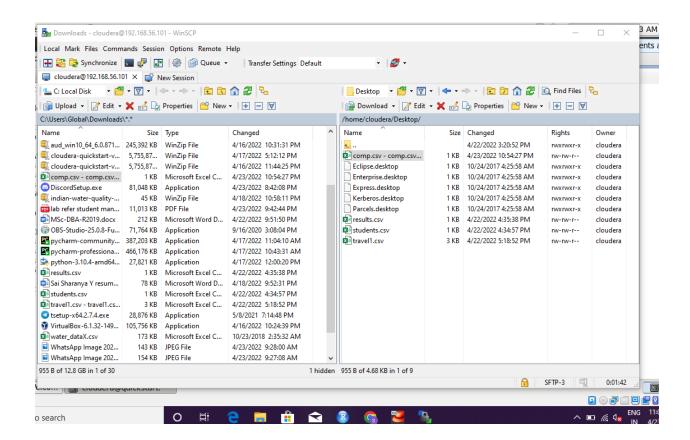
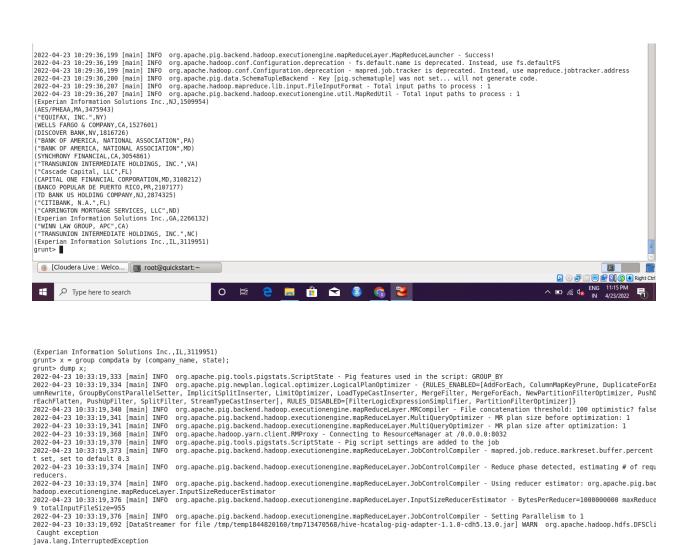
ADVANCE BIG DATA LAB ANALYTICS EXP - 4

19BTRCR043 SAI SHARANYA Y

To build a script which produces a report listing each Company & Dompany & State and number of complaints raised by them.



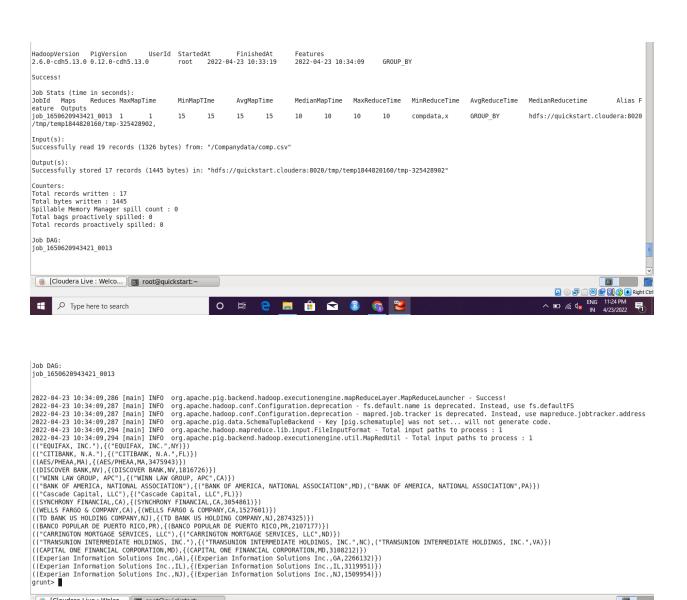
```
[cloudera@quickstart ~]$ hdfs dfs -mkdir /Companydata
   [cloudera@quickstart ~]$ hdfs dfs -ls /
   Found 9 items
   drwxr-xr-x
                                                   - cloudera supergroup
                                                                                                                                                                          0 2022-04-23 10:25 /Companydata
   drwxr-xr-x
                                                          cloudera supergroup
                                                                                                                                                                          0 2022-04-22 09:18 /TravelLab
                                                                                                                                                                          0 2017-10-23 09:15 /benchmarks
   drwxrwxrwx
                                                          hdfs
                                                                                              supergroup
                                                                                                                                                                          0 2022-04-22 02:59 /hbase
   drwxr-xr-x
                                                   - hbase
                                                                                              supergroup
                                                    - cloudera supergroup
                                                                                                                                                                          0 2022-04-23 09:46 /salarydata
   drwxr-xr-x
   drwxr-xr-x
                                                    - solr
                                                                                             solr
                                                                                                                                                                          0 2017-10-23 09:18 /solr
  drwxrwxrwt
                                                   - hdfs
                                                                                              supergroup
                                                                                                                                                                          0 2022-04-23 09:07 /tmp
                                                   - hdfs
                                                                                              supergroup
                                                                                                                                                                          0 2017-10-23 09:17 /user
   drwxr-xr-x
   drwxr-xr-x
                                                   - hdfs
                                                                                              supergroup
                                                                                                                                                                          0 2017-10-23 09:17 /var
   [cloudera@quickstart ~]$ hdfs dfs -put /home/cloudera/Desktop/comp.csv /Companydata
   [cloudera@quickstart ~]$ hdfs dfs -ls /Companydata
   Found 1 items
                                                                                                                                                                  955 2022-04-23 10:26 /Companydata/comp.csv
   -rw-r--r--
                                                1 cloudera supergroup
   [cloudera@quickstart ~]$
     [Oloudera Live : Welco...
[Signature of the content of t
                         Type here to search
 grunt>
 grunt>
grunt>
