

Big Data (HDFS) Assignment

Problem Statement: Using Command line of HDFS, perform following tasks.

- a) Create a directory /hadoop/hdfs/ in HDFS

```
hdfs dfs -mkdir /hadoop/  
hdfs dfs -mkdir hadoop/dfs
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -mkdir -p /hadoop/hdfs  
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found  
24/07/02 19:02:29 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls /  
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found  
24/07/02 19:05:05 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
Found 7 items  
drwxr-xr-x - hadoop supergroup 0 2024-07-02 18:57 /hadoop  
drwxr-xr-x - hadoop supergroup 0 2024-06-27 12:14 /hdfs  
drwxr-xr-x - hadoop supergroup 0 2024-06-28 14:40 /mapreduce-scripts  
drwxr-xr-x - hadoop supergroup 0 2024-06-27 10:15 /newdir  
drwxr-xr-x - hadoop supergroup 0 2024-06-27 10:19 /tempdir1  
drwxr-xr-x - hadoop supergroup 0 2024-06-28 07:35 /wordcount  
drwxr-xr-x - hadoop supergroup 0 2024-06-28 14:32 /zomato  
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls -R /  
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found  
24/07/02 19:07:13 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
drwxr-xr-x - hadoop supergroup 0 2024-07-02 18:57 /hadoop  
drwxr-xr-x - hadoop supergroup 0 2024-07-02 18:52 /hadoop/dfs  
drwxr-xr-x - hadoop supergroup 0 2024-07-02 18:57 /hadoop/hdfs
```

- b) Create a temp directory in Hadoop. Run HDFS command to delete “temp” directory.

```
hdfs dfs -mkdir /temp  
  
hdfs dfs -rm -r /temp
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -mkdir /hadoop/temp  
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found  
24/07/02 19:10:04 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls -R /  
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found  
24/07/02 19:10:24 WARN util.NativeCodeLoader: Unable to load native-hadoop libra  
ry for your platform... using builtin-java classes where applicable  
drwxr-xr-x - hadoop supergroup 0 2024-07-02 19:10 /hadoop  
drwxr-xr-x - hadoop supergroup 0 2024-07-02 18:52 /hadoop/dfs  
drwxr-xr-x - hadoop supergroup 0 2024-07-02 18:57 /hadoop/hdfs  
drwxr-xr-x - hadoop supergroup 0 2024-07-02 19:10 /hadoop/temp
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -rm -r /hadoop/temp/
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:13:00 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
24/07/02 19:13:03 INFO fs.TrashPolicyDefault: Namenode trash configuration: Deletion interval = 0 minutes, Emptier interval = 0 minutes.
Deleted /hadoop/temp
hadoop@hadoop-VirtualBox:~$
```

- c) List all the files/directories for the given hdfs destination path.

hdfs dfs -ls /

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls /
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:14:12 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 7 items
drwxr-xr-x - hadoop supergroup      0 2024-07-02 19:13 /hadoop
drwxr-xr-x - hadoop supergroup      0 2024-06-27 12:14 /hdfs
drwxr-xr-x - hadoop supergroup      0 2024-06-28 14:40 /mapreduce-scripts
drwxr-xr-x - hadoop supergroup      0 2024-06-27 10:15 /newdir
drwxr-xr-x - hadoop supergroup      0 2024-06-27 10:19 /tempdir1
drwxr-xr-x - hadoop supergroup      0 2024-06-28 07:35 /wordcount
drwxr-xr-x - hadoop supergroup      0 2024-06-28 14:32 /zomato
```

- d) Command that will list the directories in /hadoop folder.

hdfs dfs -ls /hadoop/

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls /hadoop
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:18:01 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 2 items
drwxr-xr-x - hadoop supergroup      0 2024-07-02 18:52 /hadoop/dfs
drwxr-xr-x - hadoop supergroup      0 2024-07-02 18:57 /hadoop/hdfs
```

