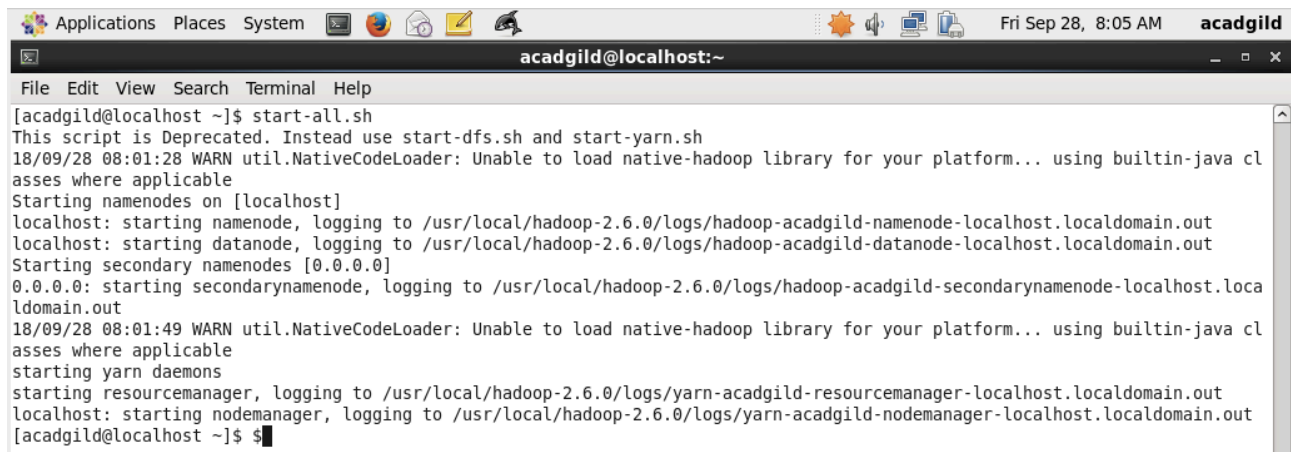


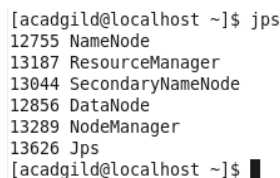
Task 1:

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 'start-all.sh' being executed. The output includes a deprecation warning, log messages for starting namenodes and datanodes, and a warning about the native-hadoop library. The prompt returns to '\$' at the end.

