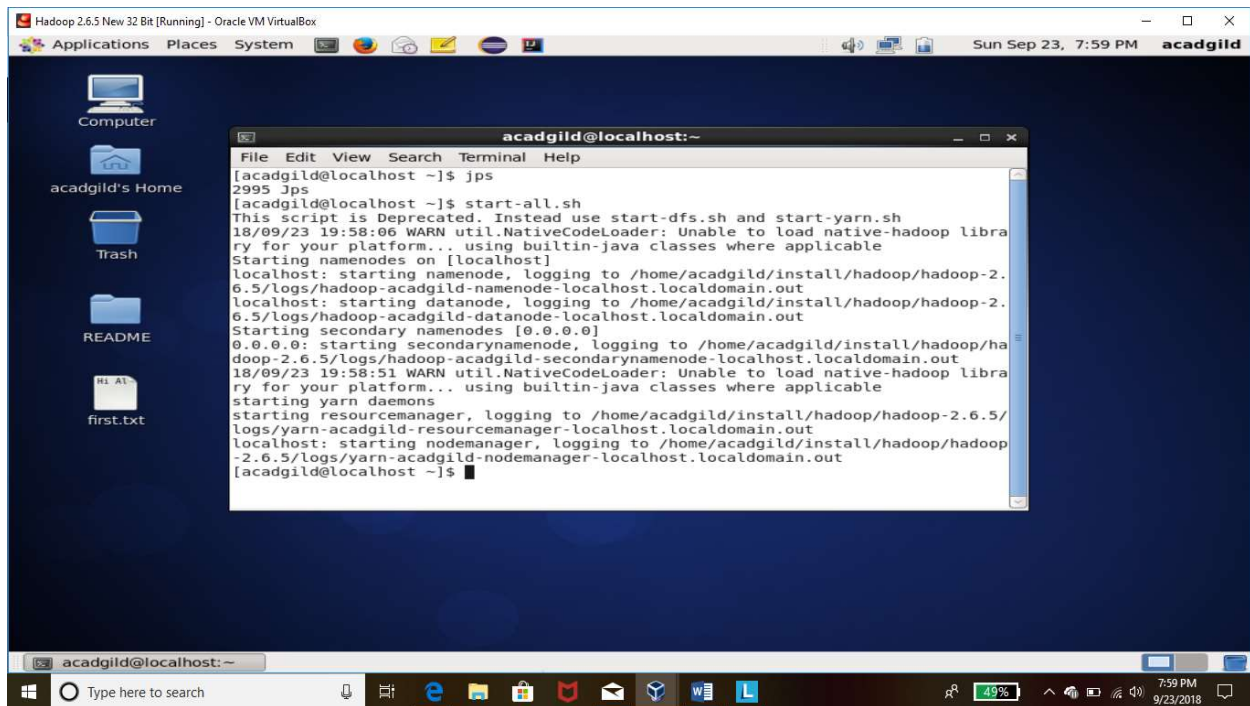
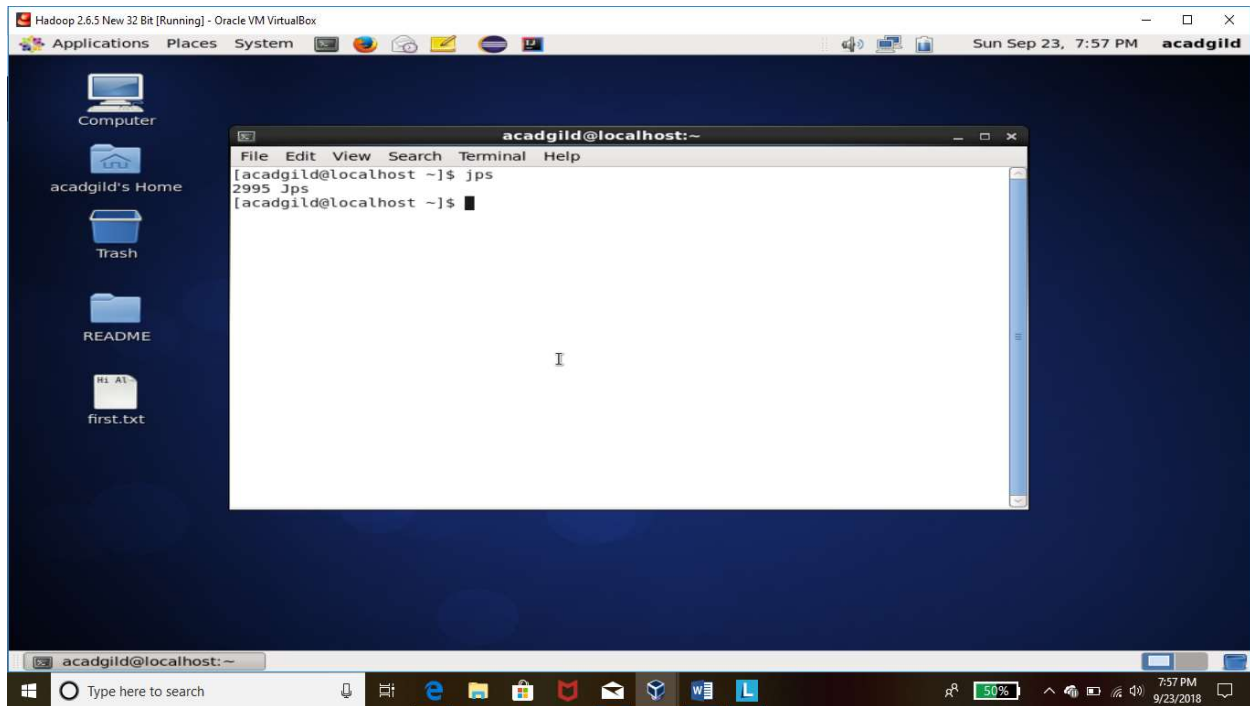


