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import java.io.*;
import java.awt.*;
import java.awt.event.*;
import java.util.*;

public class newFreq extends Frame implements ActionListener {

    private static final long serialVersionUID = 1L;

    WindowAdapter asc;

    TextField t0; //set

    public static void main (String argv[]) {
        new newFreq();
    }

    newFreq() {

        setLayout(null);
        t0 = new TextField(); add(t0); t0.addActionListener(this);
t0.setBounds(930,70,60,20); // set
        alld = new Button("allDay "); add(alld);
alld.addActionListener(this); alld.setBounds(860,30,60,20);
        setd = new Button("setDay "); add(setd);
setd.addActionListener(this); setd.setBounds(860,50,60,20);
        setBounds(10,10,1200,600);
        setTitle("Dicke panel");
        setVisible(true);
        t0.setText("1"); //set
        asc = new WindowAdapter() {
            public void windowClosed (WindowEvent evt) {
                System.exit(0);
            }
            public void windowClosing(WindowEvent evt) {
                newFreq.this.dispose();
            }
        }
    };

    addWindowListener(asc);
}

double[] A = new double[600];
double[] fA = new double[600];
double[] fmaxA = new double[2000];
//double[] fmaxAA = new double[2000];
//double[] amaxA = new double[2000];
//double[] amaxAA = new double[2000];
double[] maxmaxA = new double[600];
double[] freqA = new double[2000];
//double[] freqAA = new double[2000];

//int[] joom = new int[2000];
int[] istoqA = new int[500];
//int[] istoqAA = new int[500];

int set=1, bit=0, jpot=0, jmax=0; // dc=0;
int jmin=0, numA = 0, flag=0;

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//String      tempo="";
File f=null;

Button alld = null;
Button setd = null;

public void actionPerformed(ActionEvent event) { //decido cosa succede quando
viene premuto un pulsante

    if (event.getSource() == alld)    {
        set=1;
        for(set=12; set<377; set++) { //377
            f=new File("/home/mzanoni/Scrivania/rec/recE-"+set);
            if(f.exists()==true)    {
                settings();
            }
        }
    }

    if (event.getSource() == setd)    {
        set=(int) Float.parseFloat(t0.getText()); // set-rec
        settings();}
}

public void settings() {

    int i=0, j=0, k=0, abit=0, aset=0;

    //count=0;
    jpot=0; /* 720;
    for(j=1; j<1441; j++) {
        jpot++; //count++;
        //if(jpot>1440) {jpot=jpot-1440;}

    /* if(jpot<360) {jpot=jpot+721;} // 360<jpot<1081
    /* if(jpot>1080) {jpot=jpot-721;} // 360<jpot<1081
        //joom[jpot]=jpot;
        jmin=jpot-360;
        jmax=jpot+360;

        for(i=1; i<51; i++) { //prendiamo frequenze inferiori a 0.2 Hz
(potremmo andare fino a 0.5 Hz)
            istoqA[i]=0; //istoqAA[i]=0;
        }
        // bit=jmin;
        if(jmin<=0) {aset=set-1; bit=1440+jmin;}
        if(jmin>0) {aset=set; bit=jmin;}
        if(jmax>1440){aset=set+1; bit=jmax-1440;}
        f=new File("/home/mzanoni/Scrivania/rec/recE-"+aset+"/"+bit+".txt");
        //f=new File("classes/set-03/recB-"+set+"/"+bit+".txt");
        // f=new
File("/home/mzanoni/Scrivania/old/classes/set-03/recA-"+set+"/"+bit+".txt");
        //f=new File("/media/mzanoni/KINGSTON/setback/recA-"+set+"/"+bit+".txt");
        //f=new

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File("/media/mzanoni/KINGSTON/setout-atene/recB-"+set+"/"+bit+".txt");
//f=new
File("/media/mzanoni/KINGSTON/setout-avignon/recA-"+set+"/"+bit+".txt");
k=1;
bit=jmin;
while(k<721) {
if(f.exists()==true) { //&&(bit>0)) {
    lettura();
    istoq();
}
k++;
bit++;
//abit=bit;
if(bit<=0) {aset=set-1; abit=1440+bit;}
if(bit>0) {aset=set; abit=bit;}
if(bit>1440){aset=set+1; abit=bit-1440;}
f=new File("/home/mzanoni/Scrivania/rec/recE-"+aset+"/"+abit+".txt");
//f=new
File("/home/mzanoni/Scrivania/old/classes/set-03/recA-"+set+"/"+bit+".txt");
//f=new File("/media/mzanoni/KINGSTON/setback/recA-"+set+"/"+bit+".txt");
//f=new
File("/media/mzanoni/KINGSTON/setout-atene/recB-"+set+"/"+bit+".txt");
//f=new
File("/media/mzanoni/KINGSTON/setout-avignon/recA-"+set+"/"+bit+".txt");
} filter();
} write();
repaint();
}

public void lettura() { //leggo i file data1

    int k=1;