- e) Command to list recursively all files in hadoop directory and all subdirectories in hadoop directory

hdfs dfs -ls -R /


```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls -R /
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:19:36 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
drwxr-xr-x - hadoop supergroup 0 2024-07-02 19:13 /hadoop
drwxr-xr-x - hadoop supergroup 0 2024-07-02 18:52 /hadoop/dfs
drwxr-xr-x - hadoop supergroup 0 2024-07-02 18:57 /hadoop/hdfs
drwxr-xr-x - hadoop supergroup 0 2024-06-27 12:14 /hdfs
-rwxr-xr-x 1 hadoop hadoop 19 2024-06-27 10:23 /hdfs/newfile.txt
-rw-r--r-- 3 hadoop supergroup 19 2024-06-27 12:14 /hdfs/testfile.txt
drwxr-xr-x - hadoop supergroup 0 2024-06-28 14:40 /mapreduce-scripts
-rw-r--r-- 1 hadoop supergroup 202 2024-06-28 14:28 /mapreduce-scripts/mapper.py
-rw-r--r-- 1 hadoop supergroup 262 2024-06-28 14:40 /mapreduce-scripts/mapper1.py
-rw-r--r-- 1 hadoop supergroup 1346 2024-06-28 14:28 /mapreduce-scripts/reducer.py
-rw-r--r-- 1 hadoop supergroup 318 2024-06-28 14:40 /mapreduce-scripts/reducer1.py
drwxr-xr-x - hadoop supergroup 0 2024-06-27 10:15 /newdir
drwxr-xr-x - hadoop supergroup 0 2024-06-27 10:15 /newdir/newdir1
drwxr-xr-x - hadoop supergroup 0 2024-06-27 10:15 /newdir/newdir1/newdir2
drwxr-xr-x - hadoop supergroup 0 2024-06-27 10:15 /newdir/newdir1/newdir2/newdir3
drwxr-xr-x - hadoop supergroup 0 2024-06-27 10:19 /tempdir1
drwxr-xr-x - hadoop supergroup 0 2024-06-28 07:35 /wordcount
drwxr-xr-x - hadoop supergroup 0 2024-06-28 07:35 /wordcount/output
-rw-r--r-- 1 hadoop supergroup 0 2024-06-28 07:35 /wordcount/output/_SUCCESS
-rw-r--r-- 1 hadoop supergroup 89 2024-06-28 07:35 /wordcount/output/part-000000
-rw-r--r-- 1 hadoop supergroup 2347 2024-06-28 07:22 /wordcount/wordcount.txt
drwxr-xr-x - hadoop supergroup 0 2024-06-28 14:32 /zomato
drwxr-xr-x - hadoop supergroup 0 2024-06-28 14:32 /zomato/output
-rw-r--r-- 1 hadoop supergroup 0 2024-06-28 14:32 /zomato/output/_SUCCESS
-rw-r--r-- 1 hadoop supergroup 152 2024-06-28 14:32 /zomato/output/part-000000
```

f) List all the directory inside /hadoop/hdfs/ directory which starts with 'dir'.

```
hdfs dfs -ls hadoop/hdfs/ | grep "dir"
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls /hadoop/hdfs/ | grep "dir"
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:23:28 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
```

g) Create a temp.txt file. Copies this file from local file system to HDFS

```
echo "This is a temp file" > temp.txt
hdfs dfs -put temp.txt /hadoop/hdfs/
```

```
hadoop@hadoop-VirtualBox:~$ echo "This is a Tempfile" > temp.txt
hadoop@hadoop-VirtualBox:~$ ls
allen.txt  examples.desktop  newfile.txt  reducer1.py.save  temp.txt
Desktop    mapreduce         Pictures     reducer.py        testfile.txt
Documents  maprestaurant    Public      restaurant       Videos
Downloads  Music            reducer1.py  Templates        wordcount.txt
hadoop@hadoop-VirtualBox:~$ hdfs dfs -put temp.txt /hadoop/hdfs
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:37:09 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls /hadoop/hdfs/
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:38:28 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 1 items
-rw-r--r-- 1 hadoop supergroup 19 2024-07-02 19:37 /hadoop/hdfs/temp.txt
```

- h) Copies the file from HDFS to local file system.

```
hdfs dfs -get /Hadoop/hdfs/temp.txt /home/Hadoop/Downloads
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -get /hadoop/hdfs/temp.txt /home/hadoop/Downloads
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:46:37 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@hadoop-VirtualBox:~$ cd Downloads
hadoop@hadoop-VirtualBox:~/Downloads$ ls
allen.txt          mapper.py          zomato_orders_large.csv
Hadoop_Installation_Doc.txt  task
'Hadoop Streaming.docx'      temp.txt
hadoop@hadoop-VirtualBox:~/Downloads$
```

