Output :
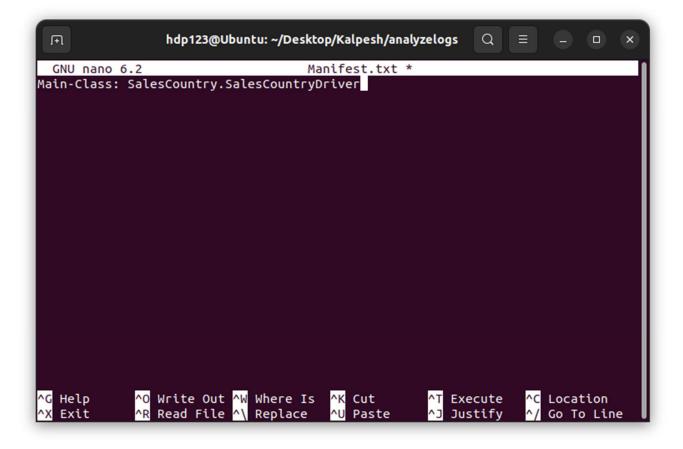
```
                    hdp123@Ubuntu: ~/Desktop/Kalpesh/analyzelogs

hdp123@Ubuntu:~/Desktop/Kalpesh$ sudo mkdir analyzelogs
[sudo] password for hdp123:
hdp123@Ubuntu:~/Desktop/Kalpesh$ sudo chmod -R 777 analyzelogs/
hdp123@Ubuntu:~/Desktop/Kalpesh$ sudo chown -R hdp123 analyzelogs/
hdp123@Ubuntu:~/Desktop/Kalpesh$ sudo cp * analyzelogs/
cp: -r not specified; omitting directory 'analyzelogs'
hdp123@Ubuntu:~/Desktop/Kalpesh$ cd analyzelogs/
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ ls
access_log_short.csv                 SalesCountryDriver.java    SalesMapper.java
hadoop-mapreduce-example-file.txt    SalesCountryReducer.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ sudo chmod 777 *
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ ls -ltr
total 172
-rwxrwxrwx 1 root root     386 Apr 26 16:52 hadoop-mapreduce-example-file.txt
-rwxrwxrwx 1 root root  158662 Apr 26 16:52 access_log_short.csv
-rwxrwxrwx 1 root root    1367 Apr 26 16:52 SalesCountryDriver.java
-rwxrwxrwx 1 root root     659 Apr 26 16:52 SalesMapper.java
-rwxrwxrwx 1 root root     749 Apr 26 16:52 SalesCountryReducer.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ ls -al
total 180
drwxrwxrwx 2 hdp123 root      4096 Apr 26 16:52 .
drwxr-xr-x 3 hdp123 hadoop    4096 Apr 26 16:51 ..
-rwxrwxrwx 1 root   root    158662 Apr 26 16:52 access_log_short.csv
-rwxrwxrwx 1 root   root       386 Apr 26 16:52 hadoop-mapreduce-example-file.txt
```

```
                    hdp123@Ubuntu: ~/Desktop/Kalpesh/analyzelogs

hdp123@Ubuntu:~/Desktop/Kalpesh$ sudo cp * analyzelogs/
cp: -r not specified; omitting directory 'analyzelogs'
hdp123@Ubuntu:~/Desktop/Kalpesh$ cd analyzelogs/
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ ls
access_log_short.csv                 SalesCountryDriver.java    SalesMapper.java
hadoop-mapreduce-example-file.txt    SalesCountryReducer.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ sudo chmod 777 *
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ ls -ltr
total 172
-rwxrwxrwx 1 root root     386 Apr 26 16:52 hadoop-mapreduce-example-file.txt
-rwxrwxrwx 1 root root  158662 Apr 26 16:52 access_log_short.csv
-rwxrwxrwx 1 root root    1367 Apr 26 16:52 SalesCountryDriver.java
-rwxrwxrwx 1 root root     659 Apr 26 16:52 SalesMapper.java
-rwxrwxrwx 1 root root     749 Apr 26 16:52 SalesCountryReducer.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ ls -al
total 180
drwxrwxrwx 2 hdp123 root      4096 Apr 26 16:52 .
drwxr-xr-x 3 hdp123 hadoop    4096 Apr 26 16:51 ..
-rwxrwxrwx 1 root   root    158662 Apr 26 16:52 access_log_short.csv
-rwxrwxrwx 1 root   root       386 Apr 26 16:52 hadoop-mapreduce-example-file.txt
-rwxrwxrwx 1 root   root      1367 Apr 26 16:52 SalesCountryDriver.java
-rwxrwxrwx 1 root   root       749 Apr 26 16:52 SalesCountryReducer.java
-rwxrwxrwx 1 root   root       659 Apr 26 16:52 SalesMapper.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ sudo chmod +r *.*
```

