

Pig Case Study

Problem Statement:

What are the movie titles that the user has rated?

How many times a movie has been rated by the user?

In question 2 above, what is the average rating given for a movie?

In Line 1: Registering the *piggybank* jar in order to use the CSVExcelStorage class.

In relation **A**, loaded the movies dataset using CSVExcelStorage because of its effective technique to handle double quotes and headers.

In relation **B**, generated the columns that are required for processing and explicitly typecasting each of them.

In relation **C**, filtered the null values from the “**title**” column.

In relation **D**, ordered the relation ‘**C**’ in ascending.

In relation **F**, loaded the ratings dataset using CSVExcelStorage because of its effective technique to handle double quotes and headers.

In relation **G**, generated the columns that are required for processing and explicitly typecasting each of them.

In relation **H**, grouped relation ‘**G**’ based on movieid.

In relation **I**, generated the grouped column and count of each.

In relation **J**, filtered the relation ‘**G**’ by using ratings greater than one.

In relation **K**, ordered the relation ‘**J**’ based on movieid.

In relation **L**, cogrouped relations ‘**D**’ and ‘**K**’ based on movieid.

In relation **M**, ordered relation ‘**L**’ with first column in ascending.

In relation **N**, generated grouped column from relation ‘**M**’ and average of column rating in relation ‘**K**’.

In relation **O**, joined relations ‘**D**’ and ‘**N**’.

In relation **P**, generated the columns that are required for processing.

In relation **Q**, joined relations ‘**P**’ and ‘**I**’.

In relation **R**, generated the columns which are required for the output.

Finally using the store function, the result is dumped into the output folder.

