

# CASE STUDY 1

## Movie Rating Analysis

## Assignment 22.1: Case Study Movie Rating

### 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?

### Dataset:

- [movies.csv](#)
- [ratings.csv](#)

### Initial Execution:

```
[acadgild@localhost ~]$ jps
2964 Jps
[acadgild@localhost ~]$ sudo service sshd start
[sudo] password for acadgild:
[acadgild@localhost ~]$ start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
18/09/07 21:05:23 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
Starting namenodes on [localhost]
localhost: starting namenode, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-namenode-localhost.localdomain.
out
localhost: starting datanode, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-datanode-localhost.localdomain.o
ut
Starting secondary namenodes [0.0.0.0]
0.0.0.0: starting secondarynamenode, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-secondarynamenode-localhost.loc
aldomain.out
18/09/07 21:05:54 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
starting yarn daemons
```

```

starting resourcemanager, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-resourcemanager-localhost.localdomain.out
localhost: starting nodemanager, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-nodemanager-localhost.localdomain.out
[acadgild@localhost ~]$ jps
3680 Jps
3545 ResourceManager
3386 SecondaryNameNode
3115 NameNode
3212 DataNode
3646 NodeManager
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/
18/09/07 21:06:30 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 2 items
drwxr-xr-x - acadgild supergroup      0 2018-07-26 01:51 /hadoopdata/flume
drwxr-xr-x - acadgild supergroup      0 2018-07-24 23:24 /hadoopdata/hbase
[acadgild@localhost ~]$ hdfs dfs -mkdir /hadoopdata/hdfs
18/09/07 21:06:52 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/
18/09/07 21:07:06 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 3 items
drwxr-xr-x - acadgild supergroup      0 2018-07-26 01:51 /hadoopdata/flume
drwxr-xr-x - acadgild supergroup      0 2018-07-24 23:24 /hadoopdata/hbase
drwxr-xr-x - acadgild supergroup      0 2018-09-07 21:06 /hadoopdata/hdfs
[acadgild@localhost ~]$ hdfs dfs -mkdir /hadoopdata/hdfs/casestudy
18/09/07 21:10:24 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
[acadgild@localhost ~]$ hdfs dfs -mkdir /hadoopdata/hdfs/casestudy/input
18/09/07 21:11:03 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/hdfs/casestudy/
18/09/07 21:11:24 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Found 1 items
drwxr-xr-x - acadgild supergroup      0 2018-09-07 21:11 /hadoopdata/hdfs/casestudy/input

[acadgild@localhost ~]$ hdfs dfs -put -f
/home/acadgild/Desktop/Case_Study_Dataset/Case_Study_Dataset/movies.csv
/hadoopdata/hdfs/casestudy/input/
18/09/07 21:35:56 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/hdfs/casestudy/input/
18/09/07 21:36:12 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

```

Found 1 items

```
-rw-r--r-- 1 acadgild supergroup 2283410 2018-09-07 21:35
/hadoopdata/hdfs/casestudy/input/movies.csv
[acadgild@localhost ~]$ hdfs dfs -put -f
/home/acadgild/Desktop/Case_Study_Dataset/Case_Study_Dataset/ratings.csv
/hadoopdata/hdfs/casestudy/input/
18/09/07 21:37:13 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
```

```
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/hdfs/casestudy/input/18/09/07 21:38:55 WARN
util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java
classes where applicable
```

Found 2 items

```
-rw-r--r-- 1 acadgild supergroup 2283410 2018-09-07 21:35
/hadoopdata/hdfs/casestudy/input/movies.csv
-rw-r--r-- 1 acadgild supergroup 709550327 2018-09-07 21:37
/hadoopdata/hdfs/casestudy/input/ratings.csv
[acadgild@localhost ~]$ hdfs dfs -mkdir /hadoopdata/hdfs/casestudy/casestudy1
18/09/07 22:19:41 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
[acadgild@localhost ~]$ hdfs dfs -mkdir /hadoopdata/hdfs/casestudy/casestudy1/output
18/09/07 22:19:56 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/hdfs/casestudy/casestudy1/
18/09/07 22:20:14 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
```

Found 1 items

```
drwxr-xr-x - acadgild supergroup 0 2018-09-07 22:19
/hadoopdata/hdfs/casestudy/casestudy1/output
[acadgild@localhost ~]$
```

## **Input File :**

### **1. /hadoopdata/hdfs/casestudy/input/movies.csv**

## **Terminal Execution :**

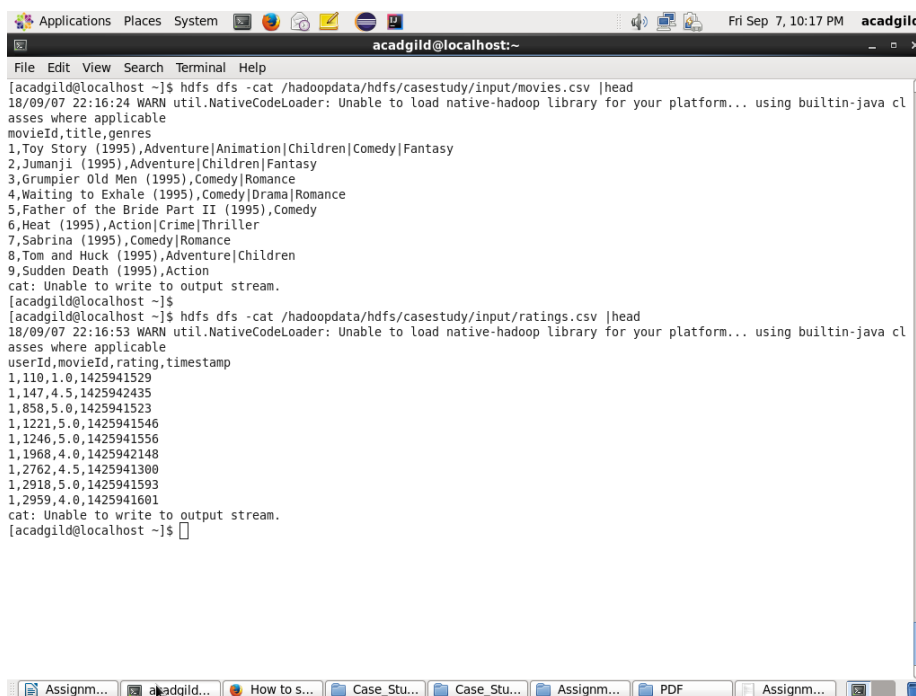
```
[acadgild@localhost ~]$ hdfs dfs -cat /hadoopdata/hdfs/casestudy/input/movies.csv |head
18/09/07 22:13:00 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
movieId,title,genres
1,Toy Story (1995),Adventure|Animation|Children|Comedy|Fantasy
2,Jumanji (1995),Adventure|Children|Fantasy
3,Grumpier Old Men (1995),Comedy|Romance
4,Waiting to Exhale (1995),Comedy|Drama|Romance
5,Father of the Bride Part II (1995),Comedy
6,Heat (1995),Action|Crime|Thriller
```

7,Sabrina (1995),Comedy|Romance  
8,Tom and Huck (1995),Adventure|Children  
9,Sudden Death (1995),Action  
cat: Unable to write to output stream.  
[acadgild@localhost ~]\$

## 2. /hadoopdata/hdfs/casestudy/input/ratings.csv

```
[acadgild@localhost ~]$ hdfs dfs -cat /hadoopdata/hdfs/casestudy/input/ratings.csv |head
18/09/07 22:16:53 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
userId,movieId,rating,timestamp
1,110,1.0,1425941529
1,147,4.5,1425942435
1,858,5.0,1425941523
1,1221,5.0,1425941546
1,1246,5.0,1425941556
1,1968,4.0,1425942148
1,2762,4.5,1425941300
1,2918,5.0,1425941593
1,2959,4.0,1425941601
cat: Unable to write to output stream.
```

## Screenshots



The screenshot shows a terminal window titled 'acadgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal displays two Hadoop commands and their outputs. The first command is 'hdfs dfs -cat /hadoopdata/hdfs/casestudy/input/movies.csv |head', which outputs a list of 9 movies with their IDs, titles, and genres. The second command is 'hdfs dfs -cat /hadoopdata/hdfs/casestudy/input/ratings.csv |head', which outputs the first 9 lines of a ratings file, each containing a user ID, movie ID, rating, and timestamp. Both commands result in a warning message from 'util.NativeCodeLoader' and a 'cat: Unable to write to output stream.' error. The terminal window is part of a desktop environment with a taskbar at the bottom showing several open applications.

```
Applications Places System [Icons] [Network] [Sound] [Volume] [Power] Fri Sep 7, 10:17 PM acadgild
acadgild@localhost:~
File Edit View Search Terminal Help
[acadgild@localhost ~]$ hdfs dfs -cat /hadoopdata/hdfs/casestudy/input/movies.csv |head
18/09/07 22:16:24 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
movieId,title,genres
1,Toy Story (1995),Adventure|Animation|Children|Comedy|Fantasy
2,Jumanji (1995),Adventure|Children|Fantasy
3,Grumpier Old Men (1995),Comedy|Romance
4,Waiting to Exhale (1995),Comedy|Drama|Romance
5,Father of the Bride Part II (1995),Comedy
6,Heat (1995),Action|Crime|Thriller
7,Sabrina (1995),Comedy|Romance
8,Tom and Huck (1995),Adventure|Children
9,Sudden Death (1995),Action
cat: Unable to write to output stream.
[acadgild@localhost ~]$
[acadgild@localhost ~]$ hdfs dfs -cat /hadoopdata/hdfs/casestudy/input/ratings.csv |head
18/09/07 22:16:53 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
userId,movieId,rating,timestamp
1,110,1.0,1425941529
1,147,4.5,1425942435
1,858,5.0,1425941523
1,1221,5.0,1425941546
1,1246,5.0,1425941556
1,1968,4.0,1425942148
1,2762,4.5,1425941300
1,2918,5.0,1425941593
1,2959,4.0,1425941601
cat: Unable to write to output stream.
[acadgild@localhost ~]$
```

