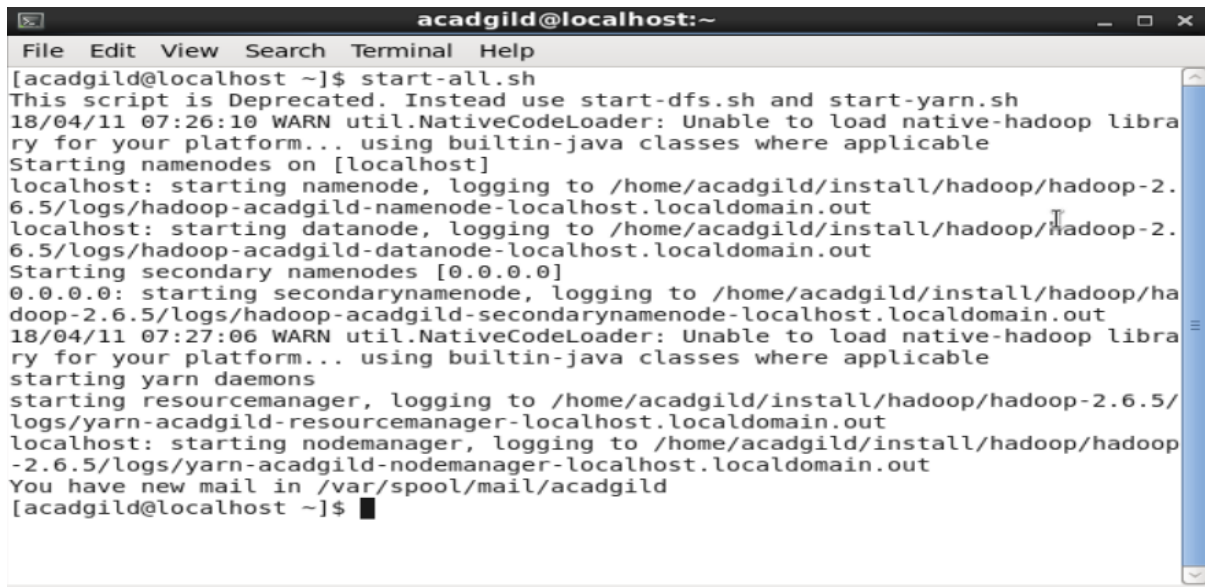


1) Start Hadoop single node on AcadGild VM. The command is start-all.sh.

A terminal window titled 'acadgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the command '[acadgild@localhost ~]\$ start-all.sh' and its output. The output includes a deprecation warning, log file paths for namenode, datanode, and secondary namenode, and the starting of yarn daemons (resourcemanager and nodemanager). It also shows a mail notification. The prompt returns to '[acadgild@localhost ~]\$' at the end.

```
[acadgild@localhost ~]$ start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
18/04/11 07:26:10 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Starting namenodes on [localhost]
localhost: starting namenode, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-namenode-localhost.localdomain.out
localhost: starting datanode, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-datanode-localhost.localdomain.out
Starting secondary namenodes [0.0.0.0]
0.0.0.0: starting secondarynamenode, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-secondarynamenode-localhost.localdomain.out
18/04/11 07:27:06 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
starting yarn daemons
starting resourcemanager, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-resourcemanager-localhost.localdomain.out
localhost: starting nodemanager, logging to /home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-nodemanager-localhost.localdomain.out
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$
```

2) Run a JPS command to see if all Hadoop daemons are running.

A terminal window showing the command '[acadgild@localhost ~]\$ jps' and its output. The output lists five processes with their PIDs: NodeManager (3776), SecondaryNameNode (3509), Jps (4181), ResourceManager (3673), and NameNode (3214). It also shows a DataNode (3311). A mail notification is also present. The prompt returns to '[acadgild@localhost ~]\$' at the end.

