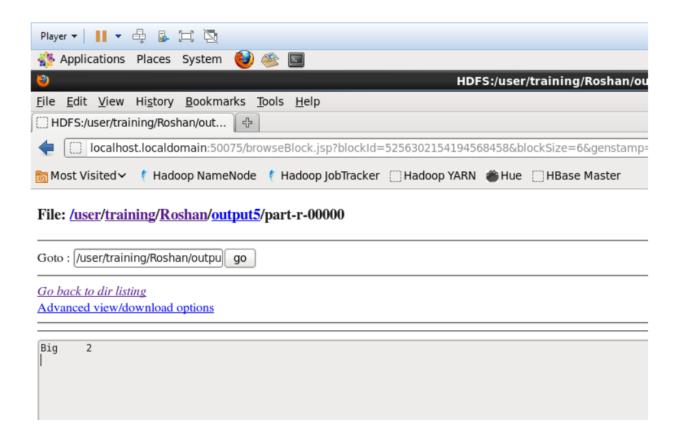
Write a program to find occurrence of any specific word

```
Code:
import java.io.IOException;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.IntWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.mapreduce.Reducer;
public class Count {
public static class WordMapper extends
Mapper<LongWritable,Text,Text,IntWritable&gt;{
@Override
public void map(LongWritable key, Text value, Context context)
throws IOException, InterruptedException{
String line = value.toString();
String find = "big";
for (String word : line.split("\\W+")){
if(find.equals(word.toLowerCase())){
context.write(new Text(find), new IntWritable(1));
}
}
}
public static class SumReducer extends Reducer< Text, IntWritable, Text,
IntWritable>{
@Override
public void reduce(Text key, Iterable<IntWritable&gt; values, Context
context) throws IOException, InterruptedException {
int wordCount = 0;
for (IntWritable value: values){
wordCount += value.get();
```

```
context.write(key, new IntWritable(wordCount));
public static void main(String[] args) throws Exception{
if(args.length != 2){
System.out.printf("Usage: WordCount <input dir&gt; &lt;output
dir>\n");
System.exit(-1);
Job job = new Job();
job.setJarByClass(Count.class);
job.setJobName(" WordCount");
FileInputFormat.setInputPaths(job, new Path(args[0]));
FileOutputFormat.setOutputPath(job, new Path(args[1]));
job.setMapperClass(WordMapper.class);
job.setReducerClass(SumReducer.class);
job.setOutputKeyClass(Text.class);
job.setOutputValueClass(IntWritable.class);
boolean success = job.waitForCompletion(true);
System.exit(success ? 0 : 1);
 [training@localhost ~]$ hadoop jar /home/training/Custs8.jar /user/training/custs /user/training/Roshan/cust-op8
 22/08/08 11:08:08 WARN mapred JobClient: Use GenericOptionsParser for parsing the arguments. Applications should implement Tool for the same. 22/08/08 11:08:08 INFO input.FileInputFormat: Total input paths to process: 1
 22/08/08 11:08:08 WARN snappy.LoadSnappy: Snappy native library is available
 22/08/08 11:08:08 INFO snappy.LoadSnappy: Snappy native library loaded
 22/08/08 11:08:09 INFO mapred.JobClient: Running job: job 202208080931 0014
                                       map 0% reduce 0%
 22/08/08 11:08:10 INFO mapred.JobClient:
                                       map 100% reduce 0%
map 100% reduce 100%
 22/08/08 11:08:13 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                       Job complete: job 202208080931 0014
 22/08/08 11:08:16 INFO mapred.JobClient:
                                       Counters: 32
                                         File System Counters
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           FILE: Number of bytes read=2514
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           FILE: Number of bytes written=366752
                                           FILE: Number of read operations=0
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           FILE: Number of large read operations=0
 22/08/08 11:08:16 INFO mapred.JobClient:
                                          FILE: Number of write operations=0 HDFS: Number of bytes read=391459
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           HDFS: Number of bytes written=10
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           HDFS: Number of read operations=2
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           HDFS: Number of large read operations=0
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           HDFS: Number of write operations=1
 22/08/08 11:08:16 INFO mapred.JobClient:
                                         Job Counters
 22/08/08 11:08:16 INFO mapred.JobClient:
                                          Launched map tasks=1
                                           Launched reduce tasks=1
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                          Data-local map tasks=1
                                           Total time spent by all maps in occupied slots (ms)=2974
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           Total time spent by all reduces in occupied slots (ms)=2273
 22/08/08 11:08:16 INFO mapred.JobClient:
                                          Total time spent by all maps waiting after reserving slots (ms)=0
```



