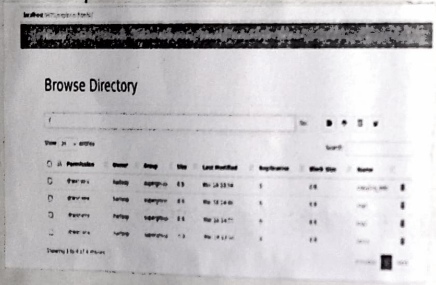
a)

1. lists of files & directories output

```
hadoop@cmrcet-virtual-machine:~$ hadoop fs -ls /
Found 2 items
drwxr-xr-x   - hadoop supergroup          0 2023-03-18 13:54 /copying_into
drwxr-xr-x   - hadoop supergroup          0 2023-03-18 12:34 /test3
```

2) -mkdir output



Ex. No. Week-4 | Date | Page No.

Hadoop commands

a) Introducing Hadoop command

1. hdfs dfs -ls: Lists the files and directories in the Hadoop Distributed File System (HDFS)
command:
hadoop@cmrcet-virtual-machine$ hadoop fs -ls /

2. hdfs dfs -mkdir: creates a new directory in the HDFS
command:
hadoop@cmrcet-virtual-machine$ hadoop dfs -mkdir /log2

```
hadoop@cmrcet-virtual-machine:~$ hadoop fs -mkdir /log2
hadoop@cmrcet-virtual-machine:~$
```

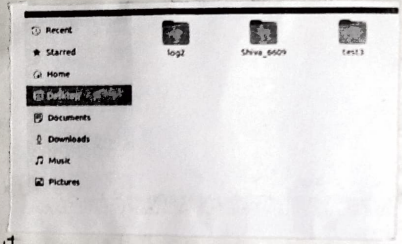
3. hdfs dfs -put: copies a file from the local file system to the HDFS
command:
$hadoop fs -put /home/hadoop/Desktop/shiva_6609/test3 /log1

```
hadoop@cmrcet-virtual-machine:~$ hadoop fs -put /home/hadoop/Desktop/Shiva_6609/test3 /log1
hadoop@cmrcet-virtual-machine:~$
```

4) -cat output

```
hadoop@cmrcet-virtual-machine:~$ hadoop fs -cat /log1
cat: `/log1': Is a directory
```

5) -get output



6) -rm output

```
hadoop@cmrcet-virtual-machine:~$ hadoop fs -rm -r /log2
Deleted /log2
```

7) start-stop command output

```
hadoop@cmrcet-virtual-machine:~$ start-yarn.sh
Starting resourcemanager
Starting nodemanagers
hadoop@cmrcet-virtual-machine:~$ start-dfs.sh
Starting namenodes on [localhost]
Starting datanodes
Starting secondary namenodes [cmrcet-virtual-machine
hadoop@cmrcet-virtual-machine:~$ stop-yarn.sh
Stopping nodemanagers
Stopping resourcemanager
hadoop@cmrcet-virtual-machine:~$ stop-dfs.sh
Stopping namenodes on [localhost]
Stopping datanodes
Stopping secondary namenodes [cmrcet-virtual-machine
hadoop@cmrcet-virtual-machine:~$
```

Ex. No.	Date	Page No.

4. hdfs dfs -cat: Displays the content of a file stored in the HDFS.
command;
$ hadoop fs -cat /log1

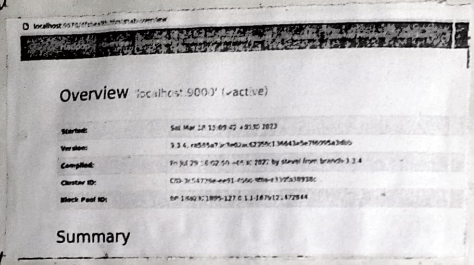
5. hdfs dfs -get: copies a file from the HDFS to the local file system.
command;
$ hadoop fs -get /log2 /home/hadoop/Desktop/

```
hadoop@cmrcet-virtual-machine:~$ hadoop fs -get /log2 /home/hadoop/Desktop/
hadoop@cmrcet-virtual-machine:~$
```

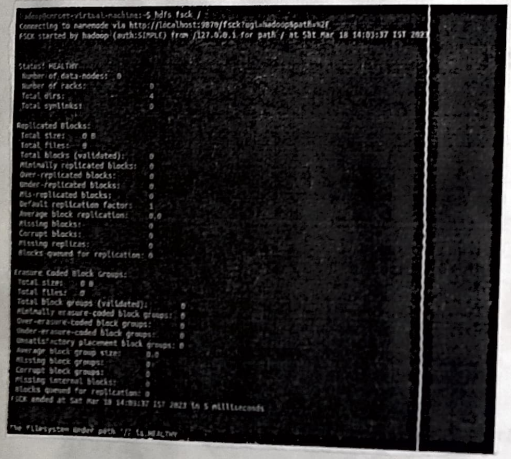
6. hdfs dfs -rm: Delete a file or directory from the HDFS.
command:
$ hadoop fs -rm -r /log2

7. start & stop commands.
command
$ start-yarn.sh
$ start-dfs.sh
$ stop-yarn.sh
$ stop-dfs.sh

b) output



c) output



Ex. No.	Date	Page No.

b) Navigating the location where the Datanodes store data.

