**CharCountMapper.java**

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 CharCountMapper extends MapReduceBase implements Mapper<LongWritable,Text,Text,IntWritable>{

public void map(LongWritable key, Text value,OutputCollector<Text,IntWritable> output,

Reporter reporter) throws IOException{

String line = value.toString();

String tokenizer[] = line.split("");

for(String SingleChar : tokenizer)

{

Text charKey = new Text(SingleChar);

IntWritable One = new IntWritable(1);

output.collect(charKey, One);

}

}

}

**CharCountReducer.java**

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 CharCountReducer extends MapReduceBase

implements Reducer<Text, IntWritable, Text,

IntWritable> {

public void

reduce(Text key, Iterator<IntWritable> values,

OutputCollector<Text, IntWritable> output,

Reporter reporter) throws IOException

{

int sum = 0;

while (values.hasNext()) {

sum += values.next().get();

}

output.collect(key, new IntWritable(sum));

}

}

**CharCountDriver.java**

import java.io.IOException;

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.mapred.TextInputFormat;

import org.apache.hadoop.mapred.TextOutputFormat;

public class CharCountDriver {

public static void main(String[] args)

throws IOException

{

JobConf conf = new JobConf(CharCountDriver.class);

conf.setJobName("CharCount");

conf.setOutputKeyClass(Text.class);

conf.setOutputValueClass(IntWritable.class);

conf.setMapperClass(CharCountMapper.class);

conf.setCombinerClass(CharCountReducer.class);

conf.setReducerClass(CharCountReducer.class);

conf.setInputFormat(TextInputFormat.class);

conf.setOutputFormat(TextOutputFormat.class);

FileInputFormat.setInputPaths(conf,

new Path(args[0]));

FileOutputFormat.setOutputPath(conf,

new Path(args[1]));

JobClient.runJob(conf);

}

}

**terminal:**

hadoop version

cd Documents

nano test.txt

cat test.txt

shruti

start-dfs.sh

start-yarn.sh

hdfs dfs -put /file\_path /destination

hdfs dfs -put /home/dikshant/Documents/test.txt /

hdfs dfs -ls /

hadoop jar /jar\_file\_location /dataset\_location\_in\_HDFS /output-file\_name

hadoop jar /home/dikshant/Documents/charectercount.jar /test.txt /CharCountResult

hdfs dfs -cat /CharCountResult/part-00000