



BIG DATA LAB EVALAUATION-2

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Q. Implements all the command of HDFS [Hadoop Distributed File System].

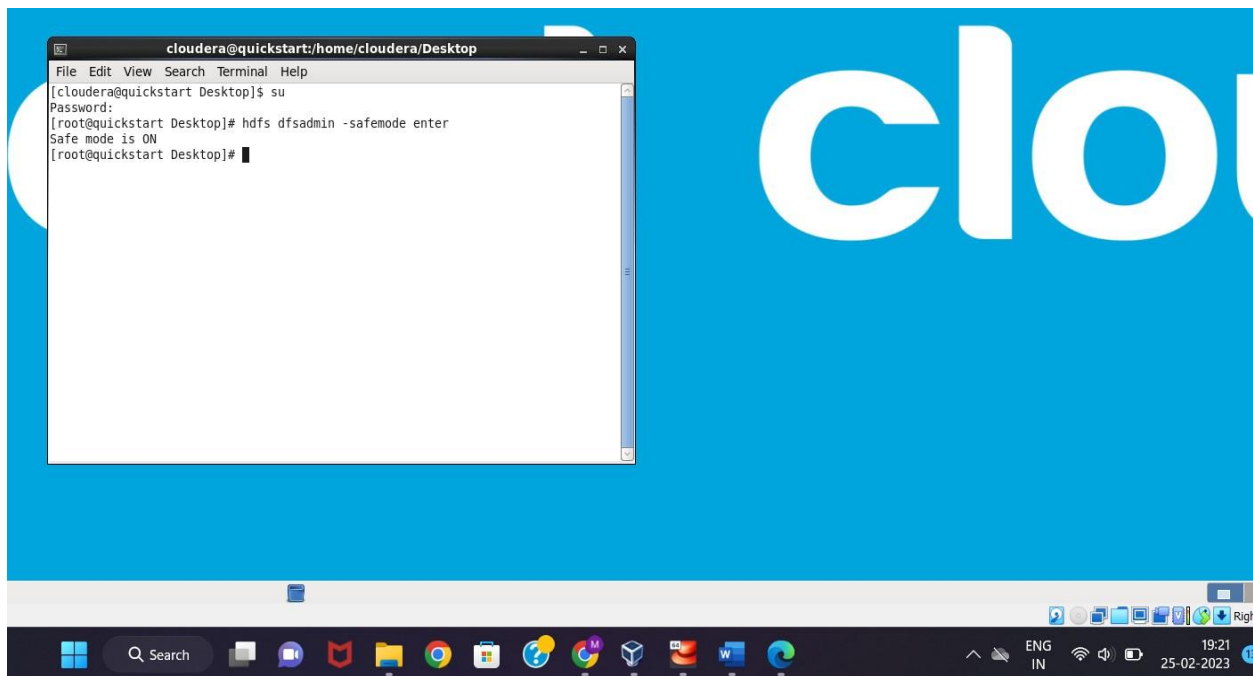
Explanation-Firstly I visit to to the cloudera CLI and using 'su' command to switch the user mode.

Then here I use HDFS commands which are as follows: --

--command which I used are

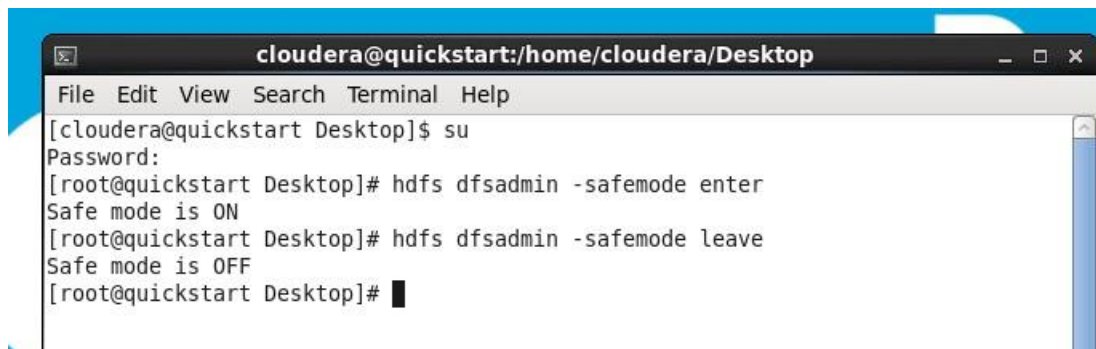
1-Command to enter the safe mode.

Using command: -" Hdfs dfsadmin -safemode enter".



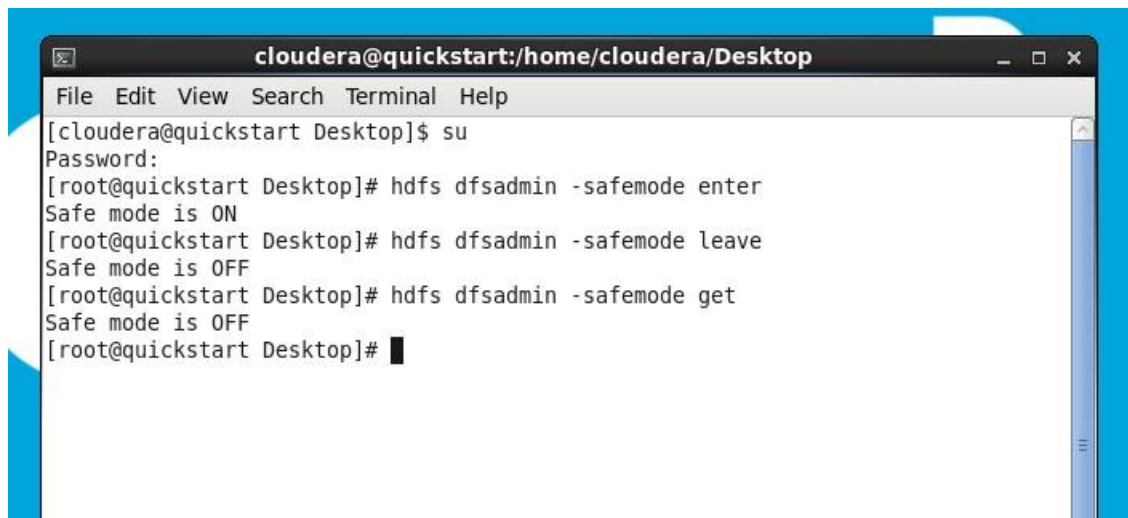
2-Here I use command to leave the safe mode.

