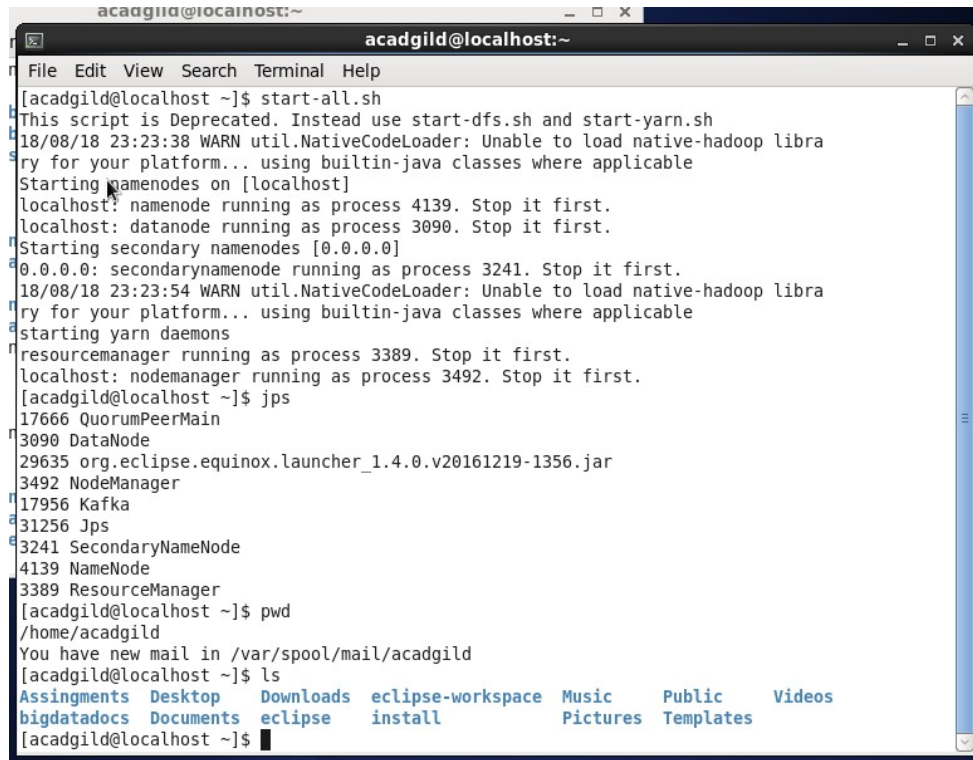


# Assingment 1

## Task 1 :

- 1) Start Hadoop single node on AcadGild VM. The command is start-all.sh.
- 2) Run a JPS command to see if all Hadoop daemons are running.
- 3) Run few Unix commands like pwd, ls -ls, etc.

