

**EXPNO: 4****CREATE UDF IN PIG****\$start-all.sh**

```

(hadoop@kali)~$ start-all.sh
WARNING: Attempting to start all Apache Hadoop daemons as hadoop in 10 seconds.
WARNING: This is not a recommended production deployment configuration.
WARNING: Use CTRL-C to abort.
Starting namenodes on [localhost]
Starting datanodes
Starting secondary namenodes [kali]
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-11 04:59:16,429 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Starting resourcemanager
Starting nodemanagers

```

**\$ jps**

```

(hadoop@kali)~$ jps
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
14436 NodeManager
16772 Jps
13830 SecondaryNameNode
14211 ResourceManager
13597 DataNode
13471 NameNode

```

**\$wget <https://dlcdn.apache.org/pig/pig-0.16.0/pig-0.16.0.tar.gz>****\$ tar xvfz pig-0.16.0.tar.gz**

```

kali-linux-2023.4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)
Player
(hadoop@kali)~$ wget https://dlcdn.apache.org/pig/pig-0.16.0/pig-0.16.0.tar.gz
--2024-08-29 18:55:41-- https://dlcdn.apache.org/pig/pig-0.16.0/pig-0.16.0.tar.gz
Resolving dlcdn.apache.org (dlcdn.apache.org) ... 208a:4e42::644, 151.101.2.132
Connecting to dlcdn.apache.org (dlcdn.apache.org)|208a:4e42::644|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 17727933 (169M) [application/x-gzip]
Saving to: 'pig-0.16.0.tar.gz'

pig-0.16.0.tar.gz      100%[=====] 169.07M  26.5MB/s   in 6.55s
2024-08-29 18:55:41 (26.0 MB/s) - 'pig-0.16.0.tar.gz' saved [17727933/17727933]

(hadoop@kali)~$ tar xvfz pig-0.16.0.tar.gz
pig-0.16.0/
pig-0.16.0/bin/
pig-0.16.0/conf/
pig-0.16.0/contrib/
pig-0.16.0/contrib/piggybank/
pig-0.16.0/contrib/piggybank/java/build/
pig-0.16.0/contrib/piggybank/java/build/classes/
pig-0.16.0/contrib/piggybank/java/build/classes/org/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/datetime/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/datetime/convert/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/datetime/diff/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/datetime/truncate/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/decode/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/math/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/stats/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/string/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/util/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/evaluation/util/apacheLogParser/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/storage/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/storage/allloader/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/storage/apacheLog/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/storage/avro/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/storage/hiverc/
pig-0.16.0/contrib/piggybank/java/build/classes/org/apache/pig/piggybank/storage/partition/
pig-0.16.0/contrib/piggybank/java/build/docs/
pig-0.16.0/contrib/piggybank/java/build/docs/api/
pig-0.16.0/contrib/piggybank/java/build/test/
pig-0.16.0/contrib/piggybank/java/lib/
pig-0.16.0/contrib/piggybank/java/src/

```

**\$nano ~/.bashrc**

```

#PIG settings
export PIG_HOME=/home/hadoop/pig
export PATH=$PATH:$PIG_HOME/bin
export PIG_CLASSPATH=$PIG_HOME/conf:$HADOOP_HOME/etc/hadoop/
export PIG_CONF_DIR=$PIG_HOME/conf
#export JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64
export PIG_CLASSPATH=$PIG_CONF_DIR:$PATH
#PIG setting ends