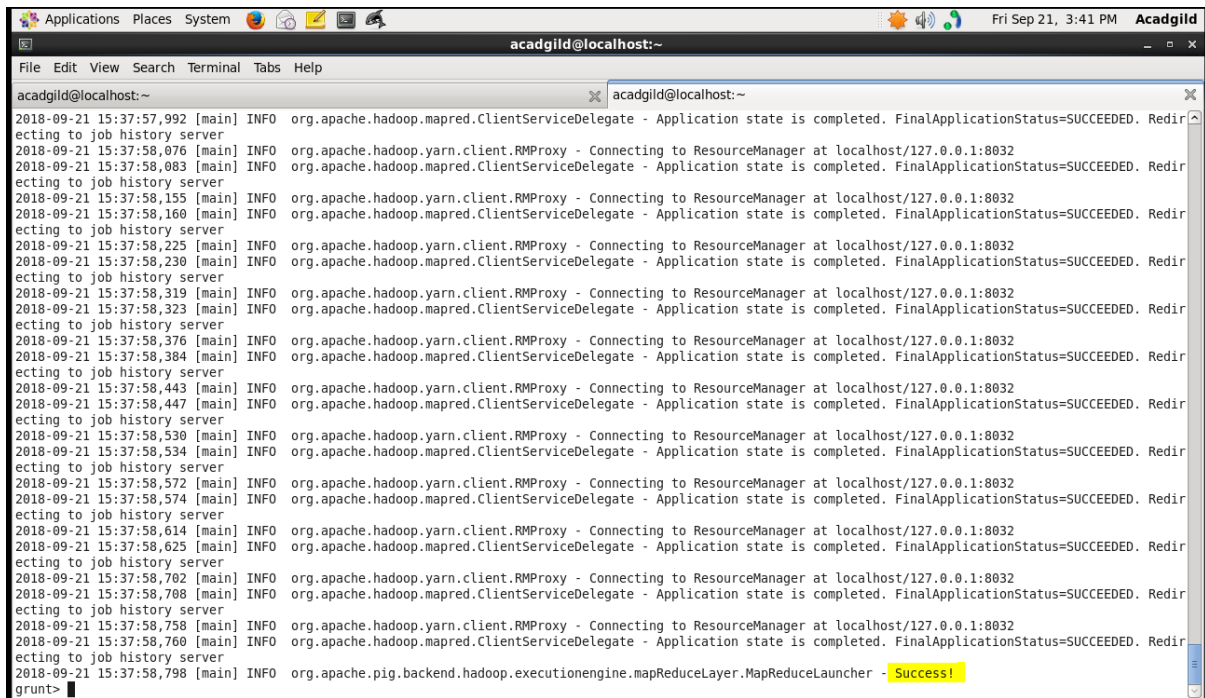
Following screenshot shows the relations of pig script.

```
Applications Places System acadgild@localhost:~
File Edit View Search Terminal Tabs Help
acadgild@localhost:~
A = load '/hadoopdata/hdfs/casestudy/movies.csv' USING org.apache.pig.piggybank.storage.CSVExcelStorage(',', 'NO_MULTILINE', 'UNIX', 'SKIP_INPUT_HEADER');
B = foreach A generate (int)$0 as movieId, (chararray)$1 as title, (chararray)$2 as genres;
C = filter B by title is not null;
D = order C by movieId asc;
F = load '/hadoopdata/hdfs/casestudy/ratings.csv' USING org.apache.pig.piggybank.storage.CSVExcelStorage(',', 'NO_MULTILINE', 'UNIX', 'SKIP_INPUT_HEADER');
G = foreach F generate (int)$0 as userId, (int)$1 as movieId, (int)$2 as rating, (int)$3 as timestamp;
H = group G by movieId;
I = foreach H generate group, COUNT(G.userId);
J = filter G by (rating > 1);
K = order J by movieId asc;
L = COGROUP D by movieId, K by movieId;
M = order L by $0 asc;
N = foreach M generate group, AVG(K.rating) as cnt;
O = join D by $0, N by $0;
P = foreach O generate $0, $1, $2, $3, $4;
Q = join P by $0, I by $0;
R = foreach Q generate $1, $6, $4;
2018-09-21 15:14:39,744 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2018-09-21 15:14:39,833 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2018-09-21 15:14:40,345 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
grunt> store R into '/output';
```

```
Applications Places System acadgild@localhost:~
File Edit View Search Terminal Tabs Help
acadgild@localhost:~
2018-09-21 15:23:14,135 [JobControl] INFO org.apache.hadoop.mapreduce.lib.input.FileInputFormat - Total input paths to process : 6
2018-09-21 15:23:14,135 [JobControl] INFO org.apache.pig.backend.hadoop.executionengine.util.MapRedUtil - Total input paths to process : 6
2018-09-21 15:23:14,136 [JobControl] INFO org.apache.pig.backend.hadoop.executionengine.util.MapRedUtil - Total input paths (combined) to process : 5
2018-09-21 15:23:14,159 [JobControl] INFO org.apache.hadoop.mapreduce.JobSubmitter - number of splits:5
2018-09-21 15:23:14,174 [JobControl] INFO org.apache.hadoop.mapreduce.JobSubmitter - Submitting tokens for job: job_1537517471795_0027
2018-09-21 15:23:14,176 [JobControl] INFO org.apache.hadoop.mapred.YARNRunner - Job jar is not present. Not adding any jar to the list of resources.
2018-09-21 15:23:14,213 [JobControl] INFO org.apache.hadoop.yarn.client.api.impl.YarnClientImpl - Submitted application application_1537517471795_0027
2018-09-21 15:23:14,219 [JobControl] INFO org.apache.hadoop.mapreduce.Job - The url to track the job: http://localhost:8088/proxy/application_1537517471795_0027/
2018-09-21 15:23:14,224 [JobControl] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
2018-09-21 15:23:14,254 [JobControl] WARN org.apache.hadoop.mapreduce.JobResourceUploader - No job jar file set. User classes may not be found. See Job or Job#setJar(String).
2018-09-21 15:23:14,276 [JobControl] INFO org.apache.hadoop.mapreduce.lib.input.FileInputFormat - Total input paths to process : 1
2018-09-21 15:23:14,276 [JobControl] INFO org.apache.pig.backend.hadoop.executionengine.util.MapRedUtil - Total input paths to process : 1
2018-09-21 15:23:14,276 [JobControl] INFO org.apache.pig.backend.hadoop.executionengine.util.MapRedUtil - Total input paths (combined) to process : 1
2018-09-21 15:23:14,320 [JobControl] INFO org.apache.hadoop.mapreduce.JobSubmitter - number of splits:1
2018-09-21 15:23:14,340 [JobControl] INFO org.apache.hadoop.mapreduce.JobSubmitter - Submitting tokens for job: job_1537517471795_0028
2018-09-21 15:23:14,341 [JobControl] INFO org.apache.hadoop.mapred.YARNRunner - Job jar is not present. Not adding any jar to the list of resources.
2018-09-21 15:23:14,362 [JobControl] INFO org.apache.hadoop.yarn.client.api.impl.YarnClientImpl - Submitted application application_1537517471795_0028
2018-09-21 15:23:14,365 [JobControl] INFO org.apache.hadoop.mapreduce.Job - The url to track the job: http://localhost:8088/proxy/application_1537517471795_0028/
2018-09-21 15:23:14,614 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - HadoopJobId: job_1537517471795_0027
2018-09-21 15:23:14,614 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Processing aliases K
2018-09-21 15:23:14,614 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - detailed locations: M: K[45,4] C: R:
2018-09-21 15:23:14,619 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - HadoopJobId: job_1537517471795_0028
2018-09-21 15:23:14,620 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Processing aliases D
2018-09-21 15:23:14,620 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - detailed locations: M: D[39,4] C: R:
2018-09-21 15:26:03,935 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - 40% complete
2018-09-21 15:26:03,975 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Running jobs are [job_1537517471795_0027, job_1537517471795_0028]
2018-09-21 15:26:49,689 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - 44% complete
2018-09-21 15:26:49,690 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Running jobs are [job_1537517471795_0027, job_1537517471795_0028]
2018-09-21 15:27:19,744 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
2018-09-21 15:27:19,758 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server
2018-09-21 15:27:19,878 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
```

