29/09/25

Lab 7 : WordCount - MapReduce

* WC Mapper . java

omp package bda;

```
import java.io.IOException;
import org.apache.hadoop.io;
import org.apache.hadoop.mapred;
import org.apache.hadoop.mapred.Mapper;
import org.apache.hadoop.mapred.Reporter;

public class WCMapper extends MapReduce
Base implements Mapper < LongWritable,
Text, Text, IntWritable > {

public void map (LongWritable key,
Text value, OutputCollector < Text,
IntWritable > output, Reporter rep )
throws IOException

{
string line = value.toString();
for (string word : line.split(" "))
{
if (word.length() > 0)
{
output.collect(new text (word),
new IntWritable (1));
}
}
}
}
```

* WCReducer.java

package lda;

import java.io.IOException;
import org.apache.hadoop.io;
import org.apache.hadoop.mapred;

public class WCReducer extends Map
Reduce Base implements Reducer
<Text, IntWritable, Text, IntWritable>{

public void reduce (Text key, Iterator
<IntWritable> value, Output Collector
<Text, IntWritable> output, Reporter
rep) throws IO Exception
{
    int count =0;
    while (value.hasNext())
    {
        IntWritable i = value.next();
        count += i.get();
    }
    output.collect (key, new IntWritable
                            (count));
    }
}

* WC Driver.java:

```java
package bda;

import java.io.IOException;
import org.apache.hadoop.conf.Configured;
import org.apache.hadoop.io;
import org.apache.hadoop.mapred;
import org.apache.hadoop.util;

public class WCDriver extends Configured
implements Tool {
public int run (String args []) throws
IOException
{
if (args.length < 2)
{
System.out.println (" Please give valid input"
return -1;
}

JobConf conf = new JobConf (WCDriver.class,
FileInputFormat.setInputPaths ( conf,
new Path (args [0]));
FileOutputFormat.setOutputPath ( conf,
new Path (args [0]));

conf.setMapperClass (WCMapper.class);
conf.setReducerClass (WCReducer.class);
conf.setMapOutputKeyClass (Text.class);
conf.setMapOutputValueClass (IntWritable.
class);
conf.setOutputKeyClass (Text.class);
conf.setOutputValueClass (IntWritable.class);
```

```java
        JobClient.runJob(conf);
        return 0;
    }


    public static void main(String args[])
    throws Exception
    {
        int exitCode = ToolRunner.run(new
        WCDriver(), args);
        System.out.println(exitCode);
    }
}
```

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