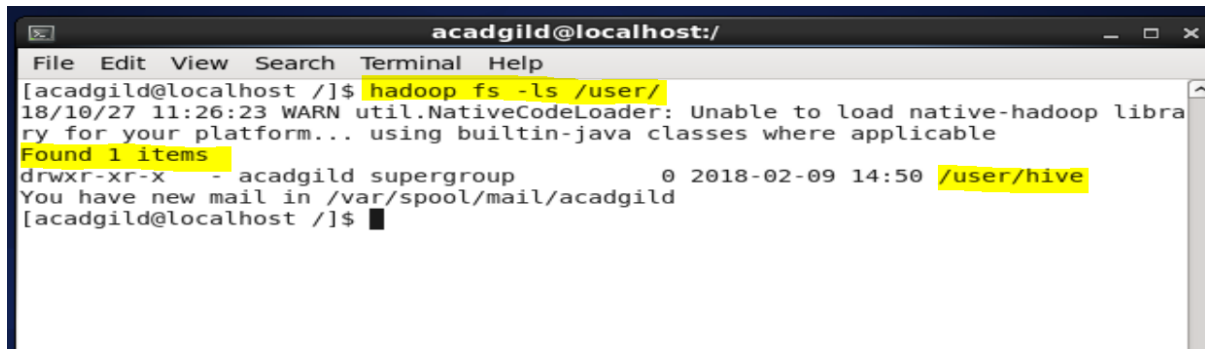


Session 2: BIG DATA & HADOOP –INTRODUCTION & CASE STUDIES

Assignment 2

Task 1:

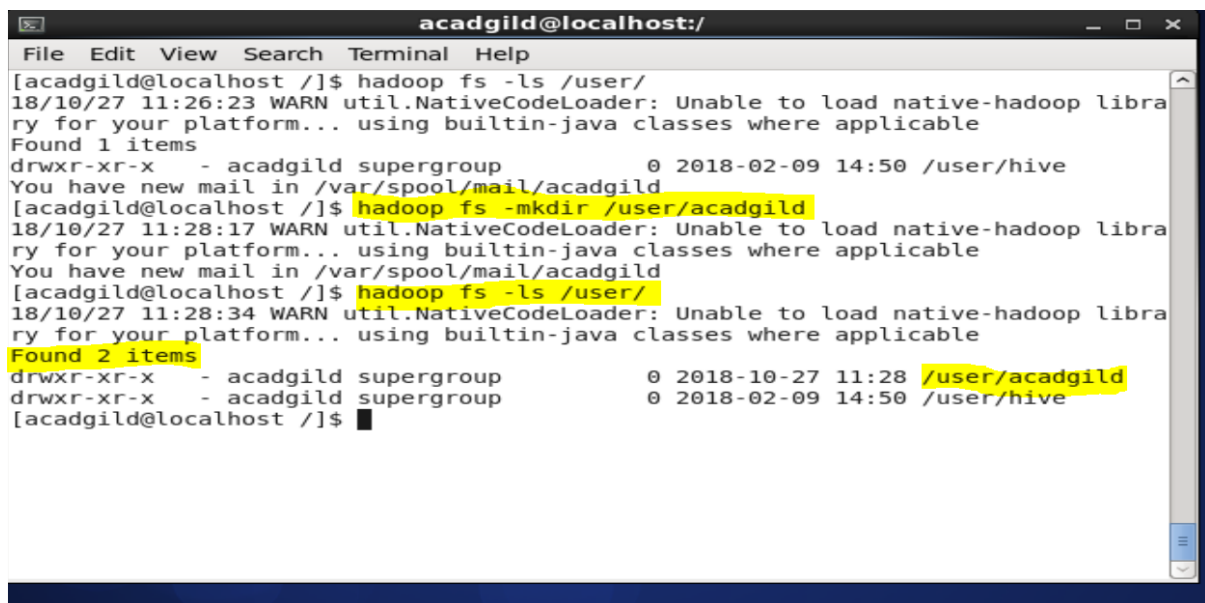
- Check whether /user/acadgild directory exists or not in the HDFS.



A terminal window titled 'acadgild@localhost:/' showing the execution of the command 'hadoop fs -ls /user/'. The output indicates that one item, '/user/hive', is found. The terminal also displays a warning message about the native-hadoop library and a notification about new mail in the spool directory.

```
acadgild@localhost:/  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ hadoop fs -ls /user/  
18/10/27 11:26:23 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 2018-02-09 14:50 /user/hive  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost ~]$
```

- Create a directory /user/acadgild/hadoop.



