```
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
HomeWorkEX6_2.jar은 시퀀스 파일 출력 jar파일
                                       ******* ///
chosun@chosun-VirtualBox:~/hadoop$ Is
1987.csv
          HomeWorkEX6_1.jar
                             HomeWorkEX6_5.jar
                                                  NOTICE.txt c++
                                                                     docs hadoop-examples-1.2.1.jar input.txt
                 HomeWorkEX6_2.jar LICENSE.txt
                                                  README.txt
                                                                      hadoop-ant-1.2.1.jar hadoop-minicluster-1.2.1.jar
share
      2007.csv
                                                               conf
           2008.csv
                     HomeWorkEX6_3.jar
                                          MyMy.jar
                                                    bin
                                                         contrib
                                                                  hadoop-client-1.2.1.jar hadoop-test-1.2.1.jar
loas
      src
                                                                                                                ivv.xml
webapps
         CHANGES.txt HomeWorkEX6_4.jar MyMyMy.jar
                                                         build.xml
                                                                    dataexpo hadoop-core-1.2.1.jar hadoop-tools-1.2.1.jar
lib
    sbin
          wordcount output
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
HW_0430 디렉토리를 생성 >>> 2008.csv파일 업로드
chosun@chosun-VirtualBox:~/hadoop$ hadoop fs -ls
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/home/chosun/hadoop-1.2.1/
hadoop-core-1.2.1.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
Found 8 items
-rw-r--r- 1 chosun supergroup
                                       15 2019-04-09 22:24 /user/chosun/20154215.txt
                                       0 2019-04-29 21:21 /user/chosun/HW_0429
drwxr-xr-x

    chosun supergroup

                                       0 2019-04-29 21:23 /user/chosun/HW_delay_sort
drwxr-xr-x - chosun supergroup
drwxr-xr-x - chosun supergroup
                                       0 2019-04-08 21:44 /user/chosun/MyMY
-rw-r--r--
           1 chosun supergroup
                                533922063 2019-04-08 21:50 /user/chosun/MyMy
                                       0 2019-04-09 21:06 /user/chosun/conf
drwxr-xr-x - chosun supergroup
drwxr-xr-x - chosun supergroup
                                       0 2019-04-08 22:13 /user/chosun/delay
drwxr-xr-x

    chosun supergroup

                                       0 2019-04-09 20:59 /user/chosun/wordcount_output
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$ hadoop fs -mkdir HW_0430
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/home/chosun/hadoop-1.2.1/
hadoop-core-1.2.1.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$ hadoop fs -put 2008.csv HW_0430
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/home/chosun/hadoop-1.2.1/
hadoop-core-1.2.1.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil
```

chosun@chosun-VirtualBox:~/hadoop\$ chosun@chosun-VirtualBox:~/hadoop\$ hadoop fs -ls HW_0430

chosun@chosun-VirtualBox:~/hadoop\$

WARNING: All illegal access operations will be denied in a future release

WARNING: An illegal reflective access operation has occurred

WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/home/chosun/hadoop-1.2.1/hadoop-core-1.2.1.jar) to method sun.security.krb5.Config.getInstance()

WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil

WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations

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WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
Found 1 items
            1 chosun supergroup 689413044 2019-04-30 01:43 /user/chosun/HW_0430/2008.csv
-rw-r--r--
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
jar 파일 실행
HW_0430 디렉토리의 2008.csv파일을 jar파일로 처리한 것을 HW_Sequencefile에 저장
SequenceFileCreator는 클래스 이름
chosun@chosun-VirtualBox:~/hadoop$ hadoop jar HomeWorkEX6_2.jar SequenceFileCreator HW_0430 HW_Sequencefile
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/home/chosun/hadoop-1.2.1/
hadoop-core-1.2.1.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
19/04/30 01:44:03 WARN mapred.JobClient: Use GenericOptionsParser for parsing the arguments. Applications should implement Tool for
the same.
19/04/30 01:44:04 INFO util.NativeCodeLoader: Loaded the native-hadoop library
19/04/30 01:44:04 WARN snappy.LoadSnappy: Snappy native library not loaded
19/04/30 01:44:04 INFO mapred. FileInputFormat: Total input paths to process: 1
19/04/30 01:44:04 INFO mapred.JobClient: Running job: job_201904300049_0006
19/04/30 01:44:05 INFO mapred.JobClient: map 0% reduce 0%
19/04/30 01:44:15 INFO mapred.JobClient: map 18% reduce 0%
19/04/30 01:44:22 INFO mapred.JobClient: map 27% reduce 0%
19/04/30 01:44:23 INFO mapred.JobClient: map 36% reduce 0%
19/04/30 01:44:30 INFO mapred.JobClient: map 54% reduce 0%
19/04/30 01:44:37 INFO mapred.JobClient: map 63% reduce 0%
19/04/30 01:44:38 INFO mapred.JobClient: map 72% reduce 0%
19/04/30 01:44:44 INFO mapred.JobClient: map 81% reduce 0%
19/04/30 01:44:45 INFO mapred.JobClient: map 90% reduce 0%
19/04/30 01:44:47 INFO mapred.JobClient: Job complete: job_201904300049_0006
19/04/30 01:44:47 INFO mapred.JobClient: Counters: 20
19/04/30 01:44:47 INFO mapred.JobClient:
                                         Map-Reduce Framework
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Spilled Records=0
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Virtual memory (bytes) snapshot=22946267136
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Map input records=7009728
19/04/30 01:44:47 INFO mapred.JobClient:
                                           SPLIT_RAW_BYTES=1133
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Map output records=7009728
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Physical memory (bytes) snapshot=1535180800
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Map input bytes=689413044
19/04/30 01:44:47 INFO mapred.JobClient:
                                           CPU time spent (ms)=68370
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Total committed heap usage (bytes)=738197504
19/04/30 01:44:47 INFO mapred.JobClient:
                                         File Input Format Counters
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Bytes Read=689454004
19/04/30 01:44:47 INFO mapred.JobClient:
                                         FileSystemCounters
19/04/30 01:44:47 INFO mapred.JobClient:
                                           HDFS_BYTES_READ=689455137
19/04/30 01:44:47 INFO mapred.JobClient:
                                           FILE_BYTES_WRITTEN=623613
19/04/30 01:44:47 INFO mapred.JobClient:
                                           HDFS_BYTES_WRITTEN=188807235
19/04/30 01:44:47 INFO mapred.JobClient:
                                         File Output Format Counters
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Bytes Written=188807235
19/04/30 01:44:47 INFO mapred.JobClient:
                                         Job Counters
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Launched map tasks=11
19/04/30 01:44:47 INFO mapred.JobClient:
                                           SLOTS_MILLIS_REDUCES=0
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Total time spent by all reduces waiting after reserving slots (ms)=0
19/04/30 01:44:47 INFO mapred.JobClient:
                                           SLOTS_MILLIS_MAPS=80348
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Total time spent by all maps waiting after reserving slots (ms)=0
19/04/30 01:44:47 INFO mapred.JobClient:
                                           Data-local map tasks=11
MR-Job Result:0
```

