

ADVANCE BIG DATA ANALYTICS

LAB - 3

19BTRCR043
SAI SHARANYA Y

Georgia Salary/Travel data provided as CSV file with this assignment for the Fiscal Year 2010 and Organization Type of Local Boards of Education, produce a distinct list of all Job Titles along with the total number of employees aligned with each Job Title & the minimum/maximum/average salaries for each of the identified Job Titles

- Store the given input file salaryTravelReport.csv into the HDFS Location
- Load the salary file and declare its structure
- Loop through the input data to clean up the number fields. Take out the commas from the salary and travel fields and cast to a float
- Trim down to just Local Boards of Education
- Further trim it down to just be for the year in question
- Bucket them up by the job title
- Loop through the titles and check how many are there under each title
- Determine the minimum, maximum and average salaries for every title
- Guarantee the order on the way out
- Dump the results on the console
- Save results back to HDFS.

Downloads - cloudera@192.168.56.101 - WinSCP

Local Mark Files Commands Session Options Remote Help

Synchronize Queue Transfer Settings Default

cloudera@192.168.56.101 X New Session

C:\Local Disk Desktop Find Files

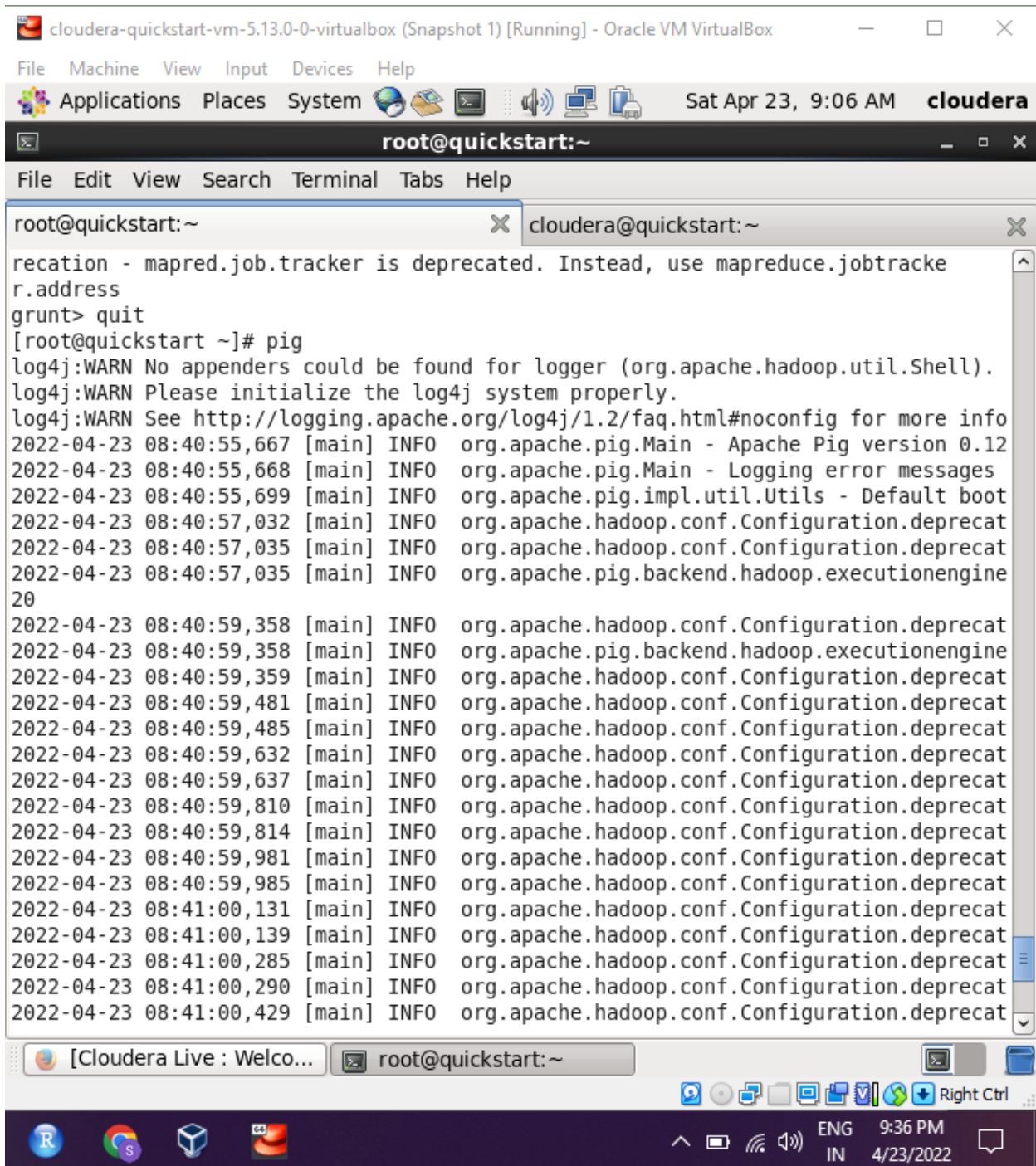
Upload Edit Properties New Download Edit Properties New

