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EXERCISE: 2

Queries

Use the Hadoop MapReduce programming framework to come up with a Program which will take the data from the .csv file and computes the following.

1.Count the number of transactions done by each country

```
package 1nt19is065;

import

java.io.IOException;

import java.util.Iterator;

import org.apache.hadoop.fs.Path; import

org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.io.LongWritable;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.mapred.FileInputFormat;

import org.apache.hadoop.mapred.FileOutputFormat;

import org.apache.hadoop.mapred.JobClient;

import org.apache.hadoop.mapred.JobConf;

import org.apache.hadoop.mapred.MapReduceBase;

import org.apache.hadoop.mapred.Mapper;

import org.apache.hadoop.mapred.OutputCollector;

import org.apache.hadoop.mapred.Reducer;

import org.apache.hadoop.mapred.Reporter;

import org.apache.hadoop.mapred.TextOutputFormat;

public class la2q1 {

public static class Map extends MapReduceBase implements Mapper<LongWritable,

Text,Text ,
```

```

IntWritable>{
private final static IntWritable one = new IntWritable (1);
@Override
public void map(LongWritable key, Text value, OutputCollector<Text, IntWritable> out,
Reporter
throws IOException {
String valueString = value.toString ();
String [] data =
valueString.split("",""); out.collect(
new Text(data[6]),one);
}
}

public static class Reduce extends MapReduceBase implements Reducer < Text ,
IntWritable ,
Text , IntWritable
>{ @Override
public void reduce(Text key, Iterator<IntWritable> values,
OutputCollector<Text, IntWritable> out,
Reporter report) throws IOException {
Text mykey = key;
int frequency = 0;
while (values.hasNext()){
IntWritable value = (IntWritable)values.next();
frequency += value.get();
}
out.collect(mykey,new IntWritable(frequency));
}
}

public static void main(String[] args) throws IOException {
// TODO Auto-generated method stub
JobConf conf = new
JobConf(la2q1.class);

```

```

conf.setJobName("&quot;la2q1&quot;");
conf.setOutputKeyClass(Text.class);
conf.setOutputValueClass(IntWritable.class);
conf.setMapperClass(Map.class);
conf.setCombinerClass(Reduce.class);
conf.setReducerClass(Reduce.class);
conf.setOutputFormat(TextOutputFormat.class);
conf.setOutputFormat(TextOutputFormat.class);
FileInputFormat.setInputPaths(conf, new Path(args[0]));
FileOutputFormat.setOutputPath(conf, new Path(args[1]));
JobClient.runJob(conf);
}
}

```

OUTPUT:

```

hadoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin
hadoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hdfs dfs -mkdir -p ~/venky
hadoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hdfs dfs -put /home/hadoop/Desktop/program1.csv ~/venky/
2022-07-02 11:08:24,411 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted
= false
hadoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hadoop jar /home/hadoop/Desktop/program1.jar ~/venky ~/184
2022-07-02 11:08:36,928 INFO client.RMProxy: Connecting to ResourceManager at /127.0.0.1:8032
2022-07-02 11:08:37,051 INFO client.RMProxy: Connecting to ResourceManager at /127.0.0.1:8032
2022-07-02 11:08:37,178 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool i
nterface and execute your application with ToolRunner to remedy this.
2022-07-02 11:08:37,212 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/hadoop/.sta
ging/job_1656739661818_0004
2022-07-02 11:08:37,292 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted
= false
2022-07-02 11:08:37,427 INFO mapred.FileInputFormat: Total input files to process : 1
2022-07-02 11:08:37,478 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted
= false
2022-07-02 11:08:37,528 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted
= false
2022-07-02 11:08:37,545 INFO mapreduce.JobSubmitter: number of splits:2
2022-07-02 11:08:37,661 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted
= false
2022-07-02 11:08:37,677 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1656739661818_0004
2022-07-02 11:08:37,677 INFO mapreduce.JobSubmitter: Executing with tokens: []
2022-07-02 11:08:37,789 INFO conf.Configuration: resource-types.xml not found
2022-07-02 11:08:37,789 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2022-07-02 11:08:37,831 INFO impl.YarnClientImpl: Submitted application application_1656739661818_0004
2022-07-02 11:08:37,856 INFO mapreduce.Job: The url to track the job: http://admin1-HP-280-G4-MT-Business-PC:8088/proxy/applicatio
n_1656739661818_0004/
2022-07-02 11:08:37,857 INFO mapreduce.Job: Running job: job_1656739661818_0004
2022-07-02 11:08:42,928 INFO mapreduce.Job: Job job_1656739661818_0004 running in uber mode : false
2022-07-02 11:08:42,930 INFO mapreduce.Job: map 0% reduce 0%
2022-07-02 11:08:46,989 INFO mapreduce.Job: map 100% reduce 0%
2022-07-02 11:08:50,017 INFO mapreduce.Job: map 100% reduce 100%
2022-07-02 11:08:51,042 INFO mapreduce.Job: Job job_1656739661818_0004 completed successfully
2022-07-02 11:08:51,129 INFO mapreduce.Job: Counters: 54
File System Counters
FILE: Number of bytes read: 1242

