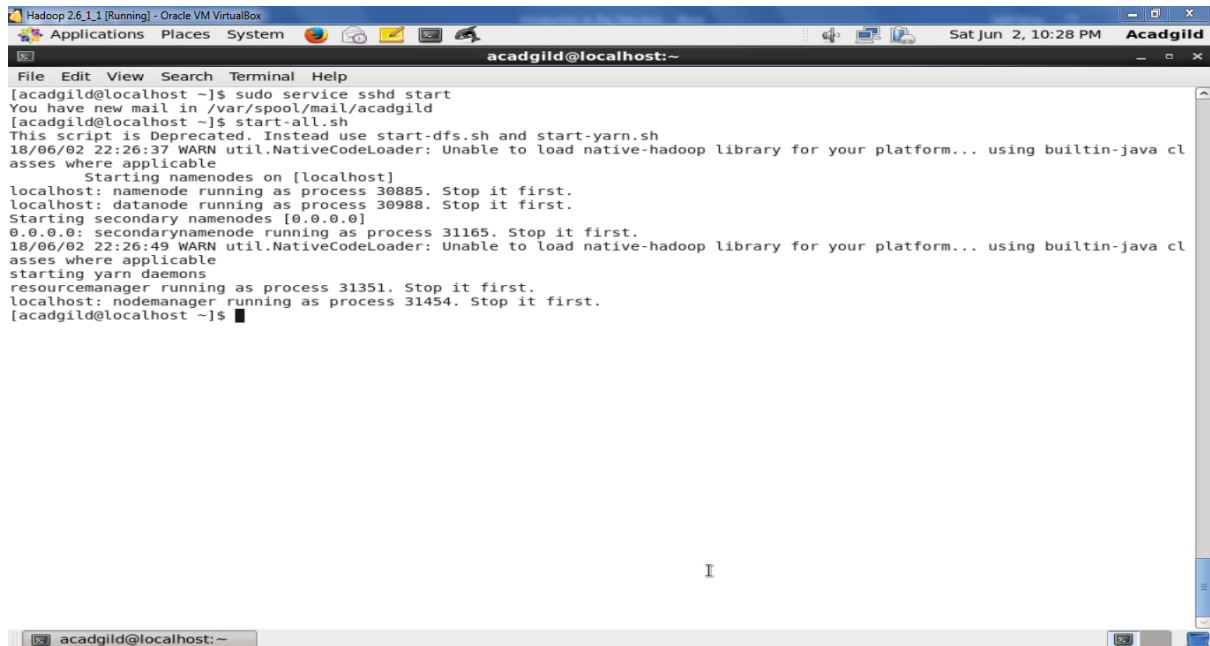


Practise Day 1

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

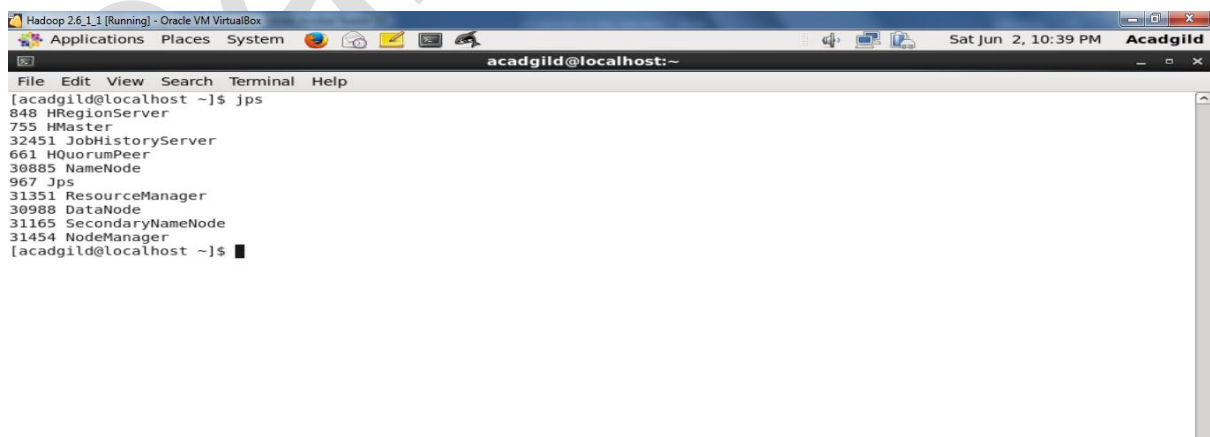
Ans - start-all.sh (Starts all daemons running.)



```
Hadoop 2.6.1.1 [Running] - Oracle VM VirtualBox
Applications Places System
acadgild@localhost:~
File Edit View Search Terminal Help
[acadgild@localhost ~]$ sudo service sshd start
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ start-all.sh
This script is deprecated. Instead use start-dfs.sh and start-yarn.sh
18/06/02 22:26:37 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Starting namenodes on [localhost]
localhost: namenode running as process 30885. Stop it first.
localhost: datanode running as process 30988. Stop it first.
Starting secondary namenodes [0.0.0.0]
0.0.0.0: secondarynamenode running as process 31165. Stop it first.
18/06/02 22:26:49 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
starting yarn daemons
resourcemanager running as process 31351. Stop it first.
localhost: nodemanager running as process 31454. Stop it first.
[acadgild@localhost ~]$
```