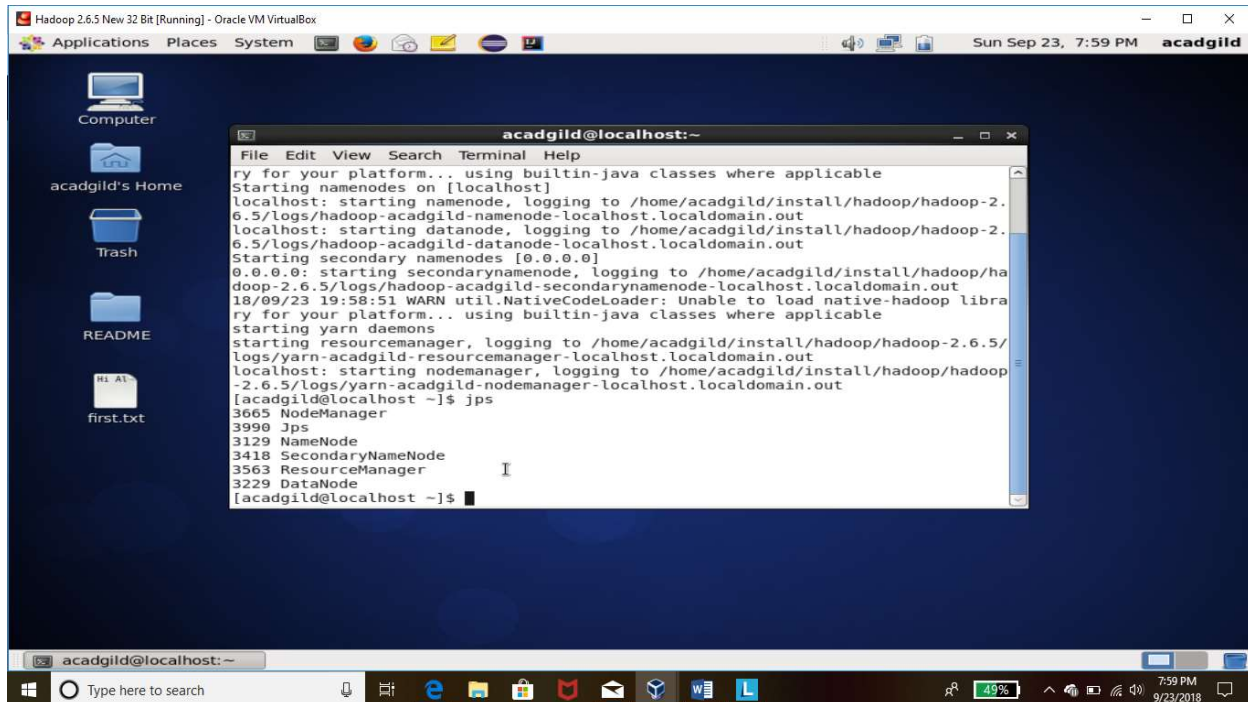
1) Start Hadoop single node on AcadGild VM. The command is start-all.sh.

