Practical 2
To implement Various Hadoop HDFS Commands

Commands:

1)hadoop version

```
File Edit View Search Terminal Help
[cloudera@quickstart ~]$ hadoop version
Hadoop 2.6.0-cdh5.13.0
Subversion http://github.com/cloudera/hadoop -r 42e8860b182e55321bd5f5605264da4adc8882be
Compiled by jenkins on 2017-10-04T18:08Z
Compiled with protoc 2.5.0
From source with checksum 5e84c185f8a22158e2b0e4b8f85311
This command was run using /usr/lib/hadoop/hadoop-common-2.6.0-cdh5.13.0.jar
```

2)hdfs dfs -ls /

```
[cloudera@quickstart ~]$ hdfs dfs -ls /
Found 6 items
drwxrwxrwx   - hdfs  supergroup          0 2017-10-23 09:15 /benchmarks
drwxr-xr-x   - hbase supergroup          0 2022-03-20 06:27 /hbase
drwxr-xr-x   - solr  solr                0 2017-10-23 09:18 /solr
drwxrwxrwt   - hdfs  supergroup          0 2022-03-20 06:27 /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
```

3)hadoop fs -ls /

```
[cloudera@quickstart ~]$ hadoop fs -ls /
Found 6 items
drwxrwxrwx   - hdfs  supergroup          0 2017-10-23 09:15 /benchmarks
drwxr-xr-x   - hbase supergroup          0 2022-03-20 06:27 /hbase
drwxr-xr-x   - solr  solr                0 2017-10-23 09:18 /solr
drwxrwxrwt   - hdfs  supergroup          0 2022-03-20 06:27 /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
```

4)hdfs dfs -mkdir /rjcit2122

```
[cloudera@quickstart ~]$ hdfs dfs -mkdir /rjcit2122
[cloudera@quickstart ~]$ hdfs dfs -ls /
Found 7 items
drwxrwxrwx   - hdfs     supergroup          0 2017-10-23 09:15 /benchmarks
drwxr-xr-x   - hbase    supergroup          0 2022-03-20 06:27 /hbase
drwxr-xr-x   - cloudera supergroup          0 2022-03-20 06:41 /rjcit2122
drwxr-xr-x   - solr     solr                0 2017-10-23 09:18 /solr
drwxrwxrwt   - hdfs     supergroup          0 2022-03-20 06:27 /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
```
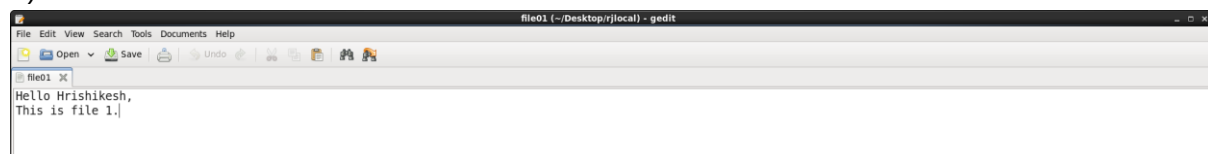
5)Create folder on desktop

6)create file in desktop folder

7)Enter some text in the file

8)hdfs dfs -copyFromLocal /home/cloudera/Desktop/rjlocal/file01 /rjcit2122

```
[cloudera@quickstart ~]$ hdfs dfs -copyFromLocal /home/cloudera/Desktop/rjlocal/file01 /rjcit2122
[cloudera@quickstart ~]$ hdfs dfs -ls /
Found 7 items
drwxrwxrwx   - hdfs      supergroup          0 2017-10-23 09:15 /benchmarks
drwxr-xr-x   - hbase     supergroup          0 2022-03-20 06:27 /hbase
drwxr-xr-x   - cloudera supergroup          0 2022-03-20 06:56 /rjcit2122
drwxr-xr-x   - solr      solr               0 2017-10-23 09:18 /solr
drwxrwxrwt   - hdfs      supergroup          0 2022-03-20 06:27 /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
[cloudera@quickstart ~]$ hdfs dfs -ls /rjcit2122
Found 1 items
-rw-r--r--   1 cloudera supergroup         33 2022-03-20 06:56 /rjcit2122/file01
```