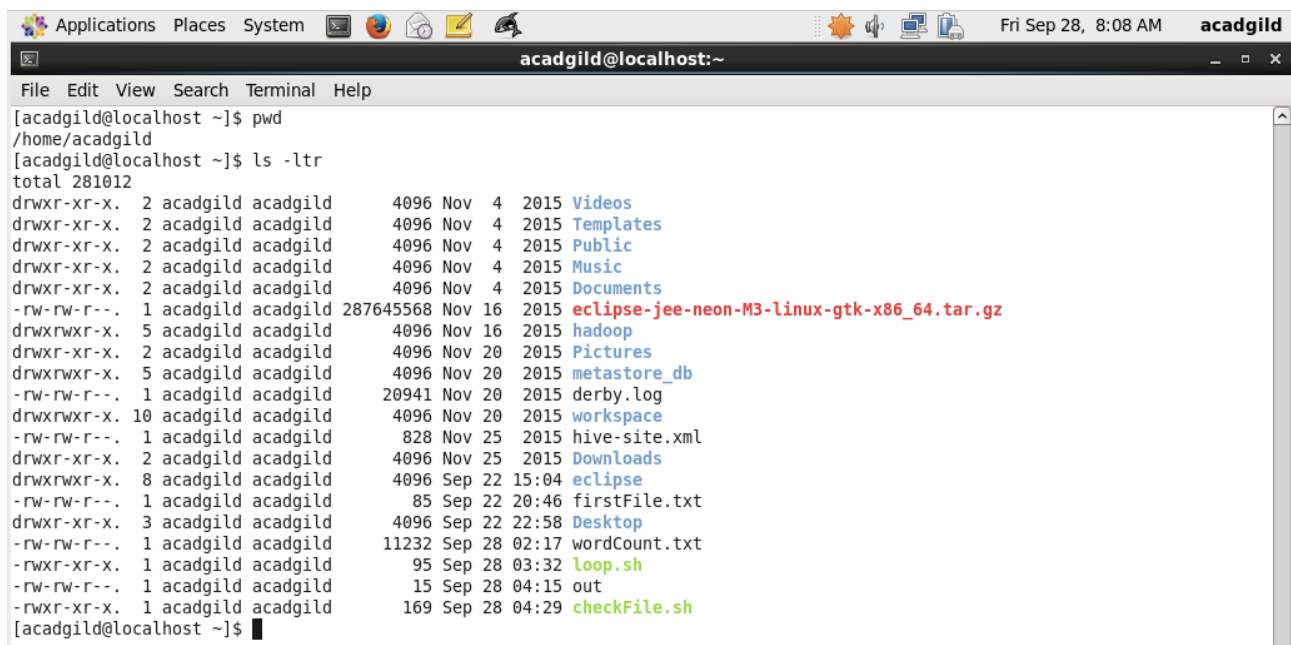
```
[acadgild@localhost ~]$ start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
18/09/28 08:01:28 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Starting namenodes on [localhost]
localhost: starting namenode, logging to /usr/local/hadoop-2.6.0/logs/hadoop-acadgild-namenode-localhost.localdomain.out
localhost: starting datanode, logging to /usr/local/hadoop-2.6.0/logs/hadoop-acadgild-datanode-localhost.localdomain.out
Starting secondary namenodes [0.0.0.0]
0.0.0.0: starting secondarynamenode, logging to /usr/local/hadoop-2.6.0/logs/hadoop-acadgild-secondarynamenode-localhost.localdomain.out
18/09/28 08:01:49 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
starting yarn daemons
starting resourcemanager, logging to /usr/local/hadoop-2.6.0/logs/yarn-acadgild-resourcemanager-localhost.localdomain.out
localhost: starting nodemanager, logging to /usr/local/hadoop-2.6.0/logs/yarn-acadgild-nodemanager-localhost.localdomain.out
[acadgild@localhost ~]$
```

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

A terminal window showing the output of the 'jps' command. It lists several Java processes: NameNode, ResourceManager, SecondaryNameNode, DataNode, NodeManager, and Jps.

```
[acadgild@localhost ~]$ jps
12755 NameNode
13187 ResourceManager
13044 SecondaryNameNode
12856 DataNode
13289 NodeManager
13626 Jps
[acadgild@localhost ~]$
```