### **Output File:**

**/hadoopdata/hdfs/casestudy/casestudy1/output**

### **Solution:**

#### **1. Driver Class: CaseStudyIUseCasesDriver.java**

```
import org.apache.hadoop.conf.Configuration;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.lib.output.TextOutputFormat;
import org.apache.hadoop.mapreduce.lib.input.TextInputFormat;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.mapreduce.lib.input.MultipleInputs;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;

public class CaseStudyIUseCasesDriver {

    @SuppressWarnings("deprecation")
    public static void main(String[] args) throws Exception {
        if (args.length != 3) {
            System.err.println("Usage: CaseStudyIUseCase2Driver <input path1> <input path2> <output path>");
            System.exit(-1);
        }

        //Job Related Configurations
        Configuration conf = new Configuration();
        Job job = new Job(conf, "CaseStudyIUseCase2Driver");
        job.setJarByClass(CaseStudyIUseCasesDriver.class);

        //Since there are multiple input, there is a slightly different way of specifying input path,
        input format and mapper
        MultipleInputs.addInputPath(job, new Path(args[0]), TextInputFormat.class,
        CaseStudyIUseCasesMoviesMapper.class);
        MultipleInputs.addInputPath(job, new Path(args[1]), TextInputFormat.class,
        CaseStudyIUseCasesRatingsMapper.class);

        //Set the reducer
```

```
    job.setReducerClass(CaseStudyIUseCasesReducer.class);

    //set the out path
    Path outputPath = new Path(args[2]);
    FileOutputFormat.setOutputPath(job, outputPath);
    outputPath.getFileSystem(conf).delete(outputPath, true);

    //set up the output key and value classes
    job.setOutputKeyClass(Text.class);

    job.setOutputValueClass(Text.class);

    //execute the job
    System.exit(job.waitForCompletion(true) ? 0 : 1);
}
}
```

## 2. Mapper Class:

### 2.1. **CaseStudyIUseCasesMoviesMapper.java**

```
import java.io.IOException;

import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.Mapper;

public class CaseStudyIUseCasesMoviesMapper extends
    Mapper<LongWritable, Text, Text, Text> {

    public void map(LongWritable key, Text value, Context context)
        throws IOException, InterruptedException {

        try {
            if (key.get() == 0 && value.toString().contains("movieId")){
                return;
            } else {
                String record = value.toString();
                String[] parts = record.split(",");
                context.write(new Text(parts[0]), new Text("movies\t" + parts[1]));
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```



## 2.2. CaseStudyIUseCasesRatingsMapper.java

```
import java.io.IOException;

import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.Mapper;

public class CaseStudyIUseCasesRatingsMapper extends
    Mapper<LongWritable, Text, Text, Text> {

    public void map(LongWritable key, Text value, Context context)
        throws IOException, InterruptedException {

        try {
            if (key.get() == 0 && value.toString().contains("userId")){
                return;
            } else {
                String record = value.toString();
                String[] parts = record.split(",");
                context.write(new Text(parts[1]), new Text("ratings\t" + parts[2]));
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

### 3. Reducer Class: [CaseStudyIUseCasesReducer.java](#)

```
import java.io.IOException;

import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.Reducer;

public class CaseStudyIUseCasesReducer extends
    Reducer<Text, Text, Text, Text> {

    public void reduce(Text key, Iterable<Text> values, Context context)
        throws IOException, InterruptedException {
        String titles = "";
        double total = 0.0;
        int count = 0;
        System.out.println("Text Key   =>" + key.toString());
        for (Text t : values) {
            String parts[] = t.toString().split("\t");
            System.out.println("Text values =>" + t.toString());
            if (parts[0].equals("ratings")) {
                count++;
                String rating = parts[1].trim();
                System.out.println("Rating is =>" + rating);
                total += Double.parseDouble(rating);
            } else if (parts[0].equals("movies")) {
                titles = parts[1];
            }
        }

        double average = total / count;
        String str = String.format("%d\t%f", count, average);
        context.write(new Text(titles), new Text(str));
    }
}
```

### 4. Jar File : [movie\\_rating .jar](#)

## 5. Terminal Execution:

```
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/hdfs/casestudy/input/
18/09/07 22:32:00 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
Found 2 items
-rw-r--r-- 1 acadgild supergroup 2283410 2018-09-07 21:35
/hadoopdata/hdfs/casestudy/input/movies.csv
-rw-r--r-- 1 acadgild supergroup 709550327 2018-09-07 21:37
/hadoopdata/hdfs/casestudy/input/ratings.csv
[acadgild@localhost ~]$
[acadgild@localhost ~]$ hadoop jar /home/acadgild/Desktop/movie_rating.jar
com.acadgild.mapreduce.case_study.assignment.movie_rating.CaseStudyIUseCasesDriver
/hadoopdata/hdfs/casestudy/input/movies.csv /hadoopdata/hdfs/casestudy/input/ratings.csv
/hadoopdata/hdfs/casestudy/casestudy1/output
18/09/07 22:39:11 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
18/09/07 22:39:13 INFO client.RMProxy: Connecting to ResourceManager at
localhost/127.0.0.1:8032
18/09/07 22:39:15 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing
not performed. Implement the Tool interface and execute your application with ToolRunner to
remedy this.
18/09/07 22:39:15 INFO input.FileInputFormat: Total input paths to process : 1
18/09/07 22:39:15 INFO input.FileInputFormat: Total input paths to process : 1
18/09/07 22:39:16 INFO mapreduce.JobSubmitter: number of splits:7
18/09/07 22:39:16 INFO mapreduce.JobSubmitter: Submitting tokens for job:
job_1536334562529_0001
18/09/07 22:39:17 INFO impl.YarnClientImpl: Submitted application
application_1536334562529_0001
18/09/07 22:39:18 INFO mapreduce.Job: The url to track the job:
http://localhost:8088/proxy/application_1536334562529_0001/
18/09/07 22:39:18 INFO mapreduce.Job: Running job: job_1536334562529_0001
18/09/07 22:39:36 INFO mapreduce.Job: Job job_1536334562529_0001 running in uber mode :
false
18/09/07 22:39:36 INFO mapreduce.Job: map 0% reduce 0%
18/09/07 22:56:07 INFO mapreduce.Job: map 2% reduce 0%
18/09/07 22:56:10 INFO mapreduce.Job: map 5% reduce 0%
18/09/07 22:56:14 INFO mapreduce.Job: map 7% reduce 0%
18/09/07 22:56:17 INFO mapreduce.Job: map 9% reduce 0%
18/09/07 22:56:21 INFO mapreduce.Job: map 11% reduce 0%
18/09/07 22:56:24 INFO mapreduce.Job: map 12% reduce 0%
18/09/07 22:56:25 INFO mapreduce.Job: map 14% reduce 0%
18/09/07 22:56:28 INFO mapreduce.Job: map 16% reduce 0%
18/09/07 22:56:31 INFO mapreduce.Job: map 17% reduce 0%
18/09/07 22:56:32 INFO mapreduce.Job: map 19% reduce 0%
18/09/07 22:56:35 INFO mapreduce.Job: map 21% reduce 0%
```

18/09/07 22:56:39 INFO mapreduce.Job: map 23% reduce 0%  
18/09/07 22:56:42 INFO mapreduce.Job: map 25% reduce 0%  
18/09/07 22:56:45 INFO mapreduce.Job: map 26% reduce 0%  
18/09/07 22:56:49 INFO mapreduce.Job: map 27% reduce 0%  
18/09/07 22:56:51 INFO mapreduce.Job: map 28% reduce 0%  
18/09/07 22:56:52 INFO mapreduce.Job: map 29% reduce 0%  
18/09/07 22:56:56 INFO mapreduce.Job: map 30% reduce 0%  
18/09/07 22:56:58 INFO mapreduce.Job: map 31% reduce 0%  
18/09/07 22:57:01 INFO mapreduce.Job: map 32% reduce 0%  
18/09/07 22:57:02 INFO mapreduce.Job: map 33% reduce 0%  
18/09/07 22:57:06 INFO mapreduce.Job: map 34% reduce 0%  
18/09/07 22:57:09 INFO mapreduce.Job: map 35% reduce 0%  
18/09/07 22:57:14 INFO mapreduce.Job: map 36% reduce 0%  
18/09/07 22:57:20 INFO mapreduce.Job: map 37% reduce 0%  
18/09/07 22:57:24 INFO mapreduce.Job: map 38% reduce 0%  
18/09/07 22:57:29 INFO mapreduce.Job: map 39% reduce 0%  
18/09/07 22:57:34 INFO mapreduce.Job: map 40% reduce 0%  
18/09/07 22:57:52 INFO mapreduce.Job: map 45% reduce 0%  
18/09/07 22:58:44 INFO mapreduce.Job: map 54% reduce 0%  
18/09/07 22:58:50 INFO mapreduce.Job: map 59% reduce 0%  
18/09/07 22:59:21 INFO mapreduce.Job: map 60% reduce 0%  
18/09/07 22:59:24 INFO mapreduce.Job: map 61% reduce 0%  
18/09/07 22:59:28 INFO mapreduce.Job: map 62% reduce 0%  
18/09/07 22:59:31 INFO mapreduce.Job: map 63% reduce 0%  
18/09/07 22:59:33 INFO mapreduce.Job: map 64% reduce 0%  
18/09/07 22:59:36 INFO mapreduce.Job: map 65% reduce 10%  
18/09/07 22:59:39 INFO mapreduce.Job: map 66% reduce 10%  
18/09/07 22:59:41 INFO mapreduce.Job: map 67% reduce 10%  
18/09/07 22:59:43 INFO mapreduce.Job: map 68% reduce 10%  
18/09/07 22:59:45 INFO mapreduce.Job: map 69% reduce 10%  
18/09/07 22:59:47 INFO mapreduce.Job: map 70% reduce 10%  
18/09/07 22:59:50 INFO mapreduce.Job: map 71% reduce 10%  
18/09/07 22:59:52 INFO mapreduce.Job: map 72% reduce 10%  
18/09/07 22:59:53 INFO mapreduce.Job: map 73% reduce 10%  
18/09/07 22:59:55 INFO mapreduce.Job: map 74% reduce 10%  
18/09/07 22:59:58 INFO mapreduce.Job: map 75% reduce 10%  
18/09/07 23:00:00 INFO mapreduce.Job: map 76% reduce 10%  
18/09/07 23:01:17 INFO mapreduce.Job: map 77% reduce 10%  
18/09/07 23:01:22 INFO mapreduce.Job: map 78% reduce 10%  
18/09/07 23:01:23 INFO mapreduce.Job: map 79% reduce 10%  
18/09/07 23:01:25 INFO mapreduce.Job: map 80% reduce 10%  
18/09/07 23:01:28 INFO mapreduce.Job: map 81% reduce 10%  
18/09/07 23:01:30 INFO mapreduce.Job: map 82% reduce 10%  
18/09/07 23:01:32 INFO mapreduce.Job: map 83% reduce 10%  
18/09/07 23:01:35 INFO mapreduce.Job: map 84% reduce 10%  
18/09/07 23:01:37 INFO mapreduce.Job: map 85% reduce 10%  
18/09/07 23:01:40 INFO mapreduce.Job: map 86% reduce 10%  
18/09/07 23:01:42 INFO mapreduce.Job: map 87% reduce 10%  
18/09/07 23:01:44 INFO mapreduce.Job: map 88% reduce 10%