- i) Command to copy from local directory with the source being restricted to a local file reference.

```
hdfs dfs -copyFromLocal /home/hadoop/Downloads/newtempfile.txt
/hadoop/hdfs
```

```
hadoop@hadoop-VirtualBox:~/Downloads$ echo "newtempfiledata" > newtempfile.txt
hadoop@hadoop-VirtualBox:~/Downloads$ cd ~
hadoop@hadoop-VirtualBox:~$ hdfs dfs -copyFromLocal /home/hadoop/Downloads/newtempfile.txt /hadoop/hdfs/
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:50:00 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls -R /hadoop/hdfs
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:50:31 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
-rw-r--r--  1 hadoop supergroup      16 2024-07-02 19:50 /hadoop/hdfs/newtempfile.txt
-rw-r--r--  1 hadoop supergroup      19 2024-07-02 19:37 /hadoop/hdfs/temp.txt
hadoop@hadoop-VirtualBox:~$
```

- j) Command to copies to local directory with the source being restricted to a local file reference.

```
hdfs dfs -copyToLocal /hadoop/hdfs/temp.txt /home/hadoop/Documents
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -copyToLocal /hadoop/hdfs/temp.txt /home/hadoop/Documents
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 19:54:58 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@hadoop-VirtualBox:~$ cd Documents
hadoop@hadoop-VirtualBox:~/Documents$ ls
temp.txt
hadoop@hadoop-VirtualBox:~/Documents$
```


- k) Command to move from local directory source to Hadoop directory.

```
hdfs dfs -moveFromLocal /home/hadoop/Documents/temp2.txt /hdfs/dfs
```

```
hadoop@hadoop-VirtualBox:~/Documents$ echo "newtemp2" > temp2.txt
hadoop@hadoop-VirtualBox:~/Documents$ ls
temp2.txt  temp.txt
hadoop@hadoop-VirtualBox:~/Documents$ cd ~
hadoop@hadoop-VirtualBox:~$ hdfs dfs -moveFromLocal /home/hadoop/Documents/temp2
.txt /hadoop/hdfs/
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:00:46 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
hadoop@hadoop-VirtualBox:~$ cd Documents
hadoop@hadoop-VirtualBox:~/Documents$ ls
temp.txt
```

- l) Deletes the directory and any content under it recursively.

```
hdfs dfs -rm -r /hadoop/hdfs/
```

```
hadoop@hadoop-VirtualBox:~/Documents$ hdfs dfs -rm -r /hadoop/hdfs
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:03:27 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
24/07/02 20:03:30 INFO fs.TrashPolicyDefault: Namenode trash configuration: Dele
tion interval = 0 minutes, Emptier interval = 0 minutes.
Deleted /hadoop/hdfs
hadoop@hadoop-VirtualBox:~/Documents$
```

- m) List the files and show Format file sizes in a human-readable fashion.

```
hdfs dfs -ls -h /hadoop/hdfs
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -ls -h /hadoop/hdfs
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:10:24 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 hadoop supergroup      16 2024-07-02 20:07 /hadoop/hdfs/newtem
pfile.txt
-rw-r--r--  1 hadoop supergroup      19 2024-07-02 20:06 /hadoop/hdfs/temp.t
xt
```

- n) Take a source file and outputs the file in text format on the terminal.

```
hdfs dfs -cat /hadoop/hdfs/temp.txt
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -cat /hadoop/hdfs/temp.txt
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:13:54 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
This is a Tempfile
hadoop@hadoop-VirtualBox:~$
```

- o) Display the content of the HDFS file test on your /user/hadoop2 directory.

```
hdfs dfs -cat /user/hadoop2/test
```

```
hadoop@hadoop-VirtualBox:~$ echo "This is a testfile" > test
hadoop@hadoop-VirtualBox:~$ hdfs dfs -moveFromLocal /home/hadoop/test /user/hadoop2/
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:26:53 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@hadoop-VirtualBox:~$ hdfs dfs -cat /user/hadoop2/test
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:27:19 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
This is a testfile
hadoop@hadoop-VirtualBox:~$
```