To navigate the location, we just have to type "localhost:9870/" in the browser.

c) Checking the current status of HDFS by using the "fsck" command.

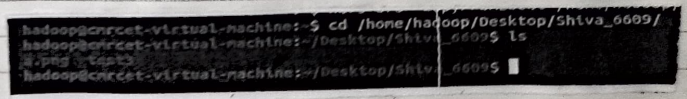
command:

$hdfs fsck /

d) Loading the small size data by using the "copyFromLocal".

To load the data through there are few steps to be followed.

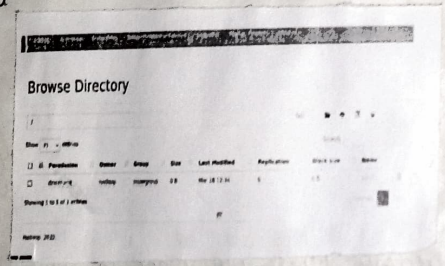
1. Create a directory where you want to copy files.
   $hdfs dfs -mkdir /copying_into
2. Check the file where created or not.
   i) go to the browser type "localhost:9870"
   ii) click the utilities
   iii) Browse the file system.
3. Check the files you want to copy
   $cd /home/hadoop/Desktop/shiva_6609/
   home/hadoop/Desktop/shiva_6609 $ ls



d) output

```
hadoop@cmrcet-virtual-machine:~/Desktop/Shiva_6609$ hdfs dfs -copyFromLocal /home/hadoop/Desktop/Shiva_6609/test3 /copying_in
hadoop@cmrcet-virtual-machine:~/Desktop/Shiva_6609$
```

e) output



f) output

```
hadoop@cmrcet-virtual-machine:~$ hdfs dfs -ls /
Found 1 items
drwxr-xr-x   - hadoop supergroup          0 2023-03-18 12:34 /test3
hadoop@cmrcet-virtual-machine:~$ hdfs dfs -get /test3 /home/hadoop/Desktop/Shiva_6609
hadoop@cmrcet-virtual-machine:~$ cd /home/hadoop/Desktop/Shiva_6609/
hadoop@cmrcet-virtual-machine:~/Desktop/Shiva_6609$ ls
test3
hadoop@cmrcet-virtual-machine:~/Desktop/Shiva_6609$
```

Ex. No.	Date	Page No.

4. Here is the main command to be executed.

$ hdfs dfs -copyFromLocal /home/hadoop/Desktop/shiva_6609/test3 /copying-into

Path1: File Location

path2: Where to be loaded

e) show the output of the copyFromLocal command.

Check the localhost whether the file/data is copied or not

1. go to browser 9870/
2. Utilities
3. go to the browser the file system.

There you can check whether copied or not.

f) Reading the data from HDFS

The data can be read by -get command.

1. Check the data you want to read

$hdfs dfs -ls /

2. use -get command and give the path where you want to read

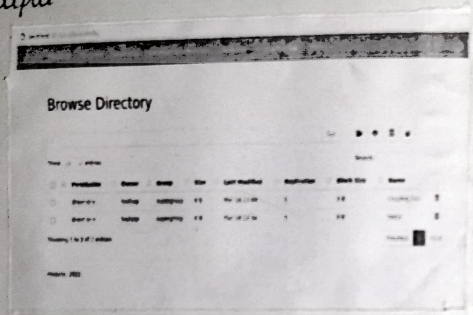
$hdfs dfs -get /test3 /home/hadoop/Desktop/shiva_6609

3. check whether data is read or not!

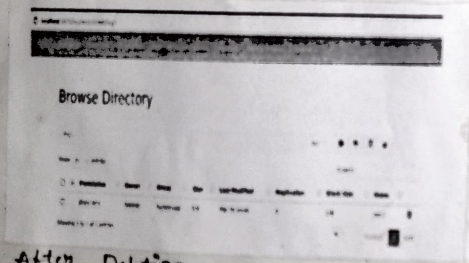
$ cd /home/hadoop/Desktop/Shiva_6609/

:~/Desktop/shiva_6609 $ ls

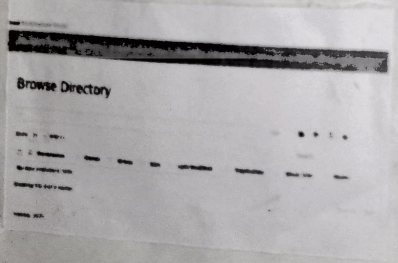
g) output



h) before Deletion



After Deletion



Ex. No.	Date	Page No.

g) Creating a Directory in HDFS

we can create the directory using -mkdir

$hdfs dfs -mkdir /test3

check whether the directory created or not.

$hdfs dfs -ls /

```
hadoop@cnrcet-virtual-machine:~$ hdfs dfs -mkdir /test3
hadoop@cnrcet-virtual-machine:~$ hdfs dfs -ls /
Found 1 items
drwxr-xr-x   - hadoop supergroup          0 2023-03-18 12:11 /test3
```

or in localhost:9870/

h) Removing files from HDFS

1. Firstly, check the files you want to delete from the localhost 9870 → Utilities → go to "Browse the file system".
2. To delete we use -rm -r command:

$hadoop fs -rm -r /test3

```
hadoop@cnrcet-virtual-machine:~$ hadoop fs -rm -r /test3
Deleted /test3
hadoop@cnrcet-virtual-machine:~$
```