C:\Users\Global\Downloads\ /home/cloudera/Desktop/

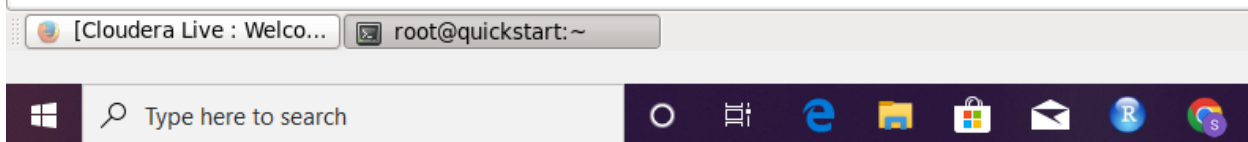
Name	Size	Type	Changed	Name	Size	Changed	Rights	Owner
..		Parent directory	4/22/2022 5:18:41 PM	..		4/22/2022 3:20:52 PM	rw-rw-r--	cloudera
cloudera-quickstart-v...		File folder	4/17/2022 11:31:34 PM	Eclipse.desktop	1 KB	10/24/2017 4:25:58 AM	rw-rw-r--	cloudera
Craftbeer dataset		File folder	4/17/2022 11:30:46 PM	Enterprise.desktop	1 KB	10/24/2017 4:25:58 AM	rw-rw-r--	cloudera
Anaconda3-2021.11-...	522,513 KB	Application	4/17/2022 10:23:35 AM	Express.desktop	1 KB	10/24/2017 4:25:58 AM	rw-rw-r--	cloudera
archive.zip	54 KB	WinZip File	4/17/2022 11:24:25 PM	Kerberos.desktop	1 KB	10/24/2017 4:25:58 AM	rw-rw-r--	cloudera
aud_win10_64_6.0.871...	245,392 KB	WinZip File	4/16/2022 10:31:31 PM	Parcels.desktop	1 KB	10/24/2017 4:25:58 AM	rw-rw-r--	cloudera
cloudera-quickstart-v...	5,755,87...	WinZip File	4/17/2022 5:12:12 PM	results.csv	1 KB	4/22/2022 4:35:38 PM	rw-rw-r--	cloudera
cloudera-quickstart-v...	5,755,87...	WinZip File	4/16/2022 11:44:25 PM	students.csv	1 KB	4/22/2022 4:34:57 PM	rw-rw-r--	cloudera
indian-water-quality-...	45 KB	WinZip File	4/18/2022 10:58:11 PM	travel1.csv	3 KB	4/22/2022 5:18:52 PM	rw-rw-r--	cloudera
OBS-Studio-25.0.8-Fu...	71,764 KB	Application	9/16/2020 3:08:04 PM					
pycharm-community...	387,203 KB	Application	4/17/2022 11:04:10 AM					
pycharm-professiona...	466,176 KB	Application	4/17/2022 10:43:31 AM					
python-3.10.4-amd64...	27,821 KB	Application	4/17/2022 12:00:20 PM					
results.csv	1 KB	Microsoft Excel C...	4/22/2022 4:35:38 PM					
Sai Sharanya Y resum...	78 KB	Microsoft Word D...	4/18/2022 9:52:31 PM					
students.csv	1 KB	Microsoft Excel C...	4/22/2022 4:34:57 PM					
travel1.csv - travel1.cs...	3 KB	Microsoft Excel C...	4/22/2022 5:18:52 PM					
tsetup-x64.2.7.4.exe	28,876 KB	Application	5/8/2021 7:14:48 PM					
VirtualBox-6.1.32-149...	105,756 KB	Application	4/16/2022 10:24:39 PM					
water_dataX.csv	173 KB	Microsoft Excel C...	10/23/2018 2:35:32 AM					
WinSCP-5.19.2-Setup....	11,143 KB	Application	8/5/2021 10:38:38 AM					

2.37 KB of 12.7 GB in 1 of 22 1 hidden 0 B of 3.75 KB in 0 of 8

SFTP-3 1:48:58



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n., org.apache.pig.impl.builtin.]
Details at logfile: /root/pig_1650728455585.log
grunt> SalaryData = load '/salarydata/travell.csv' using PigStorage(',') as (name
: chararray, title : chararray, salary : chararray, benefits : chararray, travel
: chararray, year : chararray, orgtype : chararray);
grunt> dump SalaryData
2022-04-23 09:07:31,051 [main] INFO org.apache.pig.tools.pigstats.ScriptState - P
ig features used in the script: UNKNOWN
2022-04-23 09:07:31,101 [main] INFO org.apache.pig.newplan.logical.optimizer.Logi
calPlanOptimizer - {RULES_ENABLED=[AddForEach, ColumnMapKeyPrune, DuplicateForEach
ColumnRewrite, GroupByConstParallelSetter, ImplicitSplitInserter, LimitOptimizer,
LoadTypeCastInserter, MergeFilter, MergeForEach, NewPartitionFilterOptimizer, Push
DownForEachFlatten, PushUpFilter, SplitFilter, StreamTypeCastInserter], RULES_DISA
BLED=[FilterLogicExpressionSimplifier, PartitionFilterOptimizer]}
2022-04-23 09:07:31,434 [main] INFO org.apache.pig.backend.hadoop.executionengine
.mapReduceLayer.MRCompiler - File concatenation threshold: 100 optimistic? false
2022-04-23 09:07:31,470 [main] INFO org.apache.pig.backend.hadoop.executionengine
.mapReduceLayer.MultiQueryOptimizer - MR plan size before optimization: 1
2022-04-23 09:07:31,471 [main] INFO org.apache.pig.backend.hadoop.executionengine
.mapReduceLayer.MultiQueryOptimizer - MR plan size after optimization: 1
2022-04-23 09:07:31,764 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Conne
cting to ResourceManager at /0.0.0.0:8032
2022-04-23 09:07:32,344 [main] INFO org.apache.pig.tools.pigstats.ScriptState - P
ig script settings are added to the job
2022-04-23 09:07:32,463 [main] INFO org.apache.hadoop.conf.Configuration.deprecate
ion - mapred.job.reduce.markreset.buffer.percent is deprecated. Instead, use mapre
duce.reduce.markreset.buffer.percent
2022-04-23 09:07:32,463 [main] INFO org.apache.pig.backend.hadoop.executionengine
.mapReduceLayer.JobControlCompiler - mapred.job.reduce.markreset.buffer.percent is
not set, set to default 0.3
```



```
root@quickstart:~ cloudera@quickst

HadoopVersion  PigVersion  UserId  StartedAt  FinishedAt  Features
2.6.0-cdh5.13.0 0.12.0-cdh5.13.0 root 2022-04-23 09:07:32 2022-04-23
09:08:11 UNKNOWN

Success!