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

Ans-jps (Lists all the java processes running within system)



```
Hadoop 2.6.1.1 [Running] - Oracle VM VirtualBox
Applications Places System
acadgild@localhost:~
File Edit View Search Terminal Help
[acadgild@localhost ~]$ jps
848 HRegionServer
755 HMaster
32451 JobHistoryServer
661 HQuorumPeer
30885 NameNode
967 Jps
31351 ResourceManager
30988 DataNode
31165 SecondaryNameNode
31454 NodeManager
[acadgild@localhost ~]$
```

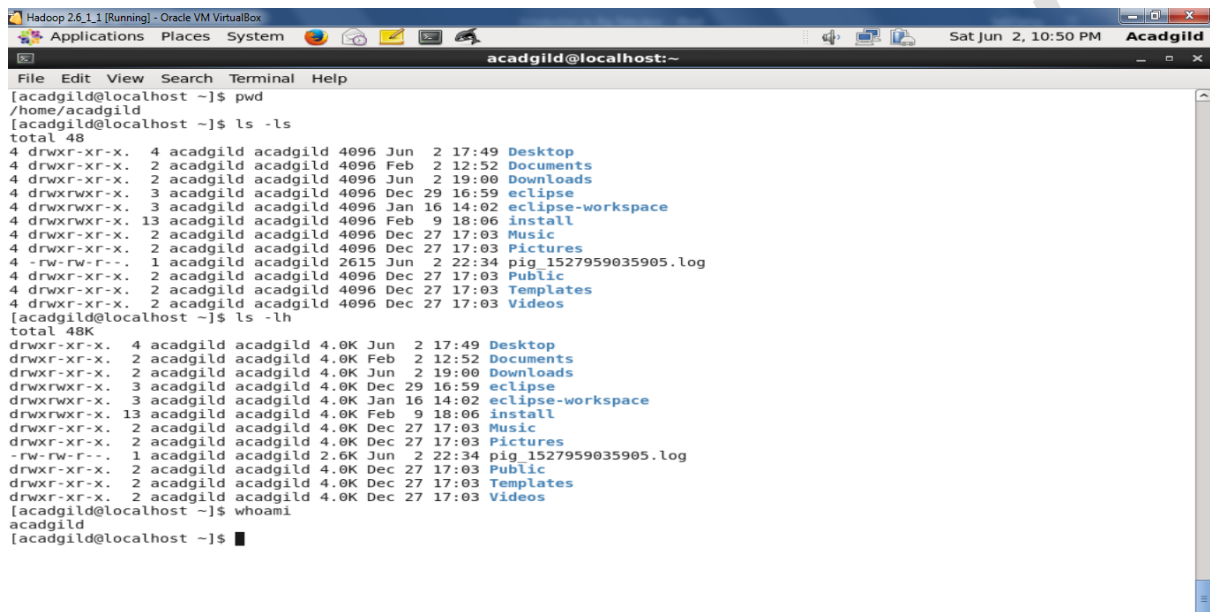
3. Run few Unix commands like *pwd*, *ls -ls* , etc.

Ans – *pwd* (shows the full pathname to present working directory)

ls -ls (list files with long format with file size)

ls -lh (list files with long format with readable file size)