```
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
HW_Sequencefile 디렉토리 확인 >>> 시퀀스 파일 11개 생성되어 있다
시퀀스 파일 라인 10개 확인 810 > 515 > 688 > 1591
chosun@chosun-VirtualBox:~/hadoop$ hadoop fs -ls HW_Sequencefile
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/home/chosun/hadoop-1.2.1/
hadoop-core-1.2.1.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
Found 13 items
-rw-r--r--
                                       0 2019-04-30 01:44 /user/chosun/HW_Sequencefile/_SUCCESS
           1 chosun supergroup
drwxr-xr-x
                                       0 2019-04-30 01:44 /user/chosun/HW_Sequencefile/_logs
           - chosun supergroup
                                 18795517 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00000
-rw-r--r--
           1 chosun supergroup
                                 19043636 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00001
-rw-r--r--
           1 chosun supergroup
                                 18346427 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00002
-rw-r--r--
            1 chosun supergroup
-rw-r--r--
            1 chosun supergroup
                                 18560235 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00003
-rw-r--r--
                                 18389695 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00004
           1 chosun supergroup
                                 18268623 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00005
            1 chosun supergroup
                                 18389093 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00006
-rw-r--r--
           1 chosun supergroup
-rw-r--r--
           1 chosun supergroup
                                 18544770 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00007
                                 17387259 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00008
            1 chosun supergroup
                                 18226586 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00009
-rw-r--r--
            1 chosun supergroup
-r\w-r--r--
           1 chosun supergroup
                                  4855394 2019-04-30 01:44 /user/chosun/HW_Sequencefile/part-00010
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$
chosun@chosun-VirtualBox:~/hadoop$ hadoop fs -text HW_Sequencefile/part-00000 | head -10
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.apache.hadoop.security.authentication.util.KerberosUtil (file:/home/chosun/hadoop-1.2.1/
hadoop-core-1.2.1.jar) to method sun.security.krb5.Config.getInstance()
WARNING: Please consider reporting this to the maintainers of org.apache.hadoop.security.authentication.util.KerberosUtil
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
19/04/30 01:45:47 INFO util.NativeCodeLoader: Loaded the native-hadoop library
19/04/30 01:45:47 INFO zlib.ZlibFactory: Successfully loaded & initialized native-zlib library
19/04/30 01:45:47 INFO compress.CodecPool: Got brand-new decompressor
810
       2008,1,3,4,2003,1955,2211,2225,WN,335,N712SW,128,150,116,-14,8,IAD,TPA,810,4,8,0,,0,NA,NA,NA,NA,NA
810
       2008,1,3,4,754,735,1002,1000,WN,3231,N772SW,128,145,113,2,19,IAD,TPA,810,5,10,0,,0,NA,NA,NA,NA,NA
515
       2008,1,3,4,628,620,804,750,WN,448,N428WN,96,90,76,14,8,IND,BWI,515,3,17,0,,0,NA,NA,NA,NA
515
       2008,1,3,4,926,930,1054,1100,WN,1746,N612SW,88,90,78,-6,-4,IND,BWI,515,3,7,0,,0,NA,NA,NA,NA,NA
515
       2008,1,3,4,1829,1755,1959,1925,WN,3920,N464WN,90,90,77,34,34,IND,BWI,515,3,10,0,,0,2,0,0,0,32
688
       2008,1,3,4,1940,1915,2121,2110,WN,378,N726SW,101,115,87,11,25,IND,JAX,688,4,10,0,,0,NA,NA,NA,NA
       1591
1591
       2008.1.3.4.1039.1040.1132.1150.WN.535.N428WN.233.250.219.-18.-1.IND.LAS.1591.7.7.0..0.NA.NA.NA.NA.NA
451
       2008,1,3,4,617,615,652,650,WN,11,N689SW,95,95,70,2,2,IND,MCI,451,6,19,0,,0,NA,NA,NA,NA,NA
451
       2008,1,3,4,1620,1620,1639,1655,WN,810,N648SW,79,95,70,-16,0,IND,MCI,451,3,6,0,,0,NA,NA,NA,NA
text: Unable to write to output stream.
```

chosun@chosun-VirtualBox:~/hadoop\$