Using command :--“HDFS dfsadmin-safemode leave”.



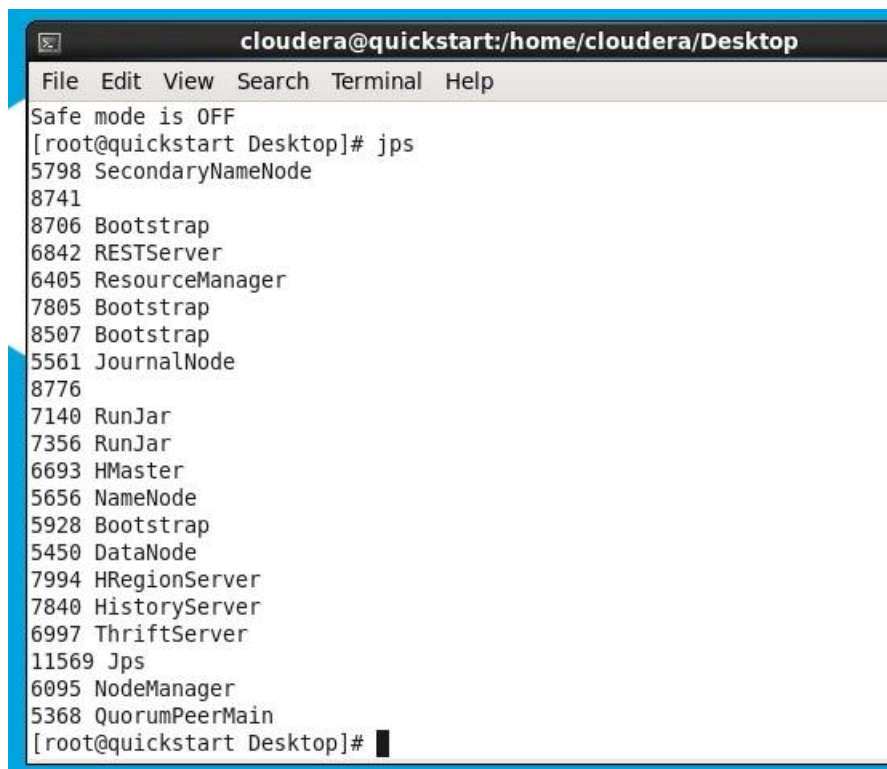
3-command to get the current status of safe mode.

Using command-“Hdfs dfsadmin -safemode get”.

A terminal window titled "cloudera@quickstart:/home/cloudera/Desktop" with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows a user switching to root and running HDFS commands to manage safe mode.

```
cloudera@quickstart:/home/cloudera/Desktop
File Edit View Search Terminal Help
[cloudera@quickstart Desktop]$ su
Password:
[root@quickstart Desktop]# hdfs dfsadmin -safemode enter
Safe mode is ON
[root@quickstart Desktop]# hdfs dfsadmin -safemode leave
Safe mode is OFF
[root@quickstart Desktop]# hdfs dfsadmin -safemode get
Safe mode is OFF
[root@quickstart Desktop]#
```

4-Now Here I use command to check the Hadoop service are working or not:--“jps”

A terminal window titled "cloudera@quickstart:/home/cloudera/Desktop" with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the output of the 'jps' command, listing various Hadoop services and their PIDs.

```
cloudera@quickstart:/home/cloudera/Desktop
File Edit View Search Terminal Help
Safe mode is OFF
[root@quickstart Desktop]# jps
5798 SecondaryNameNode
8741
8706 Bootstrap
6842 RESTServer
6405 ResourceManager
7805 Bootstrap
8507 Bootstrap
5561 JournalNode
8776
7140 RunJar
7356 RunJar
6693 HMaster
5656 NameNode
5928 Bootstrap
5450 DataNode
7994 HRegionServer
7840 HistoryServer
6997 ThriftServer
11569 Jps
6095 NodeManager
5368 QuorumPeerMain
[root@quickstart Desktop]#
```

5-Now here I use command:--“ls” [hdfs dfs-ls/].