Job Stats (time in seconds):
JobId  Maps  Reduces  MaxMapTime  MinMapTime  AvgMapTime  MedianMapT
ime  MaxReduceTime  MinReduceTime  AvgReduceTime  MedianReducetime  Al
ias  Feature Outputs
job_1650620943421_0002 1 0 7 7 7 7 n/a n/
a n/a n/a SalaryData MAP_ONLY hdfs://quickstart.cloudera
:8020/tmp/temp1844820160/tmp-1222664869,

Input(s):
Successfully read 25 records (2809 bytes) from: "/salarydata/travel1.csv"

Output(s):
Successfully stored 25 records (2808 bytes) in: "hdfs://quickstart.cloudera:8020/t
mp/temp1844820160/tmp-1222664869"

Counters:
Total records written : 25
Total bytes written : 2808
Spillable Memory Manager spill count : 0
Total bags proactively spilled: 0
Total records proactively spilled: 0

Job DAG:
```

[Cloudera Live : Welco...]

root@quickstart:~

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root@quickstart:~

✕ cloudera@quickstart:~

A INDEPENDENT SCHOOL SYSTEM)
(ABDULLAH DIANA,SPECIAL ED PARAPRO/AIDE,10934.94,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDULLAH NADIYAH W,GRADES 6-8 TEACHER,75109.92,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDULLAH RHONDALYN Y,SPECIAL ED PARAPRO/AIDE,28649.34,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDULLAH VALANCIA F,SPECIAL ED PARAPRO/AIDE,28735.02,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDULLAH-MUSA KWELI,SCHOOL PSYCHOLOGIST,83040.78,505.2,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUR-RAHMAN AMANI ALI,SPECIAL EDUCATION INTERRELATED,55430.71,208.5,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUR-RAHMAN LUQMAN,GRADES 9-12 TEACHER,54906.3,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUR-RAHMAN SAFA,SUBSTITUTE TEACHER,7561.53,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUR-RASHID JIHAN,GRADES 9-12 TEACHER,75476.82,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUS-SABOOR ISMAIL,MAINTENANCE PERSONNEL,58748.78,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUS-SAMAD DAWN CHRISTINA,GRADES 9-12 TEACHER,67290.44,1264.06,LBOE,2011,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABELLA-SLY INGRID J,GRADE 5 TEACHER,77381.8,529.29,LBOE,2011,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABERE ROCHELLE J,KINDERGARTEN TEACHER,79412.96,0,LBOE,2011,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABERNATHY MICHEAL A,MAINTENANCE PERSONNEL,40511.89,0,LBOE,2011,ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABERNATHY WINIFRED S,SUBSTITUTE TEACHER,21580,0,LBOE,2010,ATLANTA INDEPENDENT SCH



