

```

package it.polito.bigdata.hadoop.exercise17;

import org.apache.hadoop.conf.Configuration;
import org.apache.hadoop.conf.Configured;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.*;
import org.apache.hadoop.mapreduce.Job;
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.mapreduce.lib.output.TextOutputFormat;
import org.apache.hadoop.util.Tool;
import org.apache.hadoop.util.ToolRunner;

/**
 * Driver class.
 */
public class DriverBigData extends Configured implements Tool {

    @Override
    public int run(String[] args) throws Exception {

        Path inputPath1, inputPath2;
        Path outputDir;
        int numberOfReducers;
        int exitCode;

        // Parse the parameters
        numberOfReducers = Integer.parseInt(args[0]);
        inputPath1 = new Path(args[1]);
        inputPath2 = new Path(args[2]);
        outputDir = new Path(args[3]);

        Configuration conf = this.getConf();

        // Define a new job
        Job job = Job.getInstance(conf);

        // Assign a name to the job
        job.setJobName("Exercise 17");

        // Set two input paths and two mapper classes
        MultipleInputs.addInputPath(job, inputPath1, TextInputFormat.class,
MapperType1BigData.class);
        MultipleInputs.addInputPath(job, inputPath2, TextInputFormat.class,
MapperType2BigData.class);

        // Set path of the output folder for this job
        FileOutputFormat.setOutputPath(job, outputDir);

        // Specify the class of the Driver for this job
        job.setJarByClass(DriverBigData.class);

        // Set job output format
        job.setOutputFormatClass(TextOutputFormat.class);

        // Set map output key and value classes

```

```

    job.setMapOutputKeyClass(Text.class);
    job.setMapOutputValueClass(FloatWritable.class);

    // Set reduce class
    job.setReducerClass(ReducerBigData.class);

    // Set reduce output key and value classes
    job.setOutputKeyClass(Text.class);
    job.setOutputValueClass(FloatWritable.class);

    // Set number of reducers
    job.setNumReduceTasks(numberOfReducers);

    // Execute the job and wait for completion
    if (job.waitForCompletion(true)==true)
        exitCode=0;
    else
        exitCode=1;

    return exitCode;
}

/** Main of the driver
 */

public static void main(String args[]) throws Exception {
    // Exploit the ToolRunner class to "configure" and run the Hadoop application
    int res = ToolRunner.run(new Configuration(), new DriverBigData(), args);

    System.exit(res);
}
}

```