Count of specific profession Code:

```
import java.io.IOException;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.IntWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.mapreduce.Reducer;
public class Cust {
public static class WordMapper extends Mapper<LongWritable,Text,Text,IntWritable&gt;{
@Override
public void map(LongWritable key, Text value, Context context)
throws IOException, InterruptedException{
String line = value.toString();
```

```
String find = " Pilot";
for (String word : line.split(",")){
if(find.equals(word)){
context.write(new Text(find), new IntWritable(1));
}
public static class SumReducer extends Reducer<Text, IntWritable, Text, IntWritable&gt; {
@Override
public void reduce(Text key, Iterable<IntWritable&gt; values, Context context) throws
IOException, InterruptedException {
int wordCount = 0;
for (IntWritable value: values){
wordCount += value.get();
context.write(key, new IntWritable(wordCount));
}
public static void main(String[] args) throws Exception{
if(args.length != 2){
System.out.printf("Usage: WordCount <input dir&gt; &lt;output dir&gt;\n&quot;);
System.exit(-1);
}
Job job = new Job();
job.setJarByClass(Cust.class);
job.setJobName("Custs");
FileInputFormat.setInputPaths(job, new Path(args[0]));
FileOutputFormat.setOutputPath(job, new Path(args[1]));
job.setMapperClass(WordMapper.class);
job.setReducerClass(SumReducer.class);
job.setOutputKeyClass(Text.class);
job.setOutputValueClass(IntWritable.class);
```

```
boolean success = job.waitForCompletion(true);
System.exit(success ? 0 : 1);
 [training@localhost ~]$ hadoop jar /home/training/Custs8.jar /user/training/custs /user/training/Roshan/cust-op8
22/08/08 11:08:08 WARN mapred JobClient: Use GenericOptionsParser for parsing the arguments. Applications should implement Tool for the same. 22/08/08 11:08:08 INFO input.FileInputFormat: Total input paths to process : 1 22/08/08 11:08:08 WARN snappy.LoadSnappy: Snappy native library is available
 22/08/08 11:08:08 INFO snappy.LoadSnappy: Snappy native library loaded
22/08/08 11:08:09 INFO mapred.JobClient: Running job: job 202208080931_0014 22/08/08 11:08:10 INFO mapred.JobClient: map 0% reduce 0%
 22/08/08 11:08:13 INFO mapred.JobClient:
                                            map 100% reduce 0%
                                            map 100% reduce 100%
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           Job complete: job_202208080931_0014
 22/08/08 11:08:16 INFO mapred.JobClient:
                                           Counters: 32
 22/08/08 11:08:16 INFO mapred.JobClient:
                                             File System Counters
 22/08/08 11:08:16 INFO mapred.JobClient:
                                               FILE: Number of bytes read=2514
 22/08/08 11:08:16 INFO mapred.JobClient:
                                                FILE: Number of bytes written=366752
 22/08/08 11:08:16 INFO mapred.JobClient:
                                               FILE: Number of read operations=0
 22/08/08 11:08:16 INFO mapred.JobClient:
                                                FILE: Number of large read operations=0
 22/08/08 11:08:16 INFO mapred.JobClient:
                                                FILE: Number of write operations=0
                                               HDFS: Number of bytes read=391459
HDFS: Number of bytes written=10
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                                HDFS: Number of read operations=2
 22/08/08 11:08:16 INFO mapred.JobClient:
                                               HDFS: Number of large read operations=0 HDFS: Number of write operations=1
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                              Job Counters
 22/08/08 11:08:16 INFO mapred.JobClient:
                                               Launched map tasks=1
Launched reduce tasks=1
 22/08/08 11:08:16 INFO mapred.JobClient:
 22/08/08 11:08:16 INFO mapred.JobClient:
                                               Data-local map tasks=1
  Applications Places System
                                                                                                     HDFS:/user/training/Roshan/cu:
 File Edit View History Bookmarks Tools Help
 ☐ HDFS:/user/training/Roshan/cus...
         Iocalhost.localdomain:50075/browseBlock.jsp?blockId=6680803510478263682&blockSize=10&genstamp.
  🛅 Most Visited 🗸 🦸 Hadoop NameNode 🦿 Hadoop JobTracker 📋 Hadoop YARN 🐞 Hue 📋 HBase Master
 File: /user/training/Roshan/cust-op8/part-r-00000
 Goto: //user/training/Roshan/cust-c go
  Go back to dir listing
  Advanced view/download options
  Pilot
             209
```