9)hdfs dfs -put /home/cloudera/Desktop/rjlocal/file01 /rjcit2122

→ (Copy Local To Server)

```
[cloudera@quickstart ~]$ hdfs dfs -put /home/cloudera/Desktop/rjlocal/file01 /rjcit2122
put: `/rjcit2122/file01': File exists
[cloudera@quickstart ~]$ hdfs dfs -ls /rjcit2122
Found 1 items
-rw-r--r--   1 cloudera supergroup         33 2022-03-20 06:56 /rjcit2122/file01
```

10)hdfs dfs -copyFromLocal /home/cloudera/Desktop/rjlocal/file02 /rjcit2122

→ (Copy Local To Server)

```
[cloudera@quickstart ~]$ hdfs dfs -copyFromLocal /home/cloudera/Desktop/rjlocal/file02 /rjcit2122
[cloudera@quickstart ~]$ hdfs dfs -ls /rjcit2122
Found 2 items
-rw-r--r--   1 cloudera supergroup         33 2022-03-20 06:56 /rjcit2122/file01
-rw-r--r--   1 cloudera supergroup         34 2022-03-20 08:11 /rjcit2122/file02
```

11)hdfs dfs -copyToLocal /rjcit2122/file02 /home/cloudera/Desktop/rjlocal

→ (Copy Server To Local)

12)hdfs dfs -cat /rjcit2122/file01 → (Read command)

```
[cloudera@quickstart ~]$ hdfs dfs -cat /rjcit2122/file01
Hello Hrishikesh,

!! Welcome !!
[cloudera@quickstart ~]$ hdfs dfs -cat /rjcit2122/file02
Hello Hrishikesh.
This is file 2.
```

13)hdfs dfs -cp /rjcit2122/file02 /newdir → (Copy command)

```
[cloudera@quickstart ~]$ hdfs dfs -mkdir /newdir
[cloudera@quickstart ~]$ hdfs dfs -ls /newdir
[cloudera@quickstart ~]$ hdfs dfs -cp /rjcit2122/file02 /newdir
[cloudera@quickstart ~]$ hdfs dfs -ls /newdir
Found 1 items
-rw-r--r--   1 cloudera supergroup         34 2022-03-21 02:58 /newdir/file02
```

14)hdfs dfs -mv /rjcit2122/file02 /newdir1 → (Move command)

```
[cloudera@quickstart ~]$ hdfs dfs -mkdir /newdir1
[cloudera@quickstart ~]$ hdfs dfs -ls /newdir1
[cloudera@quickstart ~]$ hdfs dfs -mv /rjcit2122/file02 /newdir1
[cloudera@quickstart ~]$ hdfs dfs -ls /newdir1
Found 1 items
-rw-r--r--   1 cloudera supergroup         34 2022-03-20 08:11 /newdir1/file02
[cloudera@quickstart ~]$ hdfs dfs -cat /newdir1/file02
Hello Hrishikesh.
This is file 2.
```

15)hdfs dfs -rm /newdir2 → (Remove command)

```
[cloudera@quickstart ~]$ hdfs dfs -mkdir /newdir2
[cloudera@quickstart ~]$ hdfs dfs -cp /rjcit2122/file01 /newdir2
[cloudera@quickstart ~]$ hdfs dfs -ls /newdir2
Found 1 items
-rw-r--r--   1 cloudera supergroup         33 2022-03-21 03:11 /newdir2/file01
[cloudera@quickstart ~]$ hdfs dfs -cat /newdir2/file01
Hello Hrishikesh,

!! Welcome !!
[cloudera@quickstart ~]$ hdfs dfs -rm /newdir2/file01
Deleted /newdir2/file01
[cloudera@quickstart ~]$ hdfs dfs -ls /newdir2
[cloudera@quickstart ~]$ hdfs dfs -ls /
Found 10 items
drwxrwxrwx   - hdfs      supergroup          0 2017-10-23 09:15 /benchmarks
drwxr-xr-x   - hbase     supergroup          0 2022-03-20 06:27 /hbase
drwxr-xr-x   - cloudera supergroup          0 2022-03-21 02:58 /newdir
drwxr-xr-x   - cloudera supergroup          0 2022-03-21 03:02 /newdir1
drwxr-xr-x   - cloudera supergroup          0 2022-03-21 03:13 /newdir2
drwxr-xr-x   - cloudera supergroup          0 2022-03-21 03:02 /rjcit2122
drwxr-xr-x   - solr      solr                0 2017-10-23 09:18 /solr
drwxrwxrwt   - hdfs      supergroup          0 2022-03-20 06:27 /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
[cloudera@quickstart ~]$ hdfs dfs -rm -r /newdir2
Deleted /newdir2
[cloudera@quickstart ~]$ hdfs dfs -ls /
Found 9 items
drwxrwxrwx   - hdfs      supergroup          0 2017-10-23 09:15 /benchmarks
drwxr-xr-x   - hbase     supergroup          0 2022-03-20 06:27 /hbase
drwxr-xr-x   - cloudera supergroup          0 2022-03-21 02:58 /newdir
drwxr-xr-x   - cloudera supergroup          0 2022-03-21 03:02 /newdir1
drwxr-xr-x   - cloudera supergroup          0 2022-03-21 03:02 /rjcit2122
drwxr-xr-x   - solr      solr                0 2017-10-23 09:18 /solr
drwxrwxrwt   - hdfs      supergroup          0 2022-03-20 06:27 /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
```

