```
[root@sandbox lab]# hadoop jar /usr/hdp/2.4.0-169/hadoop-mapreduce/hadoop-streaming-2.7.1.2.4.0.0-169.jar -file /root/lab/q1_mapper.py -mapper q1_mapper.py -file  /root/lab/q1_reducer.py -reducer q1_red
ucer.py -input /user/root/dept_salary.txt -output /user/root/q1_streaming_out
WARNING: Use "yarn jar" to launch YARN applications.
16/10/04 15:51:29 WARN streaming.StreamJob: -file option is deprecated, please use generic option -files instead.
packageJobJar: [/root/lab/q1_mapper.py, /root/lab/q1_reducer.py] [/usr/hdp/2.4.0-169/hadoop-mapreduce/hadoop-streaming-2.7.1.2.4.0.0-169.jar] /tmp/streamjob8106489700785933667.jar tmpDir=null
16/10/04 15:51:34 INFO impl.TimelineClientImpl: Timeline service address: http://sandbox.hortonworks.com:8188/ws/v1/timeline/
16/10/04 15:51:35 INFO client.RMProxy: Connecting to ResourceManager at sandbox.hortonworks.com/10.0.2.15:8050
16/10/04 15:51:36 INFO impl.TimelineClientImpl: Timeline service address: http://sandbox.hortonworks.com:8188/ws/v1/timeline/
16/10/04 15:51:36 INFO client.RMProxy: Connecting to ResourceManager at sandbox.hortonworks.com/10.0.2.15:8050
16/10/04 15:51:39 INFO mapred.FileInputFormat: Total input paths to process : 1
16/10/04 15:51:39 INFO mapreduce.JobSubmitter: number of splits:2
16/10/04 15:51:40 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1475591931336_0001
16/10/04 15:51:42 INFO impl.YarnClientImpl: Submitted application application_1475591931336_0001
16/10/04 15:51:42 INFO mapreduce.Job: The url to track the job: http://sandbox.hortonworks.com:8088/proxy/application_1475591931336_0001/
16/10/04 15:51:42 INFO mapreduce.Job: Running job: job_1475591931336_0001
16/10/04 15:52:12 INFO mapreduce.Job: Job job_1475591931336_0001 running in uber mode : false
16/10/04 15:52:13 INFO mapreduce.Job:  map 0% reduce 0%
16/10/04 15:52:34 INFO mapreduce.Job:  map 100% reduce 0%
16/10/04 15:52:49 INFO mapreduce.Job:  map 100% reduce 100%
16/10/04 15:52:51 INFO mapreduce.Job: Job job_1475591931336_0001 completed successfully
16/10/04 15:52:51 INFO mapreduce.Job: Counters: 49
        File System Counters
                FILE: Number of bytes read=15271
                FILE: Number of bytes written=437842
                FILE: Number of read operations=0
                FILE: Number of large read operations=0
                FILE: Number of write operations=0
                HDFS: Number of bytes read=20121
                HDFS: Number of bytes written=55
                HDFS: Number of read operations=9
                HDFS: Number of large read operations=0
                HDFS: Number of write operations=2
        Job Counters
                Launched map tasks=2
                Launched reduce tasks=1
                Data-local map tasks=2
                Total time spent by all maps in occupied slots (ms)=37121
                Total time spent by all reduces in occupied slots (ms)=11924
                Total time spent by all map tasks (ms)=37121
                Total time spent by all reduce tasks (ms)=11924
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        Map-Reduce Framework
                Map input records=1001
                Map output records=1001
                Map output bytes=13263
                Map output materialized bytes=15277
                Input split bytes=226
                Combine input records=0
                Combine output records=0
                Reduce input groups=5
                Reduce shuffle bytes=15277
                Reduce input records=1001
                Reduce output records=5
                Spilled Records=2002
                Shuffled Maps =2
                Failed Shuffles=0
                Merged Map outputs=2
                GC time elapsed (ms)=186
                CPU time spent (ms)=2870
                Physical memory (bytes) snapshot=517435392
                Virtual memory (bytes) snapshot=2528313344
                Total committed heap usage (bytes)=354418688
        Shuffle Errors
                BAD_ID=0
                CONNECTION=0
                IO_ERROR=0
                WRONG_LENGTH=0
                WRONG_MAP=0
                WRONG_REDUCE=0
        File Input Format Counters
                Bytes Read=19895
        File Output Format Counters
                Bytes Written=55
16/10/04 15:52:51 INFO streaming.StreamJob: Output directory: /user/root/q1_streaming_out
[root@sandbox lab]# hadoop fs -cat /user/root/q1_streaming_out/part-00000 | tail -n 15
Developer       39
Marketing       990
QA      21
Research        246
Sales   14
```