**Task 4:**

**Write a java program to list down all the files inside a directory and its sub-directories who have**

**last modified timestamp between the start\_ts and end\_ts passed as an argument. The default**

**value of start\_ts is 0 and for end\_ts is infinite.**

package mapreduce.demo;  
  
import java.io.FileNotFoundException;  
import java.io.IOException;  
  
import java.net.URISyntaxException;  
import java.sql.Timestamp;  
import java.text.DateFormat;  
import java.text.ParseException;  
import java.text.SimpleDateFormat;  
//import java.util.Scanner;  
import java.util.Date;  
  
import org.apache.hadoop.conf.Configuration;  
import org.apache.hadoop.fs.FileStatus;  
import org.apache.hadoop.fs.FileSystem;  
import org.apache.hadoop.fs.Path;  
  
public class bbb {  
  public static void main(String[] args) throws IOException, URISyntaxException, ParseException  
  {  
        
      Path path = new Path(args[0]);  
        
      Configuration conf = new Configuration();  
  
      FileSystem filesystem = FileSystem.get(path.toUri(), conf);  
      FileStatus[] status = filesystem.listStatus(path);  
         
      DateFormat dateformat = new SimpleDateFormat("dd/MM/YYYY");  
      if (args.length<2)  
      {  
            Date maxDate =new Date(Long.MAX\_VALUE);  
            Date minDate =  new Date(0);   
            Timestamp start\_t = new Timestamp(minDate.getTime());                                        
            Timestamp end\_t =new Timestamp(maxDate.getTime());                              
            fileStatusFunc(status, start\_t, end\_t);  
      }  
      else{  
            
          java.util.Date start\_date = dateformat.parse(args[1]);   
          long time = start\_date.getTime();              
          Timestamp start\_ts = new Timestamp(time);  
            
          java.util.Date end\_date = dateformat.parse(args[2]);   
          long time1 = end\_date.getTime();  
          Timestamp end\_ts = new Timestamp(time1);  
            
          fileStatusFunc(status, start\_ts, end\_ts);  
            
      }  
        
      
    }  
    
  
public static void fileStatusFunc(FileStatus[] status ,Timestamp fromtime, Timestamp totime) throws FileNotFoundException, IOException  
{  
      
         
    for (int i = 0; i < status.length; i++) {  
        FileStatus fileStatus = status[i];  
        Timestamp ts = new Timestamp(System.currentTimeMillis());  
            if (fileStatus.isDirectory()) {  
                Configuration subconf = new Configuration();  
                FileSystem subfilesystem = FileSystem.get(fileStatus.getPath().toUri(), subconf);  
                FileStatus[] subStatus = subfilesystem.listStatus(fileStatus.getPath());  
                Timestamp mytimedir = new Timestamp(fileStatus.getModificationTime());  
                  
                if(mytimedir.before(totime)) {  
                        System.out.print("\nDirectory:" + fileStatus.getPath());  
                        System.out.println(" \nlast modified timestamp:" + mytimedir.toString());  
                }  
                fileStatusFunc(subStatus, fromtime, totime);  
                } else {  
                    Timestamp mytimefile = new Timestamp(fileStatus.getModificationTime());  
                    if(mytimefile.before(ts)) {  
                        System.out.print(" \nfile:" + fileStatus.getPath());  
                        System.out.println(" \nlast modified timestamp is:" + mytimefile.toString());  
                    }  
                }  
            }  
  
    }  
      
    }

OUTPUT:  
  
[acadgild@localhost training]$ hadoop jar bbb3.jar /user/acadgild/hadoop/adirectory   
17/04/20 00:54:42 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/adirectory/emp\_details.txt   
last modified timestamp is:2017-04-17 02:03:16.709  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/adirectory/wordcount.txt   
last modified timestamp is:2017-04-17 02:03:13.693

OUTPUT:  
  