18/09/07 23:01:46 INFO mapreduce.Job: map 89% reduce 10%  
18/09/07 23:01:47 INFO mapreduce.Job: map 90% reduce 10%  
18/09/07 23:01:50 INFO mapreduce.Job: map 91% reduce 10%  
18/09/07 23:01:51 INFO mapreduce.Job: map 92% reduce 10%  
18/09/07 23:01:54 INFO mapreduce.Job: map 93% reduce 10%  
18/09/07 23:01:56 INFO mapreduce.Job: map 94% reduce 10%  
18/09/07 23:01:59 INFO mapreduce.Job: map 95% reduce 10%  
18/09/07 23:02:01 INFO mapreduce.Job: map 96% reduce 10%  
18/09/07 23:02:04 INFO mapreduce.Job: map 97% reduce 10%  
18/09/07 23:02:06 INFO mapreduce.Job: map 98% reduce 10%  
18/09/07 23:02:09 INFO mapreduce.Job: map 99% reduce 10%  
18/09/07 23:02:12 INFO mapreduce.Job: map 100% reduce 10%  
18/09/07 23:02:18 INFO mapreduce.Job: map 100% reduce 14%  
18/09/07 23:02:23 INFO mapreduce.Job: map 100% reduce 19%  
18/09/07 23:02:25 INFO mapreduce.Job: map 100% reduce 24%  
18/09/07 23:02:28 INFO mapreduce.Job: map 100% reduce 29%  
18/09/07 23:02:31 INFO mapreduce.Job: map 100% reduce 67%  
18/09/07 23:03:05 INFO mapreduce.Job: map 100% reduce 68%  
18/09/07 23:03:42 INFO mapreduce.Job: map 100% reduce 69%  
18/09/07 23:04:28 INFO mapreduce.Job: map 100% reduce 70%  
18/09/07 23:05:59 INFO mapreduce.Job: map 100% reduce 72%  
18/09/07 23:06:40 INFO mapreduce.Job: map 100% reduce 73%  
18/09/07 23:07:19 INFO mapreduce.Job: map 100% reduce 74%  
18/09/07 23:07:56 INFO mapreduce.Job: map 100% reduce 75%  
18/09/07 23:08:35 INFO mapreduce.Job: map 100% reduce 76%  
18/09/07 23:09:12 INFO mapreduce.Job: map 100% reduce 77%  
18/09/07 23:09:50 INFO mapreduce.Job: map 100% reduce 78%  
18/09/07 23:10:29 INFO mapreduce.Job: map 100% reduce 79%  
18/09/07 23:11:06 INFO mapreduce.Job: map 100% reduce 80%  
18/09/07 23:11:42 INFO mapreduce.Job: map 100% reduce 81%  
18/09/07 23:12:19 INFO mapreduce.Job: map 100% reduce 82%  
18/09/07 23:12:58 INFO mapreduce.Job: map 100% reduce 83%  
18/09/07 23:13:36 INFO mapreduce.Job: map 100% reduce 84%  
18/09/07 23:14:12 INFO mapreduce.Job: map 100% reduce 85%  
18/09/07 23:14:52 INFO mapreduce.Job: map 100% reduce 86%  
18/09/07 23:15:29 INFO mapreduce.Job: map 100% reduce 87%  
18/09/07 23:16:05 INFO mapreduce.Job: map 100% reduce 88%  
18/09/07 23:16:42 INFO mapreduce.Job: map 100% reduce 89%  
18/09/07 23:17:18 INFO mapreduce.Job: map 100% reduce 90%  
18/09/07 23:17:56 INFO mapreduce.Job: map 100% reduce 91%  
18/09/07 23:18:32 INFO mapreduce.Job: map 100% reduce 92%  
18/09/07 23:19:09 INFO mapreduce.Job: map 100% reduce 93%  
18/09/07 23:19:48 INFO mapreduce.Job: map 100% reduce 94%  
18/09/07 23:20:25 INFO mapreduce.Job: map 100% reduce 95%  
18/09/07 23:21:05 INFO mapreduce.Job: map 100% reduce 96%  
18/09/07 23:20:25 INFO mapreduce.Job: map 100% reduce 95%  
18/09/07 23:21:05 INFO mapreduce.Job: map 100% reduce 96%  
18/09/07 23:21:48 INFO mapreduce.Job: map 100% reduce 97%  
18/09/07 23:22:25 INFO mapreduce.Job: map 100% reduce 98%

18/09/07 23:23:01 INFO mapreduce.Job: map 100% reduce 99%  
18/09/07 23:23:38 INFO mapreduce.Job: map 100% reduce 100%  
18/09/07 23:24:00 INFO mapreduce.Job: Job job\_1536341057600\_0001 completed successfully  
18/09/07 23:24:01 INFO mapreduce.Job: Counters: 50

#### File System Counters

FILE: Number of bytes read=961694264  
FILE: Number of bytes written=1457488774  
FILE: Number of read operations=0  
FILE: Number of large read operations=0  
FILE: Number of write operations=0  
HDFS: Number of bytes read=711856518  
HDFS: Number of bytes written=1669001  
HDFS: Number of read operations=24  
HDFS: Number of large read operations=0  
HDFS: Number of write operations=2

#### Job Counters

Killed map tasks=1  
Launched map tasks=8  
Launched reduce tasks=1  
Data-local map tasks=8  
Total time spent by all maps in occupied slots (ms)=2242118  
Total time spent by all reduces in occupied slots (ms)=1506739  
Total time spent by all map tasks (ms)=2242118  
Total time spent by all reduce tasks (ms)=1506739  
Total vcore-milliseconds taken by all map tasks=2242118  
Total vcore-milliseconds taken by all reduce tasks=1506739  
Total megabyte-milliseconds taken by all map tasks=2295928832  
Total megabyte-milliseconds taken by all reduce tasks=1542900736

#### Map-Reduce Framework

Map input records=26070134  
Map output records=26070132  
Map output bytes=442789828  
Map output materialized bytes=494930141  
Input split bytes=2301  
Combine input records=0  
Combine output records=0  
Reduce input groups=45843  
Reduce shuffle bytes=494930141  
Reduce input records=26070132  
Reduce output records=45843  
Spilled Records=76775523  
Shuffled Maps =7  
Failed Shuffles=0  
Merged Map outputs=7  
GC time elapsed (ms)=20628  
CPU time spent (ms)=1478990  
Physical memory (bytes) snapshot=1199194112  
Virtual memory (bytes) snapshot=2720649216  
Total committed heap usage (bytes)=903217152

## 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=1669001

```
[acadgild@localhost ~]$
```

```
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/hdfs/casestudy/casestudy1/output
```

```
18/09/07 23:34:15 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
```

```
Found 2 items
```

```
-rw-r--r-- 1 acadgild supergroup      0 2018-09-07 23:23
```

```
/hadoopdata/hdfs/casestudy/casestudy1/output/_SUCCESS
```

```
-rw-r--r-- 1 acadgild supergroup 1669001 2018-09-07 23:23
```

```
/hadoopdata/hdfs/casestudy/casestudy1/output/part-r-00000
```

```
[acadgild@localhost ~]$ hdfs dfs -cat
```

```
/hadoopdata/hdfs/casestudy/casestudy1/output/part-r-00000|head
```

```
18/09/07 23:34:33 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
```

```
Toy Story (1995)      66008 3.888157
```

```
GoldenEye (1995)    32534 3.431841
```

```
City Hall (1996)     4436 3.232304
```

```
Curdled (1996)       217 3.099078
```

```
"Comic      1      4.000000
```

```
Up in Smoke (1957)  3      3.666667
```

```
First Daughter (1999) 3      3.333333
```

```
"Flaw 14      3.714286
```

```
Battle of Los Angeles (2011) 44      2.522727
```

```
Jason Becker: Not Dead Yet (2012) 9      3.444444
```

```
cat: Unable to write to output stream.
```

## // Complete output file

```
[acadgild@localhost ~]$ hdfs dfs -cat
```

```
/hadoopdata/hdfs/casestudy/casestudy1/output/part-r-00000|head
```

```
18/09/07 23:34:33 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
```

```
Lincoln (2012)       2231 3.643209
```

```
Nature Calls (2012) 12      1.791667
```