    String line ;
    StringTokenizer str;
    String s=null;

// if(f.exists()==true) {
try {
InputStream is=new FileInputStream(f); //"classes/"+bit+".txt"); // "C:/users/
michele/Desktop/classes/data1.txt");
BufferedReader in = new BufferedReader(new InputStreamReader(is));

while(k<=51) {
// while((line=in.readLine())!= null){
//A[k]=-1; //B[k]=-1;
//fA[k]=-1; //fB[k]=-1;
    line=in.readLine();
    str=new StringTokenizer(line);

//s=str.nextToken(); fA[k]= Double.parseDouble(s);
s=str.nextToken(); A[k]= Double.parseDouble(s); // delay 1
fA[k]=(double) k/960;

//s=str.nextToken(); //A[k]=Double.parseDouble(s); // delay 2
//s=str.nextToken(); //A[k]=Double.parseDouble(s); // delay 3
k++;
}
}

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numA=k;
//System.out.println("fA = "+fA[25]+" A =" + A[25]);
in.close();
}
catch (Exception ex){
System.out.println("file dati "+bit+" not found");
}
}
}

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public void istoq() {

int i=0, footA=0;
double amax=0;

    /* jj++;
    /* if(jj>1440) {jj=jj-1440;}
    // emi filter (start)

    //if ((bit>=jmin)&&(bit<jmax)) {
    amax=0;

    for(i=1; i<101; i++) { //find absolute maximum
        if(A[i]>amax) {amax=A[i]; fmaxA[jpot]=fA[i]; footA=i; }

    }
    istoqA[footA]++;

    //}
    // emi filter (end)
// emi antiferter (start)

}

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public void filter() {

int n=0;
int sumA=0, sumAA=0;
double summaA=0; // summaAA=0;

System.out.println("jpot = "+jpot+" jmin = "+jmin+" jmax = "+jmax);

    for (n=1; n<51; n++) { // selects the range of frequency ( 1 - 50 mHz)
        summaA=summaA+istoqA[n]*fA[n];
        //summaAA=summaAA+istoqAA[n]*fA[n];
        sumA=sumA+istoqA[n];
        //sumAA=sumAA+istoqAA[n];
    }
    freqA[jpot]=summaA/sumA; // 360<jpot<1081
    //freqAA[jpot-360]=summaAA/sumAA; // 360<jpot<1081
}

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public void write() {

int n=0;

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try {
    OutputStream is= new FileOutputStream("out/out-"+set+".txt");
    BufferedWriter out = new BufferedWriter(new OutputStreamWriter(is));

    //for(n=361; n<1081; n++) { //<numA; i++)
    // if(n>361) {out.newLine();}
    // out.write(String.valueOf(freqA[n]));
    // }
    for(n=1; n<1441; n++) { // print values as integers (micro Hz)
        if(n>1) {out.newLine();}
        out.write(String.valueOf((int) (freqA[n]*1000000))+ " ");
        // out.write(String.valueOf((int) (freqAA[n]*1000000)));
    }
out.close();
}
catch(Exception ex) {System.out.println(" problems writing ");
}

}

public void paint(Graphics g) {

    int n=0;

    g.drawString("center "+String.valueOf(jpot),1000,105);
    g.drawString("day "+String.valueOf(set),1000,82);
    g.drawString("input numData = "+ String.valueOf(numA),800,188);
    g.drawString("file = "+ String.valueOf(bit),800,200);
    //g.drawString("tempo = "+ tempo,800,212);

    //Disegno gli assi cartesiani
    g.drawLine(50,100,50,500); //asse Y
    g.setColor(Color.black);
    g.drawLine(45,350,50,350); g.drawString(String.valueOf(1/(500*1000)),15,550);
    g.drawLine(50,500,550,500); // asse X
    g.drawLine(550,500,550,530); g.drawString("Hz",570,500);

    bit=1;
    for (n=1; n<1441; n++) {
    /* if(n>360) { //&&(n<1081)) {
    g.setColor(Color.red);
    g.fillRect(50+ (int) (n/2),500 - (int) (freqA[n]*10000),2,2);
    // }
    /* if(n<=360) { //||(n>1080)) {
    /* cic=720;
    // if(n>1080) {cic=-720; }
    //g.setColor(Color.orange);
    //g.fillRect(50+ 360+(int) (n/2),500 - (int) (freqAA[n]*10000),2,2);
    //*}

}
}
}
}

```