Write a program to find average word length.

Code:

```
import java.io.IOException;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.FloatWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.mapreduce.Reducer;
public class Average {
public static class WordMapper extends Mapper <LongWritable, Text,
Text, FloatWritable>
{
@Override
public void map(LongWritable key,Text value, Context context)
throws IOException, InterruptedException{
Text firstLetter = new Text();
FloatWritable wordLength = new FloatWritable();
String line = value.toString().toLowerCase();
for(String word:line.split(" ")){
if (word.length() > 0) {
firstLetter.set(String.valueOf(word.charAt(0)));
wordLength.set(word.length());
context.write(firstLetter, wordLength);
}
}
public static class SumReducer extends
Reducer< Text, FloatWritable, Text, FloatWritable&gt; {
public void reduce(Text key,Iterable<FloatWritable&gt;values,Context
context)
throws IOException, Interrupted Exception {
int sum =0;
int count =0;
```

```
int Average =0;
for(FloatWritable val:values) {
sum += val.get();
count = count + 1;
Average = sum/count;
context.write(key,new FloatWritable(Average));
}
}
public static void main(String[] args) throws Exception{
if(args.length != 2){
System.out.printf(
"Usage: WordCount <input dir&gt; &lt;output dir&gt; \n&quot;);
System.exit(-1);
Job job = new Job();
job.setJarByClass(Average.class);
job.setJobName("Word Count");
FileInputFormat.setInputPaths(job, new Path(args[0]));
FileOutputFormat.setOutputPath(job, new Path(args[1]));
job.setMapperClass(WordMapper.class);
job.setReducerClass(SumReducer.class);
job.setOutputKeyClass(Text.class);
job.setOutputValueClass(FloatWritable.class);
boolean success = job.waitForCompletion(true);
System.exit(success ? 0:1);
}
  <u>File Edit View Search Tools Documents Help</u>

    New31 

    X

  hi, how are you?
  hello, i'm fine.
  hello.
```