Compile Java files :


```
-rwxrwxrwx 1 root root       749 Apr 26 16:52 SalesCountryReducer.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ ls -al
total 180
drwxrwxrwx 2 hdp123 root      4096 Apr 26 16:52 .
drwxr-xr-x 3 hdp123 hadoop    4096 Apr 26 16:51 ..
-rwxrwxrwx 1 root   root    158662 Apr 26 16:52 access_log_short.csv
-rwxrwxrwx 1 root   root       386 Apr 26 16:52 hadoop-mapreduce-example-file.txt
-rwxrwxrwx 1 root   root      1367 Apr 26 16:52 SalesCountryDriver.java
-rwxrwxrwx 1 root   root       749 Apr 26 16:52 SalesCountryReducer.java
-rwxrwxrwx 1 root   root       659 Apr 26 16:52 SalesMapper.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ sudo chmod +r *.*
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ export CLASSPATH="$HADOOP_HOME/shar
e/hadoop/mapreduce/hadoop-mapreduce-client-core-2.10.1.jar:$HADOOP_HOME/share/ha
doop/mapreduce/hadoop-mapreduce-client-common-2.10.1.jar:$HADOOP_HOME/share/hado
op/common/hadoop-common-2.10.1.jar:~/analyzelogs/SalesCountry/*:$HADOOP_HOME/lib
/*"
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ javac -d . SalesMapper.java SalesCo
untryReducer.java SalesCountryDriver.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ cd SalesCountry/
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs/SalesCountry$ ls
SalesCountryDriver.class  SalesCountryReducer.class  SalesMapper.class
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs/SalesCountry$ cd ..
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ sudo nano Manifest.txt
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$
```
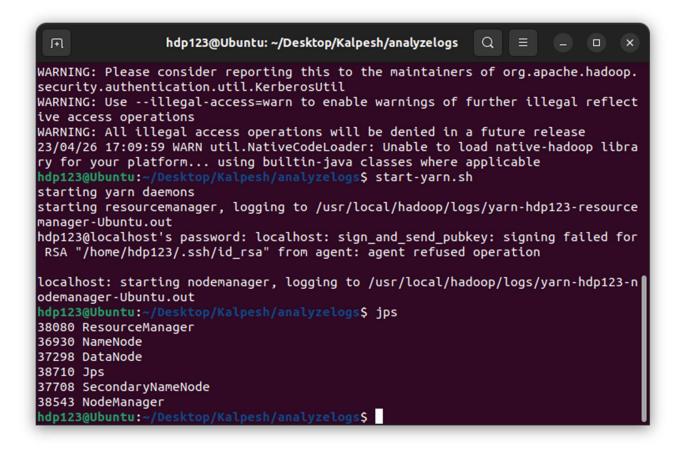


```
  GNU nano 6.2                    Manifest.txt *
Main-Class: SalesCountry.SalesCountryDriver



^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^/ Go To Line
```

