EXPERIMENT-5

Execution of HDFS Commands for interaction with Hadoop Environment. (Minimum 10 commands to be executed)

```
hi how are you
how is your job
how is your family
how is your brother
how is your sister
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -get /abc/WC.txt /home/hduser/Downloads/WWC.txt
get: `/home/hduser/Downloads/WWC.txt': No such file or directory: `file:///home/hduser/Downloads/WWC.txt'
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ls /home/hduser/Downloads/
ls: cannot access '/home/hduser/Downloads/': No such file or directory
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ mkdir -p /home/hduser/Downloads/
mkdir: cannot create directory '/home/hduser': Permission denied
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ sudo mkdir -p /home/hduser/Downloads/
[sudo] password for hadoop:
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ls /home/hduser/
Downloads
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -get /WC.txt /home/hduser/Downloads/WWC.txt
get: `/abc/WC.txt': No such file or directory
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -get /WC.txt /home/hduser/Downloads/WWC.txt
get: `/abc/WC.txt': No such file or directory
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -ls /abc/
Found 2 items
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:34 /abc/file1.txt
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:35 /abc/file2.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -get /abc/file1.txt /home/hduser/Downloads/file1.txt
get: /home/hduser/Downloads/file1.txt._COPYING_ (Permission denied)
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ls -ld /home/hduser/Downloads/
drwxr-xr-x 2 root root 4096 Apr 15 14:37 /home/hduser/Downloads/
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ sudo chown -R hadoop:hadoop /home/hduser/Downloads/
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ls -ld /home/hduser/Downloads/
drwxr-xr-x 2 hadoop hadoop 4096 Apr 15 14:37 /home/hduser/Downloads/
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ls -ld /home/hduser/Downloads/
drwxr-xr-x 2 hadoop hadoop 4096 Apr 15 14:37 /home/hduser/Downloads/
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -get /abc/file1.txt /home/hduser/Downloads/file1.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -get /abc/file1.txt /home/hduser/Desktop/Merge.txt
getmerge: `/abc/WC.txt': No such file or directory
getmerge: `/abc/WC2.txt': No such file or directory
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -getmerge /abc/file1.txt /abc/file2.txt /home/hduser/Desktop/Merge.txt
getmerge: Mkdirs failed to create file:/home/hduser/Desktop (exists=false, cwd=file:/home/hadoop/hadoop/sbin)
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ sudo mkdir -p /home/hduser/Desktop
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ sudo chown -R hadoop:hadoop /home/hduser/Desktop
sudo chmod -R 775 /home/hduser/Desktop
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -getmerge /abc/file1.txt /abc/file2.txt /home/hduser/Desktop/Merge.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ cat /home/hduser/Desktop/Merge.txt
hi how are you
how is your job
how is your family
how is your brother
how is your sister

hi how are you
how is your job
how is your family
how is your brother
how is your sister
```

```
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -copyToLocal /abc/WC.txt /home/hduser/Desktop
copyToLocal: `/abc/WC.txt': No such file or directory
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -copyToLocal /abc/file1.txt /home/hduser/Desktop
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ cat /home/hduser/Desktop/file1.txt
hi how are you
how is your job
how is your family
how is your brother
how is your sister
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -cat /abc/file1.txt
hi how are you
how is your job
how is your family
how is your brother
how is your sister
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -cat /abc/file2.txt
hi how are you
how is your job
how is your family
how is your brother
how is your sister
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -mv /abc /FFF
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -ls /FFF
Found 2 items
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:34 /FFF/file1.txt
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:35 /FFF/file2.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ 9. Cp Hadoop HDFS

cp Command Usage cp Hadoop HDFS

cp Command Example

hadoop fs -cp /CSE/ /LLL

hadoop fs -ls /LLL

The cp command copies a file from one directory to another directory within the
HDFS.
