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:~
                                                                                                      X
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /
Found 4 items
                                           0 2020-09-09 20:27 /apps
0 2020-09-09 20:28 /tmp
0 2020-09-09 20:27 /user
drwxr-xr-x
                  hdfs hadoop
drwxrwxrwt
                  hdfs hadoop
drwxr-xr-x
                  hdfs hadoop
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:~
                                                                                                    X
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user
Found 6 items
drwxrwxrwx

    hadoop hadoop

                                             0 2020-09-09 20:27 /user/hadoop
                                             0 2020-09-09 20:27 /user/history
drwxr-xr-x

    mapred mapred

                                             0 2020-09-09 20:27 /user/hive
               hdfs
                          hadoop
drwxrwxrwx
                                             0 2020-09-09 20:27 /user/hue
0 2020-09-09 20:27 /user/oozie
0 2020-09-09 20:27 /user/root
drwxrwxrwx
               - hue
                          hue
drwxrwxrwx
               - oozie
                          oozie
               - root
drwxrwxrwx
[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
                                               0 2020-09-09 20:27 /user/hadoop
0 2020-09-09 20:27 /user/history
drwxrwxrwx
                  hadoop hadoop
drwxr-xr-x
                                                                       /user/history
                  mapred mapred
                                               0 2020-09-09 20:27
                  hdfs
                           hadoop
                                                                       /user/hive
drwxrwxrwx
                                               0 2020-09-09 20:27 /user/hue
0 2020-09-09 20:27 /user/oozie
0 2020-09-09 20:27 /user/root
drwxrwxrwx
                  hue
                           hue
                  oozie
                           oozie
drwxrwxrwx
drwxrwxrwx - root hadoop 0 2020-09-09 20:27 /
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -mkdir /user/csp554
[hadoop@ip-172-31-67-156 ~]$ hadoop is -mkdir /u
Found 7 items
                                               0 2020-09-09 21:23 /user/csp554
drwxr-xr-x
                  hadoop hadoop
                  hadoop hadoop
                                               0 2020-09-09 20:27
                                                                       /user/hadoop
drwxrwxrwx
                                               0 2020-09-09 20:27 /user/history
drwxr-xr-x
                  mapred mapred
                                              0 2020-09-09 20:27 /user/hive
0 2020-09-09 20:27 /user/hue
                  hdfs
                           hadoop
drwxrwxrwx
drwxrwxrwx
                  hue
                           hue
                                               0 2020-09-09 20:27 /user/oozie
                  oozie
                           oozie
drwxrwxrwx
                - root
                                               0 2020-09-09 20:27 /user/root
                           hadoop
drwxrwxrwx
[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:~
                                                                                                         \Box
                                                                                                                 X
[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
                                               0 2020-09-09 20:27 /user/hadoop
drwxrwxrwx
                  hadoop hadoop
                                               0 2020-09-09 20:27 /user/history
drwxr-xr-x
                  mapred mapred
                                               0 2020-09-09 20:27 /user/hive
                  hdfs
drwxrwxrwx
                           hadoop
                                               0 2020-09-09 20:27 /user/hue
drwxrwxrwx
                - hue
                           hue
                                               0 2020-09-09 20:27 /user/oozie
0 2020-09-09 20:27 /user/root
drwxrwxrwx
                  oozie
                           oozie
                           hadoop
                - root
drwxrwxrwx
[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
                - hadoop hadoop
                                               0 2020-09-09 20:27 /user/hadoop
drwxrwxrwx
                                               0 2020-09-09 20:27 /user/hadoop
0 2020-09-09 20:27 /user/history
0 2020-09-09 20:27 /user/hive
0 2020-09-09 20:27 /user/hue
0 2020-09-09 20:27 /user/poot
drwxr-xr-x
                  mapred mapred
drwxrwxrwx
                  hdfs
                           hadoop
drwxrwxrwx
                  hue
                           hue
                           oozie
drwxrwxrwx
                  oozie
                                               0 2020-09-09 20:27 /user/root
                - root
                           hadoop
drwxrwxrwx
[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:~
                                                                                                     X
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user
ound 8 items
drwxr-xr-x
               hadoop hadoop
                                       0 2020-09-09 21:35 /user/csp554
                                       0 2020-09-09 21:24 /user/csp554-2
drwxr-xr-x
               hadoop hadoop
                                         2020-09-09 20:27
               hadoop hadoop
                                       0
                                                           /user/hadoop
drwxrwxrwx
                                       0 2020-09-09 20:27
                                                           /user/history
drwxr-xr-x
               mapred
                      mapred
                                       0 2020-09-09 20:27
drwxrwxrwx
               hdfs
                      hadoop
                                                            /user/hive
                                       0 2020-09-09 20:27
0 2020-09-09 20:27
                                                           /user/hue
drwxrwxrwx
               hue
                      hue
                                                           /user/oozie
               oozie
                      oozie
drwxrwxrwx
                      hadoop
                                       0 2020-09-09 20:27 /user/root
drwxrwxrwx
               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

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

Is /home/hadoop

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

```
MINGW64:/c/Users/Akash Tanwani
                                                                                                                                X
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -ls /user/csp554-2
Found 2 items
                                            21 2020-09-10 00:03 /user/csp554-2/A20448831.txt 23 2020-09-09 21:43 /user/csp554-2/akashtanwani.txt
 rw-r--r--
               1 hadoop hadoop
               1 hadoop hadoop
[hadoop@ip-172-31-67-156 ~]$ hadoop fs -rm /user/csp554-2/A20448831.txt
Deleted /user/csp554-2/A20448831.txt
[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 ~] $ exit
Connection to ec2-3-237-22-252.compute-1.amazonaws.com closed.
```