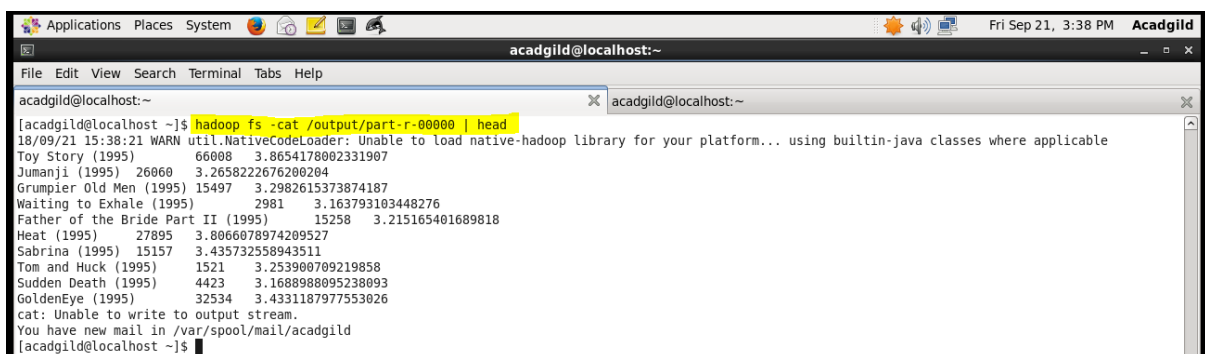
```
Applications Places System Fri Sep 21, 3:40 PM Acadgild
acagdild@localhost:~
File Edit View Search Terminal Tabs Help
acagdild@localhost:~
8]
2018-09-21 15:27:54,763 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - 54% complete
2018-09-21 15:27:54,763 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Running jobs are [job_1537517471795_002
8]
2018-09-21 15:27:59,776 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
2018-09-21 15:27:59,793 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redir
ecting to job history server
2018-09-21 15:27:59,917 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
2018-09-21 15:27:59,924 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redir
ecting to job history server
2018-09-21 15:27:59,983 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
2018-09-21 15:27:59,992 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redir
ecting to job history server
2018-09-21 15:28:00,058 [main] INFO org.apache.pig.tools.pigstats.mapreduce.MRScripState - Pig script settings are added to the job
2018-09-21 15:28:00,058 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - mapred.job.reduce.markreset.buffer.per
cent is not set, set to default 0.3
2018-09-21 15:28:00,059 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Reduce phase detected, estimating # of
required reducers.
2018-09-21 15:28:00,059 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Using reducer estimator: org.apache.pi
g.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator
2018-09-21 15:28:00,066 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator - BytesPerReducer=1000000000 maxR
educers=999 totalInputFileSize=467062400
2018-09-21 15:28:00,066 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting Parallelism to 1
2018-09-21 15:28:00,066 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - This job cannot be converted run in-pr
ocess
2018-09-21 15:28:00,145 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/lib/piggybank.jar to DistributedCache through /tmp/temp-1710478287/tmp-2128147603/piggybank.jar
2018-09-21 15:28:00,222 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/pig-0.16.0-core-h2.jar to DistributedCache through /tmp/temp-1710478287/tmp1194913541/pig-0.16.0-core-h2.jar
2018-09-21 15:28:00,243 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/lib/automaton-1.11-8.jar to DistributedCache through /tmp/temp-1710478287/tmp-1358947993/automaton-1.11-8.jar
2018-09-21 15:28:00,273 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/lib/antlr-runtime-3.4.jar to DistributedCache through /tmp/temp-1710478287/tmp-168310368/antlr-runtime-3.4.jar
2018-09-21 15:28:00,301 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/lib/joda-time-2.9.3.jar to DistributedCache through /tmp/temp-1710478287/tmp-773308258/joda-time-2.9.3.jar
2018-09-21 15:28:00,302 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting up single store job
2018-09-21 15:28:00,303 [main] INFO org.apache.pig.data.SchemaTupleFrontend - Key [pig.schematuple] is false, will not generate code.
```

```
Applications Places System Fri Sep 21, 3:41 PM Acadgild
acagdild@localhost:~
File Edit View Search Terminal Tabs Help
acagdild@localhost:~
2018-09-21 15:32:33,186 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - 62% complete
2018-09-21 15:32:33,201 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Running jobs are [job_1537517471795_002
9]
2018-09-21 15:33:10,789 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
2018-09-21 15:33:10,886 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redir
ecting to job history server
2018-09-21 15:33:11,134 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
2018-09-21 15:33:11,137 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redir
ecting to job history server
2018-09-21 15:33:11,190 [main] INFO org.apache.hadoop.yarn.client.RMProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032
2018-09-21 15:33:11,198 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redir
ecting to job history server
2018-09-21 15:33:11,265 [main] INFO org.apache.pig.tools.pigstats.mapreduce.MRScripState - Pig script settings are added to the job
2018-09-21 15:33:11,266 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - mapred.job.reduce.markreset.buffer.per
cent is not set, set to default 0.3
2018-09-21 15:33:11,266 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Reduce phase detected, estimating # of