Start Hadoop :

```
untryReducer.java SalesCountryDriver.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ cd SalesCountry/
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs/SalesCountry$ ls
SalesCountryDriver.class  SalesCountryReducer.class  SalesMapper.class
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs/SalesCountry$ cd ..
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ sudo nano Manifest.txt
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ jar -cfm analyzelogs.jar Manifest.t
xt SalesCountry/*.class
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ 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.
10.1.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 reflect
ive access operations
WARNING: All illegal access operations will be denied in a future release
23/04/26 17:03:08 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
Starting namenodes on [localhost]
localhost: sign_and_send_pubkey: signing failed for RSA "/home/hdp123/.ssh/id_rs
a" from agent: agent refused operation
hdp123@localhost's password:
```
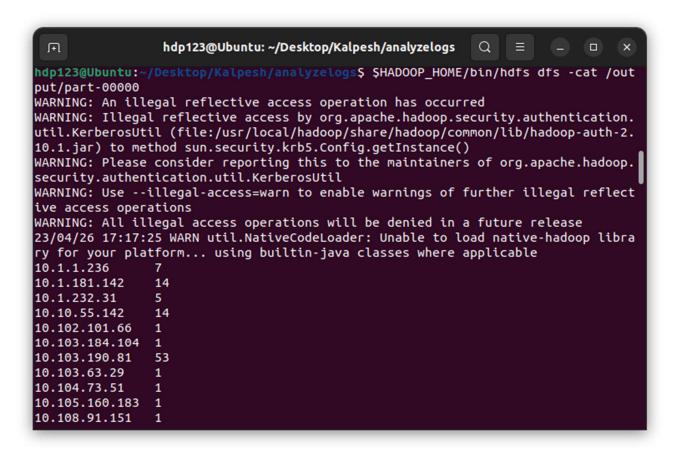
```
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.
security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflect
ive access operations
WARNING: All illegal access operations will be denied in a future release
23/04/26 17:09:59 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ start-yarn.sh
starting yarn daemons
starting resourcemanager, logging to /usr/local/hadoop/logs/yarn-hdp123-resource
manager-Ubuntu.out
hdp123@localhost's password: localhost: sign_and_send_pubkey: signing failed for
 RSA "/home/hdp123/.ssh/id_rsa" from agent: agent refused operation

localhost: starting nodemanager, logging to /usr/local/hadoop/logs/yarn-hdp123-n
odemanager-Ubuntu.out
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ jps
38080 ResourceManager
36930 NameNode
37298 DataNode
38710 Jps
37708 SecondaryNameNode
38543 NodeManager
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$
```

Creating directory on Hadoop :

```
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ mkdir input
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ ls
access_log_short.csv                input          SalesCountryDriver.java
analyzelogs.jar                     Manifest.txt   SalesCountryReducer.java
hadoop-mapreduce-example-file.txt   SalesCountry   SalesMapper.java
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ sudo cp access_log_short.csv input/
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ $HADOOP_HOME/bin/hdfs dfs -put input /
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.
util.KerberosUtil (file:/usr/local/hadoop/share/hadoop/common/lib/hadoop-auth-2.
10.1.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.
security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflect
ive access operations
WARNING: All illegal access operations will be denied in a future release
23/04/26 17:13:36 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
put: `/input/access_log_short.csv': File exists
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ $HADOOP_HOME/bin/hadoop jar analyze
logs.jar /input /output
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.
```

```
hdp123@Ubuntu:~/Desktop/Kalpesh/analyzelogs$ $HADOOP_HOME/bin/hdfs dfs -cat /out
put/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.
10.1.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 reflect
ive access operations
WARNING: All illegal access operations will be denied in a future release
23/04/26 17:17:25 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
10.1.1.236        7
10.1.181.142      14
10.1.232.31       5
10.10.55.142      14
10.102.101.66     1
10.103.184.104    1
10.103.190.81     53
10.103.63.29      1
10.104.73.51      1
10.105.160.183    1
10.108.91.151     1
```

On Browser(localhost:50070) :

Input Files

Each line passed to inividual mapper instances

Map Key Value Splitting

Sort and Shuffle

Reduce Key Value Pairs

Final Output

Apple Orange Mango
Orange Grapes Plum

Apple Plum Mango
Apple Apple Plum

Apple Orange Mango

Orange Grapes Plum

Apple Plum Mango

Apple Apple Plum

Apple,1
Orange,1
Mango,1

Orange,1
Grapes,1
Plum,1

Apple,1
Plum,1
Mango,1

Apple,1
Apple,1
Plum,1

Apple,1
Apple,1
Apple,1
Apple,1

Grapes,1

Mango,1
Mango,1

Orange,1
Orange,1

Plum,1
Plum,1
Plum,1

Apple,4

Grapes,1

Mango,2

Orange,2

Plum,3

Apple,4
Grapes,1
Mango,2
Orange,2
Plum,3