grunt> compdata = load '/Companydata/comp.csv' using PigStorage (',') as (company name : chararray, state : chararray, complaint : chararray);
2022-04-23 10:28:52,077 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2022-04-23 10:28:52,077 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.job.tracker is deprecated. Instead, use mapreduce.jobtracker.address
grunt- dump compdata;
2022-04-23 10:29:05,827 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig features used in the script: UNKNOWN
2022-04-23 10:29:05,828 [main] INFO org.apache.pig.newplan.logical.optimizer.LogicalPlanOptimizer - {RULES_ENABLED=[AddForEach, ColumnMapKeyPrune, DuplicateForEachColumnRewrite, GroupByConstParallelSetter, ImplicitSplitInserter, LimitOptimizer, LoadTypeCastInserter, MergeFilter, MergeForEach, NewPartitionFilterOptimizer, PushDownForEachFlatter, pushUpFilter, SplitFilter, StreamTypeCastInserter], RULES_DISABLED=[FilterLogicExpressionSimplifier, PartitionFilterOptimizer]}
2022-04-23 10:29:05,835 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MRCompiler - File concatenation threshold: 100 optimistier? false
2022-04-23 10:29:05,837 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiqueryOptimizer - MR plan size before optimization: 1
2022-04-23 10:29:05,837 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiqueryOptimizer - MR plan size after optimization: 1
2022-04-23 10:29:05,809 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiqueryOptimizer - MR plan size after optimization: 1
2022-04-23 10:29:05,807 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settings are added to the job
2022-04-23 10:29:05,807 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settings are added to the job
2022-04-23 10:29:05,807 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settings are added to the job
   grunt> dump compdata:
   test, set to default 0.3
2022-04-23 10:29:06,333 [DataStreamer for file /tmp/temp1844820160/tmp-554985555/hive-hbase-handler-1.1.0-cdh5.13.0.jar] WARN org.apache.hadoop.hdfs.DFSClient - Caugh
       exception
 t exception
java.lang.InterruptedException
at java.lang.Object.wait(Native Method)
at java.lang.Thread.join(Thread.java:1281)
at java.lang.Thread.join(Thread.java:1355)
                         at org.apache.hadoop.hdfs.DFSOutputStream$DataStreamer.closeResponder(DFSOutputStream.java:967)
                        at org.apache.hadoop.hdfs.DFSOutputStream$DataStreamer.endBlock(DFSOutputStream.java:705)
    [ [ Cloudera Live : Welco... ]  root@quickstart:~
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 HadoopVersion PigVersion L
2.6.0-cdh5.13.0 0.12.0-cdh5.13.0
                                                                                            UserId StartedAt
                                                                                                                                      2022-04-23 10:29:05
                                                                                                                                                                                                               2022-04-23 10:29:36
                                                                                                                                                                                                                                                                                   UNKNOWN
                                                                                                                   root
   Job Stats (time in seconds):
                                              Reduces MaxMapTime
                                                                                                                   MinMapTIme
                                                                                                                                                                  AvgMapTime
  JobId Maps
eature Outputs
                                                                                                                                                                                                               MedianMapTime MaxReduceTime MinReduceTime AvgReduceTime MedianReducetime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alias F