required reducers.
2018-09-21 15:33:11,266 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Using reducer estimator: org.apache.pi
g.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator
2018-09-21 15:33:11,278 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.InputSizeReducerEstimator - BytesPerReducer=1000000000 maxR
educers=999 totalInputFileSize=394390131
2018-09-21 15:33:11,278 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting Parallelism to 1
2018-09-21 15:33:11,278 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - This job cannot be converted run in-pr
ocess
2018-09-21 15:33:11,449 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/lib/piggybank.jar to DistributedCache through /tmp/temp-1710478287/tmp-1077606325/piggybank.jar
2018-09-21 15:33:11,616 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/pig-0.16.0-core-h2.jar to DistributedCache through /tmp/temp-1710478287/tmp33850066/pig-0.16.0-core-h2.jar
2018-09-21 15:33:11,682 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/lib/automaton-1.11-8.jar to DistributedCache through /tmp/temp-1710478287/tmp1941920981/automaton-1.11-8.jar
2018-09-21 15:33:11,755 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/lib/antlr-runtime-3.4.jar to DistributedCache through /tmp/temp-1710478287/tmp-752252006/antlr-runtime-3.4.jar
2018-09-21 15:33:11,834 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Added jar file:/home/acagdild/install/
pig/pig-0.16.0/lib/joda-time-2.9.3.jar to DistributedCache through /tmp/temp-1710478287/tmp-1397719653/joda-time-2.9.3.jar
2018-09-21 15:33:11,870 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.JobControlCompiler - Setting up single store job
2018-09-21 15:33:11,877 [main] INFO org.apache.pig.data.SchemaTupleFrontend - Key [pig.schematuple] is false, will not generate code.
2018-09-21 15:33:11,877 [main] INFO org.apache.pig.data.SchemaTupleFrontend - Starting process to move generated code to distributed cacche
```



```
acacgild@localhost:~  
2018-09-21 15:37:57,992 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,076 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,083 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,155 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,160 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,225 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,230 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,319 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,323 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,376 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,384 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,443 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,447 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,530 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,534 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,572 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,574 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,614 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,625 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,702 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,708 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,758 [main] INFO org.apache.hadoop.yarn.client.RMPProxy - Connecting to ResourceManager at localhost/127.0.0.1:8032  
2018-09-21 15:37:58,760 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server  
2018-09-21 15:37:58,798 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Success!  
grunt>
```

The following screenshot shows the required output for the script written.



```
acacgild@localhost:~  
[acacgild@localhost ~]$ hadoop fs -cat /output/part-r-00000 | head  
18/09/21 15:38:21 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
Toy Story (1995) 66008 3.8654178002331907  
Jumanji (1995) 26060 3.2658222676200204  
Grumpier Old Men (1995) 15497 3.2982615373874187  
Waiting to Exhale (1995) 2981 3.163793103448276  
Father of the Bride Part II (1995) 15258 3.215165401689818  
Heat (1995) 27895 3.8066078974209527  
Sabrina (1995) 15157 3.435732558943511  
Tom and Huck (1995) 1521 3.253900709219858  
Sudden Death (1995) 4423 3.1688988095238093  
GoldenEye (1995) 32534 3.4331187977553026  
cat: Unable to write to output stream.  
You have new mail in /var/spool/mail/acacgild  
[acacgild@localhost ~]$
```