Babbitt (1934)	1	3.000000	
In Their Sleep (Dans ton sommeil) (2010)	3	2.666667	
Requiem for a Killer (Requiem pour une tueuse) (2011)	1	4.000000	
"Bohème	3	3.666667	
"Caine Mutiny Court-Martial	8	3.437500	
Vamps (2012)	44	2.795455	
Cash on Demand (1962)	2	3.750000	
"Naughty Room	1	3.000000	
"Moth Diaries	39	3.012821	
Joe + Belle (2011)	2	4.000000	
"Invisible War	86	3.738372	
OMG Oh My God! (2012)	61	3.942623	
Picnic (1955)	619	3.644588	
"Strawberry Statement	10	3.400000	
"Twilight Saga: Breaking Dawn - Part 2	1176	2.523384	
Shakespeare High (2011)	3	3.333333	
"Circle	2	1.750000	
Holiday Engagement (2011)	14	3.607143	
"Tiger Brigades	5	2.800000	
"Year One	6	3.083333	
"Big Blonde	2	3.000000	
Walter (1982)	2	4.000000	
10 Years (2011)	95	3.042105	
Price Check (2012)	24	2.937500	
Red Dawn (2012)	261	2.747126	
Starry starry night (Xing kong) (2011)	7	3.857143	
Rise of the Guardians (2012)	1527	3.526195	
"Seafarers	18	2.388889	
"Counterfeiters	6	3.666667	
Kabei: Our Mother (Kâbê) (2008)	5	4.200000	
Samurai Banners (Fûrin kazan) (1969)	4	3.625000	
Murder on Flight 502 (1975)	2	3.000000	
Amor? (2011)	1	3.000000	
"Last Trapper	4	3.375000	
"Octopus	11	3.181818	
Locked Out (Enfermés dehors) (2006)	8	2.687500	
"Fantastic Fear of Everything	114	3.122807	
Fire Over England (1937)	4	2.750000	
Fog Over Frisco (1934)	4	2.625000	
Ten Seconds to Hell (1959)	3	3.000000	
Storage 24 (2012)	21	2.571429	
Tokio Baby (2010)	2	1.500000	
Deadfall (2012)	150	3.026667	
Skirt Day (La journée de la jupe) (2008)	10	3.650000	
Madagascar Skin (1995)	22	2.681818	



So Big! (1932)	4	2.250000	
"Singing Marine	1	3.000000	
"Great Diamond Robbery	0	NaN	
Two Sisters from Boston (1946)	1	3.000000	
"Quare Fellow	1	3.000000	
Chronicle of My Mother (Waga haha no ki) (2011)	3	3.333333	
"Moral Tales	1	4.500000	
97 Percent True (2008)	1	4.000000	
Les modèles de 'Pickpocket' (2005)	2	3.000000	
"Confession	11	3.136364	
Lovely to Look At (1952)	1	3.000000	
Excuse My Dust (1951)	1	3.000000	
Watch the Birdie (1950)	1	3.000000	
Putin's Kiss (2012)	5	3.100000	
Journey to Saturn (Rejsen til Saturn) (2008)	8	2.937500	
Byzantium (2012)	239	3.464435	
BuzzKill (2012)	1	1.000000	
"Perfect Family	6	3.333333	
Halo 4: Forward Unto Dawn (2012)	86	3.261628	
Step Up Revolution (2012)	204	3.330882	
"Yellow Cab Man	2	3.000000	
Four more years (Fyra år till) (2010)	10	3.200000	
Hellraiser: Revelations (2011)	28	1.678571	
Welcome to Sherwood! The Story of 'The Adventures of Robin Hood' (2003)	1	4.000000	
Jungle de Ikou (Jungre de Ikou) (1997)	2	2.250000	
Making 'The New World' (2006)	3	3.666667	
"Lost Missile	0	NaN	
Nightmare Man (2006)	7	2.214286	
Cry Wolf (1947)	6	3.166667	
Everybody's Acting (1926)	0	NaN	
"Pompatus of Love	248	2.695565	
Imaginaerum (2012)	54	3.268519	
Nokas (2010)	17	2.882353	
Tarda estate (2010)	1	3.000000	
Raw Deal: A Question of Consent (2001)	1	2.500000	
Budd Boetticher: An American Original (2005)	1	2.500000	
"Footprints of a Spirit	1	3.000000	
James Dean Remembered (1974)	1	2.000000	
Our Town (2003)	2	3.250000	
Bed of Roses (1933)	1	5.000000	
Division III: Football's Finest (2011)	3	2.333333	
Rebecca of Sunnybrook Farm (1938)	5	3.500000	
Mark Twain (2001)	7	3.571429	
DMT: The Spirit Molecule (2010)	45	3.444444	

Mac & Devin Go to High School (2012)	17	2.588235
"Burning Hot Summer	6	2.416667
"Kiss for Corliss	0	NaN
Adventure in Baltimore (1949)	1	3.000000
Baby Take a Bow (1934)	4	2.875000
"Tempest	6	2.750000
New Fist of Fury (Xin jing wu men) (1976)	2	3.500000
"Killer Meteors	2	2.750000
Shaolin Wooden Men (Shao Lin mu ren xiang) (1976)	3	2.333333
36 Crazy Fists (San shi liu mi xing quan) (1977)	5	2.300000
"Sleeping Car Murder	5	3.600000
Let's Not Get Angry (Ne nous fâchons pas) (1966)	3	2.333333
Hothead (Coup de tête) (1979)	6	3.416667
Poolboy: Drowning Out the Fury (2011)	6	1.833333
"Poll Diaries	4	3.125000
Aftermath (2012)	28	3.553571
Paperman (2012)	2024	4.095850
To Kill with Intrigue (Jian hua yan yu Jiang Nan) (1977)	3	2.500000
Magnificent Bodyguards (Fei du juan yun shan) (1978)	4	2.000000
"Fearless Hyena	18	2.888889
Small Wonders (1995)	62	3.419355
Dragon Fist (Long quan) (1979)	8	2.562500
Half a Loaf of Kung Fu (Dian zhi gong fu gan chian chan) (1980)	6	3.333333
We Should Not Exist (On ne devrait pas exister) (2006)	1	2.000000
Bank Error in Your Favour (Erreur de la banque en votre faveur) (2009)	6	3.416667
Kirikou and the Wild Beast (Kirikou et les bêtes sauvages) (2005)	16	3.406250
"Statue of Liberty	5	3.500000
Slingshot (2005)	1	1.000000
Brooklyn Bridge (1981)	5	2.800000
Arcade (1993)	4	2.375000
Jude the Obscure (1971)	2	3.500000
"Paramore Live	1	4.000000
Bad Ass (2012)	44	2.852273
Nativity! (2009)	21	2.952381
"Christmas Story 2	12	2.208333
Elevator Girl (2010)	11	2.863636
Dragon Attack (1983)	7	2.928571
Fearless Hyena II (Long teng hu yue) (1983)	3	3.500000
Recoil (2011)	10	2.700000
Ghost Voyage (2008)	2	1.500000
"Peace	42	3.166667
"Congress	1	4.000000
Fever (1991)	1	3.000000
Hecho en México (2012)	2	3.000000
Hitchcock (2012)	404	3.321782

Caesar Must Die (Cesare deve morire) (2012)	29	3.500000	
Interceptor (1993)	5	2.600000	
Now Where Did the Seventh Company Get to? (Mais où est donc passée la 7ème compagnie) (1973)	7	3.428571	
Other Worlds (D'autres mondes) (2004)	3	3.000000	
Peppermint Soda (Diabolo menthe) (1977)	3	4.000000	
Fly Away Home (1996)	3325	3.500902	
American Roulette (1988)	1	2.000000	
From Up on Poppy Hill (Kokuriko-zaka kara) (2011)	283	3.795053	
Redline (2009)	151	3.745033	
Honeymoon (1947)	1	2.500000	
Just Around the Corner (1938)	3	3.000000	
Kathleen (1941)	1	3.000000	
Burn Up! (1991)	4	3.125000	
Lulu in Berlin (1984)	1	2.500000	
L'instant et la patience (1994)	1	4.000000	
Welcome to the Space Show (Uchû shô e yôkoso) (2010)	14	3.107143	
Winners and Sinners (Qi mou miao ji: Wu fu xing) (1983)	19	2.921053	
Barry Munday (2010)	9	3.222222	
Purge (Puhdistus) (2012)	27	3.148148	
"Day He Arrives	9	3.277778	
My Lucky Stars (Fuk sing go jiu) (1985)	9	3.500000	
Twinkle Twinkle Lucky Stars (Xia ri fu xing) (1985)	10	2.900000	
Kiss and Tell (1945)	1	3.000000	
"Yes	3	3.333333	
Space Adventure Cobra (1982)	4	4.000000	
"Money Money Money (L'aventure	11	3.136364	
"Season for Miracles	4	4.125000	
Bliss (1997)	291	3.185567	
"Awful Truth	1	1.500000	
1911 (Xinhai geming) (2011)	13	2.769231	
Jackie Chan: Kung Fu Master (Xun zhao Cheng Long) (2009)	2	3.000000	
"Shaolin Temple	10	3.250000	
Shaolin Temple 2: Kids from Shaolin (Shao Lin xiao zi) (Kids from Shaolin) (1984)	6	3.500000	
Carol Channing: Larger Than Life (2012)	8	2.812500	
Memory (2006)	7	3.071429	
Shaolin Temple 3: Martial Arts of Shaolin (Nan bei Shao Lin) (Martial Arts of Shaolin) (1986)	5	2.800000	
Snowmageddon (2011)	5	1.900000	
Stand Up and Fight (1939)	2	3.000000	
Jazz (2001)	35	3.814286	
Barbara (2012)	84	3.583333	
"Liar's Autobiography: The Untrue Story of Monty Python's Graham Chapman	15	2.500000	