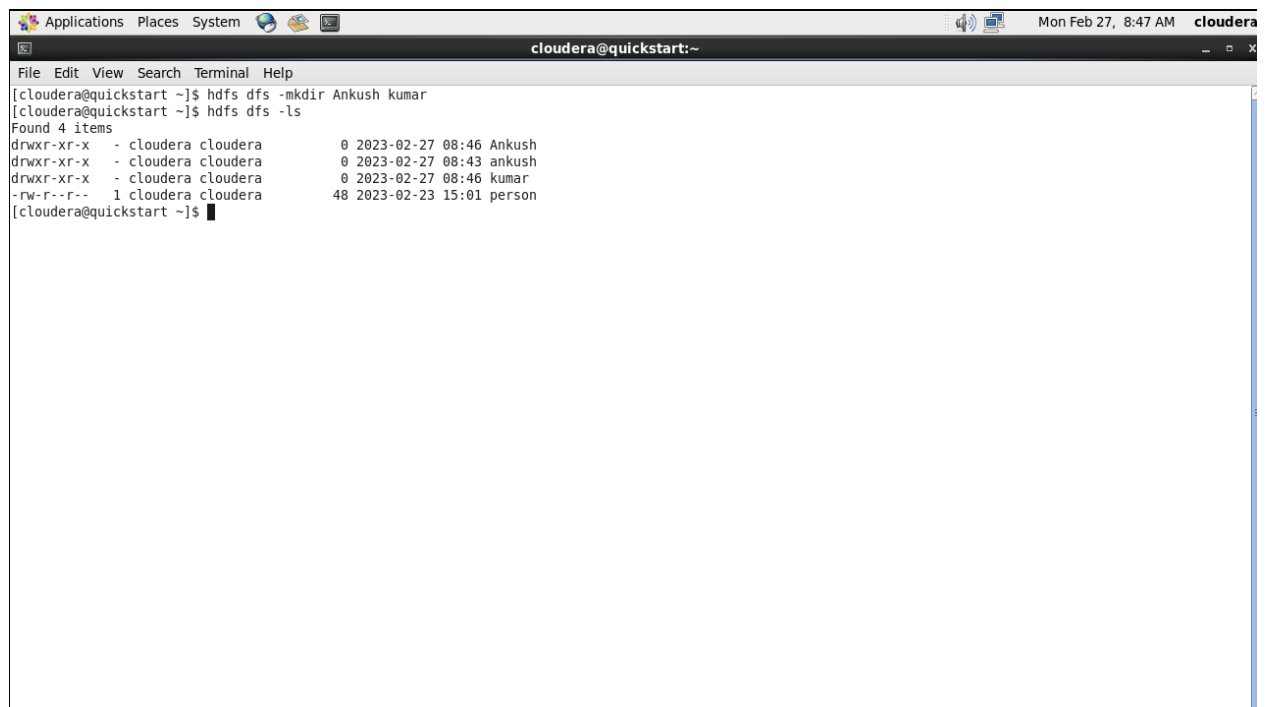
```

6095 NodeManager
5368 QuorumPeerMain
[root@quickstart Desktop]# hdfs dfs -ls /
Found 6 items
drwxrwxrwx - hdfs supergroup          0 2017-10-23 09:15 /benchmarks
drwxr-xr-x - hbase supergroup          0 2023-02-25 05:12 /hbase
drwxr-xr-x - solr solr                  0 2017-10-23 09:18 /solr
drwxrwxrwt - hdfs supergroup          0 2023-02-02 08:46 /tmp
drwxr-xr-x - hdfs supergroup          0 2017-10-23 09:17 /user
drwxr-xr-x - hdfs supergroup          0 2017-10-23 09:17 /var
[root@quickstart Desktop]#

```

6.Now here I write “mkdir”:--To create a one directory.

[hdfs dfs -mkdir Ankush kumar]



```

Applications Places System
cloudera@quickstart:~
File Edit View Search Terminal Help
[cloudera@quickstart ~]$ hdfs dfs -mkdir Ankush kumar
[cloudera@quickstart ~]$ hdfs dfs -ls
Found 4 items
drwxr-xr-x - cloudera cloudera          0 2023-02-27 08:46 Ankush
drwxr-xr-x - cloudera cloudera          0 2023-02-27 08:43 ankush
drwxr-xr-x - cloudera cloudera          0 2023-02-27 08:46 kumar
-rw-r--r-- 1 cloudera cloudera        48 2023-02-23 15:01 person
[cloudera@quickstart ~]$

```

7-Now here I use touch command to create a empty file.

Command= (hdfs dfs -touchz ankush kumar/myFile.txt)

```
Applications Places System cloudera@quickstart:~
File Edit View Search Terminal Help
[cloudera@quickstart ~]$ hdfs dfs -touchz ankush kumar.txt
touchz: 'ankush': Is a directory
[cloudera@quickstart ~]$ hdfs dfs -ls
Found 5 items
drwxr-xr-x - cloudera cloudera 0 2023-02-27 08:46 Ankush
drwxr-xr-x - cloudera cloudera 0 2023-02-27 08:43 ankush
drwxr-xr-x - cloudera cloudera 0 2023-02-27 08:46 kumar
-rw-r--r-- 1 cloudera cloudera 0 2023-02-27 08:54 kumar.txt
-rw-r--r-- 1 cloudera cloudera 48 2023-02-23 15:01 person
[cloudera@quickstart ~]$
```

8-Now here I copy the file from local file to store hdfs.

[hdfs dfs -copy from local myfile.txt Ankush kumar]

9

```
Applications Places System cloudera@quickstart:~
File Edit View Search Terminal Help
[cloudera@quickstart ~]$ hdfs dfs -touchz ankush kumar.txt
touchz: 'ankush': Is a directory
[cloudera@quickstart ~]$ hdfs dfs -ls
Found 5 items
drwxr-xr-x - cloudera cloudera 0 2023-02-27 08:46 Ankush
drwxr-xr-x - cloudera cloudera 0 2023-02-27 08:43 ankush
drwxr-xr-x - cloudera cloudera 0 2023-02-27 08:46 kumar
-rw-r--r-- 1 cloudera cloudera 0 2023-02-27 08:54 kumar.txt
-rw-r--r-- 1 cloudera cloudera 48 2023-02-23 15:01 person
[cloudera@quickstart ~]$ gedit myfile.txt
[cloudera@quickstart ~]$ hdfs dfs -copyFromLocal myfile.txt Ankush kumar
copyFromLocal: 'Ankush': No such file or directory
[cloudera@quickstart ~]$ hdfs dfs -copyFromLocal myfile.txt ankush kumar
copyFromLocal: 'kumar/myfile.txt': File exists
copyFromLocal: 'ankush': No such file or directory
[cloudera@quickstart ~]$ gedit myfile.txt
[cloudera@quickstart ~]$ hdfs dfs -copyFromLocal myfile.txt ankush
[cloudera@quickstart ~]$
[cloudera@quickstart ~]$ hdfs dfs -ls
Found 5 items
drwxr-xr-x - cloudera cloudera 0 2023-02-27 08:46 Ankush
drwxr-xr-x - cloudera cloudera 0 2023-02-27 09:10 ankush
drwxr-xr-x - cloudera cloudera 0 2023-02-27 09:04 kumar
-rw-r--r-- 1 cloudera cloudera 0 2023-02-27 08:54 kumar.txt
-rw-r--r-- 1 cloudera cloudera 48 2023-02-23 15:01 person
[cloudera@quickstart ~]$
```