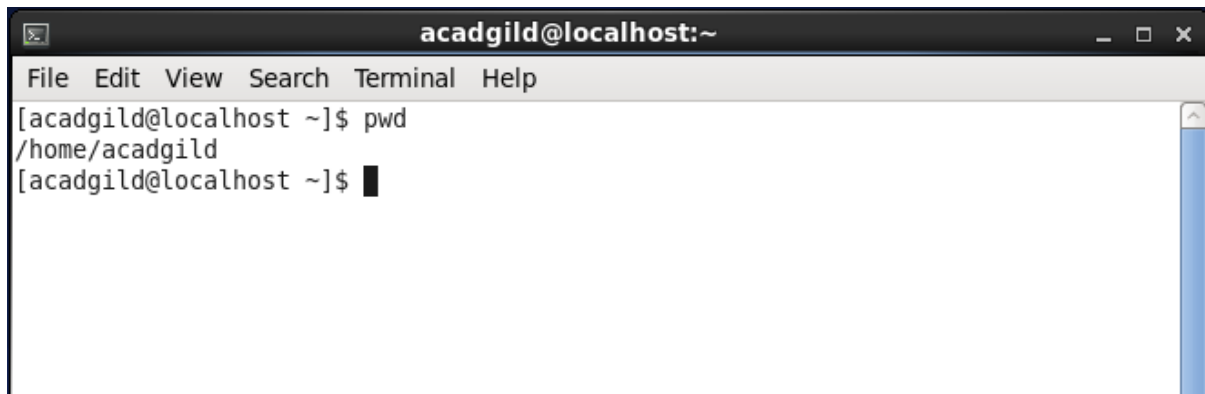
```
[acadgild@localhost ~]$ jps
3776 NodeManager
3509 SecondaryNameNode
4181 Jps
3673 ResourceManager
3214 NameNode
3311 DataNode
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$
```

3) Run few Unix commands like pwd, ls -ls, etc.

Below are linux commands with an example. Share the screenshot of each command with the output:

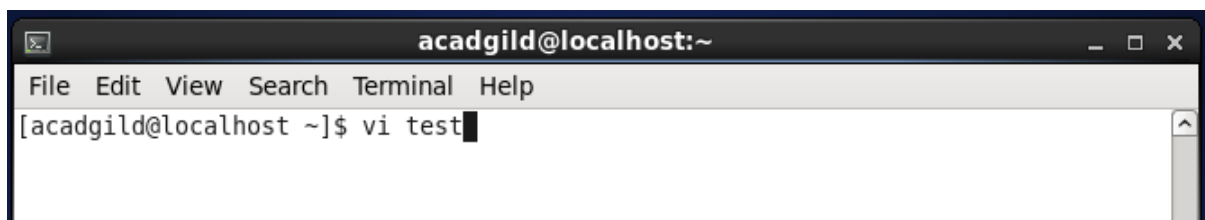
**Pwd** : which tells where you are – in which directory, starting from the root (/)

Example :

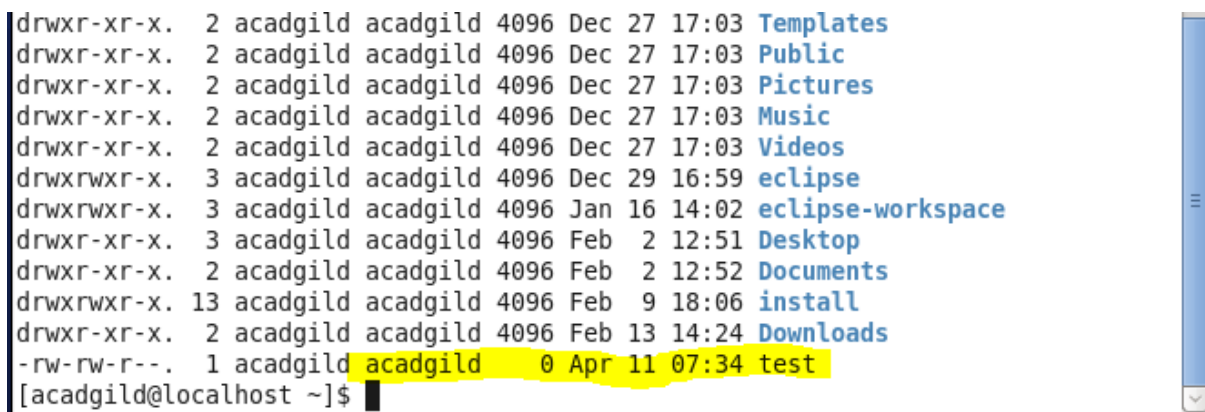


```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ pwd  
/home/acadgild  
[acadgild@localhost ~]$
```

**Vi** : vi is an interactive text editor which is display-oriented: the screen of your terminal acts as a window into the file you are editing. Changes you make to the file are reflected in what you see.



```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ vi test
```



```
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Templates  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Public  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Pictures  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Music  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Videos  
drwxrwxr-x. 3 acadgild acadgild 4096 Dec 29 16:59 eclipse  
drwxrwxr-x. 3 acadgild acadgild 4096 Jan 16 14:02 eclipse-workspace  
drwxr-xr-x. 3 acadgild acadgild 4096 Feb 2 12:51 Desktop  
drwxr-xr-x. 2 acadgild acadgild 4096 Feb 2 12:52 Documents  
drwxrwxr-x. 13 acadgild acadgild 4096 Feb 9 18:06 install  
drwxr-xr-x. 2 acadgild acadgild 4096 Feb 13 14:24 Downloads  
-rw-rw-r--. 1 acadgild acadgild 0 Apr 11 07:34 test  
[acadgild@localhost ~]$
```