```
NDENT SCHOOL SYSTEM)
grunt> OnlySchoolBoards = filter SalaryData by travel == 'LBOE' ;
2022-04-23 09:15:19,048 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default
.name is deprecated. Instead, use fs.defaultFS
2022-04-23 09:15:19,048 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.job
.tracker is deprecated. Instead, use mapreduce.jobtracker.address
grunt> dump OnlySchoolBoards;
2022-04-23 09:15:50,621 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig features used
in the script: FILTER
2022-04-23 09:15:50,626 [main] INFO org.apache.pig.newplan.logical.optimizer.LogicalPlanOptimizer
- {RULES_ENABLED=[AddForEach, ColumnMapKeyPrune, DuplicateForEachColumnRewrite, GroupByConstParal
lelSetter, ImplicitSplitInserter, LimitOptimizer, LoadTypeCastInserter, MergeFilter, MergeForEach,
NewPartitionFilterOptimizer, PushDownForEachFlatten, PushUpFilter, SplitFilter, StreamTypeCastIns
erter], RULES_DISABLED=[FilterLogicExpressionSimplifier, PartitionFilterOptimizer]}
2022-04-23 09:15:50,659 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.
MRCompiler - File concatenation threshold: 100 optimistic? false
2022-04-23 09:15:50,662 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.
MultiQueryOptimizer - MR plan size before optimization: 1
2022-04-23 09:15:50,662 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.
MultiQueryOptimizer - MR plan size after optimization: 1
2022-04-23 09:15:50,703 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to Resourc
eManager at /0.0.0.0:8032
2022-04-23 09:15:50,707 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settin
gs are added to the job
2022-04-23 09:15:50,731 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.
JobControlCompiler - mapred.job.reduce.markreset.buffer.percent is not set, set to default 0.3
2022-04-23 09:15:51,314 [DataStreamer for file /tmp/temp1844820160/tmp-1568955384/jdo-api-3.0.1.ja
```



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root@quickstart:~ cloudera@quickstart:~
Success!

Job Stats (time in seconds):
JobId  Maps  Reduces MaxMapTime  MinMapTime  AvgMapTime  MedianMapTime  MaxReduceT
ime    MinReduceTime  AvgReduceTime  MedianReductime  Alias  Feature  Outputs
job_1650620943421_0003  1  0  7  7  7  7  n/a  n/a  n/a  n/
a    OnlySchoolBoards,SalaryData  MAP_ONLY  hdfs://quickstart.cloudera:8020/tmp/temp18
44820160/tmp1437673305,

Input(s):
Successfully read 25 records (2809 bytes) from: "/salarydata/travell.csv"

Output(s):
Successfully stored 25 records (2808 bytes) in: "hdfs://quickstart.cloudera:8020/tmp/temp184482016
0/tmp1437673305"

Counters:
Total records written : 25
Total bytes written : 2808
Spillable Memory Manager spill count : 0
Total bags proactively spilled: 0
Total records proactively spilled: 0

Job DAG:
job_1650620943421_0003

2022-04-23 09:16:21,788 [main] INFO  org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.
MapReduceLauncher - Success!
2022-04-23 09:16:21,788 [main] INFO  org.apache.hadoop.conf.Configuration.deprecation - fs.default
```



```
root@quickstart: ~
(ABDUL-RAZACQ SALAHUD-DIN, INSTRUCTIONAL SPECIALIST P-8, 45832.92, 0, LBOE, 2010, ATLANTA INDEPENDENT SC
HOOOL SYSTEM)
(ABDULLAH DIANA, SPECIAL ED PARAPRO/AIDE, 10934.94, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDULLAH NADIYAH W, GRADES 6-8 TEACHER, 75109.92, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDULLAH RHONDALYN Y, SPECIAL ED PARAPRO/AIDE, 28649.34, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYST
EM)
(ABDULLAH VALANCIA F, SPECIAL ED PARAPRO/AIDE, 28735.02, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTE
M)
(ABDULLAH-MUSA KWELI, SCHOOL PSYCHOLOGIST, 83040.78, 505.2, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTE
M)
(ABDUR-RAHMAN AMANI ALI, SPECIAL EDUCATION INTERRELATED, 55430.71, 208.5, LBOE, 2010, ATLANTA INDEPENDEN
T SCHOOL SYSTEM)
(ABDUR-RAHMAN LUQMAN, GRADES 9-12 TEACHER, 54906.3, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUR-RAHMAN SAFA, SUBSTITUTE TEACHER, 7561.53, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUR-RASHID JIHAN, GRADES 9-12 TEACHER, 75476.82, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUS-SABOOR ISMAIL, MAINTENANCE PERSONNEL, 58748.78, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABDUS-SAMAD DAWN CHRISTINA, GRADES 9-12 TEACHER, 67290.44, 1264.06, LBOE, 2011, ATLANTA INDEPENDENT SCH
OOL SYSTEM)
(ABELLA-SLY INGRID J, GRADE 5 TEACHER, 77381.8, 529.29, LBOE, 2011, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABERE ROCHELLE J, KINDERGARTEN TEACHER, 79412.96, 0, LBOE, 2011, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABERNATHY MICHEAL A, MAINTENANCE PERSONNEL, 40511.89, 0, LBOE, 2011, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABERNATHY WINIFRED S, SUBSTITUTE TEACHER, 21580, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABRAMS EARLENE D, PARAPROFESSIONAL/TEACHER AIDE, 33471.12, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SY
STEM)
(ABROMITIS THERESA, KINDERGARTEN TEACHER, 50862.08, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABRON CHRISTINE B, GRADES K-5 TEACHER, 3948.84, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ABYDOS-HARRIS TARA A, GRADE 9 TEACHER, 65868.84, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYSTEM)
(ACKER CAROLYN A, PARAPROFESSIONAL/TEACHER AIDE, 18381.88, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYS
TEM)
grunt> █

[Cloudera Live : Welco... root@quickstart: ~

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(ACKER CAROLYN A, PARAPROFESSIONAL/TEACHER AIDE, 18381.88, 0, LBOE, 2010, ATLANTA INDEPENDENT SCHOOL SYS
TEM)
grunt> OnlySchoolBoardfor2010 = load OnlySchoolBoards by year == '2010';

2022-04-23 09:29:33,352 [main] INFO org.apache.pig.tools.grunt.grunt - ERROR 1200: <LINE 3, COLUMN 30> mismatched input 'ONLYSCHOOLBOARDS' expecting quoted string
Details at logfile: /root/pig_165072845585.log
grunt> byTitle = GROUP OnlySchoolBoards by title;
grunt> dump byTitle;
2022-04-23 09:29:33,357 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig features used in the script: GROUP BY, FILTER
2022-04-23 09:29:33,358 [main] INFO org.apache.pig.newplan.logical.optimizer.LogicalPlanOptimizer - {RULES_ENABLED=[AddForEach, ColumnMapKeyPrune, DuplicateForEachCol
umnRewrite, GroupByConstParallelSetter, ImplicitSplitInserter, LimitOptimizer, LoadTypeCastInserter, MergeFilter, MergeForEach, NewPartitionFilterOptimizer, PushDownFlo
rEachFlatten, PushUpFilter, SplitFilter, StreamTypeCastInserter], RULES_DISABLED=[FilterLogicExpressionSimplifier, PartitionFilterOptimizer]}
2022-04-23 09:29:33,375 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MRCompiler - File concatenation threshold: 100 optimistic? false
2022-04-23 09:29:33,381 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size before optimization: 1
2022-04-23 09:29:33,381 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size after optimization: 1
2022-04-23 09:29:33,410 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to ResourceManager at /0.0.0.0:8032
2022-04-23 09:29:33,415 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settings are added to the job
2022-04-23 09:29:33,439 [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
2022-04-23 09:29:33,439 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Reduce phase detected, estimating # of required
reducers.
2022-04-23 09:29:33,440 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Using reducer estimator: org.apache.pig.backend.
hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator
2022-04-23 09:29:33,443 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator - BytesPerReducer=1000000000 maxReducers=99
9 totalInputFileSize=2436
2022-04-23 09:29:33,443 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting Parallelism to 1
2022-04-23 09:29:33,800 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - creating jar file Job8725556231275258924.jar
2022-04-23 09:29:37,663 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - jar file Job8725556231275258924.jar created
2022-04-23 09:29:37,682 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting up single store job

[Cloudera Live : Welco... root@quickstart: ~

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ENG 10:00 PM
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2022-04-23 09:30:13,425 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapreduceLayer.MapReduceLauncher - 100% complete
2022-04-23 09:30:13,425 [main] INFO org.apache.pig.tools.pigstats.SimplePigStats - Script Statistics:
```