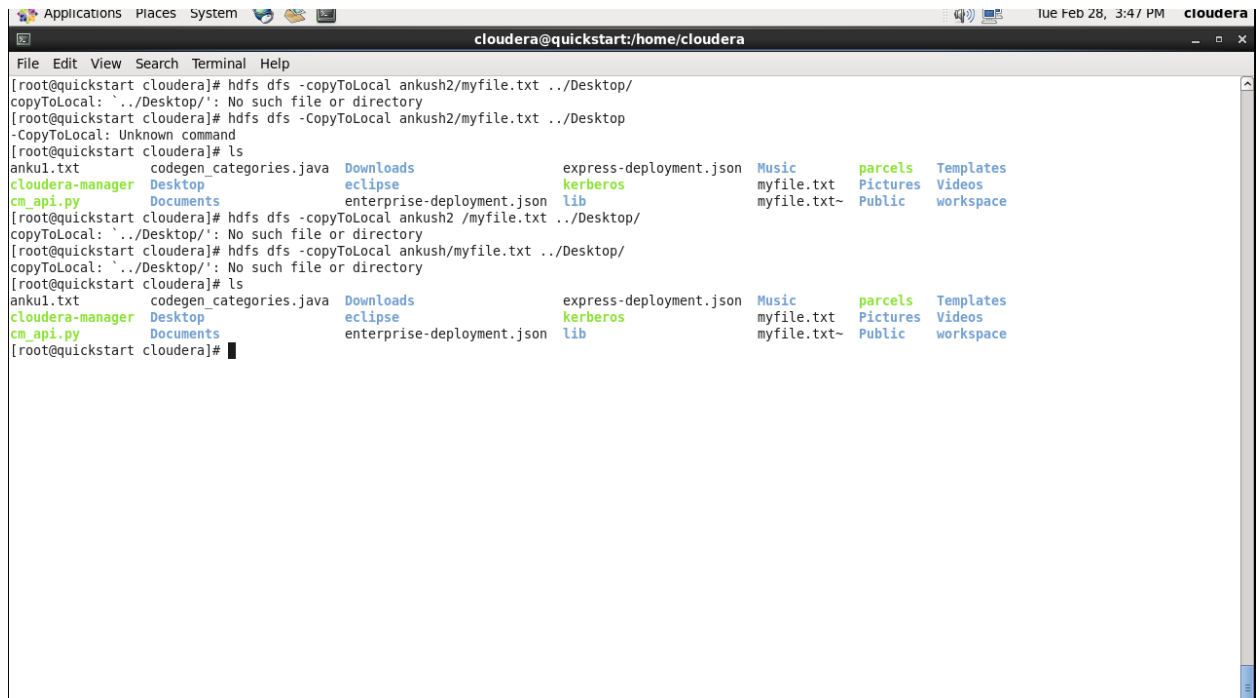
9-Now I use cat command to print the content of a file

[hdfs dfs -cat ankush /myfile.txt]

```
Found 5 items
drwxr-xr-x - cloudera cloudera      0 2023-02-27 08:46 Ankush
drwxr-xr-x - cloudera cloudera      0 2023-02-27 09:10 ankush
drwxr-xr-x - cloudera cloudera      0 2023-02-27 09:04 kumar
-rw-r--r-- 1 cloudera cloudera      0 2023-02-27 08:54 kumar.txt
-rw-r--r-- 1 cloudera cloudera    48 2023-02-23 15:01 person
[cloudera@quickstart ~]$ hdfs dfs -cat ankush/myfile.txt
hello
[cloudera@quickstart ~]$
```

10-Now I use copy to local command to copy the file from hdfs to local file system.

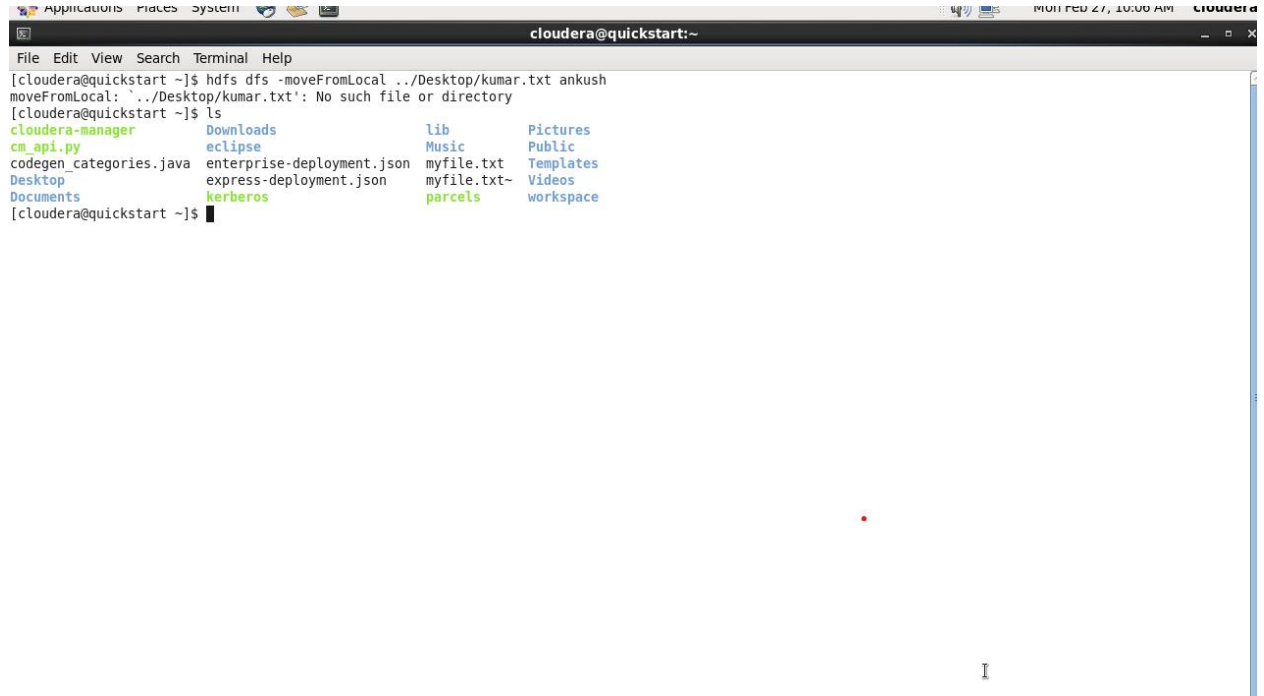
[hdfs dfs -copyToLocal kumar/myfile.txt../Desktop/]



```
Applications Places System cloudera@quickstart:/home/cloudera
File Edit View Search Terminal Help
[root@quickstart cloudera]# hdfs dfs -copyToLocal ankush2/myfile.txt ../Desktop/
copyToLocal: ../Desktop/: No such file or directory
[root@quickstart cloudera]# hdfs dfs -CopyToLocal ankush2/myfile.txt ../Desktop/
-CopyToLocal: Unknown command
[root@quickstart cloudera]# ls
anku1.txt      codegen_categories.java  Downloads      express-deployment.json  Music      parcels      Templates
cloudera-manager Desktop      eclipse        kerberos               myfile.txt Pictures      Videos
cm_api.py      Documents      enterprise-deployment.json  lib               myfile.txt~ Public        workspace
[root@quickstart cloudera]# hdfs dfs -copyToLocal ankush2 /myfile.txt ../Desktop/
copyToLocal: ../Desktop/: No such file or directory
[root@quickstart cloudera]# hdfs dfs -copyToLocal ankush/myfile.txt ../Desktop/
copyToLocal: ../Desktop/: No such file or directory
[root@quickstart cloudera]# ls
anku1.txt      codegen_categories.java  Downloads      express-deployment.json  Music      parcels      Templates
cloudera-manager Desktop      eclipse        kerberos               myfile.txt Pictures      Videos
cm_api.py      Documents      enterprise-deployment.json  lib               myfile.txt~ Public        workspace
[root@quickstart cloudera]#
```