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

A terminal window showing the output of 'pwd' and 'ls -ltr'. The 'pwd' command shows the current directory as '/home/acadgild'. The 'ls -ltr' command shows a detailed listing of files and directories in the current directory, including Videos, Templates, Public, Music, Documents, and various logs and archives.

```
[acadgild@localhost ~]$ pwd
/home/acadgild
[acadgild@localhost ~]$ ls -ltr
total 281012
drwxr-xr-x. 2 acadgild acadgild 4096 Nov 4 2015 Videos
drwxr-xr-x. 2 acadgild acadgild 4096 Nov 4 2015 Templates
drwxr-xr-x. 2 acadgild acadgild 4096 Nov 4 2015 Public
drwxr-xr-x. 2 acadgild acadgild 4096 Nov 4 2015 Music
drwxr-xr-x. 2 acadgild acadgild 4096 Nov 4 2015 Documents
-rw-rw-r--. 1 acadgild acadgild 287645568 Nov 16 2015 eclipse-jee-neon-M3-linux-gtk-x86_64.tar.gz
drwxrwxr-x. 5 acadgild acadgild 4096 Nov 16 2015 hadoop
drwxr-xr-x. 2 acadgild acadgild 4096 Nov 20 2015 Pictures
drwxrwxr-x. 5 acadgild acadgild 4096 Nov 20 2015 metastore_db
-rw-rw-r--. 1 acadgild acadgild 20941 Nov 20 2015 derby.log
drwxrwxr-x. 10 acadgild acadgild 4096 Nov 20 2015 workspace
-rw-rw-r--. 1 acadgild acadgild 828 Nov 25 2015 hive-site.xml
drwxr-xr-x. 2 acadgild acadgild 4096 Nov 25 2015 Downloads
drwxrwxr-x. 8 acadgild acadgild 4096 Sep 22 15:04 eclipse
-rw-rw-r--. 1 acadgild acadgild 85 Sep 22 20:46 firstFile.txt
drwxr-xr-x. 3 acadgild acadgild 4096 Sep 22 22:58 Desktop
-rw-rw-r--. 1 acadgild acadgild 11232 Sep 28 02:17 wordCount.txt
-rwxr-xr-x. 1 acadgild acadgild 95 Sep 28 03:32 loop.sh
-rw-rw-r--. 1 acadgild acadgild 15 Sep 28 04:15 out
-rwxr-xr-x. 1 acadgild acadgild 169 Sep 28 04:29 checkFile.sh
[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.

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

Namenode information - Mozilla Firefox

The Top 20 Big Data ... x Namenode information x

localhost:50070/dfshealth.html#tab-overview

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Hadoop Overview Datanodes Snapshot Startup Progress Utilities

Overview 'localhost:9000' (active)

Started:	Fri Sep 28 08:01:32 IST 2018
Version:	2.6.0, re3496499ecb8d220fba99dc5ed4c99c8f9e33bb1
Compiled:	2014-11-13T21:10Z by jenkins from (detached from e349649)
Cluster ID:	CID-71615a0b-f560-40e7-94e0-1057e6718ac8
Block Pool ID:	BP-695350366-127.0.0.1-1446620353823

Summary

Security is off.

Safemode is off.

acadgild@localhost:~ es, 211 blocks = 493 total filesystem object(s).

Task 2:

Check whether /user/acadgild directory exists or not in the HDFS.

If it doesn't exist, then create this.

Create a directory /user/acadgild/hadoop.

Applications Places System Fri Sep 28, 8:16 AM acadgild

acadgild@localhost:~

File Edit View Search Terminal Help

```
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild/hadoop
18/09/28 08:16:01 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Found 4 items
-rw-r--r-- 1 acadgild supergroup      85 2018-09-22 23:50 /user/acadgild/hadoop/firstFile.txt
drwxr-xr-x - acadgild supergroup      0 2018-09-28 02:39 /user/acadgild/hadoop/result
drwxr-xr-x - acadgild supergroup      0 2018-09-28 01:48 /user/acadgild/hadoop/result.txt
-rw-r--r-- 1 acadgild supergroup 11804 2018-09-28 02:25 /user/acadgild/hadoop/wordCount.txt
[acadgild@localhost ~]$
```

Task 3:

Create a file in HDFS under directory /user/acadgild/hadoop, with name word-count.txt.

Whatever we type on screen should get appended to the file.

Try to type (on screen) few lines from any online article or textbook.

```
Applications Places System 18/09/28, 8:33 AM acadgild
acadgild@localhost:~
File Edit View Search Terminal Help
[acadgild@localhost ~]$ hadoop fs -put - hadoop/word-count.txt
18/09/28 08:28:04 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Big data is a term that describes the large volume of data – both structured and unstructured – that inundates a business on
a day-to-day basis. But it's not the amount of data that's important. It's what organizations do with the data that matters.
Big data can be analyzed for insights that lead to better decisions and strategic business moves.

EOF
[acadgild@localhost ~]$ hadoop fs -cat hadoop/word-count.txt
18/09/28 08:33:18 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Big data is a term that describes the large volume of data – both structured and unstructured – that inundates a business on
a day-to-day basis. But it's not the amount of data that's important. It's what organizations do with the data that matters.
Big data can be analyzed for insights that lead to better decisions and strategic business moves.

EOF
[acadgild@localhost ~]$
```

Task 4:

Create a file max-temp.txt in local FS.

Put some 10-15 records of date and temperature example:

dd-mm-yyyy,temperature

Example:

10-01-1990,10

10-02-1991,20

Move this file to HDFS at /user/acadgild/hadoop.