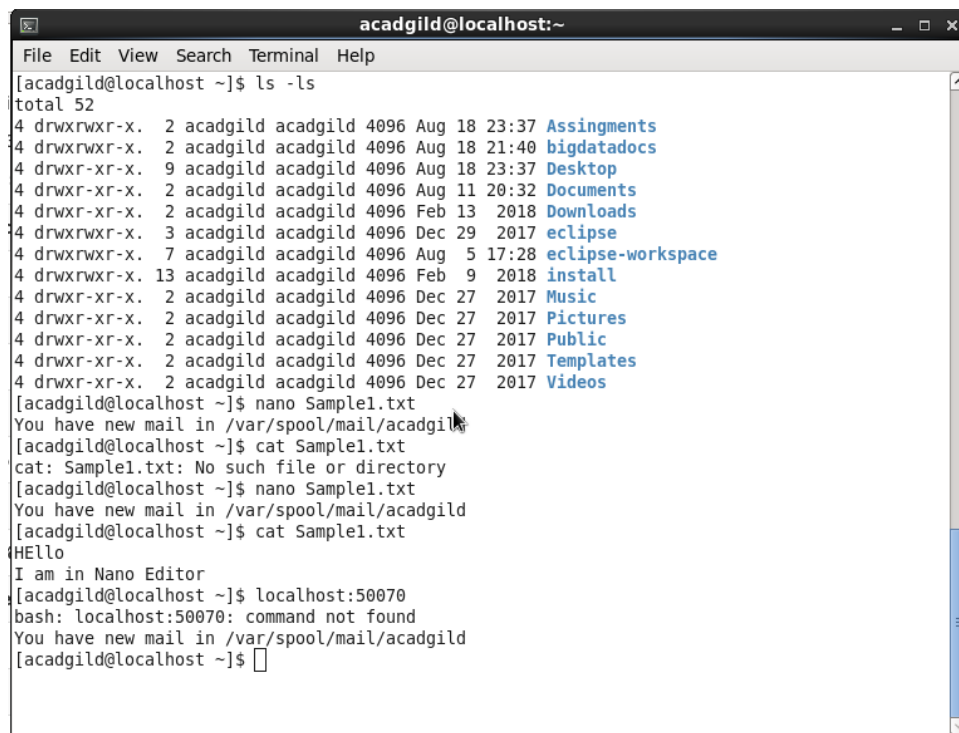
Ans :



```
acadmild@localhost:~  
[acadmild@localhost ~]$ start-all.sh  
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh  
18/08/18 23:23:38 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
Starting namenodes on [localhost]  
localhost: namenode running as process 4139. Stop it first.  
localhost: datanode running as process 3090. Stop it first.  
Starting secondary namenodes [0.0.0.0]  
0.0.0.0: secondarynamenode running as process 3241. Stop it first.  
18/08/18 23:23:54 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
starting yarn daemons  
resourcemanager running as process 3389. Stop it first.  
localhost: nodemanager running as process 3492. Stop it first.  
[acadmild@localhost ~]$ jps  
17666 QuorumPeerMain  
3090 DataNode  
29635 org.eclipse.equinox.launcher_1.4.0.v20161219-1356.jar  
3492 NodeManager  
17956 Kafka  
31256 Jps  
3241 SecondaryNameNode  
4139 NameNode  
3389 ResourceManager  
[acadmild@localhost ~]$ pwd  
/home/acadmild  
You have new mail in /var/spool/mail/acadmild  
[acadmild@localhost ~]$ ls  
Assingments Desktop Downloads eclipse-workspace Music Public Videos  
bigdatadocs Documents eclipse install Pictures Templates  
[acadmild@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.

Ans :



