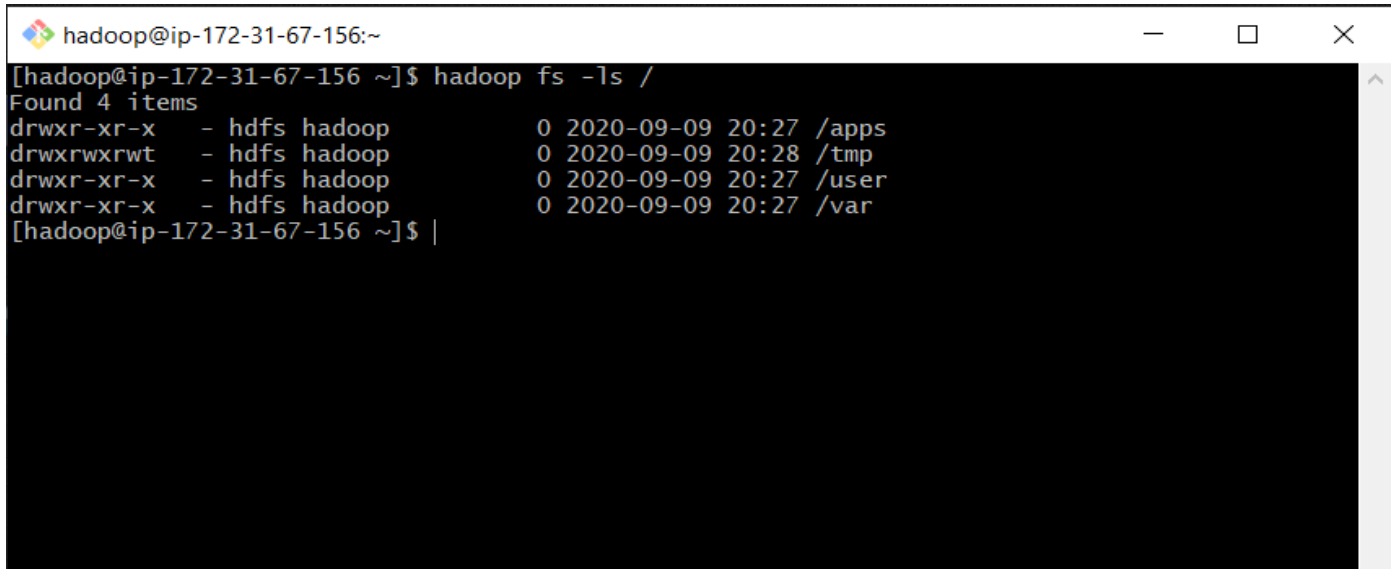# CSP554—Big Data Technologies

Assignment #2 (Modules 02a & 02b, 20 points)

9. (2 points) Execute the following hdfs command to list the files or directories that are listed (also indicating which is a file and which a directory):

