

## Session 2- Assignment 2

Tasks:

### Task 1:

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`.

### Solution :

Checked for `/user/acadgild` directory if exists using command : **`hadoop fs -ls` or `hadoop fs -ls /user/acadgild` command**

It exists and then created directory `/user/acadgild/hadoop` using command : **`hadoop fs -mkdir /user/acadgild/hadoop`**

```
acadgild@localhost:~  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild  
18/04/29 06:08:15 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
Found 3 items  
drwxr-xr-x - acadgild supergroup          0 2018-03-25 16:54 /user/acadgild/CHARACTER_SETS  
drwxr-xr-x - acadgild supergroup          0 2018-03-25 16:29 /user/acadgild/Person  
drwxr-xr-x - acadgild supergroup          0 2018-03-25 17:27 /user/acadgild/user  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hadoop fs -mkdir /user/acadgild/hadoop  
18/04/29 06:10:02 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild  
18/04/29 06:11:16 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl  
asses where applicable  
Found 4 items  
drwxr-xr-x - acadgild supergroup          0 2018-03-25 16:54 /user/acadgild/CHARACTER_SETS  
drwxr-xr-x - acadgild supergroup          0 2018-03-25 16:29 /user/acadgild/Person  
drwxr-xr-x - acadgild supergroup          0 2018-04-29 06:10 /user/acadgild/hadoop  
drwxr-xr-x - acadgild supergroup          0 2018-03-25 17:27 /user/acadgild/user  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$
```

### Task 2:

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.

**Solution:** The file is created using touchz command as shown below : **`hadoop fs -touchz /user/acadgild/hadoop/word-count.txt`**

Then added content to the file from another local file : **`hadoop fs -appendToFile /home/acadgild/textfile.txt /user/acadgild/hadoop/word-count.txt`**

To append line from screen to file first add below property to `hdfs-site.xml`

```
<property>
```

```
    <name>dfs.support.append</name>
```

```
    <value>true</value>
```

```
</property>
```

Then run the below commands to restart the service again

```
sudo service sshd start
```

```
start -all.sh
```

Then type the below command to append the line from screen to the `word-count.txt` file

```
Echo "This is end of paragraph." | hdfs dfs -appendToFile - /user/acadgild/hadoop/word-count.txt;
```

```
Hadoop 2.6_1_1 [Running] - Oracle VM VirtualBox
File Edit View Search Terminal Help
[acadgild@localhost ~]$ hadoop fs -touchz /user/acadgild/hadoop/word-count.txt
18/04/29 09:27:53 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
[acadgild@localhost ~]$ hadoop fs -appendToFile /home/acadgild/textfile.txt /user/acadgild/hadoop/word-count.txt
18/04/29 09:34:41 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 ~]$ hadoop fs -cat /user/acadgild/hadoop/word-count.txt
18/04/29 09:34:59 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Hi,

Nature is the creation of natural material and physical world on earth independent of the human activities. The beauty and richness of nature is diverse and massive. Nature provides us with several delicacies to enjoy and is our life support system. Our basic needs like food, shelter, water and air are all the gifts from nature.

[acadgild@localhost ~]$ echo "This is end of paragraph." | hdfs dfs -appendToFile /user/acadgild/hadoop/word-count.txt;
18/04/29 09:37:17 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 ~]$ hadoop fs -cat /user/acadgild/hadoop/word-count.txt
18/04/29 09:37:29 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Hi,

Nature is the creation of natural material and physical world on earth independent of the human activities. The beauty and richness of nature is diverse and massive. Nature provides us with several delicacies to enjoy and is our life support system. Our basic needs like food, shelter, water and air are all the gifts from nature.

This is end of paragraph.
[acadgild@localhost ~]$
```