➤ We can start all the daemons using command **start-all.sh**



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

➤ While typing **jps** command we can see all the running daemons as in below.



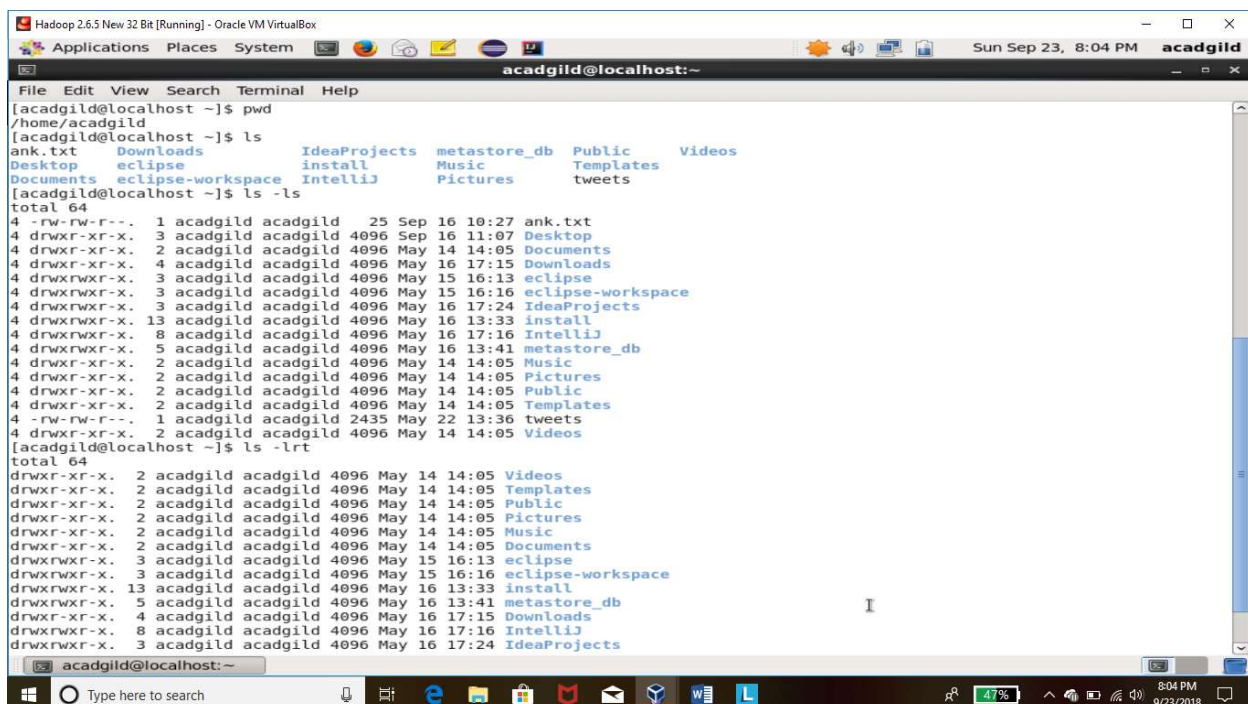
The screenshot shows a terminal window titled 'acacgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal output shows the following sequence of commands and results:

```
ry for your platform... using builtin-java classes where applicable
Starting namenodes on [localhost]
localhost: starting namenode, logging to /home/acacgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acacgild-namenode-localhost.localdomain.out
localhost: starting datanode, logging to /home/acacgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acacgild-datanode-localhost.localdomain.out
Starting secondary namenodes [0.0.0.0]
0.0.0.0: starting secondarynamenode, logging to /home/acacgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acacgild-secondarynamenode-localhost.localdomain.out
18/09/23 19:58:51 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/acacgild/install/hadoop/hadoop-2.6.5/logs/yarn-acacgild-resourcemanager-localhost.localdomain.out
localhost: starting nodemanager, logging to /home/acacgild/install/hadoop/hadoop-2.6.5/logs/yarn-acacgild-nodemanager-localhost.localdomain.out
[acacgild@localhost ~]$ jps
3665 NodeManager
3990 Jps
3129 NameNode
3418 SecondaryNameNode
3563 ResourceManager
3229 DataNode
[acacgild@localhost ~]$
```