```
acadgild@localhost:~
File Edit View Search Terminal Help
[acadgild@localhost ~]$ nano max-temp.txt
[acadgild@localhost ~]$ hadoop fs -put max-temp.txt hadoop/
18/09/28 09:02:36 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
[acadgild@localhost ~]$ hadoop fs -ls hadoop/
18/09/28 09:03:03 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Found 6 items
-rw-r--r-- 1 acadgild supergroup      85 2018-09-22 23:50 hadoop/firstFile.txt
-rw-r--r-- 1 acadgild supergroup    1907 2018-09-28 09:02 hadoop/max-temp.txt
drwxr-xr-x - acadgild supergroup      0 2018-09-28 02:39 hadoop/result
drwxr-xr-x - acadgild supergroup      0 2018-09-28 01:48 hadoop/result.txt
-rw-r--r-- 1 acadgild supergroup     363 2018-09-28 08:32 hadoop/word-count.txt
-rw-r--r-- 1 acadgild supergroup    11804 2018-09-28 02:25 hadoop/wordCount.txt
[acadgild@localhost ~]$ hadoop fs -cat hadoop/max-temp.txt
18/09/28 09:03:41 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable

Sun 7/29
Actual Temp
28° /21°
Hist. Avg.
28°/20°

Mon 7/30
Actual Temp
28° /21°
Hist. Avg.
28°/20°

Tue 7/31
Actual Temp
27° /20°
Hist. Avg.
28°/20°

Wed 8/1
Actual Temp
27° /19°

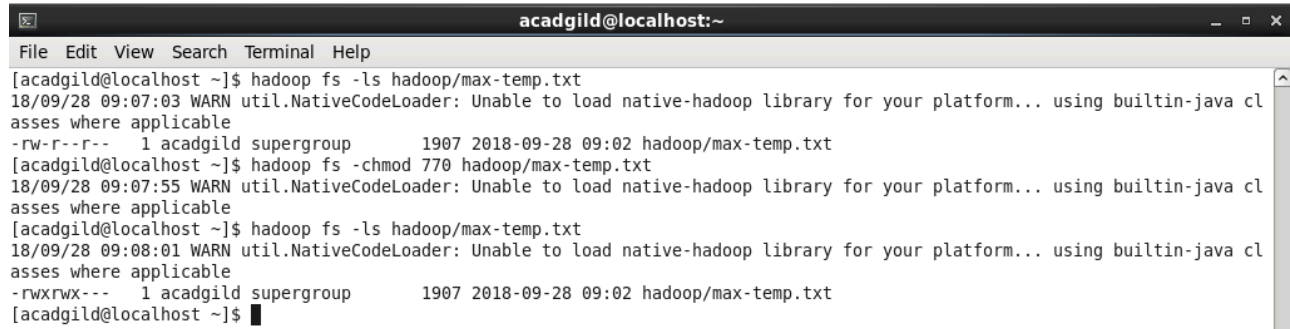
Bengaluru August Weather 2018 -
AccuWeather Forecast for Karnataka India -
Mozilla Firefox
```

Task 5:

Change the permission of the file `/user/acadgild/hadoop/max-temp.txt`, such that only the owner and

the group members have full control over the file.

Others do not have any control over it.

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

```
[acadgild@localhost ~]$ hadoop fs -ls hadoop/max-temp.txt
18/09/28 09:07:03 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
-rw-r--r--  1 acadgild supergroup      1907 2018-09-28 09:02 hadoop/max-temp.txt
[acadgild@localhost ~]$ hadoop fs -chmod 770 hadoop/max-temp.txt
18/09/28 09:07:55 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
[acadgild@localhost ~]$ hadoop fs -ls hadoop/max-temp.txt
18/09/28 09:08:01 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
-rwxrwx---  1 acadgild supergroup      1907 2018-09-28 09:02 hadoop/max-temp.txt
[acadgild@localhost ~]$
```