```
acadmild@localhost:~  
[acadmild@localhost ~]$ ls -ls  
total 52  
4 drwxrwxr-x. 2 acadmild acadmild 4096 Aug 18 23:37 Assingments  
4 drwxrwxr-x. 2 acadmild acadmild 4096 Aug 18 21:40 bigdatadocs  
4 drwxr-xr-x. 9 acadmild acadmild 4096 Aug 18 23:37 Desktop  
4 drwxr-xr-x. 2 acadmild acadmild 4096 Aug 11 20:32 Documents  
4 drwxr-xr-x. 2 acadmild acadmild 4096 Feb 13 2018 Downloads  
4 drwxrwxr-x. 3 acadmild acadmild 4096 Dec 29 2017 eclipse  
4 drwxrwxr-x. 7 acadmild acadmild 4096 Aug 5 17:28 eclipse-workspace  
4 drwxrwxr-x. 13 acadmild acadmild 4096 Feb 9 2018 install  
4 drwxr-xr-x. 2 acadmild acadmild 4096 Dec 27 2017 Music  
4 drwxr-xr-x. 2 acadmild acadmild 4096 Dec 27 2017 Pictures  
4 drwxr-xr-x. 2 acadmild acadmild 4096 Dec 27 2017 Public  
4 drwxr-xr-x. 2 acadmild acadmild 4096 Dec 27 2017 Templates  
4 drwxr-xr-x. 2 acadmild acadmild 4096 Dec 27 2017 Videos  
[acadmild@localhost ~]$ nano Sample1.txt  
You have new mail in /var/spool/mail/acadmild  
[acadmild@localhost ~]$ cat Sample1.txt  
cat: Sample1.txt: No such file or directory  
[acadmild@localhost ~]$ nano Sample1.txt  
You have new mail in /var/spool/mail/acadmild  
[acadmild@localhost ~]$ cat Sample1.txt  
Hello  
I am in Nano Editor  
[acadmild@localhost ~]$ localhost:50070  
bash: localhost:50070: command not found  
You have new mail in /var/spool/mail/acadmild  
[acadmild@localhost ~]$
```

5) Open the hdfs web page by typing localhost:50070 in the browser.

Ans :

The screenshot shows a Mozilla Firefox browser window with the title "Namenode information - Mozilla Firefox". The address bar shows "localhost:50070/dfshealth.html#tab-overview". The page content includes the following text:

Security is on.  
Safemode is off.  
26 files and directories, 3 blocks = 29 total filesystem object(s).  
Heap Memory used 34.86 MB of 51.66 MB Heap Memory. Max Heap Memory is 966.69 MB.  
Non Heap Memory used 43.3 MB of 44.25 MB Committed Non Heap Memory. Max Non Heap Memory is -1 B.

<b>Configured Capacity:</b>	17.11 GB
<b>DFS Used:</b>	200 KB
<b>Non DFS Used:</b>	11.29 GB
<b>DFS Remaining:</b>	5.81 GB
<b>DFS Used%:</b>	0%
<b>DFS Remaining%:</b>	33.98%
<b>Block Pool Used:</b>	200 KB
<b>Block Pool Used%:</b>	0%
<b>DataNodes usages% (Min/Median/Max/stdDev):</b>	0.00% / 0.00% / 0.00% / 0.00%
<b>Live Nodes</b>	1 (Decommissioned: 0)
<b>Dead Nodes</b>	0 (Decommissioned: 0)
<b>Decommissioning Nodes</b>	0

At the bottom of the browser window, there is a notification bar that says: "It looks like you haven't started Firefox in a while. Do you want to clean it up for a fresh, like-new experience? And by the way, welcome back!" with a "Refresh Firefox..." button.

## 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.

Ans :

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/hadoop  
18/08/19 00:16:26 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
ls: '/user/acadgild/hadoop': No such file or directory  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hdfs dfs -mkdir -p /user/acadgild/hadoop  
18/08/19 00:17:20 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
[acadgild@localhost ~]$ hdfs dfs -ls  
bash: hdfs: command not found  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hdfs dfs -ls  
18/08/19 00:17:55 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
Found 1 items  
drwxr-xr-x - acadgild supergroup 0 2018-08-19 00:17 hadoop  
[acadgild@localhost ~]$
```

### Task 3:

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

Ans:

The screenshot shows a Linux terminal window with the title bar 'Acadgild'. The terminal output is as follows:

```

/home/acadgild
[acadgild@localhost ~]$ ls
Assingments  Documents  eclipse-workspace  Pictures  Sample1.txtcDtrl+X  Videos
bigdatadocs  Downloads  install          Public   Sample1.txt Sample1.txt
Desktop      eclipse    Music           Sample1.txt  Templates
[acadgild@localhost ~]$ vi Word_Count.txt
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ ls
Assingments  Downloads          Music           Sample1.txtcDtrl+X  Word_Count.txt
bigdatadocs  eclipse            Pictures        Sample1.txt Sample1.txt
Desktop      eclipse-workspace  Public         Templates
Documents    install           Sample1.txt  Videos
[acadgild@localhost ~]$ hdfs dfs -put Word_Count.txt /user/acadgild/hadoop
bash: hdfs: command not found
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ hdfs dfs -put Word_Count.txt /user/acadgild/hadoop
18/08/19 00:22:35 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your p
latform... using builtin-java classes where applicable
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/hadoop
18/08/19 00:23:22 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your p
latform... using builtin-java classes where applicable
Found 1 items
-rw-r--r-- 1 acadgild supergroup 47 2018-08-19 00:22 /user/acadgild/hadoop/Word_Cou
nt.txt
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/hadoop
18/08/19 00:24:27 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your p
latform... using builtin-java classes where applicable
cat: `/user/acadgild/hadoop': Is a directory
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/hadoop/Word_Count.txt
18/08/19 00:25:34 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your p
latform... using builtin-java classes where applicable

Hello
Welcome to hadoop
Greetings from Satya
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$

```

The terminal window has a standard Linux desktop environment with icons for Applications, Places, System, and a taskbar at the bottom showing open windows like 'Acadgild@localhost:~' and '[Assingments]'.