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

➤ pwd: shows the current path

➤ ls: It lists all the files/dir in the current location

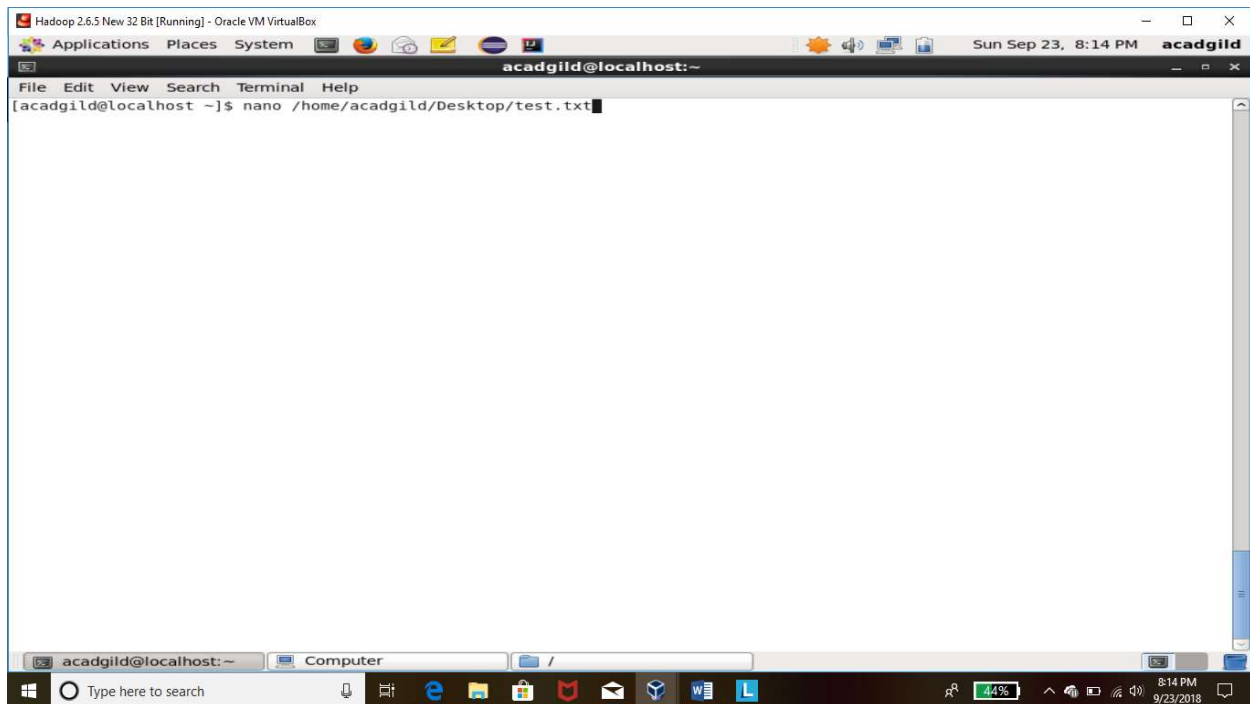


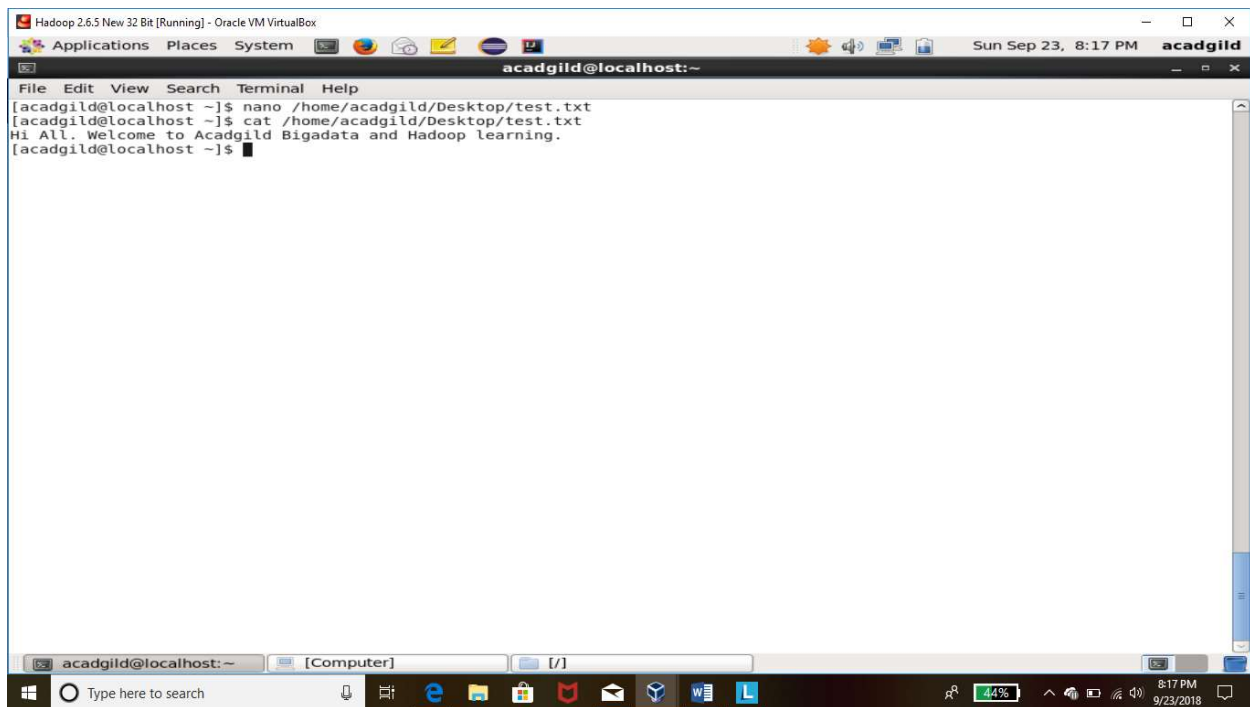
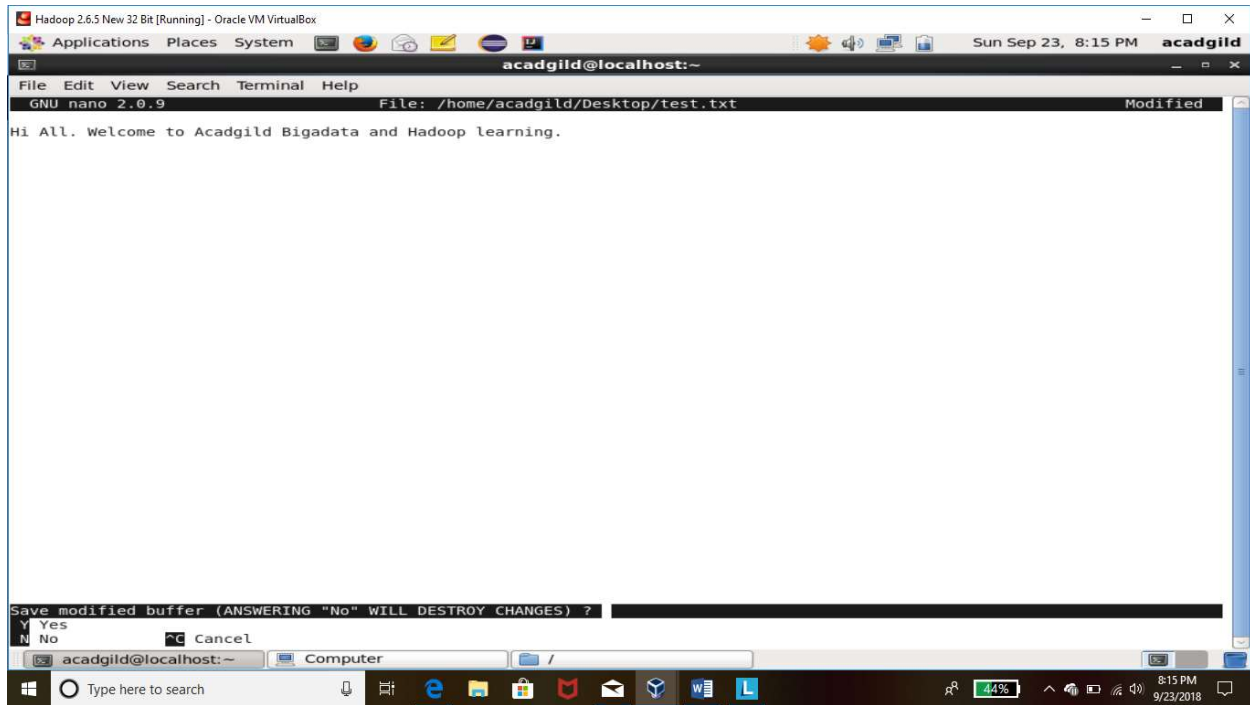
The screenshot shows a terminal window titled 'acacgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal output shows the following sequence of commands and results:

```
[acacgild@localhost ~]$ pwd
/home/acacgild
[acacgild@localhost ~]$ ls
ank.txt  Downloads  IdeaProjects  metastore_db  Public  Videos
Desktop  eclipse    install       Music          Templates
Documents eclipse-workspace IntelliJ      Pictures      tweets
[acacgild@localhost ~]$ ls -ls
total 64
4 -rw-rw-r-- 1 acacgild acacgild 25 Sep 16 10:27 ank.txt
4 drwxr-xr-x 3 acacgild acacgild 4096 Sep 16 11:07 Desktop
