package Codes;

import java.io.BufferedInputStream;

import java.io.FileInputStream;

import java.io.FilterInputStream;

import java.io.IOException;

import java.io.InputStream;

import java.util.Arrays;

public class gcskew

{

public double[] finalarr ;

public gcskew(String name, int ws, int ss, int gl)

{

InputStream is = null;

FilterInputStream fis = null;

int i = 0;

int p=0,k=0,l=0,j=0,count1=0,count2=0;

char c;

int a=0, s=0;

int windows=(int)(((gl-ws)/ss)+1);

//int n;

double calc;

byte[] buffer = new byte[ws];

double arr[]=new double[windows];

//System.out.println(name);

//System.out.println(ws);

//System.out.println(ss);

//System.out.println(gl);

try

{

// create input streams

is = new FileInputStream(name);

fis = new BufferedInputStream(is);

for(p=0;p<windows;p++)

{

//System.out.println("we have performed the reset!");

// returns number of bytes read to buffer

i = fis.read(buffer, 0,ss);

fis.mark(ws);

k=fis.read(buffer,ss,ws-ss);

// prints

//System.out.println("Number of bytes read: "+i);

for(j=0;j<ws;j++)

{

//System.out.println("the array= " + (char)buffer[j]);

if((char)buffer[j]=='C')

count1++;

if((char)buffer[j]=='G')

count2++;

}

calc = (count1-count2+0.0)/(count1+count2);

//System.out.println("The value=" + calc);

arr[s]=calc;

//HERE,WE ARE STORING VALUES IN AN ARRAY arr

s++;

fis.reset();

// System.out.println("we have performed the reset!");

count2=0;

count1=0;

}

// for each byte in buffer

/\* for(byte b:buffer) {

// converts byte to character

c = (char)b;

// if byte is null

if(b == 0)

c = '-';

// prints

System.out.println("Char read from buffer b: "+c);

// System.out.println("Char read from buffer b: "+ buffer[1]);

} \*/

/\* for(s=0;s<windows;s++)

{

//HERE, WE ARE PRINTING VALUES FROM THE ARRAY arr

System.out.println("Now we are printing from s!!"+(double)arr[s]);

}\*/

}

catch(IOException e)

{

// if any I/O error occurs

e.printStackTrace();

}

finally

{

// releases any system resources associated with the stream

if(is!=null)

try {

is.close();

} catch (IOException e1) {

// TODO Auto-generated catch block

e1.printStackTrace();

}

if(fis!=null)

try {

fis.close();

} catch (IOException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

finalarr=arr.clone();

}

public double[] gcskewfunction()

{

//System.out.println(Arrays.toString(finalarr));

return finalarr;

}

public static void main(String[] args) throws Exception

{

}

}