   job 1650620943421 0012 1
                                                                                                                                                                                                                                                           n/a
                                                                                                                                                                                                                                                                                                          compdata
                                                                                                                                                                                                                                                                                                                                                       MAP ONLY
                                                                                                                                                                                                                                                                                                                                                                                                      hdfs://quickstart.cloudera:8020
                                                                                                                                                                                                                                   n/a
                                                                                                                                                                                                                                                                                   n/a
     tmp/temp1844820160/tmp806086029,
  Input(s)
  Successfully read 19 records (1326 bytes) from: "/Companydata/comp.csv"
  Successfully stored 19 records (820 bytes) in: "hdfs://quickstart.cloudera:8020/tmp/temp1844820160/tmp806086029"
   Counters:
 Total records written : 19
Total bytes written : 820
Spillable Memory Manager spill count : 0
Total bags proactively spilled: 0
  Total records proactively spilled: 0
 Job DAG:
job_1650620943421_0012
   [Oloudera Live: Welco...
[Image: Image: I
                                                                                                                                                                                                                                                                                                                                                                                                                          🖸 🕒 🗐 🗐 🗐 🚫 🕙 Right Ctrl
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                                                                                                                                                                                                                                                                                                                                                                                                                 ^ II / 4x
```



at org.apache.hadoop.hdfs.DFSOutputStream\$DataStreamer.closeResponder(DFSOutputStream.java:967) at org.apache.hadoop.hdfs.DFSOutputStream\$DataStreamer.endBlock(DFSOutputStream.java:705) [Cloudera Live : Welco...
Image: root@quickstart:~

Σ.

at java.lang.Object.wait(Native Method) at java.lang.Thread.join(Thread.java:1281) at java.lang.Thread.join(Thread.java:1355)



```
((Experian Information Solutions Inc.,NJ), ((Experian Information Solutions Inc.,NJ,1509954)))
grunt> y = foreach x generate group, COUNT(compdata.complaint);
grunt> grunts generate group, COUNT(compdata.complaint);
grunt> grunts generate group, COUNT(compdata.complaint);
grunt> grunts generate group, GROUP BY
grunts grunts generate group, Supplied generate g
  2022-04-23 10:42:40.012 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLaver.JobControlCompiler - Reduce phase detected, estimating # of required
   reducers
  Teducers.