4 drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Documents
4 drwxr-xr-x 4 acacgild acacgild 4096 May 16 17:15 Downloads
4 drwxrwxr-x 3 acacgild acacgild 4096 May 15 16:13 eclipse
4 drwxrwxr-x 3 acacgild acacgild 4096 May 15 16:16 eclipse-workspace
4 drwxrwxr-x 3 acacgild acacgild 4096 May 16 17:24 IdeaProjects
4 drwxrwxr-x 13 acacgild acacgild 4096 May 16 13:33 install
4 drwxrwxr-x 8 acacgild acacgild 4096 May 16 17:16 IntelliJ
4 drwxrwxr-x 5 acacgild acacgild 4096 May 16 13:41 metastore_db
4 drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Music
4 drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Pictures
4 drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Public
4 drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Templates
4 -rw-rw-r-- 1 acacgild acacgild 2435 May 22 13:36 tweets
4 drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Videos
[acacgild@localhost ~]$ ls -lrt
total 64
drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Videos
drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Templates
drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Public
drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Pictures
drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Music
drwxr-xr-x 2 acacgild acacgild 4096 May 14 14:05 Documents
drwxrwxr-x 3 acacgild acacgild 4096 May 15 16:13 eclipse
drwxrwxr-x 3 acacgild acacgild 4096 May 15 16:16 eclipse-workspace
drwxrwxr-x 13 acacgild acacgild 4096 May 16 13:33 install
drwxrwxr-x 5 acacgild acacgild 4096 May 16 13:41 metastore_db
drwxr-xr-x 4 acacgild acacgild 4096 May 16 17:15 Downloads
drwxrwxr-x 8 acacgild acacgild 4096 May 16 17:16 IntelliJ
drwxrwxr-x 3 acacgild acacgild 4096 May 16 17:24 IdeaProjects
```