**Ls -lrt** : List all the files in the path

**Touch** : it will just create empty file

```
[acadgild@localhost ~]$ ls -lrt
total 44
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Templates
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Public
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Pictures
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Music
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Videos
drwxrwxr-x. 3 acadgild acadgild 4096 Dec 29 16:59 eclipse
drwxrwxr-x. 3 acadgild acadgild 4096 Jan 16 14:02 eclipse-workspace
drwxr-xr-x. 3 acadgild acadgild 4096 Feb  2 12:51 Desktop
drwxr-xr-x. 2 acadgild acadgild 4096 Feb  2 12:52 Documents
drwxrwxr-x. 13 acadgild acadgild 4096 Feb  9 18:06 install
drwxr-xr-x. 2 acadgild acadgild 4096 Feb 13 14:24 Downloads
-rw-rw-r--. 1 acadgild acadgild    0 Apr 11 07:34 test
-rw-rw-r--. 1 acadgild acadgild    0 Apr 11 07:36 session
[acadgild@localhost ~]$
```

**Mkdir** : Short for "make directory", mkdir is used to create directories on a file system.

```
acadgild@localhost:~
File Edit View Search Terminal Help
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ mkdir madhu
[acadgild@localhost ~]$ ls -lrt
total 48
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Templates
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Public
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Pictures
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Music
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Videos
drwxrwxr-x. 3 acadgild acadgild 4096 Dec 29 16:59 eclipse
drwxrwxr-x. 3 acadgild acadgild 4096 Jan 16 14:02 eclipse-workspace
drwxr-xr-x. 3 acadgild acadgild 4096 Feb  2 12:51 Desktop
drwxr-xr-x. 2 acadgild acadgild 4096 Feb  2 12:52 Documents
drwxrwxr-x. 13 acadgild acadgild 4096 Feb  9 18:06 install
drwxr-xr-x. 2 acadgild acadgild 4096 Feb 13 14:24 Downloads
-rw-rw-r--. 1 acadgild acadgild    0 Apr 11 07:34 test
-rw-rw-r--. 1 acadgild acadgild    0 Apr 11 07:36 session
drwxrwxr-x. 2 acadgild acadgild 4096 Apr 11 07:38 madhu
[acadgild@localhost ~]$
```