A terminal window titled 'acadgild@localhost:/' showing the execution of 'hadoop fs -mkdir /user/acadgild' followed by 'hadoop fs -ls /user/'. The output shows two items: '/user/acadgild' (created on 2018-10-27) and '/user/hive' (created on 2018-02-09). The terminal also displays the same warning and mail notification as the previous screenshot.

```
acadgild@localhost:/  
File Edit View Search Terminal Help  
[acadgild@localhost ~]$ hadoop fs -mkdir /user/acadgild  
18/10/27 11:28:17 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 -ls /user/  
18/10/27 11:28:34 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
Found 2 items  
drwxr-xr-x - acadgild supergroup          0 2018-10-27 11:28 /user/acadgild  
drwxr-xr-x - acadgild supergroup          0 2018-02-09 14:50 /user/hive  
[acadgild@localhost ~]$
```

```
acadgild@localhost:/  
File Edit View Search Terminal Help  
18/10/27 11:28:17 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost /]$ hadoop fs -ls /user/  
18/10/27 11:28:34 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
Found 2 items  
drwxr-xr-x - acadgild supergroup 0 2018-10-27 11:28 /user/acadgild  
drwxr-xr-x - acadgild supergroup 0 2018-02-09 14:50 /user/hive  
[acadgild@localhost /]$ hadoop fs -mkdir /user/acadgild/hadoop  
18/10/27 11:29:56 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost /]$ hadoop fs -touchz /user/acadgild/hadoop/word-count.txt  
18/10/27 11:31:17 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost /]$ hadoop fs -ls /user/acadgild/hadoop/  
18/10/27 11:31:46 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
Found 1 items  
-rw-r--r-- 1 acadgild supergroup 0 2018-10-27 11:31 /user/acadgild/ha  
dooop/word-count.txt  
[acadgild@localhost /]$
```

Task 2:

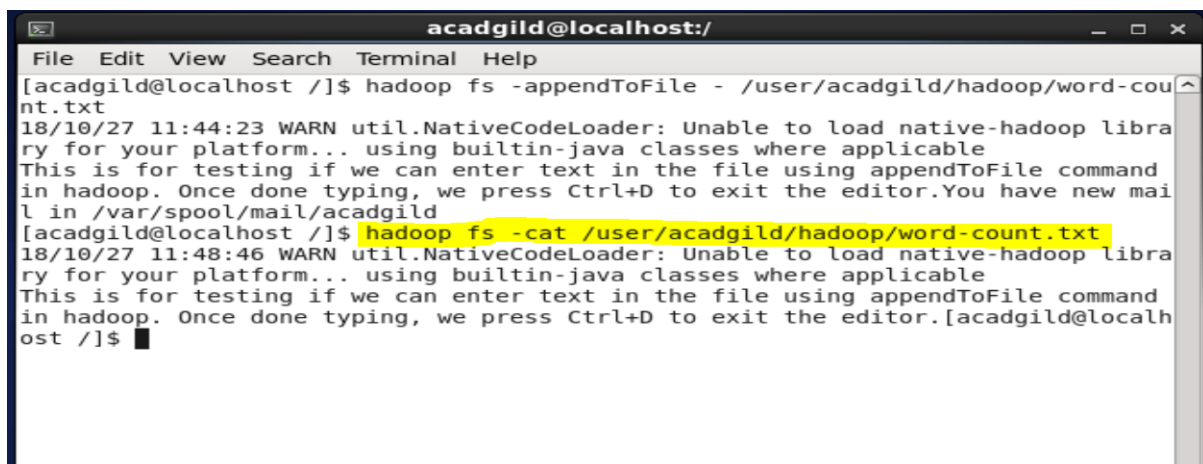
- Create a file in HDFS under directory /user/acadgild/hadoop, with name word-count.txt.

```
acadgild@localhost:/  
File Edit View Search Terminal Help  
18/10/27 11:28:17 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost /]$ hadoop fs -ls /user/  
18/10/27 11:28:34 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
Found 2 items  
drwxr-xr-x - acadgild supergroup 0 2018-10-27 11:28 /user/acadgild  
drwxr-xr-x - acadgild supergroup 0 2018-02-09 14:50 /user/hive  
[acadgild@localhost /]$ hadoop fs -mkdir /user/acadgild/hadoop  
18/10/27 11:29:56 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost /]$ hadoop fs -touchz /user/acadgild/hadoop/word-count.txt  
18/10/27 11:31:17 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
You have new mail in /var/spool/mail/acadgild  
[acadgild@localhost /]$ hadoop fs -ls /user/acadgild/hadoop/  
18/10/27 11:31:46 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
Found 1 items  
-rw-r--r-- 1 acadgild supergroup 0 2018-10-27 11:31 /user/acadgild/ha  
dooop/word-count.txt  
[acadgild@localhost /]$
```