```

```
Activities Terminal Jul 2 11:09
hdoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin

2022-07-02 11:08:50,017 INFO mapreduce.Job: map 100% reduce 100%
2022-07-02 11:08:51,042 INFO mapreduce.Job: Job job_1656739661818_0004 completed successfully
2022-07-02 11:08:51,129 INFO mapreduce.Job: Counters: 54
  File System Counters
    FILE: Number of bytes read=1243
    FILE: Number of bytes written=679321
    FILE: Number of read operations=0
    FILE: Number of large read operations=0
    FILE: Number of write operations=0
    HDFS: Number of bytes read=60552
    HDFS: Number of bytes written=656
    HDFS: Number of read operations=11
    HDFS: Number of large read operations=0
    HDFS: Number of write operations=2
    HDFS: Number of bytes read erasure-coded=0
  Job Counters
    Launched map tasks=2
    Launched reduce tasks=1
    Data-local map tasks=2
    Total time spent by all maps in occupied slots (ms)=3695
    Total time spent by all reduces in occupied slots (ms)=1457
    Total time spent by all map tasks (ms)=3695
    Total time spent by all reduce tasks (ms)=1457
    Total vcore-milliseconds taken by all map tasks=3695
    Total vcore-milliseconds taken by all reduce tasks=1457
    Total megabyte-milliseconds taken by all map tasks=3783680
    Total megabyte-milliseconds taken by all reduce tasks=1491968
  Map-Reduce Framework
    Map input records=999
    Map output records=999
    Map output bytes=15754
    Map output materialized bytes=1249
    Input split bytes=206
    Combine input records=999
    Combine output records=81
    Reduce input groups=57
    Reduce shuffle bytes=1249

CPU time spent (ms)=1180
Physical memory (bytes) snapshot=780693504
Virtual memory (bytes) snapshot=7615836160
Total committed heap usage (bytes)=828375040
Peak Map Physical memory (bytes)=294916096
Peak Map Virtual memory (bytes)=2536071168
Peak Reduce Physical memory (bytes)=191795200
Peak Reduce Virtual memory (bytes)=2544345088
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=60346
File Output Format Counters
  Bytes Written=656
hdoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hdfs dfs -ls ~/184
Found 2 items
-rw-r--r-- 1 hdoop supergroup 0 2022-07-02 11:08 /home/hdoop/184/_SUCCESS
-rw-r--r-- 1 hdoop supergroup 656 2022-07-02 11:08 /home/hdoop/184/part-000000
hdoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hdfs dfs -cat ~/184/part*
2022-07-02 11:09:10,368 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted
= false
Argentina 1
Australia 38
Austria 7
Bahrain 1
Belgium 8
Bermuda 1
Brazil 5
Bulgaria 1
Canada 76
Cayman Isls 1
China 1
```

hadoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin

Hungary	3
Iceland	1
India	2
Ireland	49
Israel	1
Italy	15
Japan	2
Jersey	1
Kuwait	1
Latvia	1
Luxembourg	1
Malaysia	1
Malta	2
Mauritius	1
Moldova	1
Monaco	2
Netherlands	22
New Zealand	6
Norway	16
Philippines	2
Poland	2
Romania	1
Russia	1
South Africa	5
South Korea	1
Spain	12
Sweden	13
Switzerland	36
Thailand	2
The Bahamas	2
Turkey	6
Ukraine	1
United Arab Emirates	6
United Kingdom	100
United States	463