2022-04-23 10:42:40,012 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Using reducer estimator: org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator
2022-04-23 10:42:40,014 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator - BytesPerReducer=1000000000 maxReducers=99
  9 totalInputFileSize=955
 2022-04-23 10:42:40,014 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting Parallelism to 1 2022-04-23 10:42:40,356 [DataStreamer for file /tmp/temp1844820160/tmp-2023882259/jdo-api-3.0.1.jar] WARN org.apache.hadoop.hdfs.DFSClient - Caught exception java.lang.InterruptedException at java.lang.Object.wait(Native Method)
                       at java.lang.Thread.join(Thread.java:1281)
at java.lang.Thread.join(Thread.java:1355)
at org.apache.hadoop.hdfs.DFSOUtputStreamsDataStreamer.closeResponder(DFSOutputStream.java:967)
at org.apache.hadoop.hdfs.DFSOutputStreamsDataStreamer.endBlock(DFSOutputStream.java:705)
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                                                                                                                                           O 🛱 🦰
                                                                                                                                                                                                                                                                                                                                                                                                              ^ 🗊 🛱 🔩
                                          PigVersion
                                                                                           UserId StartedAt
 HadoopVersion
                                                                                                                                                                                                               Features
 2.6.0-cdh5.13.0 0.12.0-cdh5.13.0
                                                                                                                                       2022-04-23 10:42:40
                                                                                                                                                                                                              2022-04-23 10:43:20
                                                                                                                 root
                                                                                                                                                                                                                                                                                 GROUP BY
 Job Stats (time in seconds):
 JobId Maps Reduces M
eature Outputs
job_1650620943421_0014 1
                                            Reduces MaxMapTime
                                                                                                                  MinMapTIme
                                                                                                                                                                AvgMapTime
                                                                                                                                                                                                              MedianMapTime MaxReduceTime MinReduceTime AvqReduceTime MedianReducetime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alias F
                                                                                                                                                                                                                                                                                                         compdata.x.v
                                                                                                                                                                                                                                                                                                                                                     GROUP BY.COMBINER
                                                                                                                                                                                                                                                                                                                                                                                                                           hdfs://quickstart.cloud
  era:8020/tmp/temp1844820160/tmp-1698350341.
 Input(s):
Successfully read 19 records (1326 bytes) from: "/Companydata/comp.csv
 Output(s):
 Successfully stored 17 records (620 bytes) in: "hdfs://quickstart.cloudera:8020/tmp/temp1844820160/tmp-1698350341"
 Counters:
Total records written : 17
Total bytes written : 620
Spillable Memory Manager spill count : 0
Total bags proactively spilled: 0
Total records proactively spilled: 0
Job DAG:
job_1650620943421_0014
 [ [Cloudera Live : Welco... ] □ root@quickstart:~
                                                                                                                                                                                                                                                                                                                                                                                                                                                             FNG 11:27 PM
   O Tune here to search
2022-04-23 10:43:20,684 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Success!
2022-04-23 10:43:20,685 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2022-04-23 10:43:20,686 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.job.tracker is deprecated. Instead, use mapreduce.jobtracker.address
2022-04-23 10:43:20,686 [main] INFO org.apache.pig.data.SchemaTupleBackend - Key [pig.schematuple] was not set... will not generate code.
2022-04-23 10:43:20,702 [main] INFO org.apache.pig.data.SchemaTupleBackend - Key [pig.schematuple] was not set... will not generate code.