11-Now here I use moveFromLocal command to move file local from hdfs

[hdfs dfs -moveFromLocal ../Desktop/myfile.txt kumar

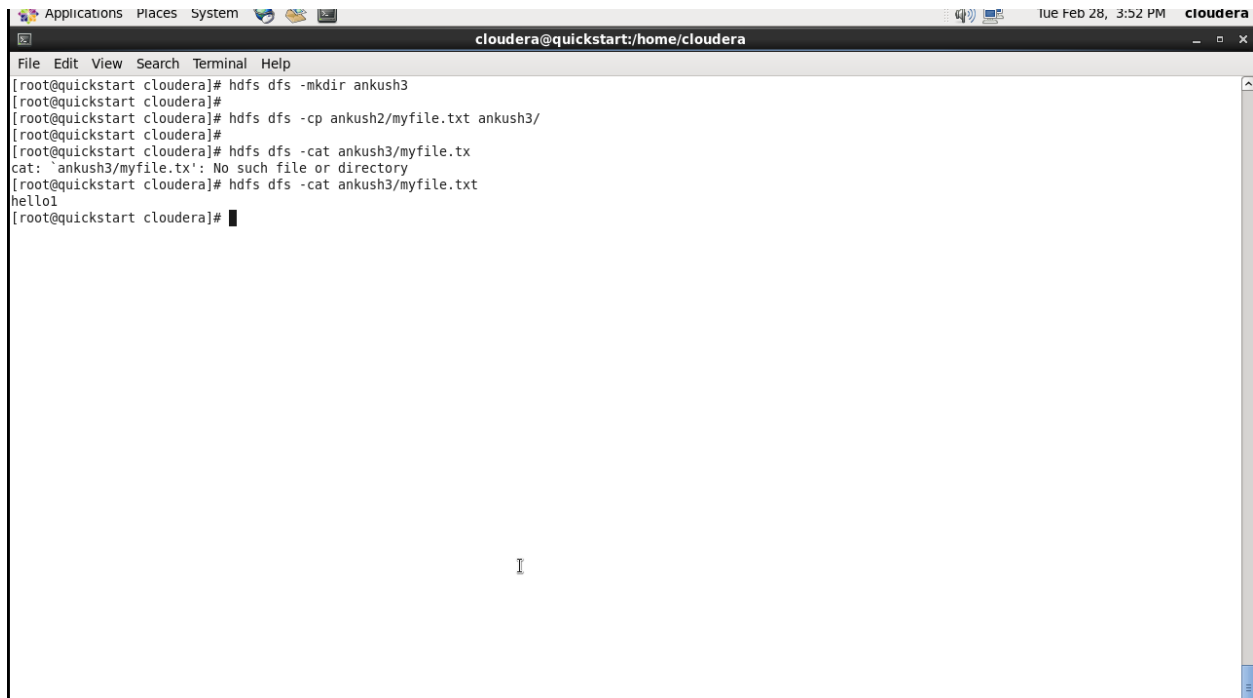


```
File Edit View Search Terminal Help
[cloudera@quickstart ~]$ hdfs dfs -moveFromLocal ../Desktop/kumar.txt ankush
moveFromLocal: '../Desktop/kumar.txt': No such file or directory
[cloudera@quickstart ~]$ ls
cloudera-manager      Downloads          lib                Pictures
cm_api.py             eclipse            Music              Public
codegen_categories.java enterprise-deployment.json myfile.txt          Templates
Desktop               express-deployment.json myfile.txt~         Videos
Documents             kerberos          parcels            workspace
[cloudera@quickstart ~]$
```

12-. “ cp ”: -- Used to copy files within hdfs.

Firstly, create a new directory “ankush3” and copy all file from “kumar” directory.