2. Find the cumulative amount of transactions done by each country

```
package Int19is065;
import java.io.IOException;
import java.util.Iterator;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.IntWritable;
import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapred.FileInputFormat;
import org.apache.hadoop.mapred.FileOutputFormat;
import org.apache.hadoop.mapred.JobClient;
import org.apache.hadoop.mapred.JobConf;
import org.apache.hadoop.mapred.MapReduceBase;
import org.apache.hadoop.mapred.Mapper;
import org.apache.hadoop.mapred.OutputCollector;
import org.apache.hadoop.mapred.Reducer;
import org.apache.hadoop.mapred.Reporter;
import org.apache.hadoop.mapred.TextOutputFormat
```

```

public class la2q2 {
    public static class Map extends MapReduceBase implements Mapper<LongWritable,
    Text,Text ,
    IntWritable>{

        @Override
        public void map(LongWritable key, Text value, OutputCollector<Text, IntWritable>
        out, Reporter
        report)
        throws IOException {
            // TODO Auto-generated method stub
            String valueString = value.toString();
            String[] data = valueString.split(",");
            out.collect(new Text(data[6]),
            new IntWritable(Integer.parseInt(data [1])));
        }
    }

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

        @Override
        public void reduce(Text key, Iterator<IntWritable> values, OutputCollector<Text,
        IntWritable> out,
        Reporter report) throws IOException {
            // TODO Auto-generated method stub
            Text mykey = key;
            int tcount = 0;
            while(values.hasNext()) {
                IntWritable value = (IntWritable)values.next();
                tcount += value.get();
            }
            out.collect(mykey , new IntWritable(tcount));
        }
    }

    public static void main(String[] args) throws IOException {
        // TODO Auto-generated method stub
        JobConf conf = new JobConf(la2q2.class);
        conf.setJobName("la2q2");
        conf.setOutputKeyClass(Text.class);
        conf.setOutputValueClass(IntWritable.class);
        conf.setMapperClass(Map.class);
        conf.setCombinerClass(Reduce.class);
        conf.setReducerClass(Reduce.class);
        conf.setOutputFormat(TextOutputFormat.class);
        conf.setOutputFormat(TextOutputFormat.class);
        FileInputFormat.setInputPaths(conf, new Path(args[0]));
        FileOutputFormat.setOutputPath(conf , new Path(args[1]));
        JobClient.runJob(conf);

    }
}

