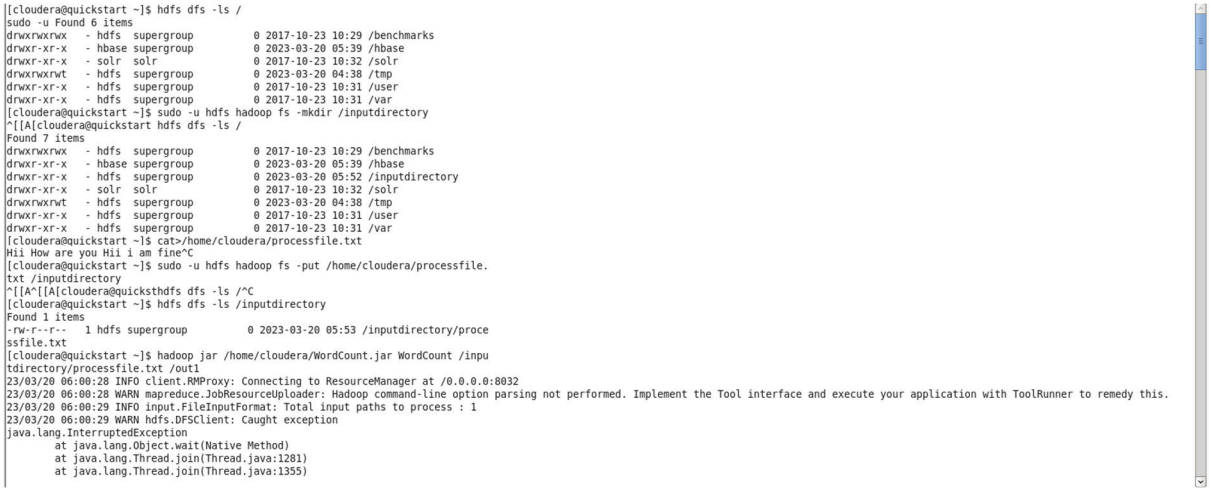
Practical 2: Map-Reduce Program for WordCount Problem

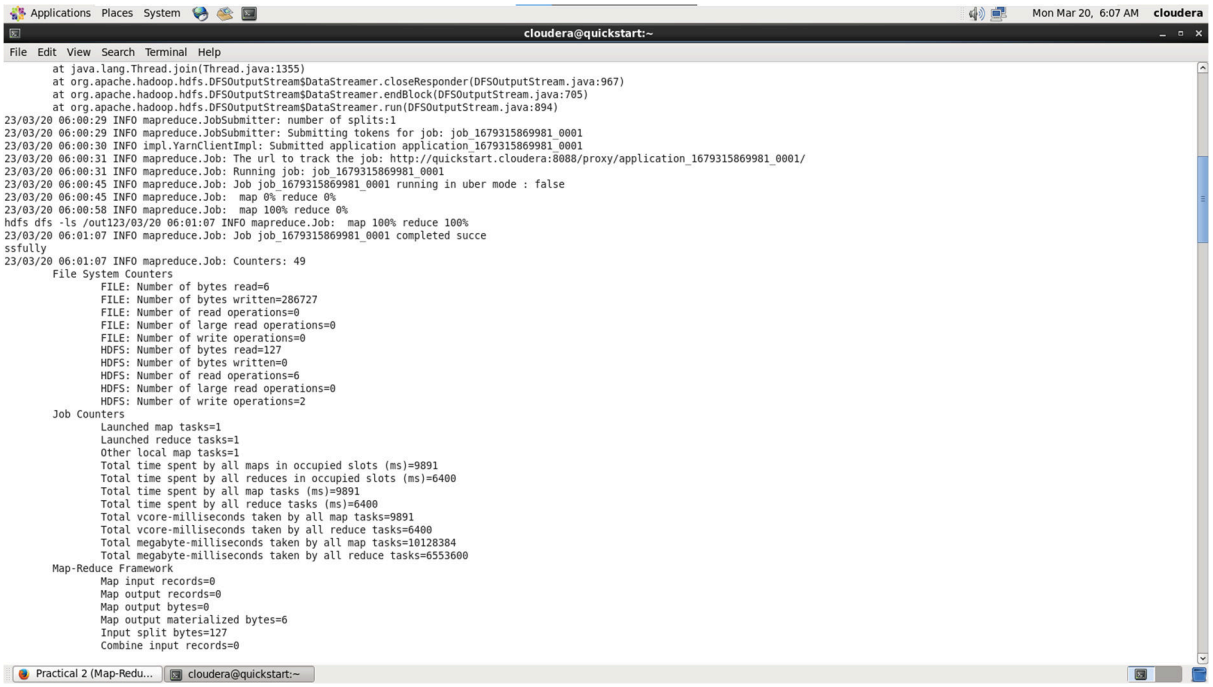
Commands:

```
[cloudera@quickstart ~]$ hdfs dfs -ls /
[cloudera@quickstart ~]$ sudo -u hdfs hadoop fs -mkdir /inputdirectory
[cloudera@quickstart ~]$ hdfs dfs -ls /
[cloudera@quickstart ~]$ cat>/home/cloudera/processfile.txt
[cloudera@quickstart ~]$ sudo -u hdfs hadoop fs -put
/home/cloudera/processfile.txt /inputdirectory
[cloudera@quickstart ~]$ hdfs dfs -ls /inputdirectory
[cloudera@quickstart ~]$ hadoop jar /home/cloudera/WordCount.jar WordCount
/inputdirectory/processfile.txt /out1
[cloudera@quickstart ~]$ hdfs dfs -ls /out1
[cloudera@quickstart ~]$ hdfs dfs -cat /out1/part-r-00000
```

OUTPUT



```
[cloudera@quickstart ~]$ hdfs dfs -ls /
sudo -u Found 6 items
drwxrwxrwx   - hdfs  supergroup          0 2017-10-23 10:29 /benchmarks
drwxr-xr-x   - hbase supergroup          0 2023-03-20 05:39 /hbase
drwxr-xr-x   - solr  solr                0 2017-10-23 10:32 /solr
drwxrwxrwt   - hdfs  supergroup          0 2023-03-20 04:38 /tmp
drwxr-xr-x   - hdfs  supergroup          0 2017-10-23 10:31 /user
drwxr-xr-x   - hdfs  supergroup          0 2017-10-23 10:31 /var
[cloudera@quickstart ~]$ sudo -u hdfs hadoop fs -mkdir /inputdirectory
^[[A[cloudera@quickstart hdfs dfs -ls /
Found 7 items
drwxrwxrwx   - hdfs  supergroup          0 2017-10-23 10:29 /benchmarks
drwxr-xr-x   - hbase supergroup          0 2023-03-20 05:39 /hbase
drwxr-xr-x   - hdfs  supergroup          0 2023-03-20 05:52 /inputdirectory
drwxr-xr-x   - solr  solr                0 2017-10-23 10:32 /solr
drwxrwxrwt   - hdfs  supergroup          0 2023-03-20 04:38 /tmp
drwxr-xr-x   - hdfs  supergroup          0 2017-10-23 10:31 /user
drwxr-xr-x   - hdfs  supergroup          0 2017-10-23 10:31 /var
[cloudera@quickstart ~]$ cat>/home/cloudera/processfile.txt
Hii How are you Hii i am fine^C
[cloudera@quickstart ~]$ sudo -u hdfs hadoop fs -put /home/cloudera/processfile.