[hdfs dfs -cp kumar/myfile.txt ankush3/]

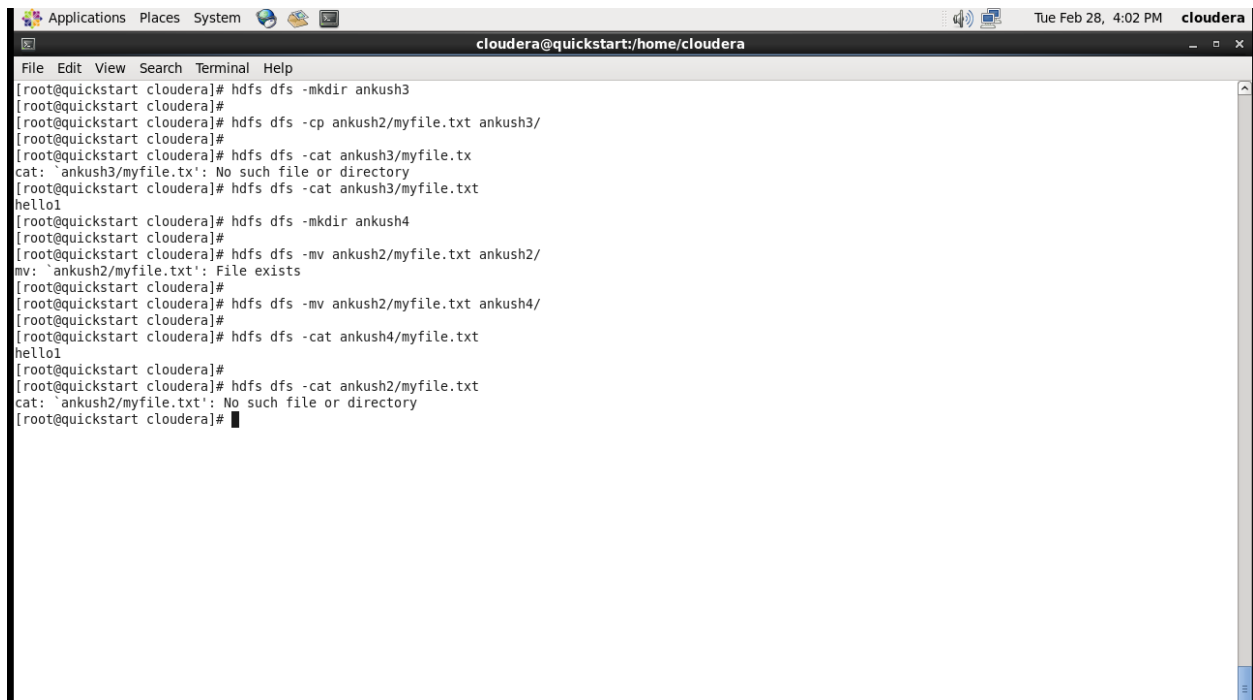
A terminal window titled 'cloudera@quickstart:/home/cloudera' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
[root@quickstart cloudera]# hdfs dfs -mkdir ankush3
[root@quickstart cloudera]#
[root@quickstart cloudera]# hdfs dfs -cp ankush2/myfile.txt ankush3/
[root@quickstart cloudera]#
[root@quickstart cloudera]# hdfs dfs -cat ankush3/myfile.tx
cat: 'ankush3/myfile.tx': No such file or directory
[root@quickstart cloudera]# hdfs dfs -cat ankush3/myfile.txt
hello!
[root@quickstart cloudera]#
```

13-Now I use “mv” command to move files within hdfs.

Now again I create a new directory “ankush4” and move “myfile.txt” from “ankush2” directory.

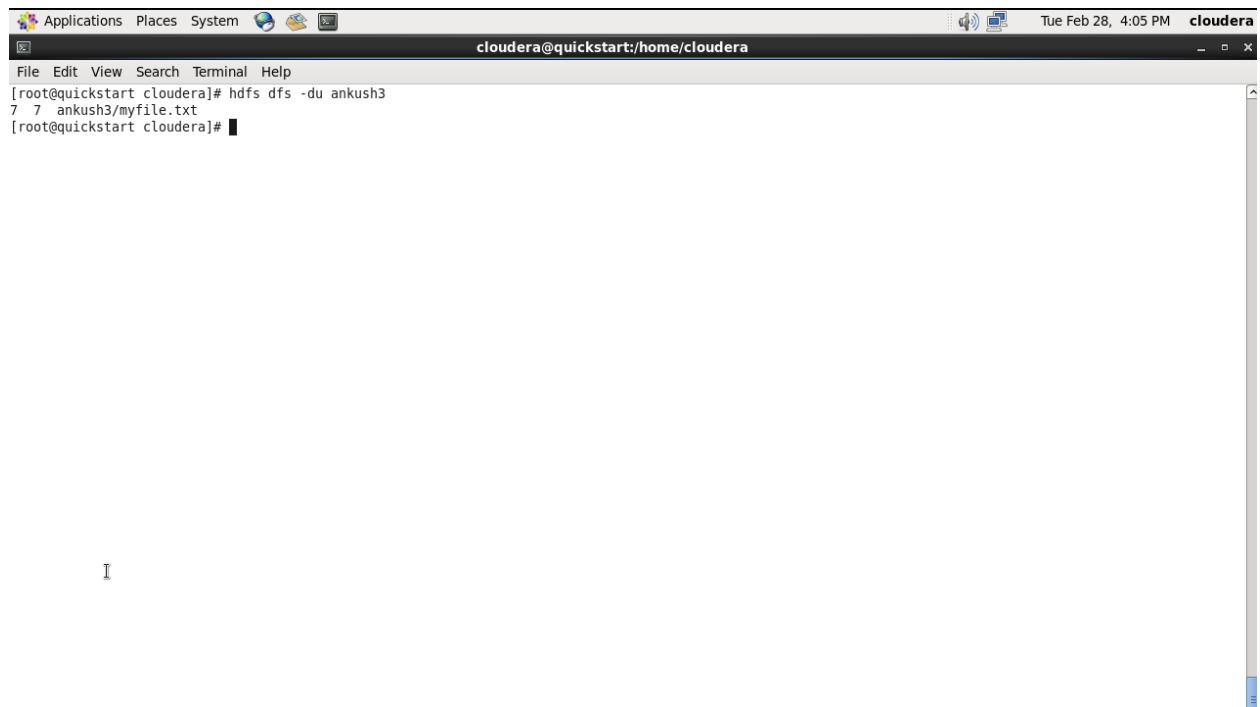
[hdfs dfs -mv ankush2/myfile.txt ankush4/]

A screenshot of a terminal window titled "cloudera@quickstart:/home/cloudera". The window shows a series of HDFS commands and their outputs. The commands include creating a directory, copying a file, checking file contents, moving a file, and using the 'du' command. The outputs show file paths, file contents, and error messages for non-existent files or directories. The terminal window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The top status bar shows "Tue Feb 28, 4:02 PM" and "cloudera".