9.: command not found
cp: target 'HDFS' is not a directory
cp: cannot stat 'Command': No such file or directory
cp: `/CSE/': No such file or directory
ls: `/LLL': No such file or directory
Command 'The' not found, did you mean:
  command 'he' from deb node-he (1.2.0-3)
  command 'the' from deb the (3.3-rc1-3build1)
Try: sudo apt install <deb name>
HDFS.: command not found
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -cp /abc/file1.txt /newDir
cp: `/newDir/': No such file or directory: `hdfs://localhost:9000/newDir'
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -mkdir /destinationDir
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -cp /abc/file1.txt /destinationDir/
```

```
how is your brother
how is your sister
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -mv /abc /FFF
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -ls /FFF
Found 2 items
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:34 /FFF/file1.txt
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:35 /FFF/file2.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ 9. Cp Hadoop HDFS

cp Command Usage cp Hadoop HDFS

cp Command Example

hadoop fs -cp /CSE/ /LLL

hadoop fs -ls /LLL

The cp command copies a file from one directory to another directory within the
HDFS.
9.: command not found
cp: target 'HDFS' is not a directory
cp: cannot stat 'Command': No such file or directory
cp: `/CSE/': No such file or directory
ls: `/LLL': No such file or directory
Command 'the' not found, did you mean:
  command 'he' from deb node-he (1.2.0-3)
  command 'the' from deb the (3.3-rc1-3build1)
Try: sudo apt install <deb name>
HDFS.: command not found
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -cp /abc/file1.txt /newDir
cp: `/newDir/': No such file or directory: `hdfs://localhost:9000/newDir'
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -mkdir /destinationDir
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -cp /abc/file1.txt /destinationDir/
cp: `/abc/file1.txt': No such file or directory
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -ls /abc
ls: `/abc/': No such file or directory
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -ls /
Found 5 items
drwxr-xr-x   - hadoop supergroup          0 2025-04-15 14:35 /FFF
drwxr-xr-x   - hadoop supergroup          0 2025-04-15 14:47 /destinationDir
drwxr-xr-x   - hadoop supergroup          0 2024-05-13 15:12 /newDataFlair
drwxr-xr-x   - hadoop supergroup          0 2024-05-13 14:36 /olddata
drwxr-xr-x   - hadoop supergroup          0 2025-04-15 14:19 /rgs
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -ls /FFF
\Found 2 items
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:34 /FFF/file1.txt
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:35 /FFF/file2.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -cp /FFF/file1.txt /destinationDir/
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -cp /FFF/file2.txt /destinationDir/
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hdfs dfs -ls /destinationDir/
Found 2 items
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:49 /destinationDir/file1.txt
-rw-r--r--   1 hadoop supergroup         90 2025-04-15 14:49 /destinationDir/file2.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ 5-5~
```

```
registryDNS    Run the registry DNS server
SUBCOMMAND may print help when invoked w/o parameters or with -h.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:-$ cd /home/hadoop/hadoop/sbin
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ./start-dfs.sh
Starting namenodes on [localhost]
localhost: namenode is running as process 9900.  Stop it first and ensure /tmp/hadoop-hadoop-namenode.pid file is empty before retry.
Starting datanodes
localhost: datanode is running as process 10056.  Stop it first and ensure /tmp/hadoop-hadoop-datanode.pid file is empty before retry.
Starting secondary namenodes [bmscecse-HP-Elite-Tower-800-G9-Desktop-PC]
bmscecse-HP-Elite-Tower-800-G9-Desktop-PC: secondarynamenode is running as process 10334.  Stop it first and ensure /tmp/hadoop-hadoop-secondarynamenode.pid file is empty before retry.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ./start-yarn.sh
Starting resourcemanager
resourcemanager is running as process 10644.  Stop it first and ensure /tmp/hadoop-hadoop-resourcemanager.pid file is empty before retry.
Starting nodemanagers
localhost: nodemanager is running as process 10807.  Stop it first and ensure /tmp/hadoop-hadoop-nodemanager.pid file is empty before retry.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ jps
12226 Jps
10644 ResourceManager
10807 NodeManager
10056 DataNode
9900 NameNode
10334 SecondaryNameNode
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ./start-dfs.sh
Starting namenodes on [localhost]
localhost: namenode is running as process 9900.  Stop it first and ensure /tmp/hadoop-hadoop-namenode.pid file is empty before retry.
Starting datanodes
localhost: datanode is running as process 10056.  Stop it first and ensure /tmp/hadoop-hadoop-datanode.pid file is empty before retry.
Starting secondary namenodes [bmscecse-HP-Elite-Tower-800-G9-Desktop-PC]
bmscecse-HP-Elite-Tower-800-G9-Desktop-PC: secondarynamenode is running as process 10334.  Stop it first and ensure /tmp/hadoop-hadoop-secondarynamenode.pid file is empty before retry.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ./start-yarn.sh
Starting resourcemanager
resourcemanager is running as process 10644.  Stop it first and ensure /tmp/hadoop-hadoop-resourcemanager.pid file is empty before retry.