Grace of My Heart (1996)	552	3.346014		
Little Miss Broadway (1938)	2	3.000000		
Miss Annie Rooney (1942)	4	2.750000		
Mr. Belvedere Goes to College (1949)	4	3.500000		
"Hobbit: An Unexpected Journey	8959	3.704041		
Mon Paradis - Der Winterpalast (2001)	1	2.500000		
No Flesh Shall Be Spared (2009)	1	3.000000		
I am Von Höfler (Variation on Werther - Private Hungary	15)	(2008)	1	2.500000
Born to Defense (Zhong hua ying xiong) (1986)	2	3.250000		
Dragon Fight (Long zai tian ya) (1989)	1	2.500000		
"Master	2	3.500000		
"Evil Cult	7	3.428571		
"Fitzgerald Family Christmas	5	3.100000		
Hyde Park on Hudson (2012)	88	3.034091		
Lay the Favorite (2012)	38	2.473684		
Audition (Konkurs) (1964)	9	3.333333		
All's Faire in Love (2009)	8	3.187500		
Crooked Arrows (2012)	8	3.437500		
"Enforcer	12	3.000000		
Dr. Wai in the Scriptures with No Words (Mao xian wang) (1996)	6	2.500000		
Once Upon a Time in China and America (Wong Fei Hung: Chi sai wik hung see) (1997)	19	3.868421		
Hitman (Contract Killer) (Sat sau ji wong) (1998)	6	2.916667		
Heroic Cops (Jing wang shuang xiong) (1978)	2	3.000000		
Never Say... Never! (Il ne faut jurer... de rien!) (2005)	3	2.166667		
"Cool	4	3.625000		
Brother of Sleep (Schlafes Bruder) (1995)	81	3.462963		
How to Make Love to a Woman (2010)	8	2.375000		
"After Fall	4	2.500000		
Violeta Went to Heaven (Violeta se fue a los cielos) (2011)	3	3.833333		
Rebellion (L'ordre et la morale) (2011)	19	3.736842		
Versailles (2008)	1	3.000000		
Two in the Wave (2010)	12	3.375000		
Lotte Reiniger: Homage to the Inventor of the Silhouette Film (2001)	1	3.500000		
"RKO Production 601: The Making of 'Kong	1	3.000000		
Yossi (Ha-Sippur Shel Yossi) (2012)	13	3.923077		
"All Blossoms Again: Pedro Costa	1	1.000000		
"Last Rites of Joe May	3	2.333333		
100 Ways to Murder Your Wife (Sha qi er ren zu) (1986)	2	3.250000		
"Prodigal	1	4.000000		
"Eleventh Hour	5	2.800000		
Barfi! (2012)	112	3.678571		
Federico Fellini's Autobiography (Federico Fellini - un autoritratto ritrovato) (2000)	2	3.750000		
Zero Dark Thirty (2012)	3015	3.714594		

Neighbouring Sounds (O som ao redor) (2012)	39	3.589744	
Consuming Spirits (2012)	2	3.500000	
Chasing Ice (2012)	63	3.722222	
Antiviral (2012)	105	3.176190	
"Arrival of a Train	52	3.307692	
Arsène Lupin (2004)	15	2.933333	
"Three Brothers	33	3.348485	
Ghost Machine (2009)	7	2.428571	
Freeloaders (2011)	3	2.833333	
"Immortal Story	12	2.916667	
Filming 'Othello' (1978)	6	3.750000	
Woodsman and the Rain (Kitsutsuki to ame) (2011)	3	3.833333	
Heidi Fleiss: Hollywood Madam (1995)	765	3.118301	
Maximum Risk (1996)	976	2.731557	
Fire with Fire (2012)	74	2.831081	
Warm Bodies (2013)	1710	3.346199	
"Gay Bed and Breakfast of Terror	6	1.416667	
Dororo (2007)	11	3.454545	
Let Fury Have the Hour (2012)	0	NaN	
Asylum Blackout (2011)	19	2.868421	
Fresh Bait (L'appât) (1995)	3	3.166667	
Frenchmen (Le coeur des hommes) (2003)	7	3.142857	
Wrong (2012)	69	3.347826	
Young & Wild (Joven y alocada) (2012)	22	2.886364	
Trishna (2011)	11	3.272727	
Aftershock (Tangshan dadizhen) (2010)	24	3.770833	
Chained (2012)	62	3.266129	
"Goodbye Girl	6	3.166667	
"Ring Finger	9	3.611111	
"Count Yorga	9	2.333333	
"Comedy	40	3.387500	
7 Khoon Maaf (2011)	19	2.473684	
"Red Shoes	7	2.857143	
Bluebeard (1972)	4	3.750000	
Our Little Girl (1935)	1	2.500000	
Playing for Keeps (2012)	86	3.017442	
Poor Little Rich Girl (1936)	4	3.625000	
Skate or Die (2008)	2	3.250000	
Michael Collins (1996)	2683	3.571562	
Negative Happy Chainsaw Edge (Negatibu happi chensô ejji) (2007)	3	3.500000	
Stevie Nicks: Live at Red Rocks (1987)	3	3.833333	
"Guilt Trip	170	2.850000	
"Girl on a Motorcycle	16	2.781250	
Save the Date (2012)	57	3.105263	
Jack Reacher (2012)	2306	3.504987	

Django Unchained (2012)	16985	4.008478		
This Is 40 (2012)	677	3.138848		
Mahakaal (The Monster) (1993)	3	2.000000		
I Bought a Vampire Motorcycle (1990)	7	2.500000		
Willard (1971)	16	2.718750		
"Public Woman	10	3.100000		
Female Demon Ohyaku (Yôen dokufuden hannya no ohyaku) (1968)	5	3.100000		
Ice Cream Man (1995)	12	2.625000		
Cirque du Soleil: Worlds Away (2012)	41	3.500000		
"Impossible	795	3.575472		
Carol for Another Christmas (1964)	2	2.250000		
"Misérables	1793	3.530954		
"Gestapo's Last Orgy	2	3.250000		
Mamitas (2011)	7	3.571429		
"Bobo 4		3.000000		
Struck by Lightning (2012)	63	3.317460		
Minecraft: The Story of Mojang (2012)	15	3.800000		
Spring Break Shark Attack (2005)	8	1.562500		
Campfire Tales (1997)	19	3.500000		
"Rich Man's Wife	280	2.750000		
Seven Ways from Sundown (1960)	2	3.000000		
Aziz Ansari: Intimate Moments for a Sensual Evening (2010)	38	3.644737		
Not Fade Away (2012)	44	3.181818		
Quartet (2012)	146	3.359589		
Silent Night (2012)	17	2.500000		
"Turn of the Screw	7	2.714286		
"Coluche	1	4.000000		
"Parasites	2	4.500000		
"Reluctant Dragon	18	2.500000		
"Marine Story	4	3.125000		
Malibu High (1979)	3	3.500000		
"Softening of the Egg	5	3.400000		
Who Wants to Kill Jessie? (Kdo chce zabít Jessii?) (1966)	18	3.472222		
Jerusalem Countdown (2011)	6	2.333333		
Stand Up and Cheer! (1934)	3	2.833333		
Stowaway (1936)	3	2.833333		
Susannah of the Mounties (1939)	5	3.200000		
11 Flowers (Wo 11) (2011)	6	4.083333		
Quatre garçons pleins d'avenir (1997)	3	3.000000		
In Your Dreams (Dans tes rêves) (2005)	1	3.000000		
"Willow Tree	10	2.950000		
Would You Rather (2012)	240	3.154167		
Infinity (1996)	254	3.507874		
Kumaré (2011)	117	3.760684		
Lady Oscar (1979)	2	3.000000		

That Hagen Girl (1947)	1	1.000000	
Holiday Wishes (2006)	1	1.500000	
Maximum Conviction (2012)	21	2.500000	
"Eye of the Storm	2	3.750000	
976-EVIL II (1992)	9	2.166667	
Xtro 2: The Second Encounter (1991)	3	2.000000	
Xtro 3: Watch the Skies (1995)	5	1.600000	
Addicted (2013)	6	2.666667	
Foreign Intrigue (1956)	2	3.250000	
Harem suare (1999)	7	2.928571	
Electile Dysfunction (2008)	2	4.000000	
"Glenn	2	1.750000	
Kevin Smith: Burn in Hell (2012)	32	3.109375	
Slipstream (1989)	14	2.142857	
"Woodmans	7	3.142857	
Move (3 Zimmer/Küche/Bad) (2012)	10	3.150000	
Holiday in Handcuffs (2007)	33	3.015152	
Camp Rock 2: The Final Jam (2010)	84	2.845238	
StreetDance 3D (2010)	26	2.961538	
"New Barbarians	13	2.884615	
How to Stop Being a Loser (2011)	6	3.166667	
Transfer (2010)	21	3.547619	
Thanksgiving Family Reunion (National Lampoon's Holiday Reunion) (2003)	3	2.333333	
Time of Roses (Ruusujen aika) (1969)	7	2.714286	
Lipton Cockton in the Shadows of Sodoma (1995)	15	3.433333	
Big Night (1996)	5562	3.999461	
"Midsummer Night's Party	6	2.333333	
Alois Nebel (2011)	16	3.187500	
Juan of the Dead (Juan de los Muertos) (2011)	44	3.193182	
Parental Guidance (2012)	88	3.073864	
Sexy Baby (2012)	13	2.615385	
Kings of Recycling (Kierrätyksen kuninkaat) (2000)	1	4.000000	
Snow on Tha Bluff (2011)	19	3.210526	
John Dies at the End (2012)	443	3.391648	
Vidal Sassoon: The Movie (2010)	1	3.000000	
Born to Be Wild (2011)	9	3.388889	
Blonde Ice (1948)	4	3.000000	
Ultrasuede: In Search of Halston (2010)	1	3.000000	
Trek Nation (2010)	7	3.428571	
Sun Kissed (2012)	1	5.000000	
Wish Me Away (2011)	6	3.083333	
"Central Park Five	116	3.853448	
"Collection	132	3.231061	
"Cherry Orchard	2	3.500000	