- p) Append the content of a local file test1 to a hdfs file test2.

```
hdfs dfs -appendToFile test1 /hadoop/hdfs/test2
```

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -appendToFile test1 /hadoop/hdfs/test2
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:32:38 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@hadoop-VirtualBox:~$ hdfs dfs -cat /hadoop/hdfs/test2
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:32:48 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
This is testfile2
This is testfile1
hadoop@hadoop-VirtualBox:~$
```

- q) Show the capacity, free and used space of the filesystem

```
hdfs dfsadmin -report
```

<pre>Configured Capacity: 21001486336 (19.56 GB) Present Capacity: 11117736045 (10.35 GB) DFS Remaining: 11117539328 (10.35 GB) DFS Used: 196717 (192.11 KB) DFS Used%: 0.00% Under replicated blocks: 1 Blocks with corrupt replicas: 0 Missing blocks: 0 Missing blocks (with replication factor 1): 0 ----- Live datanodes (1): Name: 127.0.0.1:50010 (localhost) Hostname: hadoop-VirtualBox Decommission Status : Normal Configured Capacity: 21001486336 (19.56 GB) DFS Used: 196717 (192.11 KB) Non DFS Used: 8793337747 (8.19 GB) DFS Remaining: 11117539328 (10.35 GB) DFS Used%: 0.00% DFS Remaining%: 52.94% Configured Cache Capacity: 0 (0 B)</pre>	<pre>Configured Capacity: 21001486336 (19.56 GB) DFS Used: 196717 (192.11 KB) Non DFS Used: 8793337747 (8.19 GB) DFS Remaining: 11117539328 (10.35 GB) DFS Used%: 0.00% DFS Remaining%: 52.94% Configured Cache Capacity: 0 (0 B) Cache Used: 0 (0 B) Cache Remaining: 0 (0 B) Cache Used%: 100.00% Cache Remaining%: 0.00% Xceivers: 1 Last contact: Tue Jul 02 20:34:48 EAT 2024</pre>
--	--

- r) Shows the capacity, free and used space of the filesystem. Add parameter Formats the sizes of files in a human-readable fashion.

```
hdfs dfsadmin -report -humanReadable
```



```

Configured Capacity: 21001486336 (19.56 GB)
Present Capacity: 11117748224 (10.35 GB)
DFS Remaining: 11117535232 (10.35 GB)
DFS Used: 212992 (208 KB)
DFS Used%: 0.00%
Under replicated blocks: 1
Blocks with corrupt replicas: 0
Missing blocks: 0
Missing blocks (with replication factor 1): 0

-----
Live datanodes (1):

Name: 127.0.0.1:50010 (localhost)
Hostname: hadoop-VirtualBox
Decommission Status : Normal
Configured Capacity: 21001486336 (19.56 GB)
DFS Used: 212992 (208 KB)
Non DFS Used: 8793325568 (8.19 GB)
DFS Remaining: 11117535232 (10.35 GB)
DFS Used%: 0.00%
DFS Remaining%: 52.94%
Configured Cache Capacity: 0 (0 B)

```

- s) Show the amount of space, in bytes, used by the files that match the specified file pattern.

```
hdfs dfs -du /hadoop/hdfs
```

```

hadoop@hadoop-VirtualBox:~$ hdfs dfs -du /hadoop/hdfs/
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command
not found
24/07/02 20:40:35 WARN util.NativeCodeLoader: Unable to load na
tive-hadoop library for your platform... using builtin-java cla
sses where applicable
16  /hadoop/hdfs/newtempfile.txt
19  /hadoop/hdfs/temp.txt
19  /hadoop/hdfs/test
38  /hadoop/hdfs/test2
hadoop@hadoop-VirtualBox:~$

```

- t) Show the amount of space, in bytes, used by the files that match the specified file pattern. Formats the sizes of files in a human-readable fashion.

```
hdfs dfs -du -h /hadoop/hdfs/
```

```

hadoop@hadoop-VirtualBox:~$ hdfs dfs -du -h /hadoop/hdfs/
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command
not found
24/07/02 20:42:31 WARN util.NativeCodeLoader: Unable to load na
tive-hadoop library for your platform... using builtin-java cla
sses where applicable
16  /hadoop/hdfs/newtempfile.txt
19  /hadoop/hdfs/temp.txt
19  /hadoop/hdfs/test
38  /hadoop/hdfs/test2

```

- u) Check the health of the Hadoop file system.