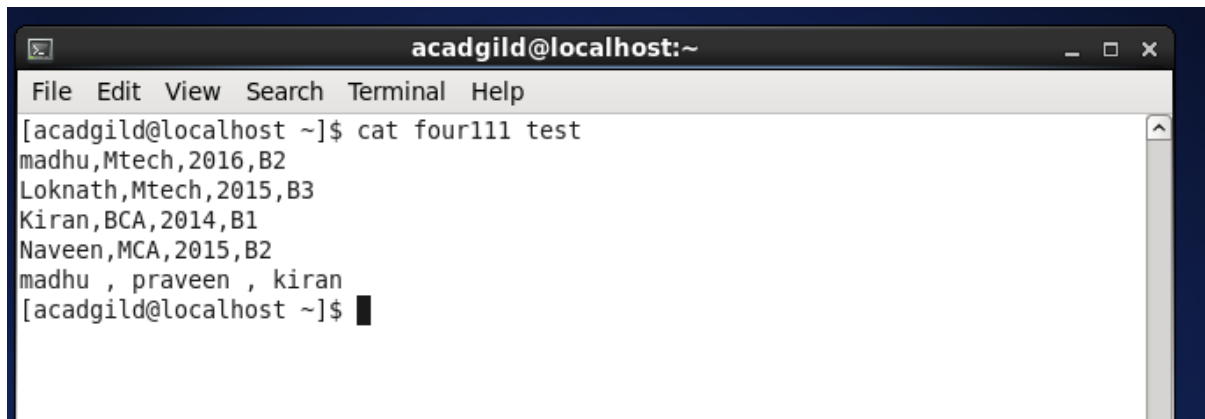
**Rm** : remove files or directories

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
drwxrwxr-x. 13 acadgild acadgild 4096 Feb  9 18:06 install  
drwxr-xr-x.  2 acadgild acadgild 4096 Feb 13 14:24 Downloads  
-rw-rw-r--.  1 acadgild acadgild   0 Apr 11 07:34 test  
-rw-rw-r--.  1 acadgild acadgild   0 Apr 11 07:36 session  
drwxrwxr-x.  2 acadgild acadgild 4096 Apr 11 07:38 madhu  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ rm test  
[acadgild@localhost ~]$  
[acadgild@localhost ~]$ ls -lrt  
total 48  
drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Templates  
drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Public  
drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Pictures  
drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Music  
drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Videos  
drwxrwxr-x.  3 acadgild acadgild 4096 Dec 29 16:59 eclipse  
drwxrwxr-x.  3 acadgild acadgild 4096 Jan 16 14:02 eclipse-workspace  
drwxr-xr-x.  3 acadgild acadgild 4096 Feb  2 12:51 Desktop  
drwxr-xr-x.  2 acadgild acadgild 4096 Feb  2 12:52 Documents  
drwxrwxr-x. 13 acadgild acadgild 4096 Feb  9 18:06 install  
drwxr-xr-x.  2 acadgild acadgild 4096 Feb 13 14:24 Downloads  
-rw-rw-r--.  1 acadgild acadgild   0 Apr 11 07:36 session  
drwxrwxr-x.  2 acadgild acadgild 4096 Apr 11 07:38 madhu  
[acadgild@localhost ~]$
```

**Echo** : displays a line of text

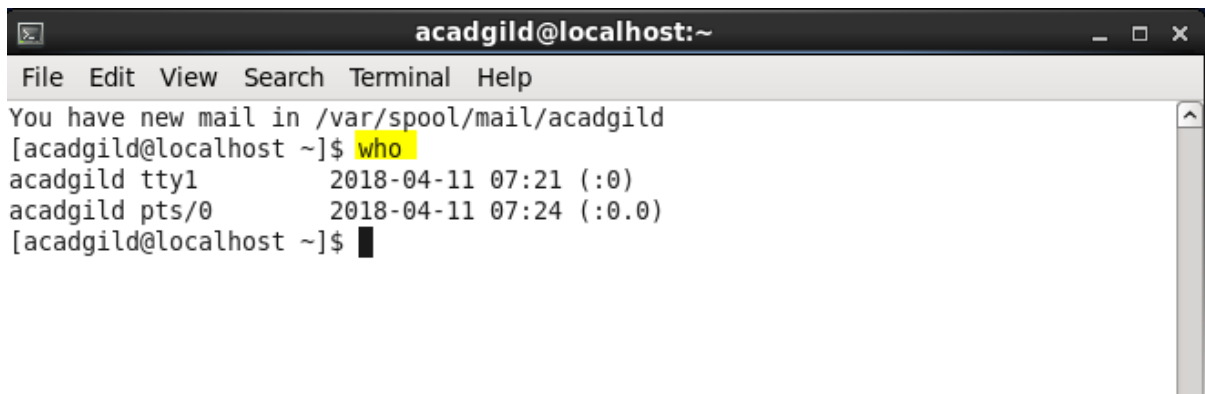
```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ echo 'welcome to haddop class'  
welcome to haddop class  
[acadgild@localhost ~]$
```

**Cat** : cat command allows us to create single or multiple files, view contain of file, concatenate files and redirect output in terminal or files.

A terminal window titled 'acadgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[acadgild@localhost ~]\$ cat four111 test' has been executed, displaying the contents of the file 'four111 test'. The output lists several lines of text: 'madhu,Mtech,2016,B2', 'Loknath,Mtech,2015,B3', 'Kiran,BCA,2014,B1', 'Naveen,MCA,2015,B2', and 'madhu , praveen , kiran'. The prompt '[acadgild@localhost ~]\$' is visible at the bottom.

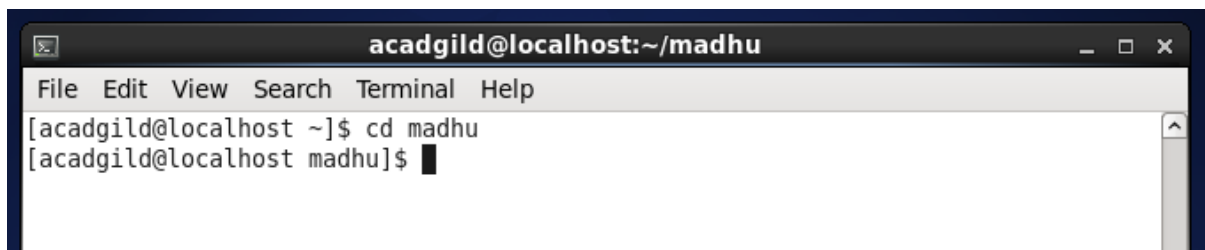
```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ cat four111 test  
madhu,Mtech,2016,B2  
Loknath,Mtech,2015,B3  
Kiran,BCA,2014,B1  
Naveen,MCA,2015,B2  
madhu , praveen , kiran  
[acadgild@localhost ~]$
```

**Who** : Display who is on the system.

A terminal window titled 'acadgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[acadgild@localhost ~]\$ who' has been executed. The output shows a notification 'You have new mail in /var/spool/mail/acadgild' followed by the results of the 'who' command. It lists two active sessions: 'acadgild tty1' at '2018-04-11 07:21 (:0)' and 'acadgild pts/0' at '2018-04-11 07:24 (:0.0)'. The prompt '[acadgild@localhost ~]\$' is visible at the bottom.

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ who  
acadgild tty1      2018-04-11 07:21 (:0)  
acadgild pts/0    2018-04-11 07:24 (:0.0)  
[acadgild@localhost ~]$
```