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

Ans :

[illegible]

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

Ans :

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ vi Word-Count.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ vi Word-Count.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hdfs dfs -appendToFile Word_Count.txt /user/acadgild/hadoop/Word_Count  
t.txt  
18/08/19 00:32:46 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your p  
latform... using builtin-java classes where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hdfs dfs -cat /user/acadgild/hadoop/Word_Count.txt  
18/08/19 00:33:09 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your p  
latform... using builtin-java classes where applicable  
  
Hello  
Welcome to hadoop  
Greetings from Satya  
  
Hello  
Welcome to hadoop  
Greetings from Satya  
[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

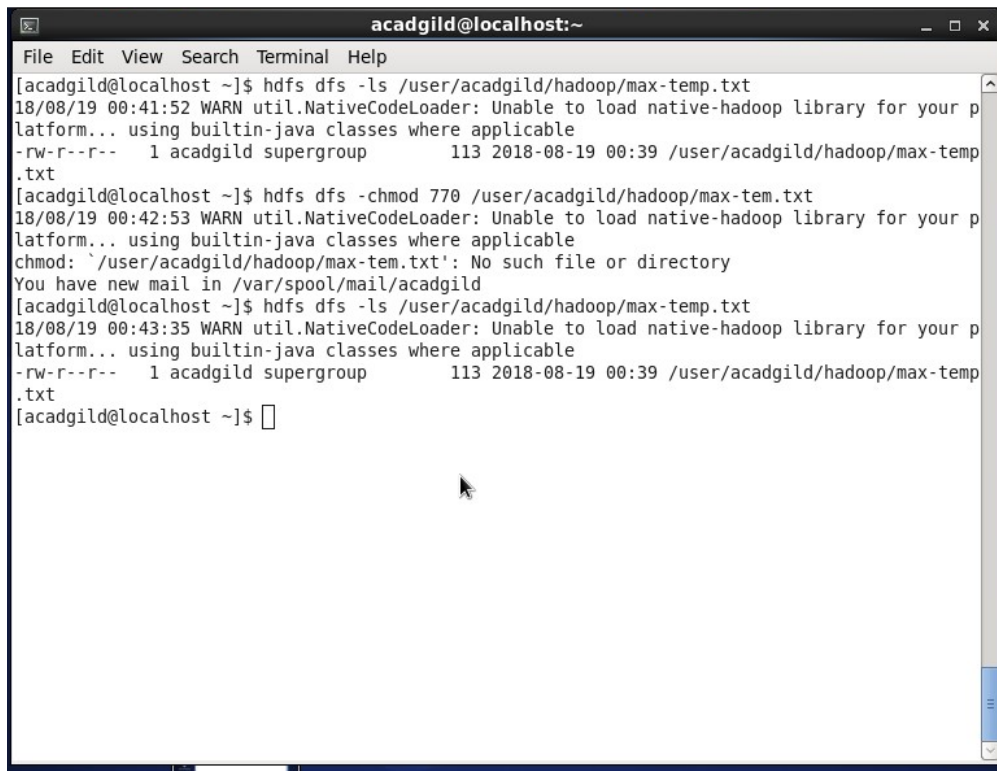
10-02-1991,20

Ans :

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ vi max-temp.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ pwd  
/home/acadgild  
[acadgild@localhost ~]$ ls  
Assingments Downloads max-temp.txt Sample1.txt Videos  
bigdatadocs eclipse Music Sample1.txtcDtrl+X Word_Count.txt  
Desktop eclipse-workspace Pictures Sample1.txt Sample1.txt Word-Count.txt  
Documents install Public Templates  
[acadgild@localhost ~]$ hdfs dfs -put /home/acadgild/max-temp.txt /user/acadgild/hadoop  
18/08/19 00:39:56 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your p  
latform... using builtin-java classes where applicable  
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/hadoop  
18/08/19 00:40:19 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your p  
latform... using builtin-java classes where applicable  
Found 2 items  
-rw-r--r-- 1 acadgild supergroup 94 2018-08-19 00:32 /user/acadgild/hadoop/Word_Cou  
nt.txt  
-rw-r--r-- 1 acadgild supergroup 113 2018-08-19 00:39 /user/acadgild/hadoop/max-temp  
.txt  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$
```

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

Ans :

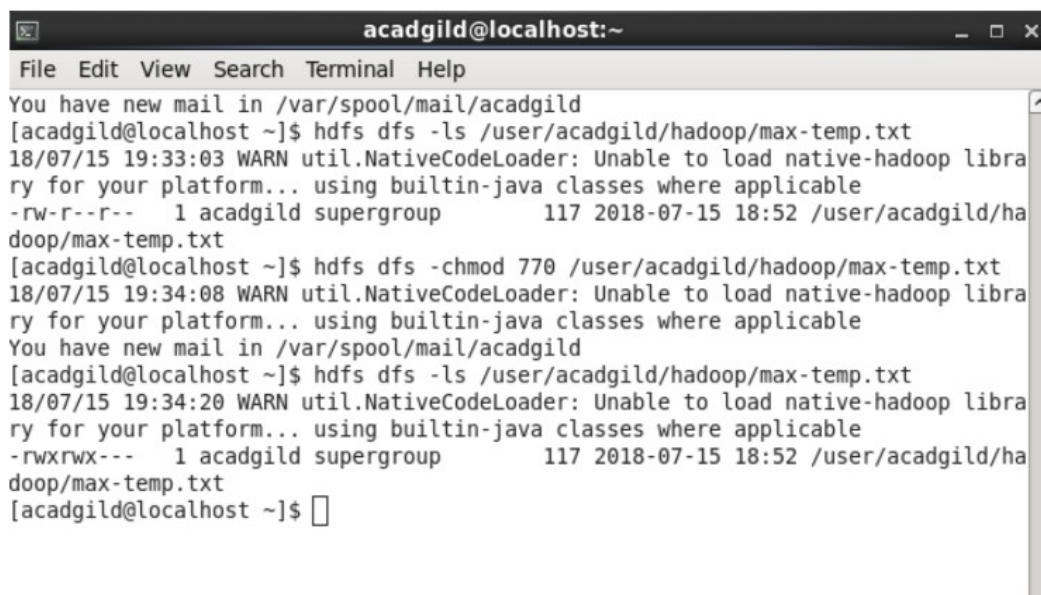


```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/hadoop/max-temp.txt  
18/08/19 00:41:52 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
-rw-r--r-- 1 acadgild supergroup 113 2018-08-19 00:39 /user/acadgild/hadoop/max-temp.txt  
[acadgild@localhost ~]$ hdfs dfs -chmod 770 /user/acadgild/hadoop/max-temp.txt  
18/08/19 00:42:53 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
chmod: '/user/acadgild/hadoop/max-temp.txt': No such file or directory  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/hadoop/max-temp.txt  
18/08/19 00:43:35 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
-rw-r--r-- 1 acadgild supergroup 113 2018-08-19 00:39 /user/acadgild/hadoop/max-temp.txt  
[acadgild@localhost ~]$
```

#### 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.

Ans :



```
acadgild@localhost:~  
File Edit View Search Terminal Help  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/hadoop/max-temp.txt  
18/07/15 19:33:03 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
-rw-r--r-- 1 acadgild supergroup 117 2018-07-15 18:52 /user/acadgild/hadoop/max-temp.txt  
[acadgild@localhost ~]$ hdfs dfs -chmod 770 /user/acadgild/hadoop/max-temp.txt  
18/07/15 19:34:08 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hdfs dfs -ls /user/acadgild/hadoop/max-temp.txt  
18/07/15 19:34:20 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
-rwxrwx--- 1 acadgild supergroup 117 2018-07-15 18:52 /user/acadgild/hadoop/max-temp.txt  
[acadgild@localhost ~]$
```