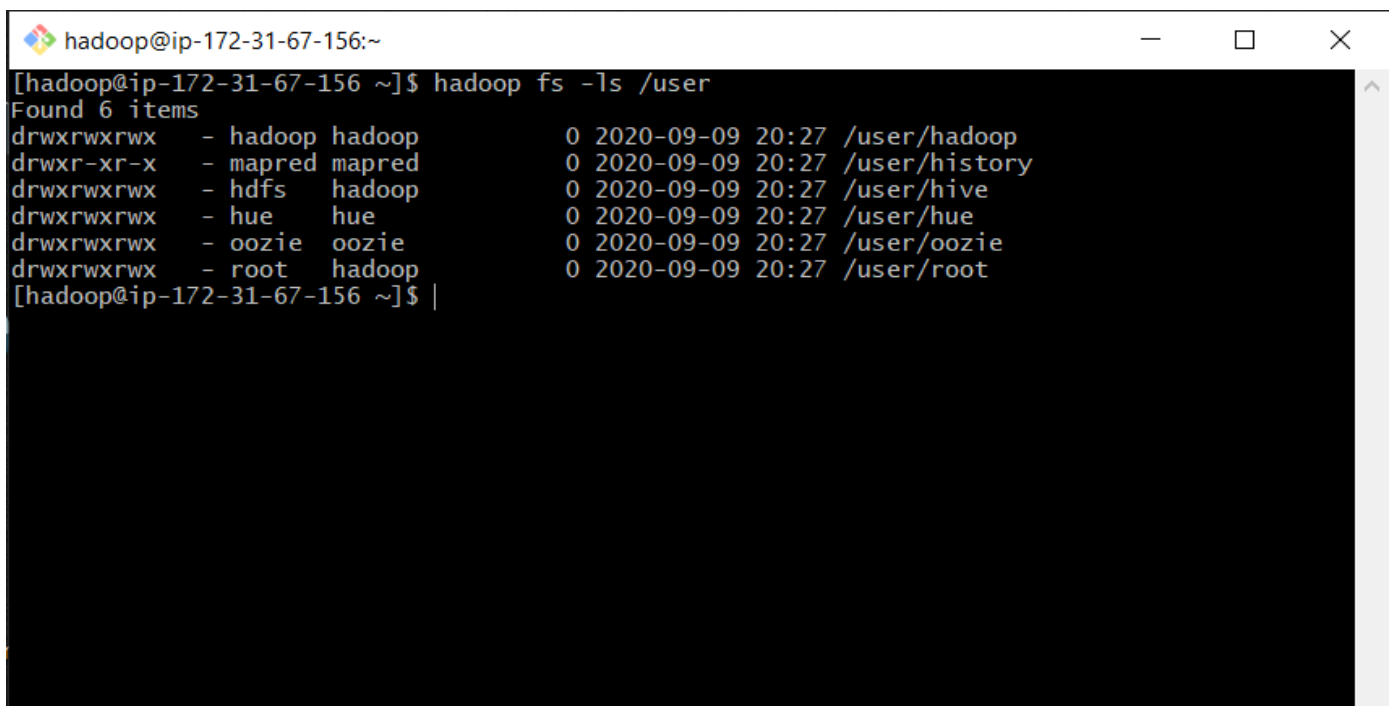hadoop fs –ls /

Ans:

Command: hadoop fs -ls /

```
hadoop@ip-172-31-67-156:~                                      —    □    ✕
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /
Found 4 items
drwxr-xr-x   - hdfs hadoop          0 2020-09-09 20:27 /apps
drwxrwxrwt   - hdfs hadoop          0 2020-09-09 20:28 /tmp
drwxr-xr-x   - hdfs hadoop          0 2020-09-09 20:27 /user
drwxr-xr-x   - hdfs hadoop          0 2020-09-09 20:27 /var
[hadoop@ip-172-31-67-156 ~]$
```

10. (2 points) Execute a command (you needed to figure out which one) to list the files and directories under the hdfs directory listed below: /user

Ans:

Command: hadoop fs -ls /user

```
hadoop@ip-172-31-67-156:~                                      —    □    ✕
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user
Found 6 items
drwxrwxrwx   - hadoop hadoop          0 2020-09-09 20:27 /user/hadoop
drwxr-xr-x   - mapred mapred          0 2020-09-09 20:27 /user/history
drwxrwxrwx   - hdfs   hadoop          0 2020-09-09 20:27 /user/hive
drwxrwxrwx   - hue    hue             0 2020-09-09 20:27 /user/hue
drwxrwxrwx   - oozie  oozie           0 2020-09-09 20:27 /user/oozie
drwxrwxrwx   - root   hadoop          0 2020-09-09 20:27 /user/root
[hadoop@ip-172-31-67-156 ~]$
```

11. (2 points) Execute a command to create the following directory: /user/csp554

Ans:

Command: hadoop fs -mkdir /user/csp554

```
hadoop@ip-172-31-67-156:~                                                   —    ☐    ✕

[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user
Found 6 items
drwxrwxrwx   - hadoop hadoop          0 2020-09-09 20:27 /user/hadoop
drwxr-xr-x   - mapred mapred          0 2020-09-09 20:27 /user/history
drwxrwxrwx   - hdfs   hadoop          0 2020-09-09 20:27 /user/hive
drwxrwxrwx   - hue    hue             0 2020-09-09 20:27 /user/hue
drwxrwxrwx   - oozie  oozie           0 2020-09-09 20:27 /user/oozie
drwxrwxrwx   - root   hadoop          0 2020-09-09 20:27 /user/root
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -mkdir /user/csp554
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user
Found 7 items
drwxr-xr-x   - hadoop hadoop          0 2020-09-09 21:23 /user/csp554
drwxrwxrwx   - hadoop hadoop          0 2020-09-09 20:27 /user/hadoop
drwxr-xr-x   - mapred mapred          0 2020-09-09 20:27 /user/history
drwxrwxrwx   - hdfs   hadoop          0 2020-09-09 20:27 /user/hive
drwxrwxrwx   - hue    hue             0 2020-09-09 20:27 /user/hue
drwxrwxrwx   - oozie  oozie           0 2020-09-09 20:27 /user/oozie
drwxrwxrwx   - root   hadoop          0 2020-09-09 20:27 /user/root
[hadoop@ip-172-31-67-156 ~]$ |
```

12. (2 points) Execute a command to create the following directory: /user/csp554-2

Ans:

Command: hadoop fs -mkdir /user/csp554-2

```
hadoop@ip-172-31-67-156:~                                                   —    ☐    ✕

[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user
Found 7 items
drwxr-xr-x   - hadoop hadoop          0 2020-09-09 21:23 /user/csp554
drwxrwxrwx   - hadoop hadoop          0 2020-09-09 20:27 /user/hadoop
drwxr-xr-x   - mapred mapred          0 2020-09-09 20:27 /user/history
drwxrwxrwx   - hdfs   hadoop          0 2020-09-09 20:27 /user/hive
drwxrwxrwx   - hue    hue             0 2020-09-09 20:27 /user/hue
drwxrwxrwx   - oozie  oozie           0 2020-09-09 20:27 /user/oozie
drwxrwxrwx   - root   hadoop          0 2020-09-09 20:27 /user/root
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -mkdir /user/csp554-2
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user
Found 8 items
drwxr-xr-x   - hadoop hadoop          0 2020-09-09 21:23 /user/csp554
drwxr-xr-x   - hadoop hadoop          0 2020-09-09 21:24 /user/csp554-2
drwxrwxrwx   - hadoop hadoop          0 2020-09-09 20:27 /user/hadoop
drwxr-xr-x   - mapred mapred          0 2020-09-09 20:27 /user/history
drwxrwxrwx   - hdfs   hadoop          0 2020-09-09 20:27 /user/hive
drwxrwxrwx   - hue    hue             0 2020-09-09 20:27 /user/hue
drwxrwxrwx   - oozie  oozie           0 2020-09-09 20:27 /user/oozie
drwxrwxrwx   - root   hadoop          0 2020-09-09 20:27 /user/root
[hadoop@ip-172-31-67-156 ~]$ |
```

13. (2 points) Execute a command that copies a given local file to the given hdfs directory :

Source local file: /home/hadoop/myname.txt

Destination HDFS directory: /user/csp554

Ans:

Command: hadoop fs -copyFromLocal /home/hadoop/akashtanwani.txt /user/csp554

```
hadoop@ip-172-31-67-156:~                                          —    □    ✕
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user
Found 8 items
drwxr-xr-x   - hadoop hadoop          0 2020-09-09 21:35 /user/csp554
drwxr-xr-x   - hadoop hadoop          0 2020-09-09 21:24 /user/csp554-2
drwxrwxrwx   - hadoop hadoop          0 2020-09-09 20:27 /user/hadoop
drwxr-xr-x   - mapred mapred          0 2020-09-09 20:27 /user/history
drwxrwxrwx   - hdfs   hadoop          0 2020-09-09 20:27 /user/hive
drwxrwxrwx   - hue    hue             0 2020-09-09 20:27 /user/hue
drwxrwxrwx   - oozie  oozie           0 2020-09-09 20:27 /user/oozie
drwxrwxrwx   - root   hadoop          0 2020-09-09 20:27 /user/root
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -copyFromLocal /home/hadoop/akashtanwani.txt /user/csp554
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user/csp554
Found 1 items
-rw-r--r--   1 hadoop hadoop         23 2020-09-09 21:36 /user/csp554/akashtanwani.txt
[hadoop@ip-172-31-67-156 ~]$ |
```

14. (2 points) Copy a file from one hdfs directory to another hdfs directory and write down the command

Source hdfs file: /user/csp554/myname.txt

Destination HDFS directory: /user/csp554-2

Ans:

Command: hadoop fs -cp /user/csp554/akashtanwani.txt /user/csp554-2

```
hadoop@ip-172-31-67-156:~                                          —    □    ✕
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -cp /user/csp554/akashtanwani.txt /user/csp554-2
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user/csp554-2
Found 1 items
-rw-r--r--   1 hadoop hadoop         23 2020-09-09 21:43 /user/csp554-2/akashtanwani.txt
[hadoop@ip-172-31-67-156 ~]$ |
```

15. (2 points) Copy the object myid.txt you uploaded to an S3 bucket into the Hadoop master node Linux file system. The actual object includes your student id as above.

Ans:

Command: aws s3 cp s3://a20448831-mybucket/A20448831.txt /home/Hadoop

ls /home/hadoop

```
hadoop@ip-172-31-67-156:~                                          —    □    ✕
[hadoop@ip-172-31-67-156 ~]$ aws s3 cp s3://a20448831-mybucket/A20448831.txt /home/hadoop
download: s3://a20448831-mybucket/A20448831.txt to ./A20448831.txt
[hadoop@ip-172-31-67-156 ~]$ ls /home/hadoop
A20448831.txt  akashtanwani.txt
[hadoop@ip-172-31-67-156 ~]$ |
```

16. (2 points) Copy the same object myid.txt you created in an S3 bucket into HDFS into the directory /users/csp554

       hadoop fs -cp s3://mybucket/myid.txt   hdfs:///user/csp554-2

       Note, the three slashes after the "hdfs:"

  Ans:

Command: hadoop fs -cp s3://a20448831-mybucket/A20448831.txt hdfs:///user/csp554-2

         hadoop fs -ls /user/csp554-2

17. (2 points) Execute a command to show the contents of the myid.txt file in the hdfs directory /user/csp554-2

    Clue: look up about how to use the "cat" command in the file system shell document.

  Ans:

Command: hadoop fs -cat /user/csp554-2/A20448831.txt

18. (2 points) Execute a command to remove the myid.txt file in the hdfs directory /user/csp554-2

  Ans:

Command: hadoop fs -rm /user/csp554-2/A20448831.txt

         hadoop fs -ls /user/csp554-2