16)hdfs dfs -expunge → Expunge Command (Empty Trash)

```
[cloudera@quickstart ~]$ hdfs dfs -expunge
[cloudera@quickstart ~]$ █
```

17)hdfs dfs -du /rjcit2122 → DU Command

```
[cloudera@quickstart ~]$ hdfs dfs -du /rjcit2122
33  33  /rjcit2122/file01
[cloudera@quickstart ~]$ hdfs dfs -du /newdir
34  34  /newdir/file02
```

18)hdfs dfs -df   → DF Command

```
[cloudera@quickstart ~]$ hdfs dfs -df
Filesystem                      Size       Used      Available  Use%
hdfs://quickstart.cloudera:8020 58531520512 872656896 46036475904   1%
[cloudera@quickstart ~]$ hdfs dfs -df -h
Filesystem                      Size     Used  Available  Use%
hdfs://quickstart.cloudera:8020 54.5 G  832.2 M   42.9 G    1%
```

19)hdfs fsck /rjcit2122 → Fsck command

```
[cloudera@quickstart ~]$ hdfs fsck /rjcit2122
Connecting to namenode via http://quickstart.cloudera:50070/fsck?ugi=cloudera&path=%2Frjcit2122
FSCK started by cloudera (auth:SIMPLE) from /10.0.2.15 for path /rjcit2122 at Mon Mar 21 04:08:30 PDT 2022
.Status: HEALTHY
 Total size:    33 B
 Total dirs:    1
 Total files:   1
 Total symlinks:            0
 Total blocks (validated):     1 (avg. block size 33 B)
 Minimally replicated blocks:  1 (100.0 %)
 Over-replicated blocks:       0 (0.0 %)
 Under-replicated blocks:      0 (0.0 %)
 Mis-replicated blocks:        0 (0.0 %)
 Default replication factor:   1
 Average block replication:    1.0
 Corrupt blocks:               0
 Missing replicas:             0 (0.0 %)
 Number of data-nodes:         1
 Number of racks:              1
FSCK ended at Mon Mar 21 04:08:30 PDT 2022 in 2 milliseconds


The filesystem under path '/rjcit2122' is HEALTHY
```

20)hdfs fsck /rjcit2122 -files

```
[cloudera@quickstart ~]$ hdfs fsck /rjcit2122 -files
Connecting to namenode via http://quickstart.cloudera:50070/fsck?ugi=cloudera&files=1&path=%2Frjcit2122
FSCK started by cloudera (auth:SIMPLE) from /10.0.2.15 for path /rjcit2122 at Mon Mar 21 04:22:50 PDT 2022
/rjcit2122 <dir>
/rjcit2122/file01 33 bytes, 1 block(s):  OK
Status: HEALTHY
 Total size:    33 B
 Total dirs:    1
 Total files:   1
 Total symlinks:            0
 Total blocks (validated):     1 (avg. block size 33 B)
 Minimally replicated blocks:  1 (100.0 %)
 Over-replicated blocks:       0 (0.0 %)
 Under-replicated blocks:      0 (0.0 %)
 Mis-replicated blocks:        0 (0.0 %)
 Default replication factor:   1
 Average block replication:    1.0
 Corrupt blocks:               0
 Missing replicas:             0 (0.0 %)
 Number of data-nodes:         1
 Number of racks:              1
FSCK ended at Mon Mar 21 04:22:50 PDT 2022 in 0 milliseconds


The filesystem under path '/rjcit2122' is HEALTHY
```