```


}

OUTPUT:

```
Activities Terminal Jul 2 11:35
hdoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin

United States 750000
hdoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hdfs dfs -mkdir -p ~/venky
hdoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hdfs dfs -put /home/hdoop/Desktop/salesd.csv ~/venky
2022-07-02 11:34:18,171 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
hdoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hadoop jar /home/hdoop/Desktop/pgjr2.jar ~/venky ~/184
2022-07-02 11:34:40,455 INFO client.RMPProxy: Connecting to ResourceManager at /127.0.0.1:8032
2022-07-02 11:34:40,603 INFO client.RMPProxy: Connecting to ResourceManager at /127.0.0.1:8032
2022-07-02 11:34:40,725 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool interface and execute your application with ToolRunner to remedy this.
2022-07-02 11:34:40,747 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/hdoop/.staging/job_1656739487142_0008
2022-07-02 11:34:40,828 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:34:40,926 INFO mapred.FileInputFormat: Total input files to process : 1
2022-07-02 11:34:40,971 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:34:41,415 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:34:41,430 INFO mapreduce.JobSubmitter: number of splits:2
2022-07-02 11:34:41,546 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:34:41,964 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1656739487142_0008
2022-07-02 11:34:41,964 INFO mapreduce.JobSubmitter: Executing with tokens: []
2022-07-02 11:34:42,069 INFO conf.Configuration: resource-types.xml not found
2022-07-02 11:34:42,070 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2022-07-02 11:34:42,107 INFO impl.YarnClientImpl: Submitted application application_1656739487142_0008
2022-07-02 11:34:42,128 INFO mapreduce.Job: The url to track the job: http://admin1-HP-280-G4-MT-Business-PC:8088/proxy/application_1656739487142_0008/
2022-07-02 11:34:42,129 INFO mapreduce.Job: Running job: job_1656739487142_0008
2022-07-02 11:34:46,179 INFO mapreduce.Job: Job job_1656739487142_0008 running in uber mode : false
2022-07-02 11:34:46,181 INFO mapreduce.Job: map 0% reduce 0%
2022-07-02 11:34:50,261 INFO mapreduce.Job: map 100% reduce 0%
2022-07-02 11:34:54,290 INFO mapreduce.Job: map 100% reduce 100%
2022-07-02 11:34:54,307 INFO mapreduce.Job: Job job_1656739487142_0008 completed successfully
2022-07-02 11:34:54,401 INFO mapreduce.Job: Counters: 54
File System Counters
  FILE: Number of bytes read=1229
  FILE: Number of bytes written=679284
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=60497
  HDFS: Number of bytes written=820
  HDFS: Number of read operations=11
  HDFS: Number of large read operations=0
  HDFS: Number of write operations=2
  HDFS: Number of bytes read erasure-coded=0
```

```
Activities Terminal Jul 2 11:35
hdoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin

2022-07-02 11:34:54,401 INFO mapreduce.Job: Counters: 54
File System Counters
  FILE: Number of bytes read=1229
  FILE: Number of bytes written=679284
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=60497
  HDFS: Number of bytes written=820
  HDFS: Number of read operations=11
  HDFS: Number of large read operations=0
  HDFS: Number of write operations=2
  HDFS: Number of bytes read erasure-coded=0
Job Counters
  Launched map tasks=2
  Launched reduce tasks=1
  Data-local map tasks=2
  Total time spent by all maps in occupied slots (ms)=3753
  Total time spent by all reduces in occupied slots (ms)=1507
  Total time spent by all map tasks (ms)=3753
  Total time spent by all reduce tasks (ms)=1507
  Total vcore-milliseconds taken by all map tasks=3753
  Total vcore-milliseconds taken by all reduce tasks=1507
  Total megabyte-milliseconds taken by all map tasks=3843072
  Total megabyte-milliseconds taken by all reduce tasks=1543168
Map-Reduce Framework
  Map input records=998
  Map output records=998
  Map output bytes=15742
  Map output materialized bytes=1235
  Input split bytes=202
  Combine input records=998
  Combine output records=80
  Reduce input groups=56
  Reduce shuffle bytes=1235
  Reduce input records=80
  Reduce output records=56
  Spilled Records=160
  Shuffled Maps =2
  Failed Shuffles=0
  Merged Map outputs=2
```



```
Activities Terminal Jul 2 11:35 hdoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin

Virtual memory (bytes) snapshot=7614599168
Total committed heap usage (bytes)=831520768
Peak Map Physical memory (bytes)=295366656
Peak Map Virtual memory (bytes)=2536939520
Peak Reduce Physical memory (bytes)=193064960
Peak Reduce Virtual memory (bytes)=2542256128

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=60295
File Output Format Counters
  Bytes Written=820
hdoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hdfs dfs -cat ~/184/part-00000
2022-07-02 11:35:04,995 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
Argentina 1200
Australia 64800
Austria 10000
Bahrain 1200
Belgium 12000
Bermuda 1200
Brazil 12300
Bulgaria 1200
Canada 124800
Cayman Isls 1200
China 1200
Costa Rica 1200
Czech Republic 6000
Denmark 18000
Dominican Republic 1200
Finland 2400
France 53100
Germany 42000
Greece 1200
Guatemala 1200
Hong Kong 1200
Hungary 3600
```

```
Activities Terminal Jul 2 11:35 hdoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin

Germany 42000
Greece 1200
Guatemala 1200
Hong Kong 1200
Hungary 3600
Iceland 1200
India 2400
Ireland 69900
Israel 1200
Italy 37800
Japan 2400
Jersey 1200
Kuwait 1200
Latvia 1200
Luxembourg 1200
Malaysia 1200
Malta 4800
Mauritius 3600
Moldova 1200
Monaco 2400
Netherlands 44700
New Zealand 7200
Norway 21600
Philippines 2400
Poland 2400
Romania 1200
Russia 3600
South Africa 12300
South Korea 1200
Spain 16800
Sweden 22800
Switzerland 76800
Thailand 4800
The Bahamas 2400
Turkey 7200
Ukraine 1200
United Arab Emirates 12000
United Kingdom 144000
United States 750000
hdoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$
```

