

Output-

```
hdp123@stud-OptiPlex-3060: /home/stud/Desktop/assignment1b/analyzelogs
stud@stud-OptiPlex-3060:~/Desktop/assignment1b$ su hdp123
Password:
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b$ ls
access_log_short.txt  hadoop-mapreduce-example-file.txt  SalesCountryDriver.java  SalesCountryReducer.java  SalesMapper.java
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b$ sudo mkdir analyzelogs
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b$ ls
access_log_short.txt  analyzelogs  hadoop-mapreduce-example-file.txt  SalesCountryDriver.java  SalesCountryReducer.java  SalesMapper.java
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b$ sudo chmod -R 777 analyzelogs/
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b$ sudo chown -R hdp123 analyzelogs
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b$ sudo cp * analyzelogs/
cp: -r not specified; omitting directory 'analyzelogs'
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b$ cd analyzelogs/
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b/analyzelogs$ ls
access_log_short.txt  hadoop-mapreduce-example-file.txt  SalesCountryDriver.java  SalesCountryReducer.java  SalesMapper.java
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b/analyzelogs$ ls -ltr
total 156
-rw-r--r-- 1 root root 143084 Apr 25 14:16 access_log_short.txt
-rw-r--r-- 1 root root 659 Apr 25 14:16 SalesMapper.java
-rw-r--r-- 1 root root 749 Apr 25 14:16 SalesCountryReducer.java
-rw-r--r-- 1 root root 1367 Apr 25 14:16 SalesCountryDriver.java
-rw-r--r-- 1 root root 391 Apr 25 14:16 hadoop-mapreduce-example-file.txt
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b/analyzelogs$ ls -al
total 164
drwxrwxrwx 2 hdp123 root 4096 Apr 25 14:16 .
drwxrwxr-x 3 stud stud 4096 Apr 25 14:15 ..
-rw-r--r-- 1 root root 143084 Apr 25 14:16 access_log_short.txt
-rw-r--r-- 1 root root 391 Apr 25 14:16 hadoop-mapreduce-example-file.txt
-rw-r--r-- 1 root root 1367 Apr 25 14:16 SalesCountryDriver.java
-rw-r--r-- 1 root root 749 Apr 25 14:16 SalesCountryReducer.java
-rw-r--r-- 1 root root 659 Apr 25 14:16 SalesMapper.java
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b/analyzelogs$ ls -llr
total 156
-rw-r--r-- 1 root root 143084 Apr 25 14:16 access_log_short.txt
-rw-r--r-- 1 root root 659 Apr 25 14:16 SalesMapper.java
-rw-r--r-- 1 root root 749 Apr 25 14:16 SalesCountryReducer.java
-rw-r--r-- 1 root root 1367 Apr 25 14:16 SalesCountryDriver.java
-rw-r--r-- 1 root root 391 Apr 25 14:16 hadoop-mapreduce-example-file.txt
hdp123@stud-OptiPlex-3060:/home/stud/Desktop/assignment1b/analyzelogs$
```

```
hdp123@stud-OptiPlex-3060: ~/analyzelogs
GNU nano 6.2 Manifest.txt *
Main-Class: SalesCountry.SalesCountryDriver

^C Help      ^O Write Out  ^W Where is   ^K Cut        ^J Execute    ^C Location   M-U Undo      M-A Set Mark   M-J To Bracket
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^_ Justify    ^/ Go To Line M-E Redo      M-G Copy      ^Q Where Was
```

```
hdp123@stud-OptiPlex-3060: ~  
hdp123@stud-OptiPlex-3060: ~  
hdp123@stud-OptiPlex-3060: ~$ ls  
analyzeLogs analyzeLogs2 Desktop Documents Downloads hadoop-2.10.1.tar.gz Music Pictures Public snap Templates Videos  
hdp123@stud-OptiPlex-3060: ~$ cd analyzeLogs  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ ls  
access_log_short.txt hadoop-mapreduce-examle-file.txt SalesCountryDriver.java SalesCountryReducer.java SalesMapper.java  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ export CLASSPATH=$SHADOOP_HOME/share/hadoop/mapreduce/hadoop-mapreduce-client-core-2.9.0.jar:$SHADOOP_HOME/share/hadoop/mapreduce/hadoop-mapreduce-client-common-2.9.0.jar:$SHADOOP_HOME/share/hadoop/common/hadoop-common-2.9.0.jar:~/analyzeLogs/SalesCountry/*:$SHADOOP_HOME/lib/*  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ javac -d . SalesMapper.java SalesCountryReducer.java SalesCountryDriver.java  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ cd SalesCountry/  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs/SalesCountry$ ls  
SalesCountryDriver.class SalesCountryReducer.class SalesMapper.class  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs/SalesCountry$ cd ..  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ sudo nano Manifest.txt  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ jar -cfm analyzeLogs.jar  
Usage: jar [OPTION...] [ [-release VERSION] [-C dir] files] ...  
Try 'jar --help' for more information.  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ jar -cfm analyzeLogs.jar Manifest.txt SalesCountry/*.class  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ cd
```

