Vaibhav Kumar Roll No 19

Assignment

Date: 23-08-2022

Problem Statement : Encrypt the email id from file

Explanation:

Implementing caesar cipher algorithm for this,

Basically Caesar cipher or Shift Cipher is a Substitution cipher algorithm in which each letter of the plain text (message) is substituted with another letter. In this algorithm, each letter of the Plaintext is shifted a number of positions based on the Key provided.

Here i have provided the key as 69.

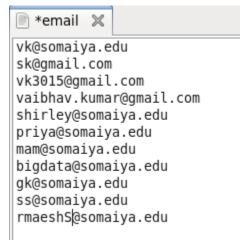
CODE:

```
import javax.crypto.Cipher;
import javax.crvpto.KevGenerator;
import javax.crypto.SecretKey;
import org.apache.hadoop.conf.Configuration;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.Text;
import org.apache.hadoop.io.IntWritable;
import org.apache.hadoop.io.LongWritable;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.mapreduce.Mapper.Context;
import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;
import org.apache.hadoop.util.GenericOptionsParser;
public class email {
        public static class emailencrypt extends Mapper<LongWritable,Text,Text,Text>
                public void map(LongWritable key, Text value, Context con)
               throws IOException,InterruptedException
                        String strIncremented=new String();
       String x = "":
       String line = value.toString();
       for(int i=0;i<line.length();i++)</pre>
          strIncremented+=(char)(line.charAt(i)+69);
       con.write(new Text(x),new Text(strIncremented));
          }
               \}/end map
public static void main(String[] args) throws Exception{
```

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```
Job job=new Job();
job.setJarByClass(email.class);
     job.setJobName("email");
  FileInputFormat.setInputPaths(job.new Path(args[0]));
  FileOutputFormat.setOutputPath(job,new Path(args[1]));
  job.setMapperClass(emailencrypt.class);
  job.setOutputKeyClass(Text.class);
  job.setOutputValueClass(Text.class);
  boolean success=job.waitForCompletion(true);
  System.exit(success?0:1);
[training@localhost ~]$ hadoop jar /home/training/emailencry.jar /user/training/vaibhav/email /user/training/emailoutput
22/08/23 11:14:33 WARN mapred.JobClient: Use GenericOptionsParser for parsing the arguments. Applications should implement Tool for
22/08/23 11:14:33 INFO input.FileInputFormat: Total input paths to process : 1
22/08/23 11:14:33 WARN snappy.LoadSnappy: Snappy native library is available
22/08/23 11:14:33 INFO snappy.LoadSnappy: Snappy native library loaded
22/08/23 11:14:33 INFO mapred.JobClient: Running job: job_202208011504_0006
22/08/23 11:14:34 INFO mapred.JobClient: map 0% reduce 0%
22/08/23 11:14:38 INFO mapred.JobClient: map 100% reduce 0%
22/08/23 11:14:40 INFO mapred.JobClient: map 100% reduce 100%
22/08/23 11:14:40 INFO mapred.JobClient: Job complete: job 202208011504 0006
22/08/23 11:14:40 INFO mapred.JobClient: Counters: 32
22/08/23 11:14:40 INFO mapred.JobClient:
                                          File System Counters
22/08/23 11:14:40 INFO mapred.JobClient:
                                            FILE: Number of bytes read=398
22/08/23 11:14:40 INFO mapred.JobClient:
                                            FILE: Number of bytes written=361496
22/08/23 11:14:40 INFO mapred.JobClient:
                                            FILE: Number of read operations=0
22/08/23 11:14:40 INFO mapred.JobClient:
                                            FILE: Number of large read operations=0
22/08/23 11:14:40 INFO mapred.JobClient:
                                            FILE: Number of write operations=0
22/08/23 11:14:40 INFO mapred.JobClient:
                                            HDFS: Number of bytes read=305
22/08/23 11:14:40 INFO mapred.JobClient:
                                            HDFS: Number of bytes written=370
                                            HDFS: Number of read operations=2
22/08/23 11:14:40 INFO mapred.JobClient:
                                            HDFS: Number of large read operations=0
22/08/23 11:14:40 INFO mapred.JobClient:
22/08/23 11:14:40 INFO mapred.JobClient:
                                            HDFS: Number of write operations=1
22/08/23 11:14:40 INFO mapred.JobClient:
                                          Job Counters
22/08/23 11:14:40 INFO mapred.JobClient:
                                            Launched map tasks=1
22/08/23 11:14:40 INFO mapred.JobClient:
                                            Launched reduce tasks=1
22/08/23 11:14:40 INFO mapred.JobClient:
                                            Data-local map tasks=1
22/08/23 11:14:40 INFO mapred.JobClient:
                                            Total time spent by all maps in occupied slots (ms)=3540
22/08/23 11:14:40 INFO mapred.JobClient:
                                            Total time spent by all reduces in occupied slots (ms)=2218
22/08/23 11:14:40 INFO mapred.JobClient:
                                            Total time spent by all maps waiting after reserving slots (ms)=0
```

Input File:



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OUTPUT:

File: /user/training/emailoutput/part-r-00000

Goto : /user/training/emailoutput | go

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