3. Count how many transactions done using Master, VISA, Diners, Amex

```
package Int19is065;

import java.io.IOException;
import java.util.Iterator;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.IntWritable;
import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapred.FileInputFormat;
import org.apache.hadoop.mapred.FileOutputFormat;
import org.apache.hadoop.mapred.JobClient;
import org.apache.hadoop.mapred.JobConf;
import org.apache.hadoop.mapred.MapReduceBase;
import org.apache.hadoop.mapred.Mapper;
import org.apache.hadoop.mapred.OutputCollector;
import org.apache.hadoop.mapred.Reducer;
import org.apache.hadoop.mapred.Reporter;
import org.apache.hadoop.mapred.TextOutputFormat;

public class la2q3 {
    public static class Map extends MapReduceBase implements Mapper<LongWritable,
        Text,Text ,
        IntWritable>{

        private final static IntWritable one = new IntWritable (1);
        @Override
        public void map(LongWritable key, Text value, OutputCollector<Text, IntWritable>
            out, Reporter
            report)
            throws IOException {
            // TODO Auto-generated method stub
            String valueString = value.toString ();
            String [] data = valueString.split("","");
            out.collect( new Text(data[2]),one);

        }
    }

    public static class Reduce extends MapReduceBase implements Reducer <Text ,
        IntWritable ,
        Text , IntWritable >{
        @Override
        public void reduce(Text key, Iterator<IntWritable> values, OutputCollector<Text,
            IntWritable> out,
            Reporter report) throws IOException {
            // TODO Auto-generated method stub
            Text mykey = key;
            int frequency = 0;
            while (values.hasNext()){
```

```

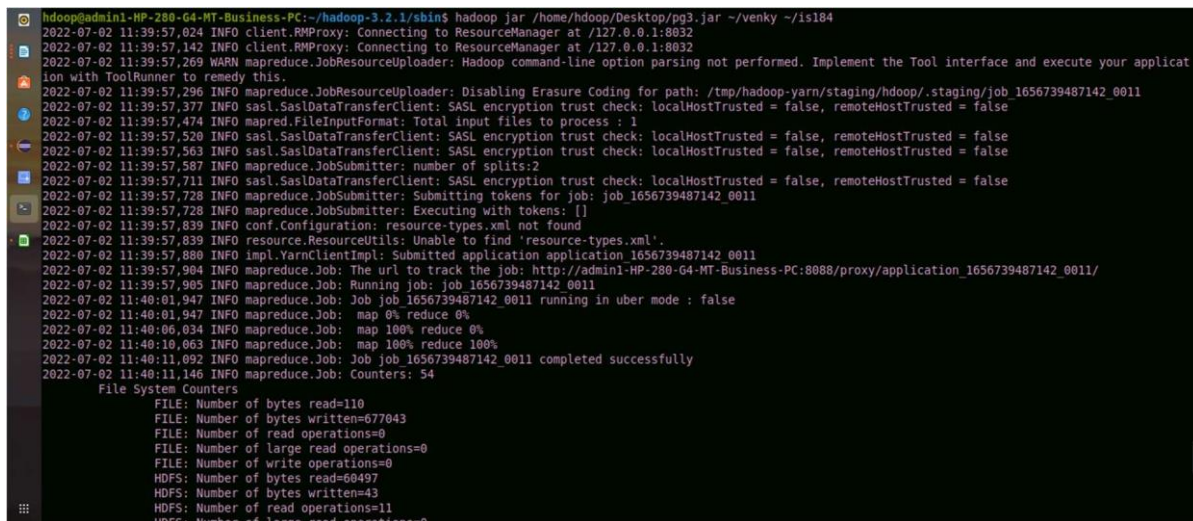
IntWritable value = (IntWritable)values.next();
frequency += value.get();
}
out.collect(mykey,new IntWritable(frequency));
}
}

public static void main(String[] args) throws IOException {
// TODO Auto-generated method stub
JobConf conf = new JobConf(1a2q3.class);
conf.setJobName("&quot;1a2q3&quot;");
conf.setOutputKeyClass(Text.class);
conf.setOutputValueClass(IntWritable.class);
conf.setMapperClass(Map.class);
conf.setCombinerClass(Reduce.class);
conf.setReducerClass(Reduce.class);
conf.setOutputFormat(TextOutputFormat.class);
conf.setOutputFormat(TextOutputFormat.class);
FileInputFormat.setInputPaths(conf, new Path(args[0]));
FileOutputFormat.setOutputPath(conf, new Path(args[1]));
JobClient.runJob(conf);

}
}