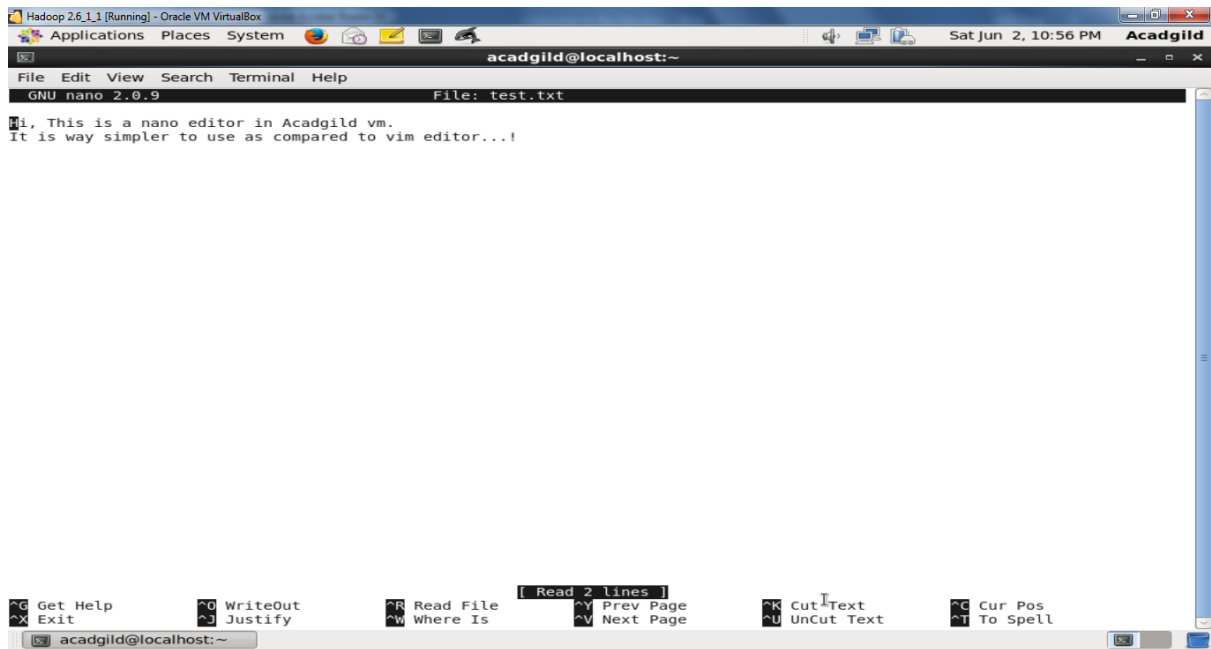
whoami (Print the user name associated with the current effective user id)



The screenshot shows a terminal window titled 'Hadoop 2.6.1.1 [Running] - Oracle VM VirtualBox'. The terminal is running as the user 'acadgild' on the host 'localhost'. The commands and their outputs are as follows:

```
[acadgild@localhost ~]$ pwd
/home/acadgild
[acadgild@localhost ~]$ ls -ls
total 48
4 drwxr-xr-x.  4 acadgild acadgild 4096 Jun  2 17:49 Desktop
4 drwxr-xr-x.  2 acadgild acadgild 4096 Feb  2 12:52 Documents
4 drwxr-xr-x.  2 acadgild acadgild 4096 Jun  2 19:00 Downloads
4 drwxrwxr-x.  3 acadgild acadgild 4096 Dec 29 16:59 eclipse
4 drwxrwxr-x.  3 acadgild acadgild 4096 Jan 16 14:02 eclipse-workspace
4 drwxrwxr-x. 13 acadgild acadgild 4096 Feb  9 18:06 install
4 drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Music
4 drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Pictures
4 -rw-rw-r--.  1 acadgild acadgild 2615 Jun  2 22:34 pig_1527959035905.log
4 drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Public
4 drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Templates
4 drwxr-xr-x.  2 acadgild acadgild 4096 Dec 27 17:03 Videos
[acadgild@localhost ~]$ ls -lh
total 48K
drwxr-xr-x.  4 acadgild acadgild 4.0K Jun  2 17:49 Desktop
drwxr-xr-x.  2 acadgild acadgild 4.0K Feb  2 12:52 Documents
drwxr-xr-x.  2 acadgild acadgild 4.0K Jun  2 19:00 Downloads
drwxrwxr-x.  3 acadgild acadgild 4.0K Dec 29 16:59 eclipse
drwxrwxr-x.  3 acadgild acadgild 4.0K Jan 16 14:02 eclipse-workspace
drwxrwxr-x. 13 acadgild acadgild 4.0K Feb  9 18:06 install
drwxr-xr-x.  2 acadgild acadgild 4.0K Dec 27 17:03 Music
drwxr-xr-x.  2 acadgild acadgild 4.0K Dec 27 17:03 Pictures
-rw-rw-r--.  1 acadgild acadgild 2.6K Jun  2 22:34 pig_1527959035905.log
drwxr-xr-x.  2 acadgild acadgild 4.0K Dec 27 17:03 Public
drwxr-xr-x.  2 acadgild acadgild 4.0K Dec 27 17:03 Templates
drwxr-xr-x.  2 acadgild acadgild 4.0K Dec 27 17:03 Videos
[acadgild@localhost ~]$ whoami
acadgild
[acadgild@localhost ~]$
```


4 Usage of Nano Editor.



The screenshot shows a terminal window titled "Hadoop 2.6.1.1 [Running] - Oracle VM VirtualBox" with the username "acadgild" and the host "localhost". The Nano editor is open, displaying the file "test.txt". The content of the file is:

```
Hi, This is a nano editor in Acadgild vm.
It is way simpler to use as compared to vim editor...!
```

The Nano editor's status bar at the bottom shows various shortcuts: ^G Get Help, ^X Exit, ^O WriteOut, ^J Justify, ^R Read File, ^W Where Is, ^Y Prev Page, ^V Next Page, ^K Cut Text, ^U UnCut Text, ^C Cur Pos, and ^T To Spell. A small indicator shows "Read 2 lines".



