2. Write a MapReduce program to find how many times each question is questioned and arrange them in descending order.

## MAPPER CLASS

package assignment12\_2;

import java.io.IOException;

import org.apache.hadoop.mapreduce.Mapper;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.io.LongWritable;

import org.apache.hadoop.io.IntWritable;

public class NYC\_Health\_Mapper extends Mapper<LongWritable, Text, Text, IntWritable> {

public void map(LongWritable key, Text value, Context context)

throws IOException, InterruptedException{

String values[] = value.toString().split(",");

int One =1;

context.write(new Text(values[1]), new IntWritable(One));

}

}

## REDUCER CLASS

package assignment12\_2;

import java.io.IOException;

import org.apache.hadoop.mapreduce.Reducer;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.io.IntWritable;

public class NYC\_Health\_Reducer extends Reducer<Text, IntWritable, Text, IntWritable> {

public void reduce(Text key, Iterable<IntWritable> value, Context context)

throws IOException, InterruptedException{

int count = 0;

for(IntWritable values : value){

count = count + values.get();

}

context.write(key, new IntWritable(count));

}

}

## DRIVER CLASS

package assignment12\_2;

import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;

import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;

import org.apache.hadoop.mapreduce.lib.input.TextInputFormat;

import org.apache.hadoop.conf.Configuration;

import org.apache.hadoop.conf.Configured;

import org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.mapreduce.Job;

import org.apache.hadoop.util.Tool;

import org.apache.hadoop.util.ToolRunner;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.fs.Path;

public class NYC\_Health\_Driver extends Configured implements Tool{

public static void main (String args[]) throws Exception{

ToolRunner.run(new Configuration(), new NYC\_Health\_Driver(),args);

}

public int run(String args[]) throws Exception{

Job job = Job.getInstance();

job.setJobName("Abhinav Assignment 12");

job.setJarByClass(NYC\_Health\_Driver.class);

job.setMapperClass(NYC\_Health\_Mapper.class);

job.setMapOutputKeyClass(Text.class);

job.setMapOutputValueClass(IntWritable.class);

job.setReducerClass(NYC\_Health\_Reducer.class);

job.setOutputKeyClass(Text.class);

job.setOutputValueClass(IntWritable.class);

job.setInputFormatClass(TextInputFormat.class);

FileInputFormat.addInputPath(job, new Path(args[0]));

FileOutputFormat.setOutputPath(job, new Path(args[1]));

job.waitForCompletion(true);

return 0;

}

}

## Write a MapReduce program to find the answer percentage of each hospital.

## MAPPER CLASS

package assignment12\_2;

import java.io.IOException;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.io.LongWritable;

import org.apache.hadoop.mapreduce.Mapper;

public class Ans\_Per\_Map extends Mapper<LongWritable, Text, Text, IntWritable>{

public void map(LongWritable key, Text value, Context context)

throws IOException, InterruptedException{

int perc;

String values[] = value.toString().split(",");

perc=Integer.parseInt(values[3]);

context.write(new Text(values[0]), new IntWritable(perc) );

}

}

## REDUER CLASS

package assignment12\_2;

import java.io.IOException;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.mapreduce.Reducer;

public class Ans\_Per\_Red extends Reducer<Text, IntWritable, Text, IntWritable>{

public void reduce(Text key, Iterable<IntWritable> value, Context context)

throws IOException, InterruptedException{

int sum=0;

int count=0;

//int per;

for(IntWritable values : value){

sum = sum + values.get();

count = count + 1;

}

//per = (sum / count) \* 100;

context.write(key, new IntWritable(sum));

}

}

## DRIVER CLASS

package assignment12\_2;

import org.apache.hadoop.conf.Configured;

import org.apache.hadoop.conf.Configuration;

import org.apache.hadoop.util.Tool;

import org.apache.hadoop.util.ToolRunner;

import org.apache.hadoop.mapreduce.Job;

import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;

import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;

import org.apache.hadoop.mapreduce.lib.input.TextInputFormat;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.fs.Path;

public class Ans\_Per\_Driver extends Configured implements Tool{

public static void main(String args[]) throws Exception{

ToolRunner.run(new Configuration(), new Ans\_Per\_Driver(), args);

}

public int run(String args[]) throws Exception{

Job job = Job.getInstance();

job.setJobName("Abhinav Assignment 2 of 12");

job.setJarByClass(Ans\_Per\_Driver.class);

job.setMapperClass(Ans\_Per\_Map.class);

job.setOutputKeyClass(Text.class);

job.setMapOutputValueClass(IntWritable.class);

job.setReducerClass(Ans\_Per\_Red.class);

job.setOutputKeyClass(Text.class);

job.setOutputValueClass(IntWritable.class);

job.setInputFormatClass(TextInputFormat.class);

FileInputFormat.addInputPath(job, new Path(args[0]));

FileOutputFormat.setOutputPath(job, new Path(args[1]));

job.waitForCompletion(true);

return 0;

}

}