HadoopVersion	PigVersion	UserId	StartedAt	FinishedAt	Features
2.6.0-cdh5.13.0	0.12.0-cdh5.13.0	root	2022-04-23 09:29:33	2022-04-23 09:30:13	GROUP_BY,FILTER

Success!

Job Stats (time in seconds):

JobId	Maps	Reduces	MaxMapTime	MinMapTime	AvgMapTime	MedianMapTime	MaxReduceTime	MinReduceTime	AvgReduceTime	MedianReduceTime	Alias
feature Outputs											F
job_1650620943421_0004	1	1	7	7	7	9	9	9	9	OnlySchoolBoards,SalaryData,byTitle	GROUP_BY
quickstart.cloudera:8020/tmp/temp1844820160/tmp652322135,											hdfs://

Input(s):

Successfully read 25 records (2809 bytes) from: "/salarydata/travell.csv"

Output(s):

Successfully stored 14 records (3180 bytes) in: "hdfs://quickstart.cloudera:8020/tmp/temp1844820160/tmp652322135"

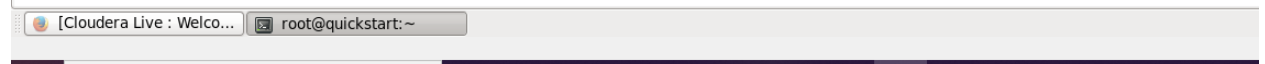
Counters:

Total records written : 14
Total bytes written : 3180
Spillable Memory Manager spill count : 0
Total bags proactively spilled: 0
Total records proactively spilled: 0

Job DAG:



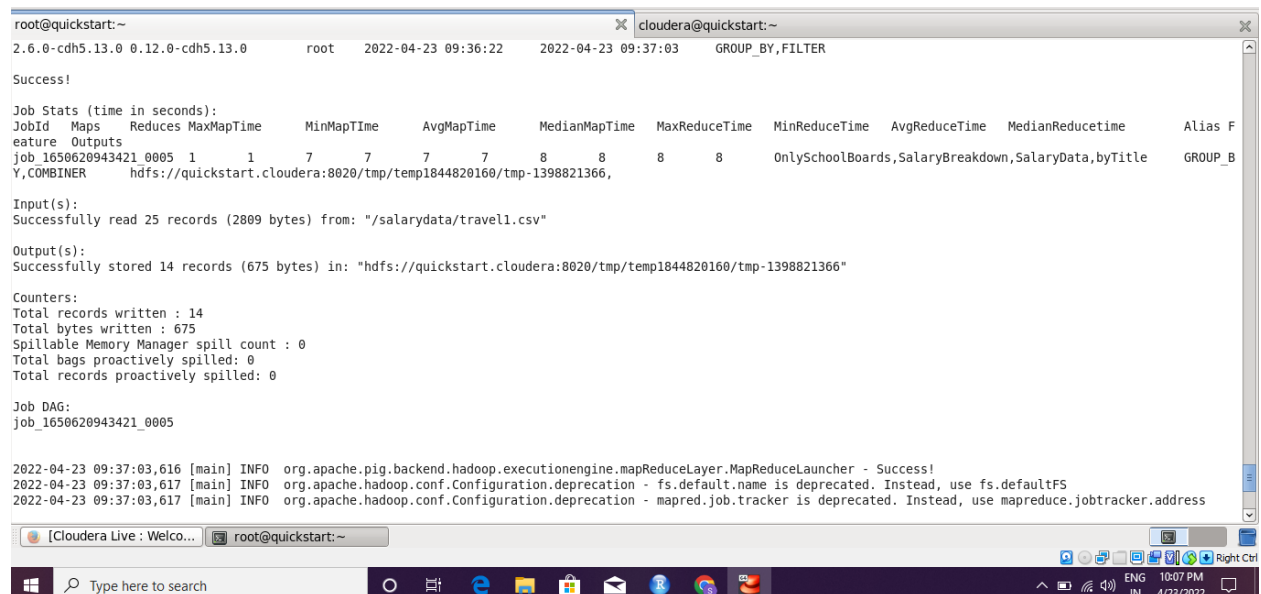
```
2022-04-23 09:30:13,591 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS.
2022-04-23 09:30:13,591 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.job.tracker is deprecated. Instead, use mapred.job.tracker.address.
2022-04-23 09:30:13,591 [main] INFO org.apache.pig.data.SchemaTupleBackend - Key [pig.schematuple] was not set... will not generate code.
2022-04-23 09:30:13,605 [main] INFO org.apache.hadoop.mapreduce.lib.input.FileInputFormat - Total input paths to process : 1
2022-04-23 09:30:13,605 [main] INFO org.apache.pig.backend.hadoop.executionengine.util.MapRedUtil - Total input paths to process : 1
(GRADE 4 TEACHER,{(ABBOTT RYAN V,GRADE 4 TEACHER,56567.24,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(GRADE 5 TEACHER,{(ABELLA-SLY INGRID J,GRADE 5 TEACHER,77381.8,529.29,LBOE,2011,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(GRADE 9 TEACHER,{(ABYDOS-HARRIS TARA A,GRADE 9 TEACHER,65868.84,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(GRADES 6-8 TEACHER,{(ABDULLAH NADIYAH W,GRADES 6-8 TEACHER,75109.92,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(GRADES K-5 TEACHER,{(ABRON CHRISTINE B,GRADES K-5 TEACHER,3948.84,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABBOD CLAUDIA MORA,GRADES
E,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(SUBSTITUTE TEACHER,{(ABERNATHY WINIFRED S,SUBSTITUTE TEACHER,21580,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABDUR-RAHMAN SAFA,SUBSTITI
,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(GRADES 9-12 TEACHER,{(ABBOTT DEEDEE W,GRADES 9-12 TEACHER,52122.1,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABDUS-SAMAD DAWN CHRISTINA
.44,1264.06,LBOE,2011,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABDUR-RASHID JIHAN,GRADES 9-12 TEACHER,75476.82,0,LBOE,2010,ATLANTA INDEPENDENT SCH
LUQMAN,GRADES 9-12 TEACHER,54906.3,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABDUL-JABBAR KHADEEJA,GRADES 9-12 TEACHER,16791.73,0,LBOE,;
CHOOH SYSTEM)})
(SCHOOL PSYCHOLOGIST,{(ABDULLAH-MUSA KWELI,SCHOOL PSYCHOLOGIST,83040.78,505.2,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(KINDERGARTEN TEACHER,{(ABROMITIS THERESA,KINDERGARTEN TEACHER,50862.08,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABERE ROCHELLE J,KINDI
0,LBOE,2011,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(MAINTENANCE PERSONNEL,{(ABERNATHY MICHEAL A,MAINTENANCE PERSONNEL,40511.89,0,LBOE,2011,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABDUS-SABOOR ISMA:
8748.78,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(SPECIAL ED PARAPRO/AIDE,{(ABDULLAH VALANCIA F,SPECIAL ED PARAPRO/AIDE,28735.02,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABDULLAH RHONI
/AIDE,28649.34,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABDULLAH DIANA,SPECIAL ED PARAPRO/AIDE,10934.94,0,LBOE,2010,ATLANTA INDEPENDEN
(INSTRUCTIONAL SPECIALIST P-8,{(ABDUL-RAZACQ SALAHUD-DIN,INSTRUCTIONAL SPECIALIST P-8,45832.92,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM):
(PARAPROFESSIONAL/TEACHER AIDE,{(ACKER CAROLYN A,PARAPROFESSIONAL/TEACHER AIDE,18381.88,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM),(ABRAM:
AL/TEACHER AIDE,33471.12,0,LBOE,2010,ATLANTA INDEPENDENT SCHOOL SYSTEM)})
(SPECIAL EDUCATION INTERRELATED,{(ABDUR-RAHMAN AMANI ALI,SPECIAL EDUCATION INTERRELATED,55430.71,208.5,LBOE,2010,ATLANTA INDEPENDENT SCHOOL S'
grunt>
```



```

Details at logfile: /root/pig_1650/28455585.log
grunt> SalaryBreakdown = FOREACH byTitle GENERATE group, COUNT(OnlySchoolBoards.salary), MIN(OnlySchoolBoards.salary), MAX(OnlySchoolBoards.salary);
grunt> dump SalaryBreakdown;
2022-04-23 09:36:22,854 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig features used in the script: GROUP_BY,FILTER
2022-04-23 09:36:22,856 [main] INFO org.apache.pig.newplan.logical.optimizer.LogicalPlanOptimizer - {RULES_ENABLED=[AddForEach, ColumnMapKeyPrune, DuplicateForEachCol
umnRewrite, GroupByConstParallelSetter, ImplicitSplitInserter, LimitOptimizer, LoadTypeCastInserter, MergeFilter, MergeForEach, NewPartitionFilterOptimizer, PushDownFo
rEachFlatten, PushUpFilter, SplitFilter, StreamTypeCastInserter], RULES_DISABLED=[FilterLogicExpressionSimplifier, PartitionFilterOptimizer]}
2022-04-23 09:36:22,876 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MRCCompiler - File concatenation threshold: 100 optimistic? false
2022-04-23 09:36:22,888 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.CombinerOptimizer - Choosing to move algebraic foreach to combiner
2022-04-23 09:36:22,898 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size before optimization: 1
2022-04-23 09:36:22,928 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size after optimization: 1
2022-04-23 09:36:22,931 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at /0.0.0.0:8032
2022-04-23 09:36:22,978 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settings are added to the job
2022-04-23 09:36:22,978 [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
2022-04-23 09:36:22,978 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Reduce phase detected, estimating # of required
reducers.
2022-04-23 09:36:22,978 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Using reducer estimator: org.apache.pig.backend.
hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator
2022-04-23 09:36:22,985 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator - BytesPerReducer=1000000000 maxReducers=99
9 totalInputFileSize=2436
2022-04-23 09:36:22,985 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting Parallelism to 1
2022-04-23 09:36:23,527 [DataStreamer for file /tmp/temp1844820160/tmp1110624421/hive-hcatalog-pig-adapter-1.1.0-cdh5.13.0.jar] WARN org.apache.hadoop.hdfs.DFSClnt
- Caught exception
java.lang.InterruptedException