```
cloudera@quickstart:/home/cloudera
File Edit View Search Terminal Help
[root@quickstart cloudera]# hdfs dfs -mkdir ankush3
[root@quickstart cloudera]#
[root@quickstart cloudera]# hdfs dfs -cp ankush2/myfile.txt ankush3/
[root@quickstart cloudera]#
[root@quickstart cloudera]# hdfs dfs -cat ankush3/myfile.tx
cat: 'ankush3/myfile.tx': No such file or directory
[root@quickstart cloudera]# hdfs dfs -cat ankush3/myfile.txt
hello1
[root@quickstart cloudera]# hdfs dfs -mkdir ankush4
[root@quickstart cloudera]#
[root@quickstart cloudera]# hdfs dfs -mv ankush2/myfile.txt ankush2/
mv: 'ankush2/myfile.txt': File exists
[root@quickstart cloudera]#
[root@quickstart cloudera]# hdfs dfs -mv ankush2/myfile.txt ankush4/
[root@quickstart cloudera]#
[root@quickstart cloudera]# hdfs dfs -cat ankush4/myfile.txt
hello1
[root@quickstart cloudera]#
[root@quickstart cloudera]# hdfs dfs -cat ankush2/myfile.txt
cat: 'ankush2/myfile.txt': No such file or directory
[root@quickstart cloudera]#
```

14-Now I used “du” command to give the size of each file in directory.

[hdfs dfs -du ankush3]

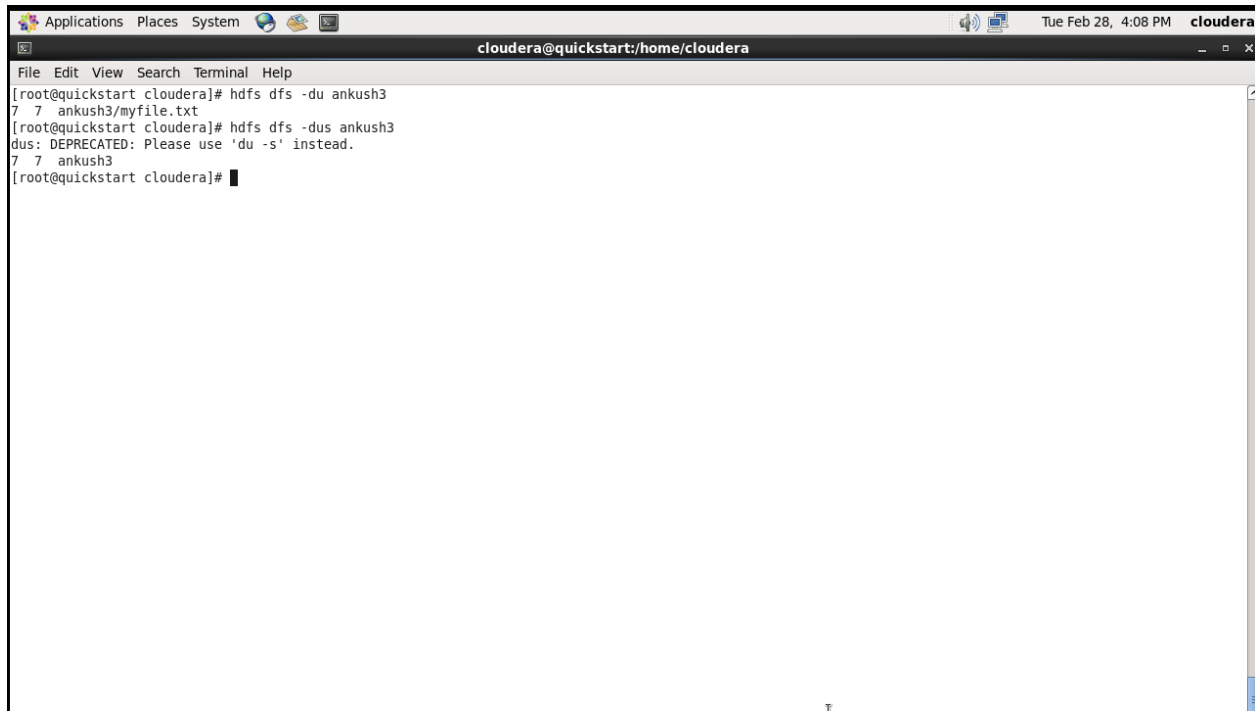
A screenshot of a terminal window titled "cloudera@quickstart:/home/cloudera". The window shows the execution of the command "hdfs dfs -du ankush3". The output is "7 7 ankush3/myfile.txt". The terminal has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The system tray at the top right shows the date and time as "Tue Feb 28, 4:05 PM" and the word "cloudera".