, , ,

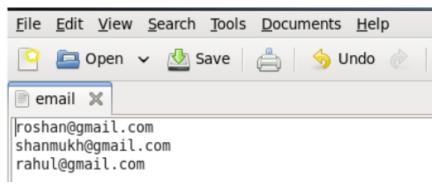
[training@localhost ~]\$ hadoop jar /home/training/Average2.jar /user/training/Ro shan/Avg /user/training/Roshan/output-avg2 22/08/17 10:20:09 WARN mapred.JobClient: Use GenericOptionsParser for parsing th e arguments. Applications should implement Tool for the same. 22/08/17 10:20:09 INFO input.FileInputFormat: Total input paths to process : 1 22/08/17 10:20:09 WARN snappy.LoadSnappy: Snappy native library is available 22/08/17 10:20:09 INFO snappy.LoadSnappy: Snappy native library loaded 22/08/17 10:20:09 INFO mapred.JobClient: Running job: job 202208170950 0010 22/08/17 10:20:10 INFO mapred.JobClient: map 0% reduce 0% 22/08/17 10:20:13 INFO mapred.JobClient: map 100% reduce 0% 22/08/17 10:20:15 INFO mapred.JobClient: Job complete: job_202208170950_0010 22/08/17 10:20:15 INFO mapred.JobClient: Counters: 32 22/08/17 10:20:15 INFO mapred.JobClient: File System Counters 22/08/17 10:20:15 INFO mapred.JobClient: FILE: Number of bytes read=70 22/08/17 10:20:15 INFO mapred.JobClient: FILE: Number of bytes written=36190 22/08/17 10:20:15 INFO mapred.JobClient: FILE: Number of read operations=0 22/08/17 10:20:15 INFO mapred.JobClient: FILE: Number of large read operatio 22/08/17 10:20:15 INFO mapred.JobClient: FILE: Number of write operations=0 22/08/17 10:20:15 INFO mapred.JobClient: HDFS: Number of bytes read=150 22/08/17 10:20:15 INFO mapred.JobClient: HDFS: Number of bytes written=30 22/08/17 10:20:15 INFO mapred.JobClient: HDFS: Number of read operations=2 HDFS: Number of large read operatio 22/08/17 10:20:15 INFO mapred.JobClient: 22/08/17 10:20:15 INFO mapred.JobClient: HDFS: Number of write operations=1 22/08/17 10:20:15 INFO mapred.JobClient: Job Counters File Edit View History Bookmarks Tools Help HDFS:/user/training/Roshan/out... localhost.localdomain:50075/browseBlock.jsp?blockId=-6230 🛅 Most Visited 🗸 🦸 Hadoop NameNode 🦸 Hadoop JobTracker 🦳 Ha Goto: /user/training/Roshan/outpu Go back to dir listing Advanced view/download options 3.0 f 5.0 h 4.0 i 3.0 4.0

Encrypt the email ids

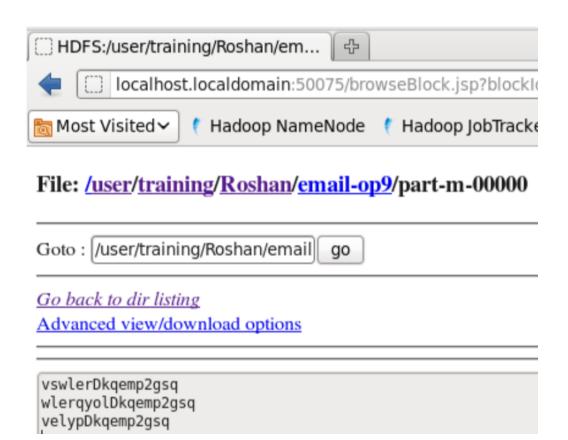
use "Only mapper" design pattern

```
import java.io.IOException;
import org.apache.hadoop.conf.Configuration;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;
import org.apache.hadoop.util.GenericOptionsParser;
public class Encry {
public static class MapForEncryption extends Mapper<LongWritable, Text, Text, Text&gt;
public void map(LongWritable key, Text Value, Context con)throws
IOException, InterruptedException
String line=Value.toString();
int encry; //created a object which will store he encrypted charater
String mask = ""; //mask object initialized with null value which will store the actual
output text
for(int i=0;i<line.length();i++) //for loop which will iterate through line
char c = line.charAt(i); //store each character at index i
encry = 4 + (int)c; //increment the alphabet by 4
c = (char)encry; //type cast encry into char
mask += c; //store the final text in mask
//String line1 = line.replace("||",");
Text outputKey = new Text(mask);
Text outputValue = new Text("");
con.write(outputKey,outputValue);
public static void main(String[] args) throws Exception{
Configuration c = new Configuration();
String[] files = new GenericOptionsParser(c,args).getRemainingArgs();
Path input = new Path(files[0]);
Path output = new Path(files[1]);
```

```
Job j = new Job(c,"FormatEmpFile");
j.setJarByClass(Encry.class);
j.setJobName("");
j.setMapperClass(MapForEncryption.class);
j.setNumReduceTasks(0);
j.setMapOutputKeyClass(Text.class);
j.setMapOutputValueClass(Text.class);
j.setMapOutputValueClass(Text.class);
FileInputFormat.addInputPath(j,input);
FileOutputFormat.setOutputPath(j,output);
System.exit(j.waitForCompletion(true)? 0:1);
}}
```



```
[training@localhost ~]$ hadoop jar /home/training/encry.jar /user/training/Roshan/email /user/training/Roshan/email-op9 22/08/23 11:51:49 WARN mapred.JobClient: Use GenericOptionsParser for parsing the arguments. Applications should implement
22/08/23 11:51:49 INFO input.FileInputFormat: Total input paths to process : 1
22/08/23 11:51:49 WARN snappy.LoadSnappy: Snappy native library is available
22/08/23 11:51:49 INFO snappy.LoadSnappy: Snappy native library loaded
22/08/23 11:51:50 INFO mapred.JobClient: Running job: job_202208230930_0016
22/08/23 11:51:51 INFO mapred.JobClient: map 0% reduce 0%
22/08/23 11:51:55 INFO mapred.JobClient: map 100% reduce 0%
22/08/23 11:51:56 INFO mapred.JobClient: Job complete: job_202208230930_0016
22/08/23 11:51:56 INFO mapred.JobClient: Counters: 24
22/08/23 11:51:56 INFO mapred.JobClient:
                                                File System Counters
22/08/23 11:51:56 INFO mapred.JobClient:
                                                  FILE: Number of bytes read=0
                                                  FILE: Number of bytes written=180563
22/08/23 11:51:56 INFO mapred.JobClient:
22/08/23 11:51:56 INFO mapred.JobClient:
                                                  FILE: Number of read operations=0
22/08/23 11:51:56 INFO mapred.JobClient:
                                                  FILE: Number of large read operations=0
22/08/23 11:51:56 INFO mapred.JobClient:
                                                  FILE: Number of write operations=0
22/08/23 11:51:56 INFO mapred.JobClient:
                                                  HDFS: Number of bytes read=163
22/08/23 11:51:56 INFO mapred.JobClient:
                                                  HDFS: Number of bytes written=55
                                                  HDFS: Number of read operations=2
HDFS: Number of large read operations=0
22/08/23 11:51:56 INFO mapred.JobClient:
22/08/23 11:51:56 INFO mapred.JobClient:
                                                  HDFS: Number of write operations=1
22/08/23 11:51:56 INFO mapred.JobClient:
```