```



Job DAG:
job_1650620943421_0005

```
2022-04-23 09:37:03,616 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Success!
2022-04-23 09:37:03,617 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2022-04-23 09:37:03,617 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.job.tracker is deprecated. Instead, use mapreduce.jobtracker.address
2022-04-23 09:37:03,617 [main] INFO org.apache.pig.data.SchemaTupleBackend - Key [pig.schematuple] was not set... will not generate code.
2022-04-23 09:37:03,631 [main] INFO org.apache.hadoop.mapreduce.lib.input.FileInputFormat - Total input paths to process : 1
2022-04-23 09:37:03,631 [main] INFO org.apache.pig.backend.hadoop.executionengine.util.MapRedUtil - Total input paths to process : 1
(GRADE 4 TEACHER,1,56567.24,56567.24)
(GRADE 5 TEACHER,1,77381.8,77381.8)
(GRADE 9 TEACHER,1,65068.84,65068.84)
(GRADES 6-8 TEACHER,1,75109.92,75109.92)
(GRADES K-5 TEACHER,2,3948.84,63957.5)
(SUBSTITUTE TEACHER,2,21580,7561.53)
(GRADES 9-12 TEACHER,5,16791.73,75476.82)
(SCHOOL PSYCHOLOGIST,1,83040.78,83040.78)
(KINDERGARTEN TEACHER,2,50862.08,79412.96)
(MAINTENANCE PERSONNEL,2,40511.89,58748.78)
(SPECIAL ED PARAPRO/AIDE,3,10934.94,28735.02)
(INSTRUCTIONAL SPECIALIST P-8,1,45832.92,45832.92)
(PARAPROFESSIONAL/TEACHER AIDE,2,18381.88,33471.12)
(SPECIAL EDUCATION INTERRELATED,1,55430.71,55430.71)
grunt>
```



```
(PARAPROFESSIONAL/TEACHER AIDE,3,10934.94,28735.02)
(SPECIAL EDUCATION INTERRELATED,1,55430.71,55430.71)
grunt> sortedSalaryBreakdown = ORDER SalaryBreakdown by $0;
grunt> dump sortedSalaryBreakdown;
2022-04-23 09:40:17,533 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig features used in the script: GROUP BY,ORDER BY,FILTER
2022-04-23 09:40:17,535 [main] INFO org.apache.pig.newplan.logical.optimizer.LogicalPlanOptimizer - {RULES_ENABLED=[AddForEach, ColumnMapKeyPrune, DuplicateForEachCol
umnRewrite, GroupByConstParallelSetter, ImplicitSplitInserter, LimitOptimizer, LoadTypeCastInserter, MergeFilter, MergeForEach, NewPartitionFilterOptimizer, PushDownFo
rEachFlatten, PushUpFilter, SplitFilter, StreamTypeCastInserter], RULES_DISABLED=[FilterLogicExpressionSimplifier, PartitionFilterOptimizer]}
2022-04-23 09:40:17,574 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MRCompiler - File concatenation threshold: 100 optimistic? false
2022-04-23 09:40:17,591 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.CombinerOptimizer - Choosing to move algebraic foreach to combiner
2022-04-23 09:40:17,611 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size before optimization: 3
2022-04-23 09:40:17,612 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size after optimization: 3
2022-04-23 09:40:17,646 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at /0.0.0.0:8032
2022-04-23 09:40:17,649 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settings are added to the job
2022-04-23 09:40:17,682 [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
2022-04-23 09:40:17,683 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Reduce phase detected, estimating # of required
reducers.
2022-04-23 09:40:17,683 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Using reducer estimator: org.apache.pig.backend.
hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator
2022-04-23 09:40:17,685 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator - BytesPerReducer=1000000000 maxReducers=99
9 totalInputFileSize=2436
2022-04-23 09:40:17,685 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting Parallelism to 1
2022-04-23 09:40:17,790 [DataStreamer for file /tmp/temp1844820160/tmp-1761480448/libthrift-0.9.3.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 sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:57)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:606)
at org.apache.hadoop.util.RunJar.run(RunJar.java:221)
at org.apache.hadoop.util.RunJar.main(RunJar.java:136)
2022-04-23 09:42:35,905 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is
job history server
2022-04-23 09:42:36,635 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is
job history server
2022-04-23 09:42:36,876 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduce
2022-04-23 09:42:36,876 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is
2022-04-23 09:42:36,876 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.job.tracker
2022-04-23 09:42:36,877 [main] INFO org.apache.pig.data.SchemaTupleBackend - Key [pig.schematuple] was not
2022-04-23 09:42:36,881 [main] INFO org.apache.hadoop.mapreduce.lib.input.FileInputFormat - Total input pa
2022-04-23 09:42:36,881 [main] INFO org.apache.pig.backend.hadoop.executionengine.util.MapRedUtil - Total
(GRADE 4 TEACHER,1,56567.24,56567.24)
(GRADE 5 TEACHER,1,77381.8,77381.8)
(GRADE 9 TEACHER,1,65868.84,65868.84)
(GRADES 6-8 TEACHER,1,75109.92,75109.92)
(GRADES 9-12 TEACHER,5,16791.73,75476.82)
(GRADES K-5 TEACHER,2,3948.84,63957.5)
(INSTRUCTIONAL SPECIALIST P-8,1,45832.92,45832.92)
(KINDERGARTEN TEACHER,2,50862.08,79412.96)
(MAINTENANCE PERSONNEL,2,40511.89,58748.78)
(PARAPROFESSIONAL/TEACHER AIDE,2,18381.88,33471.12)
(SCHOOL PSYCHOLOGIST,1,83040.78,83040.78)
(SPECIAL ED PARAPRO/AIDE,3,10934.94,28735.02)
(SPECIAL EDUCATION INTERRELATED,1,55430.71,55430.71)
(SUBSTITUTE TEACHER,2,21580,7561.53)
grunt> █