**Cd** : used to change directory

A terminal window titled 'acadgild@localhost:~/madhu' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[acadgild@localhost ~]\$ cd madhu' has been executed, changing the current directory to 'madhu'. The prompt now shows the new directory: '[acadgild@localhost madhu]\$'.

```
acadgild@localhost:~/madhu  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ cd madhu  
[acadgild@localhost madhu]$
```

**Date** : displays date with timestamp

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ date  
Wed Apr 11 07:42:50 IST 2018  
[acadgild@localhost ~]$
```

**Cal** : used to display calendar

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ cal  
April 2018  
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
```

**Mv** : mv renames file SOURCE to DEST, or moves the SOURCE file (or files) to DIRECTORY.

```
acadgild@localhost:~/madhu  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ mv session madhu  
[acadgild@localhost ~]$ cd madhu  
[acadgild@localhost madhu]$ ls -lrt  
total 0  
-rw-rw-r--. 1 acadgild acadgild 0 Apr 11 07:36 session  
[acadgild@localhost madhu]$
```

**Cp** : used to copy files

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost madhu]$ cp session /home/acadgild  
[acadgild@localhost madhu]$ cd ..  
[acadgild@localhost ~]$ ls -lrt  
total 48  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Templates  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Public  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Pictures  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Music  
drwxr-xr-x. 2 acadgild acadgild 4096 Dec 27 17:03 Videos  
drwxrwxr-x. 3 acadgild acadgild 4096 Dec 29 16:59 eclipse  
drwxrwxr-x. 3 acadgild acadgild 4096 Jan 16 14:02 eclipse-workspace  
drwxr-xr-x. 3 acadgild acadgild 4096 Feb 2 12:51 Desktop  
drwxr-xr-x. 2 acadgild acadgild 4096 Feb 2 12:52 Documents  
drwxrwxr-x. 13 acadgild acadgild 4096 Feb 9 18:06 install  
drwxr-xr-x. 2 acadgild acadgild 4096 Feb 13 14:24 Downloads  
drwxrwxr-x. 2 acadgild acadgild 4096 Apr 11 07:45 madhu  
-rw-rw-r--. 1 acadgild acadgild 0 Apr 11 07:48 session  
[acadgild@localhost ~]$
```

**Which :** which command is used to find the location of a program.

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ which test  
/usr/bin/test  
[acadgild@localhost ~]$
```

4) Create a file from the terminal using nano editor (example: nano test.txt), and add some content in it. Cat it to see if the content is saved.

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ nano text.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ cat text.txt  
I am Madhusudan , i am getting trained from Acadgild on Bigdata Hadoop.  
[acadgild@localhost ~]$
```

5)Open the hdfs web page by typing localhost:50070 in the browser. Check all the details of the HDFS.

Hadoop 2.6.1.1 [Running] - Oracle VM VirtualBox

Applications Places System

Namenode Information - Mozilla Firefox

localhost:50070/dfshealth.html#tab-datanode

Hadoop Overview Datanodes Snapshot Startup Progress Utilities

## Datanode Information

In operation

Node	Last contact	Admin State	Capacity	Used	Non DFS Used	Remaining	Blocks	Block pool used	Failed Volumes	Version
localhost (127.0.0.1:50010)	2	In Service	17.11 GB	200 KB	11.09 GB	6.02 GB	3	200 KB (0%)	0	2.6.5

Decommissioning

Node	Last contact	Under replicated blocks	Blocks with no live replicas	Under Replicated Blocks In files under construction
------	--------------	-------------------------	------------------------------	---