### Task 3:

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

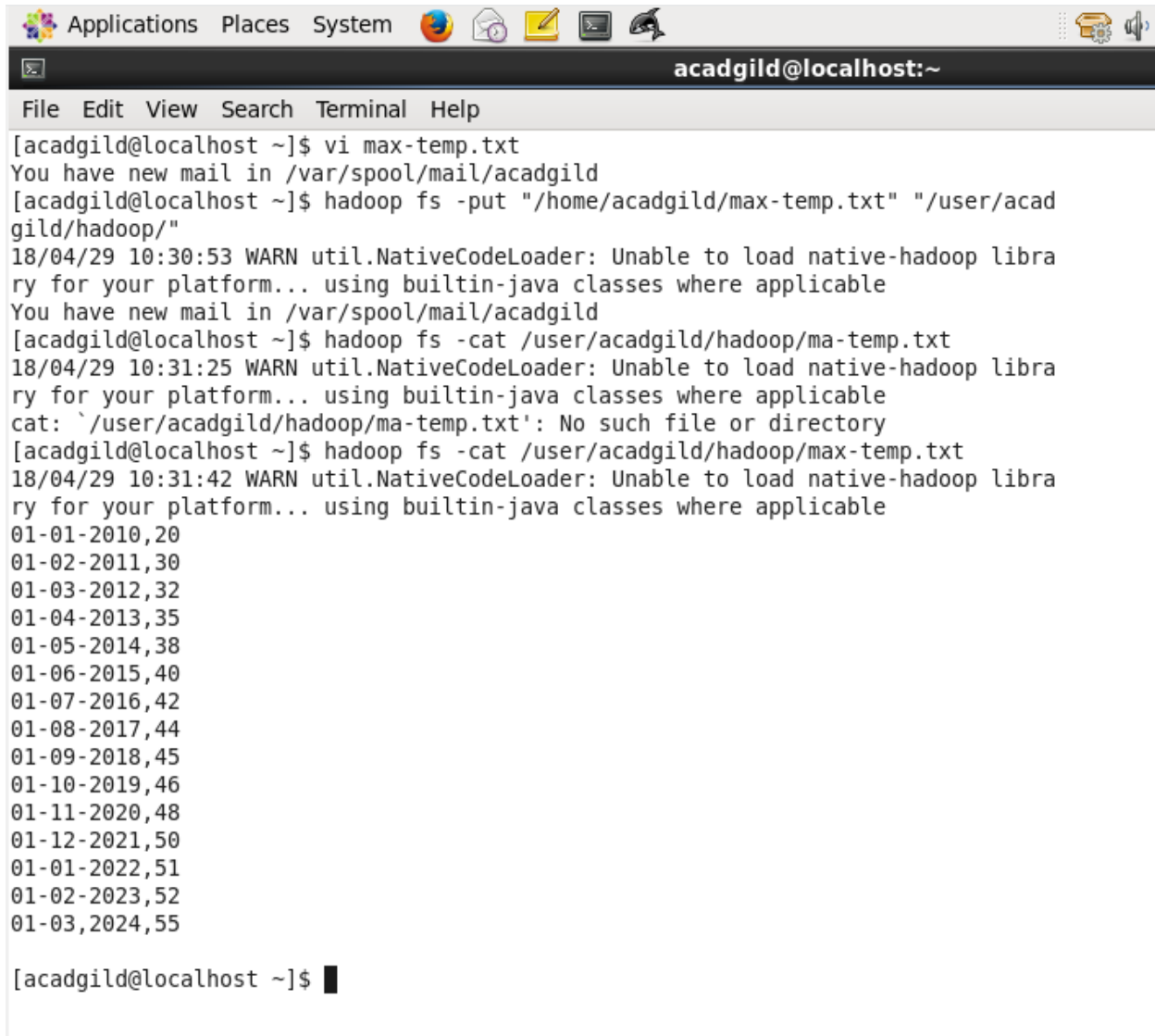
**Solution:** First created a file on local using Vi Editor and added content to it and saved locally.

