

BIG DATA LAB

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Tasks To complete

To start with hadoop

>hadoop version

```
hadoop@sarthak-VirtualBox:~$ 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 776eaf9eee9c0ffc370bcbc1888737
This command was run using /home/hadoop/hadoop-3.2.1/share/hadoop/common/hadoop-common-3.2.1.jar
```

>start-dfs.sh

```
hadoop@sarthak-VirtualBox:~$ start-dfs.sh
Starting namenodes on [localhost]
Starting datanodes
Starting secondary namenodes [sarthak-VirtualBox]
```

1. Create a directory named by your name

>hadoop fs -mkdir /Sarthak

>hadoop fs -ls /

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -mkdir /Sarthak
2022-05-30 12:19:35,741 WARN util.NativeCodeLoader: Unable to load native
hadoop@sarthak-VirtualBox:~$ hadoop fs -ls /
2022-05-30 12:19:48,931 WARN util.NativeCodeLoader: Unable to load native
Found 1 items
drwxr-xr-x  - hadoop supergroup          0 2022-05-30 12:19 /Sarthak
```

2. Add two empty files into it

```
>hadoop fs -touchz /Sarthak/one.txt
```

```
>hadoop fs -touchz /Sarthak/two.txt
```

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -touchz /Sarthak/one.txt
2022-05-30 12:20:12,241 WARN util.NativeCodeLoader: Unable to load native-
hadoop@sarthak-VirtualBox:~$ hadoop fs -touchz /Sarthak/two.txt
```

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

```
>hadoop fs -ls /Sarthak
```

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -ls /Sarthak
2022-05-30 12:20:33,502 WARN util.NativeCodeLoader: Unable to load native-hadoop
Found 2 items
-rw-r--r--  1 hadoop supergroup          0 2022-05-30 12:20 /Sarthak/one.txt
-rw-r--r--  1 hadoop supergroup          0 2022-05-30 12:20 /Sarthak/two.txt
```

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

```
>hadoop fs -mkdir /Sarthak/1NT19IS141
```

```
>hadoop fs -ls /Sarthak
```

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -mkdir /Sarthak/1NT19IS141
2022-05-30 12:20:50,719 WARN util.NativeCodeLoader: Unable to load native-hadoop
hadoop@sarthak-VirtualBox:~$ hadoop fs -ls /Sarthak
2022-05-30 12:21:07,023 WARN util.NativeCodeLoader: Unable to load native-hadoop
Found 3 items
drwxr-xr-x  - hadoop supergroup          0 2022-05-30 12:20 /Sarthak/1NT19IS141
-rw-r--r--  1 hadoop supergroup          0 2022-05-30 12:20 /Sarthak/one.txt
-rw-r--r--  1 hadoop supergroup          0 2022-05-30 12:20 /Sarthak/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 > Sarthak_1NT19IS141.txt
```

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

```
hadoop@sarthak-VirtualBox:~$ nano Sarthak_1NT19IS141.txt
hadoop@sarthak-VirtualBox:~$ cat Sarthak_1NT19IS141.txt
"Syntax to list ls command is hadoop fs -ls"
```

Tasks To complete contd...

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -touchz /Sarthak/1NT19IS141/1NT19IS141_Sarthak.txt
2022-05-30 12:24:22,986 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
hadoop@sarthak-VirtualBox:~$ hadoop fs -ls /Sarthak/1NT19IS141
2022-05-30 12:24:43,013 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
Found 1 items
-rw-r--r-- 1 hadoop supergroup 0 2022-05-30 12:24 /Sarthak/1NT19IS141/1NT19IS141_Sarthak.txt
```

► Put the file usn_name.txt in your hdfs directory called usn
>hadoop fs -touchz /Sarthak/1NT19IS141/1NT19IS141_Sarthak.txt
>hadoop fs -ls /Sarthak/1NT19IS141

► Put empty file of hdfs into the local file system
>hadoop fs -copyToLocal /Sarthak/1NT19IS141/1NT19IS141_Sarthak.txt

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -copyToLocal /Sarthak/1NT19IS141/1NT19IS141_Sarthak.txt
>ls
```