```

```

[Cloudera Live : Welco... root@quickstart:~
(SPECIAL EDUCATION INTERRELATED,1,55430.71,55430.71)
(SUBSTITUTE TEACHER,2,21580,7561.53)
grunt> store sortedSalaryBreakdown into 'salarydata/required';
2022-04-23 09:45:20,500 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig features used in the script: GROUP BY,ORDER BY,FILTER
2022-04-23 09:45:20,502 [main] INFO org.apache.pig.newplan.logical.optimizer.LogicalPlanOptimizer - {RULES_ENABLED=[AddForEach, ColumnMapKeyPrune, DuplicateForEachCol
umnRewrite, GroupByConstParallelSetter, ImplicitSplitInserter, LimitOptimizer, LoadTypeCastInserter, MergeFilter, MergeForEach, NewPartitionFilterOptimizer, PushDownFo
rEachFlatten, PushUpFilter, SplitFilter, StreamTypeCastInserter], RULES_DISABLED=[FilterLogicExpressionSimplifier, PartitionFilterOptimizer]}
2022-04-23 09:45:20,508 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.textoutputformat.separator is deprecated. Instead, use mapreduce.output.
textoutputformat.separator
2022-04-23 09:45:20,520 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MRCompiler - File concatenation threshold: 100 optimistic? false
2022-04-23 09:45:20,527 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.CombinerOptimizer - Choosing to move algebraic foreach to combiner
2022-04-23 09:45:20,537 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size before optimization: 3
2022-04-23 09:45:20,537 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MultiQueryOptimizer - MR plan size after optimization: 3
2022-04-23 09:45:20,570 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at /0.0.0.0:8032
2022-04-23 09:45:20,572 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig script settings are added to the job
2022-04-23 09:45:20,604 [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
2022-04-23 09:45:20,604 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Reduce phase detected, estimating # of required
reducers.
2022-04-23 09:45:20,604 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Using reducer estimator: org.apache.pig.backend.
hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator
2022-04-23 09:45:20,606 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator - BytesPerReducer=1000000000 maxReducers=99
9 totalInputFileSize=2436
2022-04-23 09:45:20,606 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting Parallelism to 1
2022-04-23 09:45:20,999 [DataStreamer for file /tmp/temp1844820160/tmp1055003978/libfb303-0.9.3.jar] WARN org.apache.hadoop.hdfs.DFSClient - Caught exception
java.lang.InterruptedException
at java.lang.Object.wait(Native Method)

```



```
root@quickstart:~
Success!

Job Stats (time in seconds):
JobId  Maps  Reduces MaxMapTime  MinMapTime  AvgMapTime  MedianMapTime  MaxReduceTime  MinReduceTime  AvgReduceTime  MedianReduceTime  Alias F
eature Outputs
job_1650620943421_0009 1 1 7 7 7 7 8 8 8 8 OnlySchoolBoards,SalaryBreakdown,SalaryData,byTitle GROUP_B
Y,COMBINER
job_1650620943421_0010 1 1 6 6 6 6 7 7 7 7 sortedSalaryBreakdown SAMPLER
job_1650620943421_0011 1 1 6 6 6 6 8 8 8 8 sortedSalaryBreakdown ORDER_BY /salarydata/required,

Input(s):
Successfully read 25 records (2809 bytes) from: "/salarydata/travel1.csv"

Output(s):
Successfully stored 14 records (574 bytes) in: "/salarydata/required"

Counters:
Total records written : 14
Total bytes written : 574
Spillable Memory Manager spill count : 0
Total bags proactively spilled: 0
Total records proactively spilled: 0

Job DAG:
job_1650620943421_0009 -> job_1650620943421_0010,
job_1650620943421_0010 -> job_1650620943421_0011,
job_1650620943421_0011

[Cloudera Live : Welco... root@quickstart:~
```

```
at org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.Launcher.getStats(Launcher.java:139)
at org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher.launchPig(MapReduceLauncher.java:468)
at org.apache.pig.PigServer.launchPlan(PigServer.java:1334)
at org.apache.pig.PigServer.executeCompiledLogicalPlan(PigServer.java:1319)
at org.apache.pig.PigServer.execute(PigServer.java:1309)
at org.apache.pig.PigServer.access$400(PigServer.java:122)
at org.apache.pig.PigServer$Graph.registerQuery(PigServer.java:1642)
at org.apache.pig.PigServer.registerQuery(PigServer.java:587)
at org.apache.pig.tools.grunt.GruntParser.processPig(GruntParser.java:1093)
at org.apache.pig.tools.pigscript.parser.PigScriptParser.parse(PigScriptParser.java:501)
at org.apache.pig.tools.grunt.GruntParser.parseStopOnError(GruntParser.java:198)
at org.apache.pig.tools.grunt.GruntParser.parseStopOnError(GruntParser.java:173)
at org.apache.pig.tools.grunt.Grunt.run(Grunt.java:69)
at org.apache.pig.Main.run(Main.java:547)
at org.apache.pig.Main.main(Main.java:158)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:57)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:606)
at org.apache.hadoop.util.RunJar.run(RunJar.java:221)
at org.apache.hadoop.util.RunJar.main(RunJar.java:136)
!2-04-23 09:47:27,530 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED.
) history server
!2-04-23 09:47:27,848 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED.
) history server
!2-04-23 09:47:28,246 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Success!
int>
```

```
[Cloudera Live : Welco... root@quickstart:~
```