Hala Mallak

```
1. hadoop fs -mkdir my_input
  2. hadoop fs -put input/* my input/
  3.
import java.io.IOException;
import java.util.StringTokenizer;
import org.apache.hadoop.conf.Configuration;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.IntWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.mapreduce.Reducer;
import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;
org.apache.hadoop.mapreduce.lib.input.FileSplit
public class WordCount {
 public static class TokenizerMapper extends Mapper<Object, Text, Text,
Text>{
  private Text docId = new Text();
```

```
private Text word = new Text();
  public void map(Object key, Text value, Context context) throws
IOException, InterruptedException {
   String docId = context.getInputSplit()).getPath().toString();
   StringTokenizer itr = new StringTokenizer(value.toString());
   while (itr.hasMoreTokens()) {
    word.set(itr.nextToken());
    context.write(word, new Text(docId));
   }
  }
 }
 public static class IntSumReducer extends Reducer<Text, Text, Text, Text>
{
  public void reduce(Text key, Iterable<Text> values, Context context)
throws IOException, InterruptedException {
   int frequency = 0;
   StringBuilder docIds = new StringBuilder();
   for (Text val : values) {
    doclds.append(val.toString()).append(",");
    frequency++;
   }
   docIds.deleteCharAt(docIds.length() - 1);
```

```
context.write(key, new Text(docIds.toString() + "," + frequency));
  }
 }
 public static void main(String[] args) throws Exception {
  Configuration conf = new Configuration();
  Job job = Job.getInstance(conf, "word count");
  job.setJarByClass(WordCount.class);
  job.setMapperClass(TokenizerMapper.class);
  job.setCombinerClass(IntSumReducer.class);
  job.setReducerClass(IntSumReducer.class);
  job.setOutputKeyClass(Text.class);
  job.setOutputValueClass(Text.class);
  FileInputFormat.addInputPath(job, new Path("my input"));
  FileOutputFormat.setOutputPath(job, new Path("output"));
  System.exit(job.waitForCompletion(true) ? 0 : 1);
 }
}
```

```
documents = LOAD ' output ' USING PigStorage(',') AS (word:chararray,
docId:chararray, frequency:int);
documents_filtered = FILTER documents BY word == 'MapReduce';
documents_sorted = ORDER documents_filtered BY frequency DESC;
top_10 = LIMIT documents_sorted 10;
output = FOREACH top_10 GENERATE docId, frequency;
STORE output INTO 'top_10_output' USING PigStorage('\t');
```