Then moved the file to below location using below command:

```
hadoop fs -put "/home/acadgild/max-temp.txt" "/user/acadgild/hadoop"
```

Then display the contents using below command:

*hadoop fs -cat /user/acadgild/hadoop/max-temp.txt*

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

```
[acadgild@localhost ~]$ vi max-temp.txt
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ hadoop fs -put "/home/acadgild/max-temp.txt" "/user/acadgild/hadoop/"
18/04/29 10:30:53 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 ~]$ hadoop fs -cat /user/acadgild/hadoop/ma-temp.txt
18/04/29 10:31:25 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
cat: `/user/acadgild/hadoop/ma-temp.txt': No such file or directory
[acadgild@localhost ~]$ hadoop fs -cat /user/acadgild/hadoop/max-temp.txt
18/04/29 10:31:42 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
01-01-2010,20
01-02-2011,30
01-03-2012,32
01-04-2013,35
01-05-2014,38
01-06-2015,40
01-07-2016,42
01-08-2017,44
01-09-2018,45
01-10-2019,46
01-11-2020,48
01-12-2021,50
01-01-2022,51
01-02-2023,52
01-03,2024,55

[acadgild@localhost ~]$
```

#### **Task 4:**

*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.*

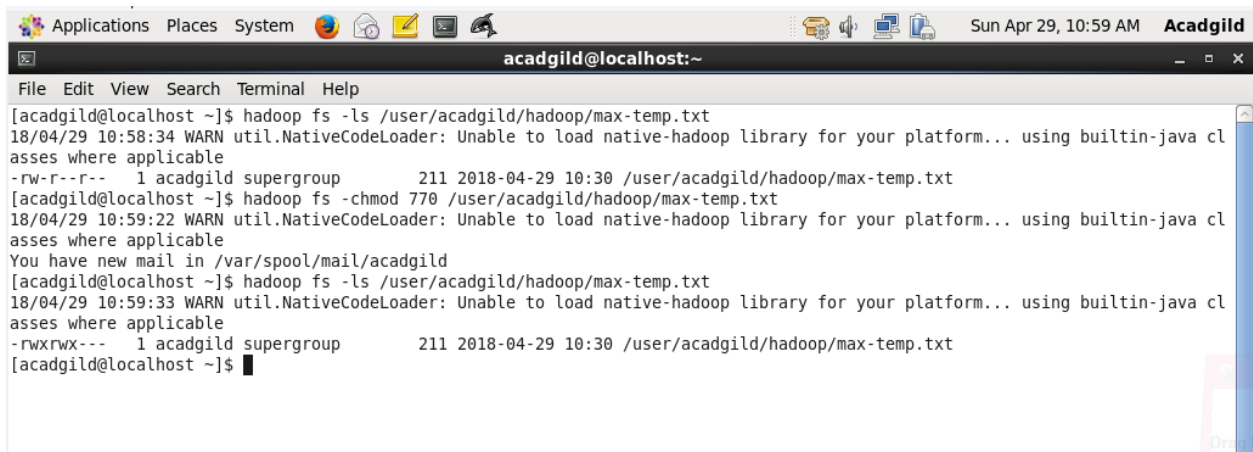
*Others do not have any control over it.*

**Solution:** *Permission is changed for max-temp.txt file using below command such that only owner and group members have full control over the file.*

*`hadoop fs -chmod 770 /user/acadgild/hadoop/max-temp.txt`*

*The new permission for the file is seen by using below command :*

*`hadoop fs -ls /user/acadgild/hadoop/max-temp.txt`*



The screenshot shows a terminal window titled 'acadgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help) and a system bar (Applications, Places, System, Sun Apr 29, 10:59 AM, Acadgild). The terminal displays the following commands and output:

```
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild/hadoop/max-temp.txt
18/04/29 10:58:34 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          211 2018-04-29 10:30 /user/acadgild/hadoop/max-temp.txt
[acadgild@localhost ~]$ hadoop fs -chmod 770 /user/acadgild/hadoop/max-temp.txt
18/04/29 10:59:22 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost ~]$ hadoop fs -ls /user/acadgild/hadoop/max-temp.txt
18/04/29 10:59:33 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
-rwxrwx---  1 acadgild supergroup          211 2018-04-29 10:30 /user/acadgild/hadoop/max-temp.txt
[acadgild@localhost ~]$
```