► Use mv command to move files from local file system and hdfs file system
>hadoop fs -mv /Sarthak/two.txt /Sarthak/1NT19IS141
>hadoop fs -ls /Sarthak/1NT19IS141

```
hadoop@sarthak-VirtualBox:~$ ls
1NT19IS141_Sarthak.txt  dfsdata  Downloads  hadoop-3.2.1  Music  Public  Templates  Videos
Desktop                Documents  examples.desktop  hadoop-3.2.1.tar.gz  Pictures  Sarthak_1NT19IS141.txt  tmpdata
hadoop@sarthak-VirtualBox:~$ hadoop fs -mv /Sarthak/two.txt /Sarthak/1NT19IS141
2022-05-30 12:26:12,372 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@sarthak-VirtualBox:~$ hadoop fs -ls /Sarthak/1NT19IS141
2022-05-30 12:26:45,440 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 2 items
-rw-r--r-- 1 hadoop supergroup 0 2022-05-30 12:24 /Sarthak/1NT19IS141/1NT19IS141_Sarthak.txt
-rw-r--r-- 1 hadoop supergroup 0 2022-05-30 12:20 /Sarthak/1NT19IS141/two.txt
```

► Experiment of cp command
>hadoop fs -cp /Sarthak/one.txt /Sarthak/1NT19IS141
>hadoop fs -ls /Sarthak/1NT19IS141

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -cp /Sarthak/one.txt /Sarthak/1NT19IS141
2022-05-30 12:30:15,899 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... u
hadoop@sarthak-VirtualBox:~$ hadoop fs -ls /Sarthak/1NT19IS141
2022-05-30 12:30:38,630 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... u
Found 3 items
-rw-r--r-- 1 hadoop supergroup 0 2022-05-30 12:24 /Sarthak/1NT19IS141/1NT19IS141_Sarthak.txt
-rw-r--r-- 1 hadoop supergroup 0 2022-05-30 12:30 /Sarthak/1NT19IS141/one.txt
-rw-r--r-- 1 hadoop supergroup 0 2022-05-30 12:20 /Sarthak/1NT19IS141/two.txt
```

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

```
>hadoop fs -du /Sarthak
```

```
>hadoop fs -du -s /Sarthak
```

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

```
>hadoop fs -du /Sarthak/1NT19IS141
```

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -moveFromLocal Sarthak_1NT19IS141.txt /Sarthak
2022-05-30 12:32:44,520 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
hadoop@sarthak-VirtualBox:~$ hadoop fs -du /Sarthak
2022-05-30 12:32:59,090 WARN util.NativeCodeLoader: Unable to
0 0 /Sarthak/1NT19IS141
45 45 /Sarthak/Sarthak_1NT19IS141.txt
0 0 /Sarthak/one.txt
hadoop@sarthak-VirtualBox:~$ hadoop fs -du -s /Sarthak
2022-05-30 12:33:04,876 WARN util.NativeCodeLoader: Unable to
45 45 /Sarthak
hadoop@sarthak-VirtualBox:~$ hadoop fs -du /Sarthak/1NT19IS141
2022-05-30 12:33:27,125 WARN util.NativeCodeLoader: Unable to
0 0 /Sarthak/1NT19IS141/1NT19IS141_Sarthak.txt
0 0 /Sarthak/1NT19IS141/one.txt
0 0 /Sarthak/1NT19IS141/two.txt
```

Illustrate the use of append command

```
cat > one.txt
```

```
Hello
```

```
^Z
```

```
[4]+ Stopped
```

```
cat > one.txt
```

```
hadoop@sarthak-VirtualBox:~$ cat > one.txt
Hello^Z
```

```
>hadoop fs -
```

```
appendToFile one.txt /Sarthak/1NT19IS141/two.txt
```

```
>hadoop fs -cat /Sarthak/1NT19IS141/two.txt
```

```
hadoop@sarthak-VirtualBox:~$ hadoop fs -appendToFile one.txt /Sarthak/INT19IS141/two.txt
2022-05-30 12:34:40,717 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
2022-05-30 12:34:41,294 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
hadoop@sarthak-VirtualBox:~$ hadoop fs -cat /Sarthak/INT19IS141/two.txt
2022-05-30 12:34:59,125 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
2022-05-30 12:34:59,691 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
Hello
```