FDR: American Badass! (2012)	9	1.888889		
All Superheros Must Die (2011)	22	2.136364		
Jean Renoir: Part One - From La Belle Époque to World War II (1993)	1	4.500000		
Booker's Place: A Mississippi Story (2012)	4	3.250000		
Girl Walk: All Day (2011)	5	3.500000		
"Acacias	8	3.250000		
Just Ask My Children (2001)	2	2.750000		
Never Too Young to Die (1986)	5	2.100000		
"Remember the Daze (Beautiful Ordinary	19	2.868421		
Waiting for Lightning (2012)	4	3.250000		
Yesterday's Enemy (1959)	2	4.250000		
Young People (1940)	1	3.000000		
Henry (2010)	1	2.500000		
"Incruste	1	2.500000		
"Villain	7	3.214286		
Soldiers of Fortune (2012)	17	2.500000		
Rurouni Kenshin (Rurôni Kenshin: Meiji kenkaku roman tan) (2012)	104	3.644231		
"Misérables	51	3.519608		
Extracted (2012)	74	3.472973		
Stevie (2008)	5	2.800000		
Mansome (2012)	17	3.000000		
"Misérables	11	3.409091		
"Misérables	3	3.166667		
"Big Street	4	2.500000		
"True Meaning of Christmas Specials	1	3.500000		
Great Escape: The Untold Story (2001)	4	3.750000		
Kenji Mizoguchi: The Life of a Film Director (Aru eiga-kantoku no shogai) (1975)	1	3.500000		
Cornelis (2010)	4	3.000000		
Promised Land (2012)	193	3.347150		
Neo Ned (2005)	5	3.600000		
Offender (2012)	7	2.928571		
Sun Wind (Aurinkotuuli) (1980)	5	2.600000		
Confessions of a Window Cleaner (1974)	5	2.100000		
Last Man Standing (1996)	3528	3.011763		
"Man Who Haunted Himself	5	3.300000		
Dakota Skye (2008)	20	3.575000		
"Demon in My View	1	2.000000		
Immaculate Conception of Little Dizzle (2009)	9	2.833333		
Judas Kiss (2011)	10	3.000000		
Confessions of a Pop Performer (1975)	2	2.750000		
Private Romeo (2011)	9	3.388889		
Role/Play (2010)	10	2.400000		
I Know What I Saw (2009)	9	3.388889		
"Sweeney	49	3.051020		



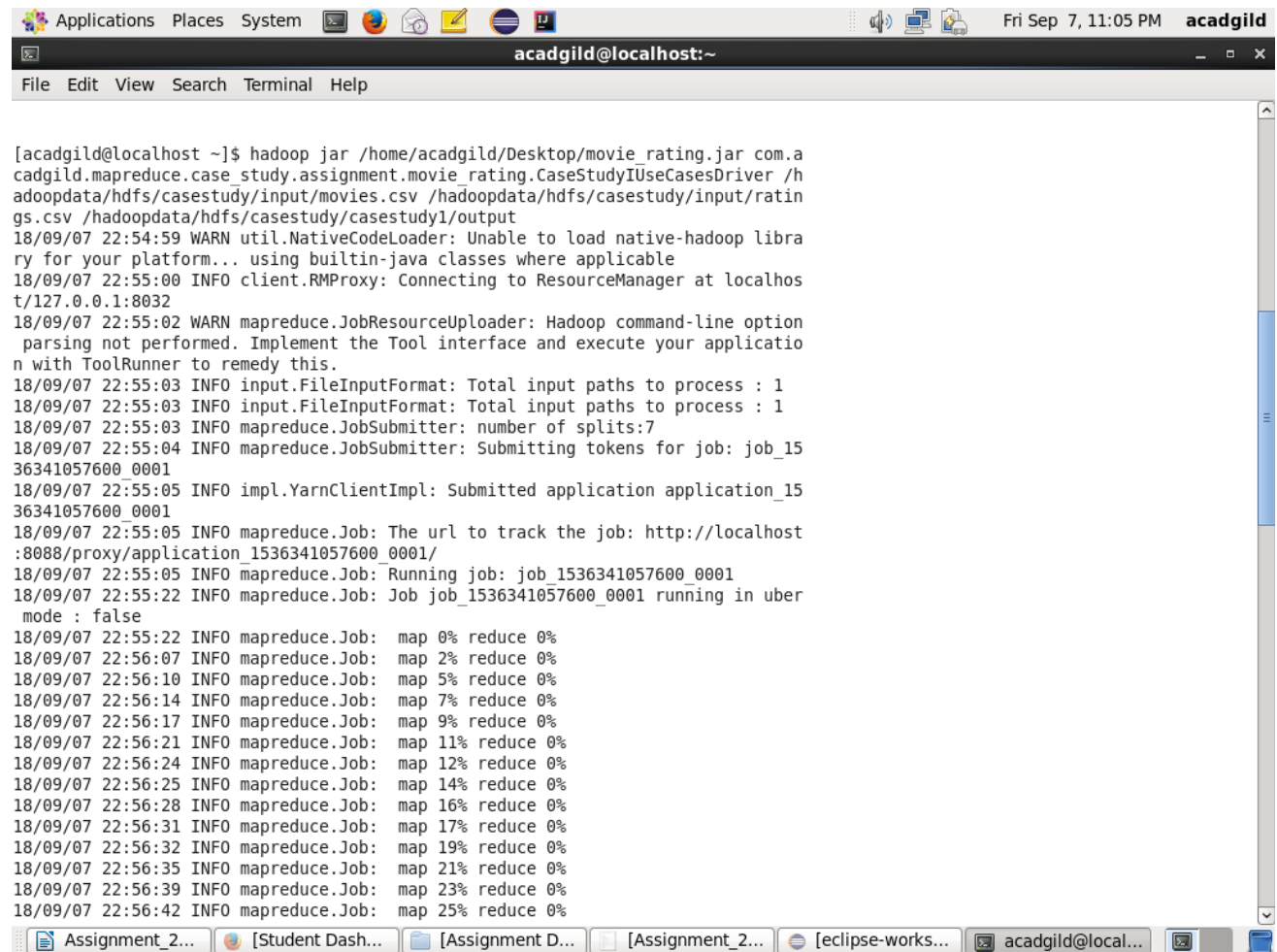
English Vinglish (2012)	44	3.738636	
Fish Story (Fisshu sutôri) (2009)	25	3.700000	
Comedy Central Roast of Bob Saget (2008)	22	3.409091	
Tiny Toon Adventures: How I Spent My Vacation (1992)	38	3.144737	
Trapped in the Closet: Chapters 1-12 (2005)	8	2.562500	
"Sea of Grass	2	3.000000	
"Visitors	3	1.500000	
L'homme qui rit (2012)	5	2.700000	
Excuse Me for Living (2012)	1	0.500000	
Aftermath (1994)	26	3.000000	
Fragments of an Alms-Film (Fragmentos de um Filme-Esmola: A Sagrada Família) (1972)	1	2.500000	
Manuel on the Island of Wonders (Manoel dans l'île des merveilles) (1984)	3	3.833333	
Eat Sleep Die (Äta sova dö) (2012)	19	3.736842	
Dr. Bronner's Magic Soapbox (2006)	7	2.642857	
"Guns 13	2.923077		
"Dark Truth	11	2.590909	
"Conversation with Gregory Peck	3	2.500000	
Odette Toulemonde (2006)	9	2.833333	
Mein Kampf (2009)	4	3.000000	
Pusher (2012)	25	2.820000	
Lucy (2003)	3	3.000000	
Caught (1996)	229	3.532751	
"Hollywood Complex	5	3.300000	
"Shunning	11	3.181818	
She Had to Say Yes (1933)	0	NaN	
Leave (2011)	5	2.300000	
Texas Chainsaw 3D (2013)	97	2.520619	
K-11 (2012)	3	4.000000	
Ex-Girlfriends (2012)	3	2.666667	
Gangster Squad (2013)	816	3.185049	
Dabangg 2 (2012)	13	2.769231	
"Marsh	8	2.375000	
Road to Redemption (2001)	3	2.833333	
"Climb	3	2.833333	
"Warrior and the Sorceress	10	2.000000	
"Company You Keep	120	3.237500	
"Trouble with Bliss	15	2.700000	
"Samaritan	20	2.875000	
I Got Next (2011)	2	3.000000	
"Iceman	250	3.336000	
Behind Blue Skies (Himlen är oskyldigt blå) (2010)	9	3.166667	
Mad Ron's Prevues from Hell (1987)	4	4.000000	
T.N.T. (1997)	2	2.250000	
Secrets of the Tribe (2010)	4	3.625000	

It's Such a Beautiful Day (2012)	290	3.970690	
Superman/Shazam!: The Return of Black Adam (DC Showcase Original Shorts Collection) (2010)	33	3.681818	
Kiss the Bride (2007)	6	2.833333	
"Haunted House	103	2.271845	
Sinners and Saints (2010)	9	2.722222	
Painted Lady (1997)	3	2.833333	
Whores' Glory (2011)	53	3.518868	
Somewhere in Palilula (Undeva la Palilula) (2012)	3	3.500000	
Set It Off (1996)	849	3.222615	
"Fork in the Road	8	3.062500	
Planet of Snail (2011)	4	2.625000	
"Waiting Room	12	3.375000	
Beware of Mr. Baker (2012)	47	3.680851	
"Batman: The Dark Knight Returns	1040	3.815385	
Alphabet City (1984)	5	2.700000	
Beyond The Hills (2012)	49	3.816327	
Pokémon the Movie: Black - Victini and Reshiram (2011)	12	2.375000	
Pokémon the Movie: White - Victini and Zekrom (2011)	15	2.566667	
Cleanflix (2009)	10	3.600000	
"Unloved	7	3.071429	
"Hand 16		3.750000	
Paul Williams Still Alive (2011)	31	3.532258	
Sister (L'enfant d'en haut) (2012)	36	3.597222	
Mea Maxima Culpa: Silence in the House of God (2012)	20	3.675000	
Everything or Nothing: The Untold Story of 007 (2012)	38	3.447368	
Grayeagle (1977)	5	2.900000	
Codependent Lesbian Space Alien Seeks Same (2011)	6	2.083333	
"World's Greatest Athlete	6	2.916667	
Jesse Stone: Stone Cold (2005)	35	3.285714	
Jesse Stone: Death in Paradise (2006)	28	3.303571	
Jesse Stone: Sea Change (2007)	27	3.296296	
Cargo (2011)	3	2.333333	
Jesse Stone: No Remorse (2010)	30	3.266667	
Jesse Stone: Innocents Lost (2011)	24	3.354167	
Jesse Stone: Benefit of the Doubt (2012)	27	3.148148	
Diana Vreeland: The Eye Has to Travel (2011)	17	3.617647	
Fine-Tune (2008)	1	2.000000	
Sangre de mi sangre (Padre Nuestro) (2007)	2	3.250000	
Milarepa (2006)	3	2.666667	
Marked for Murder (1993)	0	NaN	
2 Days in the Valley (1996)	3260	3.286043	
O Panishyros Megistanas Ton Ninja (2008)	4	2.125000	
Morgan Pålsson - världsreporter (2008)	7	2.071429	
Renoir (2012)	24	3.083333	