```
hdfs fsck /
```

```

hadoop@hadoop-VirtualBox:~$ hdfs fsck /
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:43:52 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Connecting to namenode via http://localhost:50070/fsck?ugi=hadoop&path=%2F
FSCK started by hadoop (auth:SIMPLE) from /127.0.0.1 for path / at Tue Jul 02 20:43:55 EAT 2024
.....
/hdfs/testfile.txt: Under replicated BP-28903570-127.0.1.1-1719470518054:blk_1073741828_1004. Target Replicas is 3 but found 1 replica(s).
.....
Status: HEALTHY
Total size: 57278 B
Total dirs: 17
Total files: 17
Total symlinks: 0
Total blocks (validated): 15 (avg. block size 3818 B)
Minimally replicated blocks: 15 (100.0 %)
Over-replicated blocks: 0 (0.0 %)
Under-replicated blocks: 1 (6.666665 %)
Mis-replicated blocks: 0 (0.0 %)
Default replication factor: 1
Average block replication: 1.0
Corrupt blocks: 0

Under-replicated blocks: 1 (6.666665 %)
Mis-replicated blocks: 0 (0.0 %)
Default replication factor: 1
Average block replication: 1.0
Corrupt blocks: 0
Missing replicas: 2 (11.764706 %)
Number of data-nodes: 1
Number of racks: 1
FSCK ended at Tue Jul 02 20:43:55 EAT 2024 in 32 milliseconds

The filesystem under path '/' is HEALTHY
hadoop@hadoop-VirtualBox:~$

```

- v) Command to turn off the safemode of Name Node.

hdfs dfsadmin -safemode leave

- w) HDFS command to format NameNode.

hdfs namenode -format

- x) Create a file named hdfs test file and change it number of replications to 3.

```

echo "HDFS test file" > hdfs test file.txt
hdfs dfs -put hdfs test file.txt /hadoop/hdfs
hdfs dfs -setrep 3 /hadoop/hdfs/hdfs test file.txt

```

```

hadoop@hadoop-VirtualBox:~$ echo "HDFS test file" > hdfs test file.txt
hadoop@hadoop-VirtualBox:~$ hdfs dfs -put hdfs test file.txt /hadoop/hdfs
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:48:21 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@hadoop-VirtualBox:~$ hdfs dfs -setrep 3 /hadoop/hdfs/hdfs test file.txt
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:49:05 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Replication 3 set: /hadoop/hdfs/hdfs test file.txt

```

- y) Write command to display number of replicas for hdfs test file.txt file.

hdfs dfs -stat %r /hadoop/hdfs/hdfs test file.txt

```

hadoop@hadoop-VirtualBox:~$ hdfs dfs -stat %r /hadoop/hdfs/hdfs test file.txt
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 20:53:36 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
3

```


- z) Write command to Display the status of file “hdfstest.txt” like block size, filesize in bytes.

`hdfs fsck /Hadoop/hdfs/hdfstest.txt -files -blocks -locations`

```
Status: HEALTHY
Total size:      15 B
Total dirs:      0
Total files:     1
Total symlinks:   0
Total blocks (validated): 1 (avg. block size 15 B)
Minimally replicated blocks: 1 (100.0 %)
Over-replicated blocks: 0 (0.0 %)
Under-replicated blocks: 1 (100.0 %)
Mis-replicated blocks: 0 (0.0 %)
Default replication factor: 1
Average block replication: 1.0
Corrupt blocks: 0
Missing replicas: 2 (66.666664 %)
Number of data-nodes: 1
Number of racks: 1
FSCK ended at Tue Jul 02 20:59:54 EAT 2024 in 1 milliseconds
```

- aa) Write HDFS command to change file permission from `rw-r--r--` to `rw-rw-r--` for `hdfstest.txt`.

`hdfs dfs -chmod 765 /Hadoop/hdfs/hdfstest.txt`

```
hadoop@hadoop-VirtualBox:~$ hdfs dfs -chmod 765 /hadoop/hdfs/hdfstest.txt
/usr/local/hadoop/etc/hadoop/hadoop-env.sh: line 1: es: command not found
24/07/02 21:01:33 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform
ere applicable
```