

1) SalesMapper.java

```
package SalesCountry;

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.mapred.*;

public class SalesMapper extends MapReduceBase implements Mapper<LongWritable, Text,
Text, IntWritable> {

    private final static IntWritable one = new IntWritable(1);

    public void map(LongWritable key, Text value, OutputCollector<Text, IntWritable>
output, Reporter reporter) throws IOException {

        String valueString = value.toString();
        String[] SingleCountryData = valueString.split("-");
        output.collect(new Text(SingleCountryData[0]), one);
    }
}
```

2) SalesCountryReducer.java

```
package SalesCountry;

import java.io.IOException;
import java.util.*;

import org.apache.hadoop.io.IntWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapred.*;

public class SalesCountryReducer extends MapReduceBase implements Reducer<Text,
IntWritable, Text, IntWritable> {

    public void reduce(Text t_key, Iterator<IntWritable> values,
OutputCollector<Text,IntWritable> output, Reporter reporter) throws IOException {
        Text key = t_key;
        int frequencyForCountry = 0;
        while (values.hasNext()) {
            // replace type of value with the actual type of our value
            IntWritable value = (IntWritable) values.next();
            frequencyForCountry += value.get();
        }
        output.collect(key, new IntWritable(frequencyForCountry));
    }
}
```

3) SalesCountryDriver.java

```
package SalesCountry;

import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.*;
import org.apache.hadoop.mapred.*;

public class SalesCountryDriver {
    public static void main(String[] args) {
        JobClient my_client = new JobClient();
        // Create a configuration object for the job
        JobConf job_conf = new JobConf(SalesCountryDriver.class);

        // Set a name of the Job
        job_conf.setJobName("SalePerCountry");

        // Specify data type of output key and value
        job_conf.setOutputKeyClass(Text.class);
        job_conf.setOutputValueClass(IntWritable.class);

        // Specify names of Mapper and Reducer Class
        job_conf.setMapperClass(SalesCountry.SalesMapper.class);
        job_conf.setReducerClass(SalesCountry.SalesCountryReducer.class);

        // Specify formats of the data type of Input and output
        job_conf.setInputFormat(TextInputFormat.class);
        job_conf.setOutputFormat(TextOutputFormat.class);

        // Set input and output directories using command line arguments,
        //arg[0] = name of input directory on HDFS, and arg[1] = name of output
        directory to be created to store the output file.
```

```
FileInputFormat.setInputPaths(job_conf, new Path(args[0]));
FileOutputFormat.setOutputPath(job_conf, new Path(args[1]));

my_client.setConf(job_conf);
try {
    // Run the job
    JobClient.runJob(job_conf);
} catch (Exception e) {
    e.printStackTrace();
}
}
```

OUTPUT:

```
student@mll12:~$ hdfs dfs -put ~/input25 /
student@mll12:~$ hadoop jar myjar.jar /input25 /output25
student@mll12:~$ hdfs dfs -cat /output25/part-00000
10.1.1.236      7
10.1.181.142   14
10.1.232.31    5
10.10.55.142   14
10.102.101.66   1
10.103.184.104   1
10.103.190.81   53
10.103.63.29    1
10.104.73.51    1
10.105.160.183   1
10.108.91.151    1
10.109.21.76    1
10.11.131.40    1
10.111.71.20    8
10.112.227.184   6
10.114.74.30    1
10.115.118.78    1
10.117.224.230   1
10.117.76.22    12
10.118.19.97     1
10.118.250.30    7
10.119.117.132   23
10.119.33.245    1
10.119.74.120    1
10.12.113.198    2
10.12.219.30     1
10.120.165.113   1
10.120.207.127   4
10.123.124.47    1
10.123.35.235    1
10.124.148.99    1
10.124.155.234   1
10.126.161.13    7
10.127.162.239   1
10.128.11.75    10
10.13.42.232     1
10.130.195.163   8
10.130.70.80     1
10.131.163.73    1
10.131.209.116   5
10.132.19.125    2
10.133.222.184   12
10.134.110.196   13
10.134.242.87    1
10.136.84.60     5
```

10.14.2.86	8	
10.14.4.151	2	
10.140.139.116		1
10.140.141.1	9	
10.140.67.116	1	
10.141.221.57	5	
10.142.203.173	7	
10.143.126.177	32	
10.144.147.8	1	
10.15.208.56	1	
10.15.23.44	13	
10.150.212.239		14
10.150.227.16	1	
10.150.24.40	13	
10.152.195.138	8	
10.153.23.63	2	
10.153.239.5	25	
10.155.95.124	9	
10.156.152.9	1	
10.157.176.158	1	
10.164.130.155	1	
10.164.49.105	8	
10.164.95.122	10	
10.165.106.173	14	
10.167.1.145	19	
10.169.158.88	1	
10.170.178.53	1	
10.171.104.4	1	
10.172.169.53	18	
10.174.246.84	3	
10.175.149.65	1	
10.175.204.125	15	
10.177.216.164	6	
10.179.107.170	2	
10.181.38.207	13	
10.181.87.221	1	
10.185.152.140	1	
10.186.56.126	16	
10.186.56.183	1	
10.187.129.140	6	
10.187.177.220	1	
10.187.212.83	1	
10.187.28.68	1	
10.19.226.186	2	
10.190.174.142	10	