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Try 'jar --help' for more information.  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ jar -cfm analyzeLogs.jar Manifest.txt SalesCountry/*.class  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ cd  
hdp123@stud-OptiPlex-3060: ~$ start-dfs.sh  
WARNING: An illegal reflective access operation has occurred  
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/usr/local/hadoop/share/hadoop/common/lib/hadoop-auth-2.9.0.jar) to method sun.security.krb5.Config.getInstance()  
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil  
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations  
WARNING: All illegal access operations will be denied in a future release  
23/04/25 14:36:39 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
Starting namenodes on [localhost]  
localhost: starting namenode, logging to /usr/local/hadoop/logs/hadoop-hdp123-namenode-stud-OptiPlex-3060.out  
localhost: starting datanode, logging to /usr/local/hadoop/logs/hadoop-hdp123-datanode-stud-OptiPlex-3060.out  
Starting secondary namenodes [0.0.0.0]  
0.0.0.0: starting secondarynamenode, logging to /usr/local/hadoop/logs/hadoop-hdp123-secondarynamenode-stud-OptiPlex-3060.out  
WARNING: An illegal reflective access operation has occurred  
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/usr/local/hadoop/share/hadoop/common/lib/hadoop-auth-2.9.0.jar) to method sun.security.krb5.Config.getInstance()  
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil  
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations  
WARNING: All illegal access operations will be denied in a future release  
23/04/25 14:36:47 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
hdp123@stud-OptiPlex-3060: ~$ start-yarn.sh  
starting yarn daemons  
starting resourcemanager, logging to /usr/local/hadoop/logs/yarn-hdp123-resourcemanager-stud-OptiPlex-3060.out  
WARNING: An illegal reflective access operation has occurred  
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/usr/local/hadoop/share/hadoop/common/lib/hadoop-auth-2.9.0.jar) to method sun.security.krb5.Config.getInstance()  
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil  
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations  
WARNING: All illegal access operations will be denied in a future release  
localhost: starting nodemanager, logging to /usr/local/hadoop/logs/yarn-hdp123-nodemanager-stud-OptiPlex-3060.out  
hdp123@stud-OptiPlex-3060: ~$
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hdp123@stud-OptiPlex-3060: ~/analyzeLogs  
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hdp123@stud-OptiPlex-3060: ~$ jps  
26707 SecondaryNameNode  
27065 NodeManager  
26937 ResourceManager  
26507 DataNode  
26237 NameNode  
27918 Jps  
hdp123@stud-OptiPlex-3060: ~$ ls  
analyzeLogs analyzeLogs2 Desktop Documents Downloads hadoop-2.10.1.tar.gz Music Pictures Public snap Templates Videos  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ cd analyzeLogs  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ sudo mkdir input1000  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ ls  
access_log_short.csv analyzeLogs.jar input Manifest.txt SalesCountryDriver.java SalesMapper.java  
access_log_short.txt hadoop-mapreduce-examle-file.txt input1000 SalesCountry SalesCountryReducer.java  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ sudo cp access_log_short.csv input1000/  
hdp123@stud-OptiPlex-3060: ~/analyzeLogs$ $SHADOOP_HOME/bin/hdfs dfs -put ~/input1000 /  
WARNING: An illegal reflective access operation has occurred  
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/usr/local/hadoop/share/hadoop/common/lib/hadoop-auth-2.9.0.jar) to method sun.security.krb5.Config.getInstance()  
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil  
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations  
WARNING: All illegal access operations will be denied in a future release
```



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stud@stud-OptiPlex-3060: ~

cable
hdp123@stud-OptiPlex-3060:~/analyzeLogs$ $HADOOP_HOME/bin/hadoop jar analyzeLogs.jar /input1000 /output2000
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/usr/local/hadoop/share/hadoop/common/lib/hadoop-auth-2.9.0.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
23/04/25 14:44:05 WARN util.NativeCodeLoader: Unable to load native hadoop library for your platform... using builtin-java classes where applicable
23/04/25 14:44:06 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
23/04/25 14:44:06 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
23/04/25 14:44:06 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool interface and execute your application with ToolRunner to remedy this.
23/04/25 14:44:06 INFO mapred.FileInputFormat: Total input files to process : 1
23/04/25 14:44:06 INFO mapreduce.JobSubmitter: number of splits:2
23/04/25 14:44:07 INFO Configuration.deprecation: yarn.resourcemanager.system-metrics-publisher.enabled is deprecated. Instead, use yarn.system-metrics-publisher.enabled
23/04/25 14:44:07 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1682413619585_0001
23/04/25 14:44:07 INFO impl.YarnClientImpl: Submitted application application_1682413619585_0001
23/04/25 14:44:08 INFO mapreduce.Job: The url to track the job: http://stud-OptiPlex-3060:8088/proxy/application_1682413619585_0001/
23/04/25 14:44:08 INFO mapreduce.Job: Running job: job_1682413619585_0001
23/04/25 14:44:14 INFO mapreduce.Job: Job job_1682413619585_0001 running in uber mode : false
23/04/25 14:44:14 INFO mapreduce.Job: map 0% reduce 0%
23/04/25 14:44:19 INFO mapreduce.Job: map 100% reduce 0%
23/04/25 14:44:23 INFO mapreduce.Job: map 100% reduce 100%
23/04/25 14:44:24 INFO mapreduce.Job: Job job_1682413619585_0001 completed successfully
23/04/25 14:44:24 INFO mapreduce.Job: Counters: 49
File System Counters
  FILE: Number of bytes read=26793
  FILE: Number of bytes written=659375
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=147388
  HDFS: Number of bytes written=3838
```