```

OUTPUT:



```

hadoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hadoop jar /home/hadoop/Desktop/pg3.jar ~/venky ~/is184
2022-07-02 11:39:57,024 INFO client.RMProxy: Connecting to ResourceManager at /127.0.0.1:8032
2022-07-02 11:39:57,142 INFO client.RMProxy: Connecting to ResourceManager at /127.0.0.1:8032
2022-07-02 11:39:57,269 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool interface and execute your application with ToolRunner to remedy this.
2022-07-02 11:39:57,296 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/hadoop/.staging/job_1656739487142_0011
2022-07-02 11:39:57,377 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:39:57,474 INFO mapred.FileInputFormat: Total input files to process : 1
2022-07-02 11:39:57,520 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:39:57,563 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:39:57,587 INFO mapreduce.JobSubmitter: number of splits:2
2022-07-02 11:39:57,711 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:39:57,728 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1656739487142_0011
2022-07-02 11:39:57,728 INFO mapreduce.JobSubmitter: Executing with tokens: []
2022-07-02 11:39:57,839 INFO conf.Configuration: resource-types.xml not found
2022-07-02 11:39:57,839 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2022-07-02 11:39:57,880 INFO impl.YarnClientImpl: Submitted application application_1656739487142_0011
2022-07-02 11:39:57,984 INFO mapreduce.Job: The url to track the job: http://admin1-HP-280-G4-MT-Business-PC:8088/proxy/application_1656739487142_0011/
2022-07-02 11:39:57,985 INFO mapreduce.Job: Running job: job_1656739487142_0011
2022-07-02 11:40:01,947 INFO mapreduce.Job: Job job_1656739487142_0011 running in uber mode : false
2022-07-02 11:40:06,034 INFO mapreduce.Job: map 100% reduce 0%
2022-07-02 11:40:10,063 INFO mapreduce.Job: map 100% reduce 100%
2022-07-02 11:40:11,092 INFO mapreduce.Job: Job job_1656739487142_0011 completed successfully
2022-07-02 11:40:11,146 INFO mapreduce.Job: Counters: 54
File System Counters
  FILE: Number of bytes read=110
  FILE: Number of bytes written=677043
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=60497
  HDFS: Number of bytes written=43
  HDFS: Number of read operations=11
  HDFS: Number of large read operations=0