```

**\$mv pig-0.16.0 pig**

**\$pig**

```

hadoop@kali: ~
File Actions Edit View Help
pig 0.16.0/tutorial/src/org/apache/pig/tutorial/tutorialUtil.java
pig 0.16.0/tutorial/pig
pig 0.16.0/tutorial/pig.cmd
pig 0.16.0/tutorial/pig.py

(hadoop@kali) ~
$ mv pig-0.16.0 pig
(hadoop@kali) ~
$ source ~/.bashrc
(hadoop@kali) ~
$ pig
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
55024 ResourceManager
54024 SecondaryNameNode
55138 NodeManager
54393 Database
64951 JPS
54267 NameNode

(hadoop@kali) ~
$ pig
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-08-29 18:58:45.221 [main] INFO pig.ExecTypeProvider: Trying ExecType : LOCAL
2024-08-29 18:58:45.226 [main] INFO pig.ExecTypeProvider: Trying ExecType : MAPREDUCE
2024-08-29 18:58:45.227 [main] INFO pig.ExecTypeProvider: Picked MAPREDUCE as the ExecType
2024-08-29 18:58:45.477 [main] INFO org.apache.pig.Main - Apache Pig version 0.16.0 (r1746530) compiled Jun 01 2016, 23:10:10
2024-08-29 18:58:45.561 [main] INFO org.apache.pig.impl.util.Utils - Default hadoop file:/home/hadoop/pigscript not found
2024-08-29 18:58:45.667 [main] WARN org.apache.hadoop.util.NativeCodeLoader - Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
2024-08-29 18:58:46.721 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.job.tracker is deprecated. Instead, use mapreduce.jobtracker.address
2024-08-29 18:58:46.723 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2024-08-29 18:58:46.774 [main] INFO org.apache.pig.backend.hadoop.ExecMainEngine - Converting to Hadoop file system at: hdfs://localhost:9000
2024-08-29 18:58:48.975 [main] INFO org.apache.pig.PigServer - Pig Script ID for the session: PIG-default-5c28e2d3-7330-47ba-a30b-c0b0a274bfc2
2024-08-29 18:58:48.975 [main] WARN org.apache.pig.PigServer - ATS is disabled since yarn.timeline-service.enabled set to false
grunts> quit
2024-08-29 18:59:00.426 [main] INFO org.apache.pig.Main - Pig script completed in 15 seconds and 392 milliseconds (15392 ms)

(hadoop@kali) ~

```

**\$cd DA-Lab**

**\$mkdir exp4**

**\$cd exp4**

**\$nano sample.txt**

```

hadoop@kali: ~/DA-Lab/exp4
File Actions Edit View Help
GNU nano 7.2 sample.txt
1,John
2,Jane
3,Joe
4,Emma

```

**\$nano demo\_pig.pig**

```

hadoop@kali: ~/DA-Lab/exp4
File Actions Edit View Help
GNU nano 7.2 demo_pig.pig
-- Load the data from HDFS
data = LOAD '/exp4/sample.txt' USING PigStorage(',') AS (id:int, name:chararray);
-- Dump the data to check if it was loaded correctly
DUMP data;

```

**\$hdfs dfs -mkdir /exp4**

**\$hdfs dfs -copyFromLocal ~/DA-Lab/exp4/sample.txt /exp4**

**\$pig demo\_pig.pig**

The image displays two screenshots of a terminal window running Hadoop cluster startup logs. The top screenshot shows the initialization of the Hadoop ecosystem, including the NameNode and DataNode startup processes. The bottom screenshot shows the Hadoop cluster reaching a state where all nodes are connected and ready for operation. The logs are output from a terminal window titled 'kail--lin-2023-4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)'. The terminal shows the command 'hadoop@kali: ~ - DA-Lab/exp4' and the execution of 'pig demo\_pig.pig'. The logs indicate that the Hadoop cluster is successfully starting up, with all nodes connected and ready for operation. The logs also show the Hadoop cluster's configuration, including the NameNode and DataNode addresses, and the Hadoop cluster's state, including the number of nodes connected and the amount of data stored. The logs are output from a terminal window titled 'kail--lin-2023-4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)'. The terminal shows the command 'hadoop@kali: ~ - DA-Lab/exp4' and the execution of 'pig demo\_pig.pig'. The logs indicate that the Hadoop cluster is successfully starting up, with all nodes connected and ready for operation. The logs also show the Hadoop cluster's configuration, including the NameNode and DataNode addresses, and the Hadoop cluster's state, including the number of nodes connected and the amount of data stored.

