginning of the line
- `G` move the cursor to the end of the file
- `gg` move the cursor to the beginning of the file

# Vim Commands – Moving in the file

- `L` move the cursor to the bottom of the screen
- `:59` move cursor to line 59. Replace 59 by the desired line number.
- `20|` move cursor to column 20.
- `%` Move cursor to matching parenthesis
- `[[` Jump to function start
- `[{` Jump to block start

# Vim commands – Cut, Copy, Paste

- y Copy the selected text to clipboard
- p Paste clipboard contents
- dd Cut current line
- yy Copy current line
- y\$ Copy to end of line
- D Cut to end of line

# Vim Commands - Search

- `/word` Search word from top to bottom
- `?word` Search word from bottom to top
- `*` Search the word under cursor
- `\cstring` Search STRING or string, case insensitive
- `/jo[ha]n` Search john or joan
- `^\< the` Search the, theatre or then
- `/the\>` Search the or breathe

# Vim Commands - Search

- `^< the\>` Search the
- `^< !.\>` Search all words of 4 letters
- `/^` Search fred but not alfred or frederick
- `/fred\|joe` Search fred or joe
- `^< \d\d\d\d\>` Search exactly 4 digits
- `/^\n\{3}` Find 3 empty lines



# Vim commands - Search

- `:bufdo /searchstr/` Search in all open files
- `bufdo %s/something/somethingelse/g` Search something in all the open buffers and replace it with somethingelse

# Vim commands - Replace

- `:%s/old/new/g` Replace all occurrences of old by new in file
- `:%s/onward/forward/gi` Replace onward by forward, case insensitive
- `:%s/old/new/gc` Replace all occurrences with confirmation
- `:2,35s/old/new/g` Replace all occurrences between lines 2 and 35

# Vim commands - Replace

- `:5,$s/old/new/g` Replace all occurrences from line 5 to EOF
- `:%s/^/hello/g` Replace the beginning of each line by hello
- `:%s/$/Harry/g` Replace the end of each line by Harry
- `:%s/onward/forward/gi` Replace onward by forward, case insensitive

# Vim commands - Replace

- `:%s/ *$//g` Delete all white spaces
- `:g/string/d` Delete all lines containing string
- `:v/string/d` Delete all lines containing which didn't contain string
- `:s/Bill/Steve/` Replace the first occurrence of Bill by Steve in current line
- `:s/Bill/Steve/g` Replace Bill by Steve in current line
- `:%s/Bill/Steve/g` Replace Bill by Steve in all the file

Thank You

Tech Training Team