Multiple file input demo assignment

Create 2 or 3 input files on your own, in which the data is present in different formats. Write a program to process these files using different map classes and perform any one aggregate function like sum, max, min etc. on it.

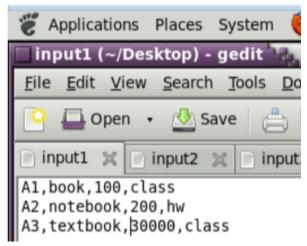
```
import java.io.IOException;
import org.apache.hadoop.conf.Configuration;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.IntWritable;
import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.mapreduce.Reducer;
import org.apache.hadoop.mapreduce.lib.input.MultipleInputs;
import org.apache.hadoop.mapreduce.lib.input.TextInputFormat;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;
import org.apache.hadoop.util.GenericOptionsParser;
public class MultipleInputFiles {
public static class map1 extends
Mapper<LongWritable,Text,Text,IntWritable&gt;
public void map(LongWritable key, Text value, Context con)
throws IOException, InterruptedException
String line = value.toString();
String[] line1 = line.split(",");
String name = line1[0];
Text outputKey = new Text(name);
int cost = Integer.parseInt(line1[2]);
IntWritable outputValue = new IntWritable(cost);
con.write(outputKey, outputValue);
public static class Map2 extends Mapper<LongWritable, Text, Text,
IntWritable>
```