txt /inputdirectory
^[[A^[[A[cloudera@quickshdfs dfs -ls /^C
[cloudera@quickstart ~]$ hdfs dfs -ls /inputdirectory
Found 1 items
-rw-r--r--   1 hdfs supergroup          0 2023-03-20 05:53 /inputdirectory/proce
ssfile.txt
[cloudera@quickstart ~]$ hadoop jar /home/cloudera/WordCount.jar WordCount /inpu
tdirectory/processfile.txt /out1
23/03/20 06:00:28 INFO client.RMProxy: Connecting to ResourceManager at /0.0.0.0:8032
23/03/20 06:00:28 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool interface and execute your application with ToolRunner to remedy this.
23/03/20 06:00:29 INFO input.FileInputFormat: Total input paths to process : 1
23/03/20 06:00:29 WARN hdfs.DFSClient: Caught exception
java.lang.InterruptedException
        at java.lang.Object.wait(Native Method)
        at java.lang.Thread.join(Thread.java:1281)
        at java.lang.Thread.join(Thread.java:1355)
```




```
                Reduce input groups=0
                Reduce shuffle bytes=6
                Reduce input records=0
                Reduce output records=0
                Spilled Records=0
                Shuffled Maps =1
                Failed Shuffles=0
                Merged Map outputs=1
                GC time elapsed (ms)=176
                CPU time spent (ms)=1170
                Physical memory (bytes) snapshot=322920448
                Virtual memory (bytes) snapshot=3015028736
                Total committed heap usage (bytes)=195301376
        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=0
        File Output Format Counters
                Bytes Written=0
[cloudera@quickstart ~]$ hdfs dfs -ls /out1
Found 2 items
-rw-r--r--   1 cloudera supergroup          0 2023-03-20 06:01 /out1/_SUCCESS
-rw-r--r--   1 cloudera supergroup          0 2023-03-20 06:01 /out1/part-r-0000
0
```

```
[cloudera@quickstart ~]$ hdfs dfs -cat /out1/part-r-00000
Hii     2
How     1
am      1
are     1
fine    1
i       1
u       1
[cloudera@quickstart ~]$
```