

BIG DATA LAB

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Tasks To complete

To start with hadoop

>hadoop version

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop version
Hadoop 3.2.1
Source code repository https://gitbox.apache.org/repos/asf/hadoop.git -r b3cbbb467e22ea829b3808f4b7b01d07e0bf3842
Compiled by rohithsharmaks on 2019-09-10T15:56Z
Compiled with protoc 2.5.0
From source with checksum 776eaf9eee9c0ffc370bcbcb1888737
This command was run using /home/hadoop/hadoop-3.2.1/share/hadoop/common/hadoop-common-3.2.1.jar
```

>start-dfs.sh

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ start-dfs.sh
Starting namenodes on [localhost]
Starting datanodes
Starting secondary namenodes [admin1-HP-280-G4-MT-Business-PC]
```

1. Create a directory named by your name

>hadoop fs -mkdir /laisha

>hadoop fs -ls /

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -mkdir /laisha
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -ls /
Found 3 items
drwxr-xr-x - hadoop supergroup 0 2022-05-24 09:36 /laisha
drwxrwxr-x - hadoop supergroup 0 2021-07-28 12:58 /tmp
drwxr-xr-x - hadoop supergroup 0 2021-07-28 12:56 /user
```

2. Add two empty files into it

>hadoop fs -touchz /laisha/one.txt

>hadoop fs -touchz /laisha/two.txt

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -touchz /laisha/one.txt
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -touchz /laisha/two.txt
```

3. List all the files in the directory that you have created

>hadoop fs -ls /laisha

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -ls /laisha
Found 2 items
-rw-r--r-- 1 hadoop supergroup 0 2022-05-24 09:37 /laisha/one.txt
-rw-r--r-- 1 hadoop supergroup 0 2022-05-24 09:37 /laisha/two.txt
```

4. Create one more directory by your usn and put that inside the directory of your name

>hadoop fs -mkdir /laisha/1NT19IS147

>hadoop fs -ls /laisha

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -mkdir /laisha/1NT19IS147
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -ls /laisha
Found 3 items
drwxr-xr-x - hadoop supergroup 0 2022-05-24 09:48 /laisha/1NT19IS147
-rw-r--r-- 1 hadoop supergroup 0 2022-05-24 09:37 /laisha/one.txt
-rw-r--r-- 1 hadoop supergroup 0 2022-05-24 09:37 /laisha/two.txt
```

5. Create a file in your local system by the name_usn.txt and add the contents as "Syntax to list ls command is hadoop fs -ls "

>cat > laisha_1NT19IS147.txt

>"Syntax to list ls command is hadoop fs -ls"

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ cat > laisha_1NT19IS147.txt
"Syntax to list ls command is hadoop fs -ls"
^Z
[2]+  Stopped                  cat > laisha_1NT19IS147.txt
```

Tasks To complete contd...

► Put the file usn_name.txt in your hdfs directory called usn

>hadoop fs -touchz /laisha/1NT19IS147/1NT19IS147_laisha.txt

>hadoop fs -ls /laisha/1NT19IS147

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -touchz /laisha/1NT19IS147/1NT19IS147_laisha.txt
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -ls /laisha/1NT19IS147
Found 1 items
-rw-r--r--    1 hadoop supergroup          0 2022-05-24 10:28 /laisha/1NT19IS147/1NT19IS147_laisha.txt
```

► Put empty file of hdfs into the local file system

>hadoop fs -copyToLocal /laisha/1NT19IS147/1NT19IS147_laisha.txt

>ls

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -copyToLocal /laisha/1NT19IS147/1NT19IS147_laisha.txt
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ ls
1NT19IS147_laisha.txt  Desktop  Downloads  hadoop-3.2.1.tar.gz  Music  Public  test.js  Videos
apache-hive-3.1.2-bin  dfsdata  eclipse-workspace  laisha_1NT19IS147.txt  Pictures  snap  tmpdata
apache-hive-3.1.2-bin.tar.gz  Documents  hadoop-3.2.1  letsgoo  prarabdh  Templates  vansh
```

► Use mv command to move files from local file system and hdfs file system

>hadoop fs -mv /laisha/two.txt /laisha/1NT19IS147

>hadoop fs -ls /laisha/1NT19IS147

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -mv /laisha/two.txt /laisha/1NT19IS147
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -ls /laisha/1NT19IS147
Found 3 items
-rw-r--r--    1 hadoop supergroup          0 2022-05-24 10:28 /laisha/1NT19IS147/1NT19IS147_laisha.txt
-rw-r--r--    1 hadoop supergroup          0 2022-05-24 10:45 /laisha/1NT19IS147/one.txt
-rw-r--r--    1 hadoop supergroup          0 2022-05-24 09:37 /laisha/1NT19IS147/two.txt
```

► Experiment of cp command

>hadoop fs -cp /laisha/one.txt /laisha/1NT19IS147

>hadoop fs -ls /laisha/1NT19IS147

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -ls /laisha
Found 3 items
drwxr-xr-x    - hadoop supergroup          0 2022-05-24 10:28 /laisha/1NT19IS147
-rw-r--r--    1 hadoop supergroup          0 2022-05-24 09:37 /laisha/one.txt
-rw-r--r--    1 hadoop supergroup          0 2022-05-24 09:37 /laisha/two.txt
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -cp /laisha/one.txt /laisha/1NT19IS147
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -ls /laisha/1NT19IS147
Found 2 items
-rw-r--r--    1 hadoop supergroup          0 2022-05-24 10:28 /laisha/1NT19IS147/1NT19IS147_laisha.txt
-rw-r--r--    1 hadoop supergroup          0 2022-05-24 10:45 /laisha/1NT19IS147/one.txt
```

► Display the total size of all the files in name directory

>hadoop fs -du /laisha

>hadoop fs -du -s /laisha

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -moveFromLocal laisha_1NT19IS147.txt /laisha
2022-05-24 10:52:26,455 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
```

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -du /laisha
0 0 /laisha/1NT19IS147
45 45 /laisha/laisha_1NT19IS147.txt
0 0 /laisha/one.txt
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -du -s /laisha
45 45 /laisha
```

► Display each file size in usn directory Use stat command on name and usn directories

>hadoop fs -du /laisha/1NT19IS147

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -du /laisha/1NT19IS147
0 0 /laisha/1NT19IS147/1NT19IS147_laisha.txt
0 0 /laisha/1NT19IS147/one.txt
0 0 /laisha/1NT19IS147/two.txt
```

► Illustrate the use of append command

cat > one.txt

Hello

^Z

[4]+ Stopped cat > one.txt

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ cat > one.txt
Hello
^Z
[4]+ Stopped cat > one.txt
```

>hadoop fs -appendToFile one.txt /laisha/1NT19IS147/two.txt

>hadoop fs -cat /laisha/1NT19IS147/two.txt

```
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -appendToFile one.txt /laisha/1NT19IS147/two.txt
2022-05-24 16:10:03,035 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
hadoop@admin1-HP-280-G4-MT-Business-PC:~$ hadoop fs -cat /laisha/1NT19IS147/two.txt
2022-05-24 16:10:28,957 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
Hello
```