Write a Map Reduce program to calculate the total units sold for each Company.

package assignment3.task2;

import org.apache.hadoop.fs.Path;

import org.apache.hadoop.conf.\*;

import org.apache.hadoop.mapreduce.Job;

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

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

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

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

import org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.io.Text;

public class Task2 {

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

Configuration conf = new Configuration();

Job job = new Job(conf, "Task2");

job.setJarByClass(Task2.class);

job.setMapOutputKeyClass(Text.class);

job.setMapOutputValueClass(IntWritable.class);

job.setOutputKeyClass(Text.class);

job.setOutputValueClass(IntWritable.class);

job.setMapperClass(Task2Mapper.class);

job.setReducerClass(Task2Reducer.class);

job.setInputFormatClass(TextInputFormat.class);

job.setOutputFormatClass(TextOutputFormat.class);

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

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

job.waitForCompletion(true);

}

}

/\*\*

\* <h1>Task2Mapper</h1>

\* Mapper program to calculate the total units sold for each Company

\* This class will take input as (Key,Value) pair from a given file and will

\* produce the output as (Key,Value) pair.

\* \*/

package assignment3.task2;

import java.io.IOException;

import org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.io.LongWritable;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.mapreduce.\*;

public class Task2Mapper extends Mapper<LongWritable, Text, Text, IntWritable> {

Text outKey = new Text();

IntWritable outValue = new IntWritable();

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

throws IOException, InterruptedException {

//every line will be split based on '|' and will be stored in String array

String[] lineArray = value.toString().split("\\|");

//output key for mapper class

outKey.set(lineArray[0]);

//output value for mapper class

outValue.set(1);

context.write(outKey, outValue);

}

}

/\*\*

\* \* Reducer program to calculate the total units sold for each Company

\* This class will take input as (Key,Value) pair from output of mapper class

\* value will be a combined list for all the values for a given key

\* \*/

package assignment3.task2;

import java.io.IOException;

import org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.mapreduce.Reducer;

public class Task2Reducer extends Reducer<Text, IntWritable, Text, IntWritable>

{

IntWritable outValue = new IntWritable();

public void reduce(Text key, Iterable<IntWritable> values,Context context) throws IOException, InterruptedException

{

//we are taking the value of mapper class which is (1) and adding up all the values

//to get the total units sold for each company

int sum = 0;

for (IntWritable value : values) {

sum += value.get();

}

//output of reducer is total number of units sold for each company

outValue.set(sum);

context.write(key, outValue);

}

}