Starting nodemanagers
localhost: nodemanager is running as process 10807.  Stop it first and ensure /tmp/hadoop-hadoop-nodemanager.pid file is empty before retry.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ jps
13012 Jps
10644 ResourceManager
10807 NodeManager
10056 DataNode
9900 NameNode
10334 SecondaryNameNode
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -ls /
Found 2 items
drwxr-xr-x   - hadoop supergroup          0 2024-05-13 15:12 /newDataFlair
drwxr-xr-x   - hadoop supergroup          0 2024-05-13 14:36 /olddata
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -copyFromLocal /home/rekhags/Desktop/file1.txt /rgs/test.txt
copyFromLocal: `/rgs/test.txt': No such file or directory: `hdfs://localhost:9000/rgs/test.txt'
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -mkdir /rgs
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -copyFromLocal /home/rekhags/Desktop/file1.txt /rgs/test.txt
copyFromLocal: `/home/rekhags/Desktop/file1.txt': No such file or directory
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ ls /home/hadoop/Desktop/
file1.txt  first.txt  Untitled.jar  WC.jar
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ nano /home/hadoop/Desktop/file1.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -copyFromLocal /home/hadoop/Desktop/file1.txt /rgs/test.txt
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop/sbin$ hadoop fs -mkdir /rgs
mkdir: `/rgs': file exists
```

```
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ ^[[200~sudo apt update
sudo: command not found
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ ~sudo apt update
Command '~sudo' not found, did you mean:
  command 'sudo' from deb sudo (1.9.9-1ubuntu2.4)
  command 'sudo' from deb sudo-ldap (1.9.9-1ubuntu2.4)
Try: sudo apt install <deb name>
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ tar -xzvf hadoop-3.x.x.tar.gz
tar (child): hadoop-3.x.x.tar.gz: Cannot open: No such file or directory
tar (child): Error is not recoverable: exiting now
tar: Child returned status 2
tar: Error is not recoverable: exiting now
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ sudo apt update
[sudo] password for hadoop:
Hit:1 https://packages.microsoft.com/repos/code stable InRelease
Hit:2 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:3 https://dl.google.com/linux/chrome/deb stable InRelease [1,825 B]
Hit:4 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Hit:6 https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/6.0 InRelease
Get:7 https://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,214 B]
Hit:9 https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/7.0 InRelease
Hit:10 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:8 https://apache.jfrog.io/artifactory/cassandra-deb 41x InRelease
Fetched 131 kB in 3s (42.9 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
344 packages can be upgraded. Run 'apt list --upgradable' to see them.
W: https://repo.mongodb.org/apt/ubuntu/dists/jammy/mongodb-org/6.0/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
W: https://debian.cassandra.apache.org/dists/41x/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ sudo apt install openjdk-11-jdk
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openjdk-11-jdk is already the newest version (11.0.26+4-1ubuntu1~22.04).
The following packages were automatically installed and are no longer required:
  linux-headers-6.2.0-26-generic linux-hwe-6.2-headers-6.2.0-26
  linux-image-6.2.0-26-generic linux-modules-6.2.0-26-generic
  linux-modules-extra-6.2.0-26-generic
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 344 not upgraded.
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ java -version
openjdk version "11.0.26" 2025-01-21
OpenJDK Runtime Environment (build 11.0.26+4-post-Ubuntu-1ubuntu122.04)
OpenJDK 64-Bit Server VM (build 11.0.26+4-post-Ubuntu-1ubuntu122.04, mixed mode, sharing)
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~$ mkdir -p ~/hadoop_wordcount
cd ~/hadoop_wordcount
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop_wordcount$ nano WordCount.java
hadoop@bmscecse-HP-Elite-Tower-800-G9-Desktop-PC:~/hadoop_wordcount$ javac -classpath $(hadoop classpath) -d /home/hadoop/wordcount_classes WordCount.java
WordCount.java:18: error: cannot find symbol
    public static class TokenizerMapper extends MapReduceBase implements Mapper<Object, Text, Text, IntWritable> {
                                                ^
  symbol:   class MapReduceBase
  location: class WordCount
WordCount.java:22: error: cannot find symbol
```