**EvenOdd Program:**

**MapperCode:**

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.MapReduceBase;

import org.apache.hadoop.mapred.Mapper;

import org.apache.hadoop.mapred.OutputCollector;

import org.apache.hadoop.mapred.Reporter;

public class EvenOddMapper extends MapReduceBase implements Mapper<LongWritable,

Text, Text, IntWritable> {

@Override

// Map function

public void map(LongWritable key, Text value, OutputCollector<Text,

IntWritable> output, Reporter rep)

throws IOException

{

// Splitting the line into spaces

String data[] = value.toString().split(" ");

for (String num : data)

{

int number = Integer.parseInt(num);

if (number % 2 == 1)

{

// For Odd Numbers

output.collect(new Text("ODD"), new IntWritable(number));

}

else

{

// For Even Numbers

output.collect(new Text("EVEN"),

new IntWritable(number));

}

}

}

}

**REDUCERCODE**

import java.io.IOException;

import java.util.Iterator;

import org.apache.hadoop.io.IntWritable;

import org.apache.hadoop.io.Text;

import org.apache.hadoop.mapred.MapReduceBase;

import org.apache.hadoop.mapred.OutputCollector;

import org.apache.hadoop.mapred.Reducer;

import org.apache.hadoop.mapred.Reporter;

public class EvenOddReducer extends MapReduceBase implements Reducer<Text,

IntWritable, Text, IntWritable> {

@Override

// Reduce Function

public void reduce(Text key, Iterator<IntWritable> value,

OutputCollector<Text, IntWritable> output, Reporter rep)

throws IOException

{

if (key.equals("ODD"))

{

while (value.hasNext())

{

IntWritable i = value.next();

output.collect(key, new IntWritable(i.get()));

}

}

else

{

while (value.hasNext())

{

IntWritable i = value.next();

output.collect(key, new IntWritable(i.get()));

}

}

}

}

**DRIVERCODE:**

//Importing libraries

import org.apache.hadoop.conf.Configured;

import org.apache.hadoop.fs.Path;

import org.apache.hadoop.io.IntWritable;

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.util.Tool;

import org.apache.hadoop.util.ToolRunner;

public class EvenOddDriver extends Configured implements Tool {

@Override

public int run(String[] args) throws Exception

{

if (args.length < 2)

{

System.out.println("Please enter valid arguments");

return -1;

}

JobConf conf = new JobConf(EvenOddDriver.class);

FileInputFormat.setInputPaths(conf, new Path(args[0]));

FileOutputFormat.setOutputPath(conf, new Path(args[1]));

conf.setMapperClass(EvenOddMapper.class);

conf.setReducerClass(EvenOddReducer.class);

conf.setMapOutputKeyClass(Text.class);

conf.setMapOutputValueClass(IntWritable.class);

conf.setOutputKeyClass(Text.class);

conf.setOutputValueClass(IntWritable.class);

JobClient.runJob(conf);

return 0;

}

// Main Method

public static void main(String args[]) throws Exception

{

int exitcode = ToolRunner.run(new EvenOddDriver(), args);

System.out.println(exitcode);

}

}

**OUTPUT:**