2022-04-23 10:43:20,702 [main] INFO org.apache.pig.backend.hadoop.executionengine.util.MapRedUtil - Total input paths to process : 1
   (("EQUIFAX, INC."),1)
(("CITIBANK, N.A."),1)
((AES/PHEAA,MA),1)
((DISCOVER BANK,NV),1)
   (("WINN LAW GROUP, APC"),1)
(("BANK OF AMERICA, NATIONAL ASSOCIATION"),2)
(("Cascade Capital, LLC"),1)
((SYNCHRONY FINANCIAL,CA),1)
((SYNCHRONY FINANCIAL,CA),1)
((TO BANK US HOLDING COMPANY,CA),1)
((TO BANK US HOLDING COMPANY,NJ),1)
((BANCO POPULAR DE PUERTO RICO,PR),1)
(("CARRINGTON MORTGAGE SERVICES, LLC"),1)
(("TARNSUNION INTERMEDIATE HOLDINGS, INC."),2)
((CAPITAL ONE FINANCIAL CORPORATION,MD),1)
((Experian Information Solutions Inc.,GA),1)
((Experian Information Solutions Inc.,IL),1)
((Experian Information Solutions Inc.,NJ),1)
grunt> ■
```

```
grunt> z = ORDER y BY $1 DESC;
grunt> dump z;
2022-04-23 10:44:49,587 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig features used in the script: GROUP BY,ORDER BY
2022-04-23 10:44:49,588 [main] INFO org.apache.pig.newplan.logical.optimizer.LogicalPlanOptimizer - {RULES ENABLED=[AddForEach, ColumnMapKeyPrune, DuplicateForEachCol
umnRewrite, GroupByConstParallelSetter, ImplicitSplitInserter, LimitOptimizer, LogalTypeCastInserter, MergeFilter, MergeForEach, NewPartitionFilterOptimizer, PushDownForEachFlatten, PushUpFilter, SplitFilter, StreamTypeCastInserter], RULES DISABLED=[FilterLogicExpressionSimplifier, PartitionFilterOptimizer]}
2022-04-23 10:44:49,600 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.Mcompiler - File concatenation threshold: 100 optimistic? false
2022-04-23 10:44:49,610 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.CombinerOptimizer - Choosing to move algebraic foreach to combiner
2022-04-23 10:44:49,610 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size before optimization: 3
2022-04-23 10:44:49,610 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size after optimization: 3
2022-04-23 10:44:49,637 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to ResourceManager at 70.00.08.08032
2022-04-23 10:44:49,630 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settings are added to the job
2022-04-23 10:44:49,661 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - mapred.job.reduce.markreset.buffer.percent is no
t set, set to default 0.3
  t set, set to default 0.3
  2022-04-23 10:44:49,664 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Reduce phase detected, estimating # of required
 reducers.
2022-04-23 10:44:49,664 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Using reducer estimator: org.apache.pig.backend.
 hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator
2022-04-23 10:44:49,666 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator - BytesPerReducer=1000000000 maxReducers=99
 2022-04-23 10:44:49,060 [main] INFO org.apache.pig.backend.nadoop.executionengine.mapkeduceLayer.inputSizeReducerEstimator - BytesPerkeducer=1000000000 maxkeducers=99
9 totalInputFileSize=955
2022-04-23 10:44:49,666 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting Parallelism to 1
2022-04-23 10:44:50,013 [DataStreamer for file /tmp/temp1844820160/tmp589044177/hive-hbase-handler-1.1.0-cdh5.13.0.jar] WARN org.apache.hadoop.hdfs.DFSClient - Caught
    exception
 java.lang.InterruptedException
at java.lang.Object.wait(Native Method)
at java.lang.Thread.join(Thread.java:1281)
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 Successi
  Job Stats (time in seconds):
                                                                                                                                                                   MedianMapTime MaxReduceTime MinReduceTime AvgReduceTime MedianReducetime
                                   Reduces MaxMapTime
                                                                                           MinMapTIme
                                                                                                                                AvgMapTime
 JobId Maps
eature Outputs
                                                                                                                                                                                                                                                                                                                                                                          Alias F
                                                                                                                                                                                                                                           compdata,x,y
SAMPLER
 job_1650620943421_0015 1
job_1650620943421_0016 1
job_1650620943421_0017 1
                                                                                                                                                                                                                                                                              GROUP BY, COMBINER
                                                                                                                                                                                                                                                              ORDER BY
                                                                                                                                                                                                                                                                                                  hdfs://quickstart.cloudera:8020/tmp/tem
 p1844820160/tmp-1261696629,
 Input(s):
Successfully read 19 records (1326 bytes) from: "/Companydata/comp.csv"
 Successfully stored 17 records (620 bytes) in: "hdfs://quickstart.cloudera:8020/tmp/temp1844820160/tmp-1261696629"
Counters:
Total records written : 17
Total bytes written : 620
Spillable Memory Manager spill count : 0
Total bags proactively spilled: 0
Total records proactively spilled: 0
  Job DAG:
 job_1650620943421_0015 ->
job_1650620943421_0016 ->
job_1650620943421_0017
                                                                         job_1650620943421_0016,
job_1650620943421_0017,
```