Typhoon (Tae-poong) (2005)	13	3.038462	
"Last Stand	617	3.092382	
Mama (2013)	686	3.131195	
"Candidate	5	3.200000	
Upstream Color (2013)	629	3.580286	
Fast Life (1932)	1	3.000000	
Careless Love (2012)	2	3.000000	
Special When Lit (2009)	10	3.650000	
"Year of the Tiger	1	2.500000	
Outpost: Black Sun (2012)	21	2.142857	
Preston Sturges: The Rise and Fall of an American Dreamer (1990)	1	4.500000	
Double Indemnity (1973)	4	2.375000	
London After Midnight (2002)	5	3.600000	
Broken City (2013)	224	2.973214	
Nursery University (2008)	6	4.166667	
"Counterfeit Coin	12	3.666667	
Nameless Gangster (Bumchoiwaui junjaeng) (2012)	36	3.611111	
Ginger & Rosa (2012)	54	3.138889	
First Shot (2002)	3	3.666667	
Marina Abramovic: The Artist Is Present (2012)	65	3.576923	
Bonsái (2011)	8	3.687500	
Shadow Dancer (2012)	63	3.079365	
Thale (2012)	44	2.977273	
It's a Disaster (2012)	97	3.489691	
Texas Across the River (1966)	6	3.500000	

[acadgild@localhost ~]\$

## ScreenShots OUTPUTS



The screenshot shows a terminal window titled 'acadgild@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal displays the output of a Hadoop MapReduce job. The command executed is: `hadoop jar /home/acadgild/Desktop/movie_rating.jar com.acadgild.mapreduce.case_study.assignment.movie_rating.CaseStudyIUseCasesDriver /hadoopdata/hdfs/casestudy/input/movies.csv /hadoopdata/hdfs/casestudy/input/ratings.csv /hadoopdata/hdfs/casestudy/casestudy1/output`. The output includes several log messages: a warning about the native Hadoop library, information about connecting to the ResourceManager, a warning about the Tool interface, and a series of progress reports for the job. The progress reports show the map and reduce percentages increasing from 0% to 25%.

```
[acadgild@localhost ~]$ hadoop jar /home/acadgild/Desktop/movie_rating.jar com.acadgild.mapreduce.case_study.assignment.movie_rating.CaseStudyIUseCasesDriver /hadoopdata/hdfs/casestudy/input/movies.csv /hadoopdata/hdfs/casestudy/input/ratings.csv /hadoopdata/hdfs/casestudy/casestudy1/output
18/09/07 22:54:59 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
18/09/07 22:55:00 INFO client.RMProxy: Connecting to ResourceManager at localhost/127.0.0.1:8032
18/09/07 22:55:02 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool interface and execute your application with ToolRunner to remedy this.
18/09/07 22:55:03 INFO input.FileInputFormat: Total input paths to process : 1
18/09/07 22:55:03 INFO input.FileInputFormat: Total input paths to process : 1
18/09/07 22:55:03 INFO mapreduce.JobSubmitter: number of splits:7
18/09/07 22:55:04 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1536341057600_0001
18/09/07 22:55:05 INFO impl.YarnClientImpl: Submitted application application_1536341057600_0001
18/09/07 22:55:05 INFO mapreduce.Job: The url to track the job: http://localhost:8088/proxy/application_1536341057600_0001/
18/09/07 22:55:05 INFO mapreduce.Job: Running job: job_1536341057600_0001
18/09/07 22:55:22 INFO mapreduce.Job: Job job_1536341057600_0001 running in uber mode : false
18/09/07 22:55:22 INFO mapreduce.Job:  map 0% reduce 0%
18/09/07 22:56:07 INFO mapreduce.Job:  map 2% reduce 0%
18/09/07 22:56:10 INFO mapreduce.Job:  map 5% reduce 0%
18/09/07 22:56:14 INFO mapreduce.Job:  map 7% reduce 0%
18/09/07 22:56:17 INFO mapreduce.Job:  map 9% reduce 0%
18/09/07 22:56:21 INFO mapreduce.Job:  map 11% reduce 0%
18/09/07 22:56:24 INFO mapreduce.Job:  map 12% reduce 0%
18/09/07 22:56:25 INFO mapreduce.Job:  map 14% reduce 0%
18/09/07 22:56:28 INFO mapreduce.Job:  map 16% reduce 0%
18/09/07 22:56:31 INFO mapreduce.Job:  map 17% reduce 0%
18/09/07 22:56:32 INFO mapreduce.Job:  map 19% reduce 0%
18/09/07 22:56:35 INFO mapreduce.Job:  map 21% reduce 0%
18/09/07 22:56:39 INFO mapreduce.Job:  map 23% reduce 0%
18/09/07 22:56:42 INFO mapreduce.Job:  map 25% reduce 0%
```

Applications Places System Fri Sep 7, 11:26 PM acadgild

acadgild@localhost:~

File Edit View Search Terminal Help

```
18/09/07 22:56:42 INFO mapreduce.Job: map 25% reduce 0%
18/09/07 22:56:45 INFO mapreduce.Job: map 26% reduce 0%
18/09/07 22:56:49 INFO mapreduce.Job: map 27% reduce 0%
18/09/07 22:56:51 INFO mapreduce.Job: map 28% reduce 0%
18/09/07 22:56:52 INFO mapreduce.Job: map 29% reduce 0%
18/09/07 22:56:56 INFO mapreduce.Job: map 30% reduce 0%
18/09/07 22:56:58 INFO mapreduce.Job: map 31% reduce 0%
18/09/07 22:57:01 INFO mapreduce.Job: map 32% reduce 0%
18/09/07 22:57:02 INFO mapreduce.Job: map 33% reduce 0%
18/09/07 22:57:06 INFO mapreduce.Job: map 34% reduce 0%
18/09/07 22:57:09 INFO mapreduce.Job: map 35% reduce 0%
18/09/07 22:57:14 INFO mapreduce.Job: map 36% reduce 0%
18/09/07 22:57:20 INFO mapreduce.Job: map 37% reduce 0%
18/09/07 22:57:24 INFO mapreduce.Job: map 38% reduce 0%
18/09/07 22:57:29 INFO mapreduce.Job: map 39% reduce 0%
18/09/07 22:57:34 INFO mapreduce.Job: map 40% reduce 0%
18/09/07 22:57:52 INFO mapreduce.Job: map 45% reduce 0%
18/09/07 22:58:44 INFO mapreduce.Job: map 54% reduce 0%
18/09/07 22:58:50 INFO mapreduce.Job: map 59% reduce 0%
18/09/07 22:59:21 INFO mapreduce.Job: map 60% reduce 0%
18/09/07 22:59:24 INFO mapreduce.Job: map 61% reduce 0%
18/09/07 22:59:28 INFO mapreduce.Job: map 62% reduce 0%
18/09/07 22:59:31 INFO mapreduce.Job: map 63% reduce 0%
18/09/07 22:59:33 INFO mapreduce.Job: map 64% reduce 0%
18/09/07 22:59:36 INFO mapreduce.Job: map 65% reduce 10%
18/09/07 22:59:39 INFO mapreduce.Job: map 66% reduce 10%
18/09/07 22:59:41 INFO mapreduce.Job: map 67% reduce 10%
18/09/07 22:59:43 INFO mapreduce.Job: map 68% reduce 10%
18/09/07 22:59:45 INFO mapreduce.Job: map 69% reduce 10%
18/09/07 22:59:47 INFO mapreduce.Job: map 70% reduce 10%
18/09/07 22:59:50 INFO mapreduce.Job: map 71% reduce 10%
18/09/07 22:59:52 INFO mapreduce.Job: map 72% reduce 10%
18/09/07 22:59:53 INFO mapreduce.Job: map 73% reduce 10%
18/09/07 22:59:55 INFO mapreduce.Job: map 74% reduce 10%
18/09/07 22:59:58 INFO mapreduce.Job: map 75% reduce 10%
18/09/07 23:00:00 INFO mapreduce.Job: map 76% reduce 10%
18/09/07 23:01:17 INFO mapreduce.Job: map 77% reduce 10%
18/09/07 23:01:22 INFO mapreduce.Job: map 78% reduce 10%
18/09/07 23:01:23 INFO mapreduce.Job: map 79% reduce 10%
```

Assignment\_2... Student Dashb... [Assignment D... [Assignment\_2... eclipse-worksp... acadgild@local...