- Whatever we type on screen should get appended to the file
Use the “appendToFile” command to enter text in the file as shown below:

```
acadgild@localhost:/  
File Edit View Search Terminal Help  
[acadgild@localhost /]$ hadoop fs -appendToFile - /user/acadgild/hadoop/word-co  
unt.txt  
18/10/27 11:44:23 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
This is for testing if we can enter text in the file using appendToFile command  
in hadoop. Once done typing, we press Ctrl+D to exit the editor.
```

Then, we use “cat” command to see if the text we typed has been added to the file:

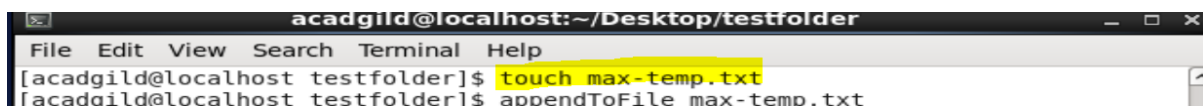


```
acadgild@localhost:/
File Edit View Search Terminal Help
[acadgild@localhost /]$ hadoop fs -appendToFile - /user/acadgild/hadoop/word-count.txt
18/10/27 11:44:23 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
This is for testing if we can enter text in the file using appendToFile command in hadoop. Once done typing, we press Ctrl+D to exit the editor.You have new mail in /var/spool/mail/acadgild
[acadgild@localhost /]$ hadoop fs -cat /user/acadgild/hadoop/word-count.txt
18/10/27 11:48:46 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
This is for testing if we can enter text in the file using appendToFile command in hadoop. Once done typing, we press Ctrl+D to exit the editor.[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.

Touch command is used to create the file max-temp.txt in the local FS in a folder testfolder.



```
acadgild@localhost:~/Desktop/testfolder
File Edit View Search Terminal Help
[acadgild@localhost testfolder]$ touch max-temp.txt
[acadgild@localhost testfolder]$ appendToFile max-temp.txt
```

The command “**nano max-temp.txt**” is used to add records to the file



```
acadgild@localhost:~/Desktop/testfolder
File Edit View Search Terminal Help
GNU nano 2.0.9 File: max-temp.txt Modified
10-10-2010,25
07-09-2013,28
06-12-2015,13
28-11-2017,26
28-08-2014,29
26-06-2016,22
10-09-2016,23
05-03-2012,16
22-11-2015,14
12-12-2014,11
14-11-2012,19
02-08-2015,27
05-08-2017,21
```

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

```
acadgild@localhost:~/Desktop/testfolder
File Edit View Search Terminal Help
28-11-2017,26
28-08-2014,29
26-06-2016,22
10-09-2016,23
05-03-2012,16
22-11-2015,14
12-12-2014,11
14-11-2012,19
02-08-2015,27
05-08-2017,21
[acadgild@localhost testfolder]$ hadoop fs -copyFromLocal /home/acadgild/Desktop
/testfolder/max-temp.txt /user/acadgild/hadoop
18/10/27 12:12:46 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost testfolder]$ hadoop fs -ls /user/acadgild/hadoop/
18/10/27 12:13:27 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
Found 2 items
-rw-r--r-- 1 acadgild supergroup 182 2018-10-27 12:12 /user/acadgild/ha
doop/max-temp.txt
-rw-r--r-- 1 acadgild supergroup 144 2018-10-27 11:48 /user/acadgild/ha
doop/word-count.txt
[acadgild@localhost testfolder]$
```

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.

The command "**chmod <mode> <filename with path>**" is used to change the permissions of a file. The mode can be written as both normal modes such as r for read, w for write and x for execute or octal mode where 4 stands for "read", 2 stands for "write", 1 stands for "execute", and 0 stands for "no permission." Hence, to give users and group members full rights(read, write and execute), the first two digits are 7 and 7. The last digit 0 denotes no permission for others.

The permission level is verified by executing the ls command.

```
18/10/27 12:25:11 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
[acadgild@localhost testfolder]$ hadoop fs -chmod 770 /user/acadgild/hadoop/max
-temp.txt
18/10/27 12:27:34 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost testfolder]$ hadoop fs -ls /user/acadgild/hadoop/
18/10/27 12:28:09 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
Found 2 items
-rwxrwx--- 1 acadgild supergroup 182 2018-10-27 12:12 /user/acadgild/ha
doop/max-temp.txt
-rw-r--r-- 1 acadgild supergroup 144 2018-10-27 11:48 /user/acadgild/ha
doop/word-count.txt
[acadgild@localhost testfolder]$
```