[acadgild@localhost training]$ hadoop jar bbb3.jar /user/acadgild/hadoop 01/03/2017 19/04/2017  
17/04/20 00:57:46 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/adirectory/emp\_details.txt   
last modified timestamp is:2017-04-17 02:03:16.709  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/adirectory/wordcount.txt   
last modified timestamp is:2017-04-17 02:03:13.693  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/max-temp.txt   
last modified timestamp is:2017-04-14 03:44:55.946  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/newfile.txt   
last modified timestamp is:2017-04-17 06:48:46.804  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/session2.txt   
last modified timestamp is:2017-04-14 04:24:52.215  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/wordcount.txt   
last modified timestamp is:2017-04-14 02:35:35.953  
   
file:hdfs://localhost:9000/user/acadgild/hadoop/wordcount1.txt   
last modified timestamp is:2017-04-14 04:22:47.678

**Task 5:**

**Write a Java program to display the content of a file in HDFS on screen.**

package list;  
  
import java.net.URI;  
  
import org.apache.hadoop.conf.Configuration;  
import org.apache.hadoop.fs.FSDataInputStream;  
import org.apache.hadoop.fs.FileSystem;  
import org.apache.hadoop.fs.Path;  
import org.apache.hadoop.io.IOUtils;  
  
public class FileRead {  
    public static void main(String[] args) throws Exception {  
        if (args.length != 1) {  
            System.out.println("Pass one argument");  
            System.exit(1);  
        }  
  
        String uri = args[0];  
        Configuration conf = new Configuration();  
        FileSystem fs = FileSystem.get(URI.create(uri), conf);  
        FSDataInputStream in = null;  
        try {  
            in = fs.open(new Path(uri));  
            IOUtils.copyBytes(in, System.out, 4096, false);  
        }   
        finally {  
            IOUtils.closeStream(in);  
        }  
    }  
}  
  
OUTPUT:

[acadgild@localhost training]$ hadoop jar FileRead.jar /user/acadgild/hadoop/session2.txt  
  
hello acadgild  
good morning   
have a great day ahead

https://ssl.gstatic.com/ui/v1/icons/mail/images/cleardot.gif**Task 6:**

**Write a Java program to copy a file from local filesystem to HDFS.**

package list;  
  
import java.io.BufferedInputStream;  
import java.io.FileInputStream;  
import java.io.InputStream;  
import java.io.OutputStream;  
import java.net.URI;  
  
import org.apache.hadoop.conf.Configuration;  
import org.apache.hadoop.fs.FileSystem;  
import org.apache.hadoop.fs.Path;  
import org.apache.hadoop.io.IOUtils;  
  
public class FileCopy {  
    public static void main(String[] args) throws Exception {  
        if (args.length != 2) {  
            System.out.println("Pass two arguments");  
            System.exit(1);  
        }  
  
        String localSrc = args[0];  
        String dst = args[1];  
  
        InputStream in = new BufferedInputStream(new FileInputStream(localSrc));  
        Configuration conf = new Configuration();  
        FileSystem fs = FileSystem.get(URI.create(dst), conf);  
        OutputStream out = fs.create(new Path(dst));  
          
        IOUtils.copyBytes(in, out, 4096, true);  
    }  
}  
  
  
[acadgild@localhost training]$ hadoop jar FileCopy.jar  /home/acadgild/Downloads/emp\_details.txt /user/acadgild/hadoop/newfile.txt  
  
[acadgild@localhost training]$ hadoop fs -ls /user/acadgild/hadoop  
  
Found 6 items  
drwxr-xr-x   - acadgild supergroup          0 2017-04-17 02:03 /user/acadgild/hadoop/adirectory  
-rwxrwx---   1 acadgild supergroup        187 2017-04-14 03:44 /user/acadgild/hadoop/max-temp.txt  
-rw-r--r--   1 acadgild supergroup        159 2017-04-17 06:48 /user/acadgild/hadoop/newfile.txt  
-rw-r--r--   1 acadgild supergroup         52 2017-04-14 04:24 /user/acadgild/hadoop/session2.txt  
-rw-r--r--   1 acadgild supergroup        114 2017-04-14 02:35 /user/acadgild/hadoop/wordcount.txt  
-rw-r--r--   1 acadgild supergroup        223 2017-04-14 04:22 /user/acadgild/hadoop/wordcount1.txt