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hdp123@stud-OptiPlex-3060: ~/analyzeLogs
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stud@stud-OptiPlex-3060: ~

Bytes Read=147180
File Output Format Counters
  Bytes Written=3838
hdp123@stud-OptiPlex-3060:~/analyzeLogs$ $HADOOP_HOME/bin/hdfs dfs -cat /output2000/part-00000
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/usr/local/hadoop/share/hadoop/common/lib/hadoop-auth-2.9.0.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
23/04/25 14:44:46 WARN util.NativeCodeLoader: Unable to load native hadoop library for your platform... using builtin-java classes where applicable
10.1.1.236 7
10.1.181.142 14
10.1.232.31 5
10.19.55.142 14
10.102.101.66 1
10.103.184.104 1
10.193.190.81 53
10.193.63.29 1
10.104.73.51 1
10.105.100.183 1
10.198.91.151 1
10.199.21.76 1
10.11.131.40 1
10.111.71.20 8
10.112.227.184 6
10.114.74.30 1
10.115.118.78 1
10.117.224.230 1
10.117.76.22 12
10.118.19.97 1
10.118.250.30 7
10.119.117.132 23
10.119.33.245 1
10.119.74.120 1
```

GUI Output-

The screenshot shows the Hadoop Distributed File System (HDFS) Explorer GUI in a Firefox web browser. The browser address bar shows the URL `localhost:50070/explorer.html#/`. The page title is "Browse Directory". The navigation bar includes links for "Hadoop", "Overview", "Datanodes", "Datanode Volume Failures", "Snapshot", "Startup Progress", and "Utilities".

The main content area displays a table of directory entries. The table has columns for "Permission", "Owner", "Group", "Size", "Last Modified", "Replication", "Block Size", and "Name". The entries are:

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
drwxr-xr-x	hdp123	supergroup	0 B	Apr 25 14:42	0	0 B	input1000
drwxr-xr-x	hdp123	supergroup	0 B	Apr 25 14:44	0	0 B	output2000
drwx-----	hdp123	supergroup	0 B	Apr 25 14:44	0	0 B	tmp

Below the table, it says "Showing 1 to 3 of 3 entries". There are "Previous", "1", and "Next" buttons. At the bottom, it says "Hadoop, 2017."

The screenshot shows the Hadoop Distributed File System (HDFS) Explorer GUI in a Firefox web browser. The browser address bar shows the URL `localhost:50070/explorer.html#/output2000`. The page title is "Browse Directory". The navigation bar includes links for "Hadoop", "Overview", "Datanodes", "Datanode Volume Failures", "Snapshot", "Startup Progress", and "Utilities".

The main content area displays a table of directory entries. The table has columns for "Permission", "Owner", "Group", "Size", "Last Modified", "Replication", "Block Size", and "Name". The entries are:

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
-rw-r--r--	hdp123	supergroup	3838	Apr 25 14:44	1	128 MB	_SUCCESS
-rw-r--r--	hdp123	supergroup	3838	Apr 25 14:44	1	128 MB	part-00000

Below the table, it says "Showing 1 to 2 of 2 entries". There are "Previous", "1", and "Next" buttons. At the bottom, it says "Hadoop, 2017."

A modal window titled "Block Information" is open, showing details for "Block 0". The information includes:

- Block ID: 1073741832
- Block Pool ID: BP-1150298843-127.0.1.1-1682410018300
- Generation Stamp: 1008
- Size: 3838
- Availability: stud-OptiPlex-3060

The modal window also displays "File contents" in a text area:

```
10.1.1.236 7
10.1.181.142 14
10.1.232.31 5
10.10.55.142 14
10.102.101.66 1
10.103.184.104 1
10.103.190.81 53
10.103.63.29 1
```

A "Close" button is visible at the bottom right of the modal window.