The second screenshot shows the same terminal window after the Nano editor has been closed. The terminal output is as follows:

```
[acadgild@localhost ~]$ nano test.txt
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ cat test.txt
Hi, This is a nano editor in Acadgild vm.
It is way simpler to use as compared to vim editor...!
[acadgild@localhost ~]$
```

5) All the details of the HDFS web page by typing *localhost:50070* in the browser.

The screenshot shows the Hadoop NameNode Overview page in Mozilla Firefox. The browser window title is "Hadoop 2.6.1.1 [Running] - Oracle VM VirtualBox". The address bar shows "localhost:50070/dfshealth.html#tab-overview". The page has a green header with tabs: "Hadoop", "Overview", "Datanodes", "Snapshot", "Startup Progress", and "Utilities". The "Overview" tab is selected. The main content area is titled "Overview 'localhost:8020' (active)". Below the title is a table with the following information:

Started:	Sat Jun 02 22:25:43 IST 2018
Version:	2.6.5, re8c9fe0b4c252caf2ebf1464220599650f119997
Compiled:	2016-10-02T23:43Z by sjlee from branch-2.6.5
Cluster ID:	CID-7b3f9bd8-f34c-4fb8-87aa-f76b6dfbd809
Block Pool ID:	BP-437583619-127.0.0.1-1517555661954

Below the table is a section titled "Summary". It contains the following text:

Security is off.
Safemode is off.
60 files and directories, 12 blocks = 72 total filesystem object(s).
Heap Memory used 40.16 MB of 59.93 MB Heap Memory. Max Heap Memory is 966.69 MB.

The bottom of the screenshot shows the terminal window with the command "acadmild@localhost:~" and the browser window with the title "Namenode informatio..."

The screenshot shows the Hadoop NameNode Summary page in Mozilla Firefox. The browser window title is "Hadoop 2.6.1.1 [Running] - Oracle VM VirtualBox". The address bar shows "localhost:50070/dfshealth.html#tab-overview". The page has a green header with tabs: "Hadoop", "Overview", "Datanodes", "Snapshot", "Startup Progress", and "Utilities". The "Overview" tab is selected. The main content area is titled "Summary". It contains the following text:

Security is off.
Safemode is off.
60 files and directories, 12 blocks = 72 total filesystem object(s).
Heap Memory used 41.73 MB of 59.93 MB Heap Memory. Max Heap Memory is 966.69 MB.
Non Heap Memory used 52.36 MB of 53.34 MB Committed Non Heap Memory. Max Non Heap Memory is -1 B.

Below the text is a table with the following information:

Configured Capacity:	17.11 GB
DFS Used:	148 KB
Non DFS Used:	11.63 GB
DFS Remaining:	5.48 GB
DFS Used%:	0%
DFS Remaining%:	32.02%
Block Pool Used:	148 KB
Block Pool Used%:	0%
DataNodes usages % (Min/Median/Max/stdDev):	0.00% / 0.00% / 0.00% / 0.00%
Live Nodes	1 (Decommissioned: 0)
Dead Nodes	0 (Decommissioned: 0)

The bottom of the screenshot shows the terminal window with the command "acadmild@localhost:~" and the browser window with the title "Namenode informatio..."

Hadoop 2.6.1.1 (Running) - Oracle VM VirtualBox

Applications Places System

Namenode information - Mozilla Firefox

Namenode information x +

localhost:50070/dfshealth.html#tab-overview

Search

Dead Nodes	0 (Decommissioned: 0)
Decommissioning Nodes	0
Number of Under-Replicated Blocks	0
Number of Blocks Pending Deletion	0
Block Deletion Start Time	6/2/2018, 10:25:43 PM

NameNode Journal Status

Current transaction ID: 522

Journal Manager	State
FileJournalManager(root=/home/acadgild/install/data/dfs/name)	EditLogFileOutputStream(/home/acadgild/install/data/dfs/name/current/edits_inprogress_0000000000000000444)

NameNode Storage

Storage Directory	Type	State
/home/acadgild/install/data/dfs/name	IMAGE_AND_EDITS	Active

acadgild@localhost: ~

Namenode informatio...

Applications Places System

Namenode information - Mozilla Firefox

Namenode information x +

localhost:50070/dfshealth.html#tab-datanode

Search

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)	0	In Service	17.11 GB	148 KB	11.63 GB	5.48 GB	10	148 KB (0%)	0	2.6.5

Decomissioning

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

acadgild@localhost: ~

Namenode informatio...

End