Applications Places System Fri Sep 7, 11:27 PM acadgild

acadgild@localhost:~

File Edit View Search Terminal Help

18/09/07	23:01:17	INFO	mapreduce.Job:	map	77%	reduce	10%
18/09/07	23:01:22	INFO	mapreduce.Job:	map	78%	reduce	10%
18/09/07	23:01:23	INFO	mapreduce.Job:	map	79%	reduce	10%
18/09/07	23:01:25	INFO	mapreduce.Job:	map	80%	reduce	10%
18/09/07	23:01:28	INFO	mapreduce.Job:	map	81%	reduce	10%
18/09/07	23:01:30	INFO	mapreduce.Job:	map	82%	reduce	10%
18/09/07	23:01:32	INFO	mapreduce.Job:	map	83%	reduce	10%
18/09/07	23:01:35	INFO	mapreduce.Job:	map	84%	reduce	10%
18/09/07	23:01:37	INFO	mapreduce.Job:	map	85%	reduce	10%
18/09/07	23:01:40	INFO	mapreduce.Job:	map	86%	reduce	10%
18/09/07	23:01:42	INFO	mapreduce.Job:	map	87%	reduce	10%
18/09/07	23:01:44	INFO	mapreduce.Job:	map	88%	reduce	10%
18/09/07	23:01:46	INFO	mapreduce.Job:	map	89%	reduce	10%
18/09/07	23:01:47	INFO	mapreduce.Job:	map	90%	reduce	10%
18/09/07	23:01:50	INFO	mapreduce.Job:	map	91%	reduce	10%
18/09/07	23:01:51	INFO	mapreduce.Job:	map	92%	reduce	10%
18/09/07	23:01:54	INFO	mapreduce.Job:	map	93%	reduce	10%
18/09/07	23:01:56	INFO	mapreduce.Job:	map	94%	reduce	10%
18/09/07	23:01:59	INFO	mapreduce.Job:	map	95%	reduce	10%
18/09/07	23:02:01	INFO	mapreduce.Job:	map	96%	reduce	10%
18/09/07	23:02:04	INFO	mapreduce.Job:	map	97%	reduce	10%
18/09/07	23:02:06	INFO	mapreduce.Job:	map	98%	reduce	10%
18/09/07	23:02:09	INFO	mapreduce.Job:	map	99%	reduce	10%
18/09/07	23:02:12	INFO	mapreduce.Job:	map	100%	reduce	10%
18/09/07	23:02:18	INFO	mapreduce.Job:	map	100%	reduce	14%
18/09/07	23:02:23	INFO	mapreduce.Job:	map	100%	reduce	19%
18/09/07	23:02:25	INFO	mapreduce.Job:	map	100%	reduce	24%
18/09/07	23:02:28	INFO	mapreduce.Job:	map	100%	reduce	29%
18/09/07	23:02:31	INFO	mapreduce.Job:	map	100%	reduce	67%
18/09/07	23:03:05	INFO	mapreduce.Job:	map	100%	reduce	68%
18/09/07	23:03:42	INFO	mapreduce.Job:	map	100%	reduce	69%
18/09/07	23:04:28	INFO	mapreduce.Job:	map	100%	reduce	70%
18/09/07	23:05:13	INFO	mapreduce.Job:	map	100%	reduce	71%
18/09/07	23:05:59	INFO	mapreduce.Job:	map	100%	reduce	72%
18/09/07	23:06:40	INFO	mapreduce.Job:	map	100%	reduce	73%
18/09/07	23:07:19	INFO	mapreduce.Job:	map	100%	reduce	74%
18/09/07	23:07:56	INFO	mapreduce.Job:	map	100%	reduce	75%
18/09/07	23:08:35	INFO	mapreduce.Job:	map	100%	reduce	76%
18/09/07	23:09:12	INFO	mapreduce.Job:	map	100%	reduce	77%

Assignment\_2... Student Dashb... [Assignment D... [Assignment\_2... eclipse-worksp... acadgild@local...

Applications Places System Fri Sep 7, 11:27 PM acadgild

acadgild@localhost:~

File Edit View Search Terminal Help

```
18/09/07 23:07:19 INFO mapreduce.Job: map 100% reduce 74%
18/09/07 23:07:56 INFO mapreduce.Job: map 100% reduce 75%
18/09/07 23:08:35 INFO mapreduce.Job: map 100% reduce 76%
18/09/07 23:09:12 INFO mapreduce.Job: map 100% reduce 77%
18/09/07 23:09:50 INFO mapreduce.Job: map 100% reduce 78%
18/09/07 23:10:29 INFO mapreduce.Job: map 100% reduce 79%
18/09/07 23:11:06 INFO mapreduce.Job: map 100% reduce 80%
18/09/07 23:11:42 INFO mapreduce.Job: map 100% reduce 81%
18/09/07 23:12:19 INFO mapreduce.Job: map 100% reduce 82%
18/09/07 23:12:58 INFO mapreduce.Job: map 100% reduce 83%
18/09/07 23:13:36 INFO mapreduce.Job: map 100% reduce 84%
18/09/07 23:14:12 INFO mapreduce.Job: map 100% reduce 85%
18/09/07 23:14:52 INFO mapreduce.Job: map 100% reduce 86%
18/09/07 23:15:29 INFO mapreduce.Job: map 100% reduce 87%
18/09/07 23:16:05 INFO mapreduce.Job: map 100% reduce 88%
18/09/07 23:16:42 INFO mapreduce.Job: map 100% reduce 89%
18/09/07 23:17:18 INFO mapreduce.Job: map 100% reduce 90%
18/09/07 23:17:56 INFO mapreduce.Job: map 100% reduce 91%
18/09/07 23:18:32 INFO mapreduce.Job: map 100% reduce 92%
18/09/07 23:19:09 INFO mapreduce.Job: map 100% reduce 93%
18/09/07 23:19:48 INFO mapreduce.Job: map 100% reduce 94%
18/09/07 23:20:25 INFO mapreduce.Job: map 100% reduce 95%
18/09/07 23:21:05 INFO mapreduce.Job: map 100% reduce 96%
18/09/07 23:21:48 INFO mapreduce.Job: map 100% reduce 97%
18/09/07 23:22:25 INFO mapreduce.Job: map 100% reduce 98%
18/09/07 23:23:01 INFO mapreduce.Job: map 100% reduce 99%
18/09/07 23:23:38 INFO mapreduce.Job: map 100% reduce 100%
18/09/07 23:24:00 INFO mapreduce.Job: Job job_1536341057600_0001 completed successfully
18/09/07 23:24:01 INFO mapreduce.Job: CounterS: 50
File System Counters
  FILE: Number of bytes read=961694264
  FILE: Number of bytes written=1457488774
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=711856518
  HDFS: Number of bytes written=1669001
  HDFS: Number of read operations=24
  HDFS: Number of large read operations=0
```

Assignment\_2... Student Dashb... [Assignment D... [Assignment\_2... eclipse-worksp... acadgild@local...

Applications Places System Fri Sep 7, 11:28 PM acadgild

acadgild@localhost:~

File Edit View Search Terminal Help

File System Counters

- FILE: Number of bytes read=961694264
- FILE: Number of bytes written=1457488774
- FILE: Number of read operations=0
- FILE: Number of large read operations=0
- FILE: Number of write operations=0
- HDFS: Number of bytes read=711856518
- HDFS: Number of bytes written=1669001
- HDFS: Number of read operations=24
- HDFS: Number of large read operations=0
- HDFS: Number of write operations=2

Job Counters






- Killed map tasks=1
- Launched map tasks=8
- Launched reduce tasks=1
- Data-local map tasks=8
- Total time spent by all maps in occupied slots (ms)=2242118
- Total time spent by all reduces in occupied slots (ms)=1506739
- Total time spent by all map tasks (ms)=2242118
- Total time spent by all reduce tasks (ms)=1506739
- Total vcore-milliseconds taken by all map tasks=2242118
- Total vcore-milliseconds taken by all reduce tasks=1506739
- Total megabyte-milliseconds taken by all map tasks=2295928832
- Total megabyte-milliseconds taken by all reduce tasks=1542900736

Map-Reduce Framework

- Map input records=26070134
- Map output records=26070132
- Map output bytes=442789828
- Map output materialized bytes=494930141
- Input split bytes=2301
- Combine input records=0
- Combine output records=0
- Reduce input groups=45843
- Reduce shuffle bytes=494930141
- Reduce input records=26070132
- Reduce output records=45843
- Spilled Records=76775523
- Shuffled Maps =7
- Failed Shuffles=0

Assignment\_2... Student Dashb... [Assignment D... [Assignment\_2... eclipse-worksp... acadgild@local...



Applications Places System      Fri Sep 7, 11:29 PM acadgild

acadgild@localhost:~

File Edit View Search Terminal Help

```
Total time spent by all map tasks (ms)=2242118
Total time spent by all reduce tasks (ms)=1506739
Total vcore-milliseconds taken by all map tasks=2242118
Total vcore-milliseconds taken by all reduce tasks=1506739
Total megabyte-milliseconds taken by all map tasks=2295928832
Total megabyte-milliseconds taken by all reduce tasks=1542900736

Map-Reduce Framework
  Map input records=26070134
  Map output records=26070132
  Map output bytes=442789828
  Map output materialized bytes=494930141
  Input split bytes=2301
  Combine input records=0
  Combine output records=0
  Reduce input groups=45843
  Reduce shuffle bytes=494930141
  Reduce input records=26070132
  Reduce output records=45843
  Spilled Records=76775523
  Shuffled Maps =7
  Failed Shuffles=0
  Merged Map outputs=7
  GC time elapsed (ms)=20628
  CPU time spent (ms)=1478990
  Physical memory (bytes) snapshot=1199194112
  Virtual memory (bytes) snapshot=2720649216
  Total committed heap usage (bytes)=903217152

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=1669001

[acadgild@localhost ~]$
```

Assignment\_2... Student Dashb... [Assignment D... [Assignment\_2... eclipse-worksp... acadgild@local...

Applications Places System Fri Sep 7, 11:42 PM acadgild

acadgild@localhost:~

File Edit View Search Terminal Help

```
[acadgild@localhost ~]$ hdfs dfs -ls /hadoopdata/hdfs/casestudy/casestudy1/output
18/09/07 23:34:15 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Found 2 items
-rw-r--r-- 1 acadgild supergroup          0 2018-09-07 23:23 /hadoopdata/hdfs/casestudy/casestudy1/output/_SUCCESS
-rw-r--r-- 1 acadgild supergroup 1669001 2018-09-07 23:23 /hadoopdata/hdfs/casestudy/casestudy1/output/part-r-00000
[acadgild@localhost ~]$ hdfs dfs -cat /hadoopdata/hdfs/casestudy/casestudy1/output/part-r-00000|head
18/09/07 23:34:33 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java cl
asses where applicable
Toy Story (1995)      66008  3.888157
GoldenEye (1995)     32534  3.431841
City Hall (1996)     4436   3.232304
Curdled (1996) 217  3.099078
"Comic 1 4.000000
Up in Smoke (1957) 3 3.666667
First Daughter (1999) 3 3.333333
"Flaw 14 3.714286
Battle of Los Angeles (2011) 44 2.522727
Jason Becker: Not Dead Yet (2012) 9 3.444444
cat: Unable to write to output stream.
[acadgild@localhost ~]$
```

Assignment\_2... Student Dashb... [Assignment D... [Assignment\_2... eclipse-worksp... acadgild@local...