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SECTION: B

SEM: 6

BATCH : 1

PROGRAM: ODD _EVEN MAP REDUCE BDA LAB TEST 2 INPUT:-

DRIVER INPUT:-

```
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 OddEvenDriver extends Configured
                                     implements Tool {
                                         @Override
                                         public int run(String[] args) throws Exception
                                             if (args.length < 2)</pre>
                                                  System.out.println("Please enter valid
                                     arguments");
```

```
return -1;
        }
        JobConf conf = new
JobConf(OddEvenDriver.class);
        FileInputFormat.setInputPaths(conf, new
Path(args[0]));
        FileOutputFormat.setOutputPath(conf, new
Path(args[1]));
        conf.setMapperClass(OddEvenMapper.class);
        conf.setReducerClass(OddEvenReducer.class);
        conf.setMapOutputKeyClass(Text.class);
conf.setMapOutputValueClass(IntWritable.class);
        conf.setOutputKeyClass(Text.class);
conf.setOutputValueClass(IntWritable.class);
        JobClient.runJob(conf);
        return 0;
    }
    public static void main(String args[]) throws
Exception
        int exitcode = ToolRunner.run(new
OddEvenDriver(), args);
        System.out.println(exitcode);
    }
}
```

MAPPER INPUT:-

```
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 OddEvenMapper extends MapReduceBase implements
Mapper<LongWritable,

Text, Text,
IntWritable> {
```

```
@Override
    public void map(LongWritable key, Text value,
OutputCollector<Text,
                                     IntWritable> output,
Reporter rep)
    throws IOException
    {
        String data[] = value.toString().split(" ");
        for (String num : data)
            int number = Integer.parseInt(num);
            if (number % 2 == 1)
            {
                output.collect(new Text("ODD"), new
IntWritable(number));
            }
            else
            {
                output.collect(new Text("EVEN"),
                       new IntWritable(number));
            }
        }
    }
}
```

REDUCER INPUT:-

```
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 OddEvenReducer extends MapReduceBase implements
Reducer<Text,
                                   IntWritable, Text,
IntWritable> {
   @Override
    public void reduce(Text key, Iterator<IntWritable> value,
    OutputCollector<Text, IntWritable> output, Reporter rep)
   throws IOException
    {
        int sum = 0, count = 0;
        if (key.equals("ODD"))
            while (value.hasNext())
            {
                IntWritable i = value.next();
                sum += i.get();
                count++;
            }
        }
        else
        {
            while (value.hasNext())
            {
                IntWritable i = value.next();
                sum += i.get();
                count++;
            }
        }
```

```
output.collect(key, new IntWritable(count));
}
```