import java.awt.\*;

import java.awt.event.\*;

import java.util.\*;

public class CGPA extends Frame implements ActionListener{

Label l1,l2,l3,l4,l5,l6,l7,l8,lc,lg,ls,la,lt,cl;

TextField t11,t12,t21,t22,t31,t32,t41,t42,t51,t52,t61,t62,t71,t72,t81,t82;

Button b1,b2;

Frame f;

CGPA() {

f=new Frame();

f.setVisible(true);

f.setSize(650, 650);

f.setLayout(null);

f.setBackground(Color.getHSBColor(120,100,100));

f.setTitle("REC Aggregate Calculator");

ls=new Label("Semester");

l1=new Label("Semester 1");

l2=new Label("Semester 2");

l3=new Label("Semester 3");

l4=new Label("Semester 4");

l5=new Label("Semester 5");

l6=new Label("Semester 6");

l7=new Label("Semester 7");

l8=new Label("Semester 8");

la=new Label("RESULT");

lt=new Label("REC AGGREGATE CALCULATOR");

cl=new Label("\*NOTE: If you are lateral entry student then enter

first two semesters values as 0");

//lt.setBackground(Color.lightGray);

lt.setBackground(Color.getHSBColor(132,132,132));

lt.setAlignment(lt.CENTER);

lc=new Label("Credits");

lg=new Label("GPA");

b1=new Button("Calculate");

b2=new Button("Exit");

t11=new TextField();

t12=new TextField();

t21=new TextField();

t22=new TextField();

t31=new TextField();

t32=new TextField();

t41=new TextField();

t42=new TextField();

t51=new TextField();

t52=new TextField();

t61=new TextField();

t62=new TextField();

t71=new TextField();

t72=new TextField();

t81=new TextField();

t82=new TextField();

lt.setBounds(100, 50, 425, 30);

cl.setBounds(50, 90, 550, 30);

ls.setBounds(40, 130, 100, 30);

lc.setBounds(230, 130, 100, 30);

lg.setBounds(420, 130, 100, 30);

l1.setBounds(40, 170, 100, 30);

t11.setBounds(230, 170, 100, 30);

t12.setBounds(420, 170, 100, 30);

l2.setBounds(40, 210, 100, 30);

t21.setBounds(230, 210, 100, 30);

t22.setBounds(420, 210, 100, 30);

l3.setBounds(40, 250, 100, 30);

t31.setBounds(230, 250, 100, 30);

t32.setBounds(420, 250, 100, 30);

l4.setBounds(40, 290, 100, 30);

t41.setBounds(230, 290, 100, 30);

t42.setBounds(420, 290, 100, 30);

l5.setBounds(40, 330, 100, 30);

t51.setBounds(230, 330, 100, 30);

t52.setBounds(420, 330, 100, 30);

l6.setBounds(40, 370, 100, 30);

t61.setBounds(230, 370, 100, 30);

t62.setBounds(420, 370, 100, 30);

l7.setBounds(40, 410, 100, 30);

t71.setBounds(230, 410, 100, 30);

t72.setBounds(420, 410, 100, 30);

l8.setBounds(40, 450, 100, 30);

t81.setBounds(230, 450, 100, 30);

t82.setBounds(420, 450, 100, 30);

b1.setBounds(40, 530, 100, 30);

b2.setBounds(230, 530, 100, 30);

la.setBounds(420, 530, 200, 30);

f.add(lt);

f.add(cl);

f.add(ls);

f.add(lc);

f.add(lg);

f.add(l1);

f.add(t11);

f.add(t12);

f.add(l2);

f.add(t21);

f.add(t22);

f.add(l3);

f.add(t31);

f.add(t32);

f.add(l4);

f.add(t41);

f.add(t42);

f.add(l5);

f.add(t51);

f.add(t52);

f.add(l6);

f.add(t61);

f.add(t62);

f.add(l7);

f.add(t71);

f.add(t72);

f.add(l8);

f.add(t81);

f.add(t82);

f.add(b1);

f.add(b2);

f.add(la);

b1.addActionListener(this);

b2.addActionListener(this);

}

public void actionPerformed(ActionEvent e){

if(e.getSource()==b1){

int i, credits=0, flag=0;

float ans,sum=0;

int c[]=new int[8];

double g[]=new double[8];

c[0]=Integer.parseInt(t11.getText());

c[1]=Integer.parseInt(t21.getText());

c[2]=Integer.parseInt(t31.getText());

c[3]=Integer.parseInt(t41.getText());

c[4]=Integer.parseInt(t51.getText());

c[5]=Integer.parseInt(t61.getText());

c[6]=Integer.parseInt(t71.getText());

c[7]=Integer.parseInt(t81.getText());

g[0]=Double.parseDouble(t12.getText());

g[1]=Double.parseDouble(t22.getText());

g[2]=Double.parseDouble(t32.getText());

g[3]=Double.parseDouble(t42.getText());

g[4]=Double.parseDouble(t52.getText());

g[5]=Double.parseDouble(t62.getText());

g[6]=Double.parseDouble(t72.getText());

g[7]=Double.parseDouble(t82.getText());

for(i=0; i<8; i++) {

if(g[i]>10 || g[i]<0) {

flag=1;

break;

}

else {

sum+=c[i]\*g[i];

credits+=c[i];

}

}

if(flag==0) {

ans=sum/credits;

la.setText("Your CGPA is: "+String.valueOf(ans));

}

else {

la.setText("Invalid Input");

}

Font myFont = new Font("Serif",Font.BOLD,16);

la.setFont(myFont);

}

else if(e.getSource()==b2)

System.exit(0);

}

public static void main(String args[]) {

new CGPA();

}

}