```

```
Activities Terminal Jul 2 11:38
hadoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin

2022-07-02 11:37:59,181 WARN mapreduce.JobResourceUploader: Hadoop command-line option parsing not performed. Implement the Tool interface and execute your application with ToolRunner to remedy this.
2022-07-02 11:37:59,208 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/hadoop/.staging/job_1656739487142_0010
2022-07-02 11:37:59,305 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:37:59,410 INFO mapred.FileInputFormat: Total input files to process : 1
2022-07-02 11:37:59,458 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:37:59,508 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:37:59,524 INFO mapreduce.JobSubmitter: number of splits:2
2022-07-02 11:37:59,640 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
2022-07-02 11:38:00,049 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1656739487142_0010
2022-07-02 11:38:00,189 INFO mapreduce.JobSubmitter: Executing with tokens: []
2022-07-02 11:38:00,189 INFO conf.Configuration: resource-types.xml not found
2022-07-02 11:38:00,189 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2022-07-02 11:38:00,230 INFO impl.YarnClientImpl: Submitted application application_1656739487142_0010
2022-07-02 11:38:00,253 INFO mapreduce.Job: The url to track the job: http://admin1-HP-280-G4-MT-Business-PC:8088/proxy/application_1656739487142_0010/
2022-07-02 11:38:00,254 INFO mapreduce.Job: Running job: job_1656739487142_0010
2022-07-02 11:38:04,354 INFO mapreduce.Job: Job job_1656739487142_0010 running in uber mode : false
2022-07-02 11:38:04,355 INFO mapreduce.Job: map 0% reduce 0%
2022-07-02 11:38:08,447 INFO mapreduce.Job: map 100% reduce 0%
2022-07-02 11:38:12,486 INFO mapreduce.Job: map 100% reduce 100%
2022-07-02 11:38:13,514 INFO mapreduce.Job: Job job_1656739487142_0010 completed successfully
2022-07-02 11:38:13,608 INFO mapreduce.Job: Counters: 54

File System Counters
  FILE: Number of bytes read=110
  FILE: Number of bytes written=677049
  FILE: Number of read operations=0
  FILE: Number of large read operations=0
  FILE: Number of write operations=0
  HDFS: Number of bytes read=60501
  HDFS: Number of bytes written=43
  HDFS: Number of read operations=11
  HDFS: Number of large read operations=0
  HDFS: Number of write operations=2
  HDFS: Number of bytes read erasure-coded=0

Job Counters
  Launched map tasks=2
  Launched reduce tasks=1
  Data-local map tasks=2
  Total time spent by all maps in occupied slots (ms)=3583
  Total time spent by all reduces in occupied slots (ms)=1469
  Total time spent by all map tasks (ms)=3583
```

```
Activities Terminal Jul 2 11:41
hadoop@admin1-HP-280-G4-MT-Business-PC: ~/hadoop-3.2.1/sbin

at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.apache.hadoop.util.RunJar.run(RunJar.java:323)
at org.apache.hadoop.util.RunJar.main(RunJar.java:236)
hadoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hadoop jar /home/hadoop/Desktop/pg3.jar ~/venky ~/is184
2022-07-02 11:41:04,454 INFO client.RMPProxy: Connecting to ResourceManager at /127.0.0.1:8032
2022-07-02 11:41:04,573 INFO client.RMPProxy: Connecting to ResourceManager at /127.0.0.1:8032
Exception in thread "main" org.apache.hadoop.mapred.FileAlreadyExistsException: Output directory hdfs://127.0.0.1:9000/home/hadoop/is184 already exists
at org.apache.hadoop.mapred.FileOutputFormat.checkOutputSpecs(FileOutputFormat.java:131)
at org.apache.hadoop.mapreduce.JobSubmitter.checkSpecs(JobSubmitter.java:279)
at org.apache.hadoop.mapreduce.JobSubmitter.submitJobInternal(JobSubmitter.java:143)
at org.apache.hadoop.mapreduce.Job$11.run(Job.java:1570)
at org.apache.hadoop.mapreduce.Job$11.run(Job.java:1567)
at java.security.AccessController.doPrivileged(Native Method)
at javax.security.auth.Subject.doAs(Subject.java:422)
at org.apache.hadoop.security.UserGroupInformation.doAs(UserGroupInformation.java:1730)
at org.apache.hadoop.mapreduce.Job.submit(Job.java:1567)
at org.apache.hadoop.mapred.JobClient$1.run(JobClient.java:576)
at org.apache.hadoop.mapred.JobClient$1.run(JobClient.java:571)
at java.security.AccessController.doPrivileged(Native Method)
at javax.security.auth.Subject.doAs(Subject.java:422)
at org.apache.hadoop.security.UserGroupInformation.doAs(UserGroupInformation.java:1730)
at org.apache.hadoop.mapred.JobClient.submitJobInternal(JobClient.java:571)
at org.apache.hadoop.mapred.JobClient.submitJob(JobClient.java:562)
at org.apache.hadoop.mapred.JobClient.runJob(JobClient.java:873)
at madhurila.pg3la.main(pg3la.java:66)
at sun.reflect.NativeMethodAccessorImpl.invoke(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:498)
at org.apache.hadoop.util.RunJar.run(RunJar.java:323)
at org.apache.hadoop.util.RunJar.main(RunJar.java:236)
hadoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$ hdfs dfs -cat ~/is184/part-00000
2022-07-02 11:41:20,415 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localhostTrusted = false, remoteHostTrusted = false
Amex 110
Diners 09
Mastercard 277
Visa 522
hadoop@admin1-HP-280-G4-MT-Business-PC:~/hadoop-3.2.1/sbin$
```