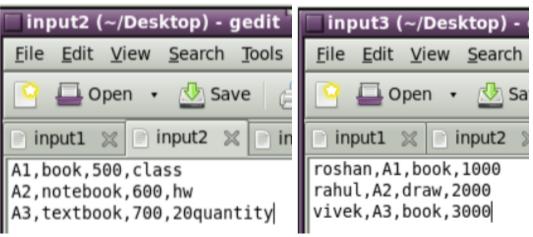
```
public void map(LongWritable key, Text value, Context con)
throws IOException, InterruptedException
String line = value.toString();
String[] line1 = line.split(",");
String name = line1[0];
Text outputKey = new Text(name);
int cost = Integer.parseInt(line1[2]);
IntWritable outputValue = new IntWritable(cost);
con.write(outputKey, outputValue);
}
public static class Map3 extends Mapper<LongWritable, Text, Text,
IntWritable>
public void map(LongWritable key, Text value, Context con)
throws IOException, InterruptedException
String line = value.toString();
String[] line1 = line.split(",");
String name = line1[1];
Text outputKey = new Text(name);
int cost = Integer.parseInt(line1[3]);
IntWritable outputValue = new IntWritable(cost);
con.write(outputKey, outputValue);
}
public static class Red extends Reducer< Text, IntWritable,
Text,IntWritable>
public void reduce(Text name, Iterable<IntWritable&gt;total cost,
Context con) throws IOException, InterruptedException
```

```
//to get the sum of cost
// int sum = 0;
// for(IntWritable value : total cost){
// sum += value.get();
//}
//to get the max cost
int max = 0;
for (IntWritable value : total cost) {
if (value.get() > max) {
max = value.get();
}
con.write(name,new IntWritable(max));
}
public static void main(String[] args) throws Exception{
Configuration c = new Configuration();
GenericOptionsParser parser = new GenericOptionsParser(c,args);
String[] files = parser.getRemainingArgs();
Path p1 = \text{new Path(files[0])};
Path p2 = new Path(files[1]);
Path p3 = new Path(files[2]);
Path p4 = new Path(files[3]);
Job j = \text{new Job(c,"multiple")};
j.setJarByClass(MultipleInputFiles.class);
j.setMapperClass(map1.class);
j.setMapperClass(Map2.class);
j.setReducerClass(Red.class);
j.setOutputKeyClass(Text.class);
j.setOutputValueClass(IntWritable.class);
MultipleInputs.addInputPath(j,p1,TextInputFormat.class,map1.class);
MultipleInputs.addInputPath(j, p2,
TextInputFormat.class,Map2.class);
MultipleInputs.addInputPath(j, p3,
```

TextInputFormat.class,Map3.class);

```
FileOutputFormat.setOutputPath(j,p4);
System.exit(j.waitForCompletion(true)?0:1);
}
```





```
[training@localhost ~]$ hadoop jar /home/training/MultipleInput.jar /user/traini
ng/Roshan/Multiple-ipp1 /user/training/Roshan/Multiple-ip2 /user/training/Roshan
/Multiple-ip3 /user/training/Roshan/MultipleFiles-op5
22/08/29 10:47:49 WARN mapred.JobClient: Use GenericOptionsParser for parsing th
e arguments. Applications should implement Tool for the same.
22/08/29 10:47:49 INFO input.FileInputFormat: Total input paths to process : 1
22/08/29 10:47:49 WARN snappy.LoadSnappy: Snappy native library is available
22/08/29 10:47:49 INFO snappy.LoadSnappy: Snappy native library loaded
22/08/29 10:47:49 INFO input.FileInputFormat: Total input paths to process : 1
22/08/29 10:47:49 INFO input.FileInputFormat: Total input paths to process : 1
22/08/29 10:47:49 INFO mapred.JobClient: Running job: job 202208290924 0005
22/08/29 10:47:50 INFO mapred.JobClient: map 0% reduce 0%
22/08/29 10:47:54 INFO mapred.JobClient: map 66% reduce 0%
22/08/29 10:47:57 INFO mapred.JobClient: map 100% reduce 0%
22/08/29 10:47:58 INFO mapred.JobClient: map 100% reduce 100%
22/08/29 10:47:59 INFO mapred.JobClient: Job complete: job 202208290924 0005
22/08/29 10:47:59 INFO mapred.JobClient: Counters: 32
22/08/29 10:47:59 INFO mapred.JobClient: File System Counters
22/08/29 10:48:00 INFO mapred.JobClient:
                                               FILE: Number of bytes read=87
22/08/29 10:48:00 INFO mapred.JobClient:
                                               FILE: Number of bytes written=73445
22/08/29 10:48:00 INFO mapred.JobClient: FILE: Number of read operations=0 22/08/29 10:48:00 INFO mapred.JobClient: FILE: Number of large read operatio
ns=0
```

For max cost:

