

## Assignment5.3

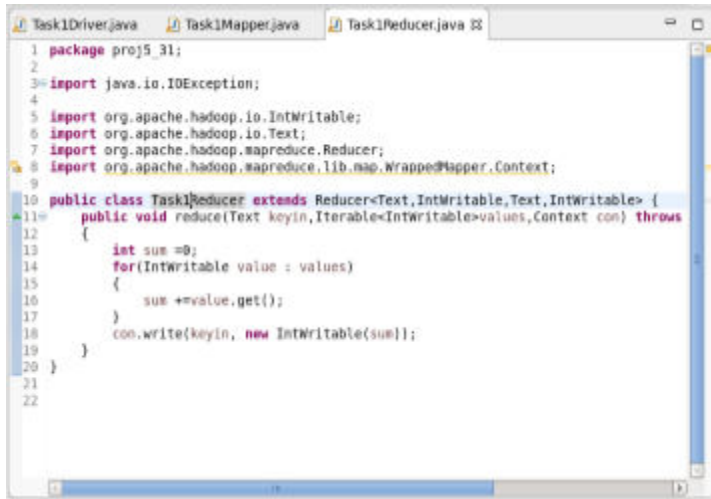
Driver class1:

```
Task1Driver.java Task1Mapper.java Task1Reducer.java
12
13 public class Task1Driver {
14     public static void main(String[] args) throws Exception{
15         Configuration conf = new Configuration();
16         Job job = new Job(conf, "Task3");
17         job.setJarByClass(Task1Driver.class);
18
19         job.setMapOutputKeyClass(Text.class);
20         job.setMapOutputValueClass(IntWritable.class);
21         job.setOutputKeyClass(Text.class);
22         job.setOutputValueClass(IntWritable.class);
23         job.setMapperClass(Task1Mapper.class);
24         job.setReducerClass(Task1Reducer.class);
25         job.setInputFormatClass(TextInputFormat.class);
26         job.setOutputFormatClass(TextOutputFormat.class);
27         Path outputPath = new Path(args[1]);
28         FileInputFormat.addInputPath(job, new Path(args[0]));
29         FileOutputFormat.setOutputPath(job, outputPath);
30         outputPath.getFileSystem(conf).delete(outputPath, true);
31         job.waitForCompletion(true);
32
33
34
35     }
36 }
37
```

Mapper class1:

```
Task1Driver.java Task1Mapper.java Task1Reducer.java
2
3 import java.io.IOException;
4
5 import org.apache.hadoop.io.*;
6 import org.apache.hadoop.io.Text;
7 import org.apache.hadoop.mapreduce.Mapper;
8 import org.apache.hadoop.mapreduce.Mapper.Context;
9
10 public class Task1Mapper extends Mapper<LongWritable,Text,Text,IntWritable>{
11
12     Text outKey = new Text();
13     IntWritable outValue = new IntWritable();
14     public void map(LongWritable key,Text value,Context con) throws IOException, InterruptedException{
15         {
16             String[] line = value.toString().split(" ");
17
18             outKey.set(line[0]);
19             outValue.set(1);
20
21
22             con.write(outKey,outValue);
23         }
24     }
25 }
26 }
27
```

## Reducer class1:

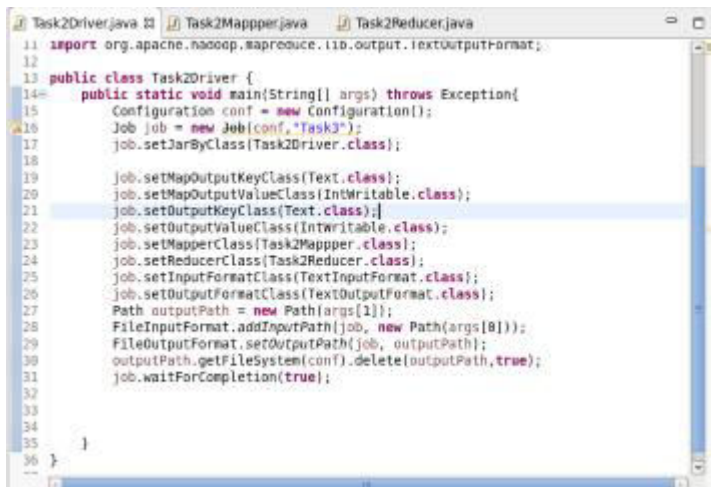


```
1 package proj5_31;
2
3 import java.io.IOException;
4
5 import org.apache.hadoop.io.IntWritable;
6 import org.apache.hadoop.io.Text;
7 import org.apache.hadoop.mapreduce.Reducer;
8 import org.apache.hadoop.mapreduce.lib.map.WrappedMapper.Context;
9
10 public class Task1Reducer extends Reducer<Text, IntWritable, Text, IntWritable> {
11     public void reduce(Text keyin, Iterable<IntWritable> values, Context con) throws
12     {
13         int sum = 0;
14         for(IntWritable value : values)
15         {
16             sum += value.get();
17         }
18         con.write(keyin, new IntWritable(sum));
19     }
20 }
21
22
```

## Output:

```
asses where applicable
102      2
145      2
186      2
196      2
22       3
256      1
654      1
[acagdild@localhost Des
```

## Driver class2:



```
11 import org.apache.hadoop.mapreduce.lib.output.TextOutputFormat;
12
13 public class Task2Driver {
14     public static void main(String[] args) throws Exception{
15         Configuration conf = new Configuration();
16         Job job = new Job(conf, "Task3");
17         job.setJarByClass(Task2Driver.class);
18
19         job.setMapOutputKeyClass(Text.class);
20         job.setMapOutputValueClass(IntWritable.class);
21         job.setOutputKeyClass(Text.class);
22         job.setOutputValueClass(IntWritable.class);
23         job.setMapperClass(Task2Mapper.class);
24         job.setReducerClass(Task2Reducer.class);
25         job.setInputFormatClass(TextInputFormat.class);
26         job.setOutputFormatClass(TextOutputFormat.class);
27         Path outputPath = new Path(args[1]);
28         FileInputFormat.addInputPath(job, new Path(args[0]));
29         FileOutputFormat.setOutputPath(job, outputPath);
30         outputPath.getFileSystem(conf).delete(outputPath, true);
31         job.waitForCompletion(true);
32     }
33 }
34
35
```

## Mapper 2:

```
Task2Driver.java Task2Mapper.java Task2Reducer.java
1 package proj5_32;
2
3 import java.io.IOException;
4
5 import org.apache.hadoop.io.*;
6 import org.apache.hadoop.io.Text;
7 import org.apache.hadoop.mapreduce.Mapper;
8 import org.apache.hadoop.mapreduce.Mapper.Context;
9
10 public class Task2Mapper extends Mapper<LongWritable,Text,Text,IntWritable>{
11
12     Text outKey = new Text();
13     IntWritable outValue = new IntWritable();
14     public void map(LongWritable key,Text value,Context con) throws IOException, I
15     {
16         String[] line = value.toString().split(" ");
17
18         outKey.set(line[1]);
19         outValue.set(1);
20
21         con.write(outKey,outValue);
22     }
23 }
24
25
26 }
```

## Reducer 2:

```
Task2Driver.java Task2Mapper.java Task2Reducer.java
1 package proj5_32;
2
3 import java.io.IOException;
4
5 import org.apache.hadoop.io.IntWritable;
6 import org.apache.hadoop.io.Text;
7 import org.apache.hadoop.mapreduce.Reducer;
8 import org.apache.hadoop.mapreduce.lib.map.WrappedMapper.Context;
9
10 public class Task2Reducer extends Reducer<Text,IntWritable,Text,IntWritable> {
11     public void reduce(Text keyin,Iterable<IntWritable>values,Context con) throws
12     {
13         int sum =0;
14         for(IntWritable value : values)
15         {
16             sum +=value.get();
17         }
18         con.write(keyin, new IntWritable(sum));
19     }
20 }
21
22 }
```

## Output2:

```
.....
asses where applicable
235      2
242      2
256      2
302      3
377      1
456      2
654      1
[acadgild@localhost Desktop]$
```