## \$nano uppercase\_udf.py

```
hadoop@kali: ~/DA-Lab/exp4
File Actions Edit View Help
GNU nano 7.2 uppercase_udf.py
def uppercase(text):
    return text.upper()
if __name__ == "__main__":
    import sys
    for line in sys.stdin:
        line = line.strip()
        result = uppercase(line)
        print(result)
get SOURCE_IP
get SOURCE_IPS
get SOURCE_IPS
```



## \$hdfs dfs -copyFromLocal ~/DA-Lab/exp4/uppercase\_udf.py /exp4

```
(hadoop@kali)-[~/hadoop/bin]
$ ./hdfs dfs -ls /exp4
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-21 00:26:01,736 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
Found 3 items
drwxr-xr-x   - hadoop supergroup          0 2024-08-30 05:07 /exp4/output
-rw-r--r--   1 hadoop supergroup        27 2024-08-30 04:43 /exp4/sample.txt
-rw-r--r--   1 hadoop supergroup       172 2024-08-30 05:02 /exp4/uppercase_udf.py
```

## \$nano udf\_example.pig

```
File Actions Edit View Help
GNU nano 7.2 udf_example.pig
-- Register the Python UDF script
REGISTER 'hdfs:///exp4/uppercase_udf.py' USING jython AS udf;
-- Load some data
data = LOAD 'hdfs:///exp4/sample.txt' AS (text:chararray);
-- Use the Python UDF
uppercased_data = FOREACH data GENERATE udf.uppercase(text) AS uppercase_text;
-- Store the result
STORE uppercased_data INTO 'hdfs:///exp4/output';
```