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.

➤ Created the file test.txt using the nano command with the file name, as in the below





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

➤ Below are the screenshots of the hdfs webpage with some nodes details.

The screenshot shows the Hadoop NameNode information page in a Mozilla Firefox browser. The page title is "NameNode information - Mozilla Firefox". The browser address bar shows "localhost:50070/dfshealth.html#tab-overview". The page has a green navigation bar 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:	Sun Sep 23 19:58:17 IST 2018
Version:	2.6.5, re8c9fe0b4c252caf2ebf1464220599650f119997
Compiled:	2016-10-02T23:43Z by sjlee from branch-2.6.5
Cluster ID:	CID-b1cc4527-fe93-4080-9c86-db6cf093a9cc
Block Pool ID:	BP-577305157-127.0.0.1-1526457801927

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

Security is off.
Safemode is off.
47 files and directories, 11 blocks = 58 total filesystem object(s).
Heap Memory used 49.54 MB of 54.32 MB Heap Memory. Max Heap Memory is 966.69 MB.

The screenshot shows the Hadoop NameNode information page in a Mozilla Firefox browser. The page title is "NameNode information - Mozilla Firefox". The browser address bar shows "localhost:50070/dfshealth.html#tab-overview". The page has a green navigation bar 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.
47 files and directories, 11 blocks = 58 total filesystem object(s).
Heap Memory used 49.54 MB of 54.32 MB Heap Memory. Max Heap Memory is 966.69 MB.
Non Heap Memory used 19.81 MB of 20.12 MB Committed Non Heap Memory. Max Non Heap Memory is -1 B.

Below the text is a table with the following information:

Configured Capacity:	44.7 GB
DFS Used:	140 KB
Non DFS Used:	13.31 GB
DFS Remaining:	31.39 GB
DFS Used%:	0%
DFS Remaining%:	70.22%
Block Pool Used:	140 KB
Block Pool Used%:	0%
DataNodes usages% (Min/Median/Max/stdDev):	0.00% / 0.00% / 0.00% / 0.00%
Live Nodes	1 (Decommissioned: 0)

Hadoop 2.6.5 New 32 Bit [Running] - Oracle VM VirtualBox

Applications Places System

Namenode information - Mozilla Firefox

Namenode information x +

localhost:50070/dfshealth.html#tab-overview

Number of Blocks Pending Deletion: 0

Block Deletion Start Time: 9/23/2018, 7:58:17 PM

NameNode Journal Status

Current transaction ID: 265

Journal Manager	State
FileJournalManager(root=/home/acadgild/install/data/dfs/name)	EditLogFileOutputStream(/home/acadgild/install/data/dfs/name/current/edits_inprogress_000000000000000000265)

NameNode Storage

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

Hadoop, 2016.

Legacy UI

[acadgild@localhost: ~] [Computer] [/]

Type here to search

8:20 PM 9/23/2018

Hadoop 2.6.5 New 32 Bit [Running] - Oracle VM VirtualBox

Applications Places System

Namenode information - Mozilla Firefox

Namenode information x +

localhost:50070/dfshealth.html#tab-datanode

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)	1	In Service	44.7 GB	140 KB	13.31 GB	31.39 GB	9	140 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
------	--------------	-------------------------	------------------------------	---

Hadoop, 2016.

Legacy UI

[acadgild@localhost: ~] [Computer] [/]

Type here to search

8:20 PM 9/23/2018

Hadoop 2.6.5 New 32 Bit [Running] - Oracle VM VirtualBox

Applications Places System

Namenode information - Mozilla Firefox

Namenode information x +

localhost:50070/dfshealth.html#tab-overview

Search

Hadoop Overview Datanodes Snapshot Startup Progress Utilities

Overview 'localhost:8020' (active)

Started:	Sun Sep 23 19:58:17 IST 2018
Version:	2.6.5, re8c9fe0b4c252caf2ebf1464220599650f119997
Compiled:	2016-10-02T23:43Z by sjlee from branch-2.6.5
Cluster ID:	CID-b1cc4527-fe93-4080-9c86-db6cf093a9cc
Block Pool ID:	BP-577305157-127.0.0.1-1526457801927

Summary

Security is off.
Safemode is off.
47 files and directories, 11 blocks = 58 total filesystem object(s).
Heap Memory used 49.54 MB of 54.32 MB Heap Memory. Max Heap Memory is 966.69 MB.

[acadgild@localhost: ~] [Computer] [/]

Namenode informatio...

Type here to search

45%

8:19 PM 9/23/2018