```
cloudera@quickstart:/home/cloudera
File Edit View Search Terminal Help
[root@quickstart cloudera]# hdfs dfs -du ankush3
7 7 ankush3/myfile.txt
[root@quickstart cloudera]#
```

15-Now I used “dus” command to give the total size of directory

```
[hdfs dfs -dus ankush3]
```

It gave the same result because directory have a single file




The screenshot shows a terminal window titled "cloudera@quickstart:/home/cloudera". The terminal output is as follows:

```
File Edit View Search Terminal Help
[root@quickstart cloudera]# hdfs dfs -du ankush3
7 7 ankush3/myfile.txt
[root@quickstart cloudera]# hdfs dfs -dus ankush3
dus: DEPRECATED: Please use 'du -s' instead.
7 7 ankush3
[root@quickstart cloudera]#
```

16-Now I used “rmr” command to delete the files from HDFS.it also delete non-empty directory.

[hdfs dfs -rmr ankush4]



```
Applications Places System cloudera@quickstart:/home/cloudera
File Edit View Search Terminal Help
[root@quickstart cloudera]# hdfs dfs -ls ankush4
Found 1 items
-rw-r--r-- 1 root supergroup 7 2023-02-28 15:34 ankush4/myfile.txt
[root@quickstart cloudera]# hdfs dfs -rmr ankush4
rmr: DEPRECATED: Please use 'rm -r' instead.
Deleted ankush4
[root@quickstart cloudera]# hdfs dfs -ls ankush4
ls: 'ankush4': No such file or directory
[root@quickstart cloudera]#
```

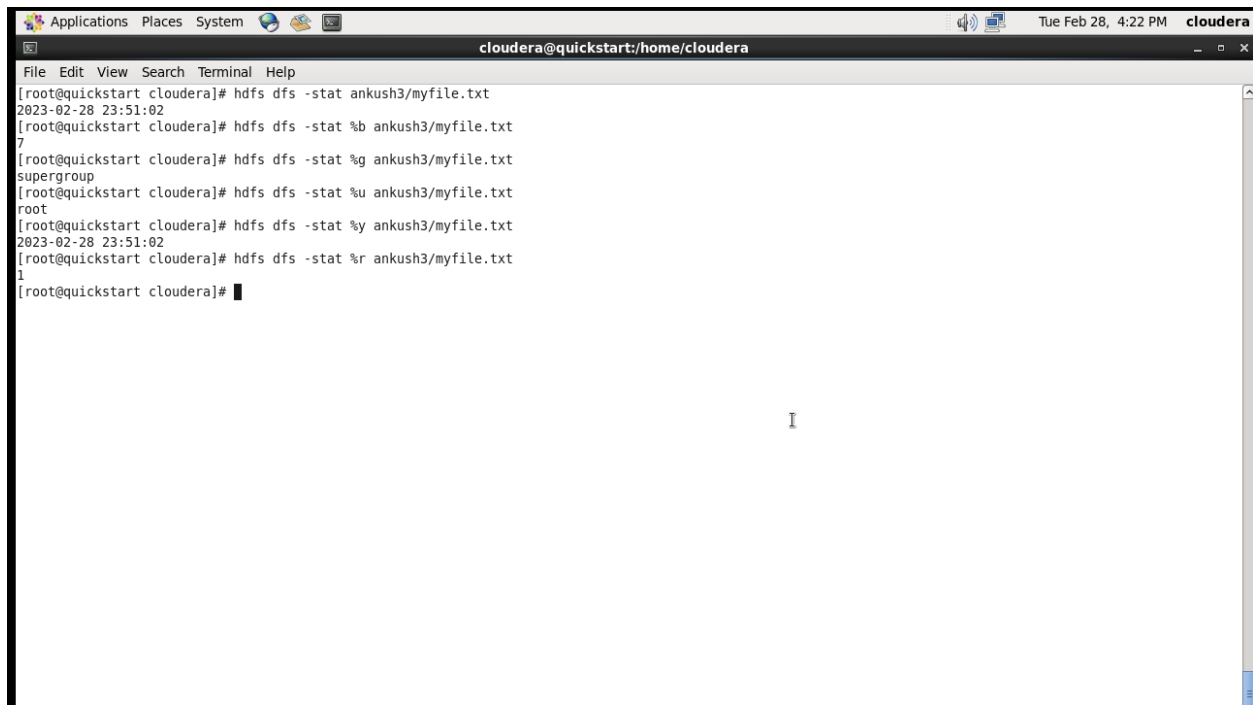
17-Here I use command “stat” it provide modification time of directory or path and it gives the stats of the directory or file.

```
[hdfs dfs -stat ankush3/myfile.txt]
```

```
[hdfs dfs -stat %g ankush3/myfile.txt]
```

```
[hdfs dfs -stat %u ankush3/myfile.txt]
```

```
[hdfs dfs -stat%y ankush3/myfile.txt]
```

A terminal window titled 'cloudera@quickstart:/home/cloudera' showing a series of HDFS commands and their outputs. The commands are: 'hdfs dfs -stat ankush3/myfile.txt', 'hdfs dfs -stat %b ankush3/myfile.txt', 'hdfs dfs -stat %g ankush3/myfile.txt', 'hdfs dfs -stat %u ankush3/myfile.txt', and 'hdfs dfs -stat %y ankush3/myfile.txt'. The outputs show file size (7), permissions (supergroup), owner (root), and creation time (2023-02-28 23:51:02).

```
File Edit View Search Terminal Help
[root@quickstart cloudera]# hdfs dfs -stat ankush3/myfile.txt
2023-02-28 23:51:02
[root@quickstart cloudera]# hdfs dfs -stat %b ankush3/myfile.txt
7
[root@quickstart cloudera]# hdfs dfs -stat %g ankush3/myfile.txt
supergroup
[root@quickstart cloudera]# hdfs dfs -stat %u ankush3/myfile.txt
root
[root@quickstart cloudera]# hdfs dfs -stat %y ankush3/myfile.txt
2023-02-28 23:51:02
[root@quickstart cloudera]# hdfs dfs -stat %r ankush3/myfile.txt
1
[root@quickstart cloudera]#
```

18-Now here I use “setrep” command to change the replication factor of a file or directory.

By default,it is 3 for anything.

[hdfs dfs -setrep -R -w6 ankush3/myfile.txt]

```
Applications Places System cloudera@quickstart:/home/cloudera
File Edit View Search Terminal Help
[root@quickstart cloudera]# hdfs dfs -setrep -R 4 ankush3
Replication 4 set: ankush3/myfile.txt
[root@quickstart cloudera]# hdfs dfs -ls ankush2
[root@quickstart cloudera]# hdfs dfs -ls ankush3
Found 1 items
-rw-r--r-- 4 root supergroup          7 2023-02-28 15:51 ankush3/myfile.txt
[root@quickstart cloudera]#
```