## \$pig -f udf\_example.pig

```
kali-linux-2023.4-vmware-jam64 - VMware Workstation 17 Player (Non-commercial use only)
Player
hadoop@kali: ~/DA-Lab/exp4
$ nano uppercase_udf.py
$ cd ../hadoop/bin
$ ./hdfs dfs -put ~/DA-Lab/exp4/uppercase_udf.py /exp4
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-08-30 05:02:54,541 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
(hadoop@kali)-[~/hadoop/bin]
$ cd ../DA-Lab/exp4
(hadoop@kali)-[~/DA-Lab/exp4]
$ nano udf_example.pig
(hadoop@kali)-[~/DA-Lab/exp4]
$ pig -f udf_example.pig
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-08-30 05:06:18,501 INFO pig.ExecTypeProvider: Trying ExecType : LOCAL
2024-08-30 05:06:18,601 INFO pig.ExecTypeProvider: Trying ExecType : MAPREDUCE
2024-08-30 05:06:18,636 [main] INFO org.apache.pig.Main - Apache Pig version 0.16.0 (r1740538) compiled Jun 01 2016, 23:10:49
2024-08-30 05:06:19,605 [main] WARN org.apache.hadoop.util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
2024-08-30 05:06:20,127 [main] INFO org.apache.pig.impl.util.Utils - Default bootstrap file /home/hadoop/.pigbootstrap not found
2024-08-30 05:06:20,382 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.job.tracker is deprecated. Instead, use mapreduce.jobtracker.address
2024-08-30 05:06:20,383 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2024-08-30 05:06:20,383 [main] INFO org.apache.pig.backend.hadoop.executionengine.MExecutionEngine - Connecting to hadoop file system at: hdfs://localhost:9000
2024-08-30 05:06:22,040 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2024-08-30 05:06:22,513 [main] INFO org.apache.pig.PigServer - Pig Script ID for the session: PIG-udf_example.pig-1dec08cc-3e11-4763-a9e8-501b5b6b38a1
2024-08-30 05:06:22,513 [main] WARN org.apache.pig.PigServer - ATS is disabled since yarn.timeline-service.enabled set to false
2024-08-30 05:06:22,725 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2024-08-30 05:06:24,290 [main] INFO org.apache.pig.scripting.jython.JythonScriptEngine - Created tmp python.cachedir/tmp/pig.jython.3781842653894475167
2024-08-30 05:06:26,094 [main] WARN org.apache.pig.scripting.jython.JythonScriptEngine - pig.cmd.args.remaining is empty. This is not expected unless on testing.
2024-08-30 05:06:30,044 [main] INFO org.apache.pig.scripting.jython.JythonScriptEngine - Register scripting UDF: udf_uppercase
2024-08-30 05:06:31,784 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2024-08-30 05:06:31,867 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2024-08-30 05:06:38,447 [main] INFO org.apache.pig.scripting.jython.JythonFunction - No schema defined for function 'uppercase' in /tmp/pig2113342629392933085tmp/uppercase_udf.py
2024-08-30 05:06:38,503 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2024-08-30 05:06:38,743 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - mapred.textoutputformat.separator is deprecated. Instead, use mapreduce.output.textoutputformat.separator
2024-08-30 05:06:38,830 [main] INFO org.apache.pig.tools.pigstats.ScriptState - Pig features used in the script: UNKNOWN
2024-08-30 05:06:38,928 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
2024-08-30 05:06:39,982 [main] INFO org.apache.pig.data.SchemaTupleBackend - Key [pig.schematuple] was not set... will not generate code.
2024-08-30 05:06:39,132 [main] INFO org.apache.pig.mapgen.LogicalOptimizer.LogicalPlanOptimizer - [RULES_ENABLED: {InferPiggy, ColumnMajorPrune, ConstantCalculator, GroupByConstParallelSetter, LimitOptimizer, LoadTypeCastInserter, MergeFilter, MergeJoinEach, PartitionFilterOptimizer, PredicatePushdownOptimizer, PushdownForEachFlatten, PushdownFilter, SplitFilter, StreamTypeCastInserter}]
2024-08-30 05:06:39,403 [main] INFO org.apache.pig.impl.util.SpillableMemoryManager - Selected heap (PS Old Gen) of size 699138048 to monitor: collectionUsageThreshold = 489396048, usageThreshold = 489396048
2024-08-30 05:06:39,604 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapreduceLayer.MRCCompiler - File concatenation threshold: 184 optimizer: false
2024-08-30 05:06:39,858 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapreduceLayer.MultiQueryOptimizer - MR plan size before optimization: 1
2024-08-30 05:06:39,899 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapreduceLayer.MultiQueryOptimizer - MR plan size after optimization: 1
2024-08-30 05:06:39,959 [main] INFO org.apache.hadoop.conf.Configuration.deprecation - fs.default.name is deprecated. Instead, use fs.defaultFS
```

```

kali-linux-2023.4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)
Player
hadoop@kali: ~/hadoop/bin
File Actions Edit View Help
2024-08-30 05:10:12,729 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 4 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:13,731 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 5 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:14,733 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 6 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:15,735 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 7 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:16,738 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 8 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:17,740 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 9 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:17,859 [main] INFO org.apache.hadoop.mapred.ClientServiceDelegate - Application state is completed. FinalApplicationStatus=SUCCEEDED. Redirecting to job history server
2024-08-30 05:10:18,062 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 10 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:19,064 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 1 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:20,066 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 2 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:21,068 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 3 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:22,071 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 4 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:23,074 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 5 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:24,076 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 6 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:25,079 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 7 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:26,081 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 8 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:27,083 [main] INFO org.apache.hadoop.ipc.Client - Retrying connect to server: 0.0.0.0/0.0.0.0:10020. Already tried 9 time(s); retry policy is RetryUpToMaximumCountWithFixedSleep(maxRetries=10, sleepTime=1000 MILLISECO
NDS)
2024-08-30 05:10:27,087 [main] WARN org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Unable to retrieve job to compute warning aggregation.
2024-08-30 05:10:27,988 [main] INFO org.apache.pig.backend.hadoop.executionengine.mapReduceLayer.MapReduceLauncher - Success!
2024-08-30 05:10:28,108 [main] INFO org.apache.pig.Main - Pig script completed in 4 minutes, 9 seconds and 767 milliseconds (249747 ms)

(hadoop@kali) ~/DB-Lab/exp4
$ cd ../~/hadoop/bin

(hadoop@kali) ~/hadoop/bin
$ ./hdfs dfs -cat /exp4/output/part-m-00000
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-08-30 05:12:25,908 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
1,JOHN
2,JANE
3,JOE
4,EMMA

(hadoop@kali) ~/hadoop/bin

```

**\$hdfs dfs -cat /exp4/output/\***

```

(hadoop@kali) ~/hadoop/bin
$ ./hdfs dfs -cat /exp4/output/*
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-21 00:33:32,731 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
1,JOHN
2,JANE
3,JOE
4,EMMA

```