```
package exemple;

import java.awt.*;
import java.awt.event.*;
import comp.graphics.*;
import comp.windows.*;
import java.net.URL;


public class Exemple extends Frame {
	public String text = "";
	public Image backg, sunset, ico, newIm, openIm, saveIm, helpIm;
	Toolkit tool;
	int ww, hh, prevw;
	ToolBar tb;
	StatusBar sb;
	Ticker tk;
	boolean tk1;
	Font f = new Font("Helvetica", Font.BOLD+Font.ITALIC, 20);
	FontMetrics fm = getFontMetrics(f);



public static void main (String args[]){new Exemple("Exemple");}

public Exemple(){
		tool=getToolkit();
		Dimension res=tool.getScreenSize();
		ww=res.width; hh=res.height; prevw = ww;
		setBackground(new Color(38, 104, 165));
		setFont(f);
		setForeground(new Color(255,255,0));
		setResizable(false);
		loadImages();
		setIconImage(ico);
		adaugaMenuBar();

		setLayout(null);

		tb = new ToolBar(this, 400);
	add(tb);
	tb.setBounds(5, 52, 390, 33);
	tb.Save.disable();

		sb = new StatusBar(396, 33);
	add(sb);
	sb.setBounds(5, 361, 396, 33);

		tk = new Ticker();
	add(tk);
	tk.setBounds(50, 220, 300, 50);
	tk.setVisible(false);

		reshape((int)((res.width-400)/2),(int)((res.height-400)/2), 400, 400);
		show();
}

public Exemple(String title){
		this();
		setTitle(title);
}


public boolean handleEvent(Event e){
```

```
    if(e.id==Event.WINDOW_DESTROY) System.exit(0);
    else if(e.id==Event.ACTION_EVENT && e.target instanceof MenuItem){
                  if("Exit".equals(e.arg))System.exit(0);
                  else if("Open".equals(e.arg)){
                FileDialog fd=new FileDialog(this, "Open");
                fd.show();
                if(fd.getFile()!=null){
                        text="Ati selectat fisierul " + fd.getFile() +".";
                        repaint();
                }
                     return true;
                       }else if("Save".equals(e.arg)){
                FileDialog fd=new FileDialog(this, "Save");
                fd.setMode(1);
                fd.show();
                if(fd.getFile()!=null){
                        text="Ati salvat cu numele " + fd.getFile() +".";
                        repaint();
                }
                     return true;
                   }else if("Ticker".equals(e.arg)){
                    text="";
                    repaint();
                    if(!tk1){
                        tk.setVisible(true);
                        tk.start();
                    }else{
                        tk.setVisible(false);
                        tk.stop();
                    }
                    tk1=!tk1;
                     return true;
                   }else if("New Window".equals(e.arg)){
                    Window1 w = new Window1(this);
                    w.show();
                     return true;
                   }else if("Edit".equals(e.arg)){
                    Edit edit = new Edit(this);
                    edit.show();
                     return true;
                   }else if("Calculator".equals(e.arg)){
                    new calc(this).show();
                   }else{
                    text="Ati selectat meniul " + e.arg.toString() +".";
                    repaint();
                    return true;
                   }
    }else if(e.id==1001){
                    if(e.target == tb.Newf) {sb.setText("New File","",""); return true;}
                    if(e.target == tb.Open) {sb.setText("","Open File",""); return true;}
                    if(e.target == tb.Help) {sb.setText("","",""); return true;}

    }else return false;
    return false;
}

public void paint(Graphics g){
    g.drawString(text, (size().width-fm.stringWidth(text))/2, 180);
}

public void adaugaMenuBar(){
        MenuBar men=new MenuBar();

        Menu file=new Menu("File");
```

```
        Menu exemple=new Menu("Exemple");
        Menu about=new Menu("About");

        file.add("New");
        file.add("Open");
        file.add("Save");
        file.add("Save As..");
        file.add("-");
        file.add("Calculator");
        file.add("-");
        file.add("Exit");

        exemple.add("Ticker");
        exemple.add("Edit");
        exemple.add("Label");
        exemple.add("New Window");

        men.add(file);
        men.add(exemple);
        men.add(about);

        setMenuBar(men);
}


   public URL GetResources(String s) {return this.getClass().getResource(s);}

   public void loadImages(){
      try {
           MediaTracker mt = new MediaTracker(this);
                backg = tool.getImage(GetResources("comp/images/backg.jpg"));
                sunset = tool.getImage(GetResources("comp/images/sunset.jpg"));
                ico = tool.getImage(GetResources("comp/images/ico.gif"));
                newIm = tool.getImage(GetResources("comp/images/newIm.gif"));
                openIm = tool.getImage(GetResources("comp/images/openIm.gif"));
                saveIm = tool.getImage(GetResources("comp/images/saveIm.gif"));
                helpIm = tool.getImage(GetResources("comp/images/helpIm.gif"));
                mt.addImage(backg, 0);
                mt.addImage(sunset, 1);
                mt.addImage(ico, 2);
                mt.addImage(newIm, 3);
                mt.addImage(newIm, 4);
                mt.addImage(newIm, 5);
                mt.addImage(newIm, 6);
                mt.waitForAll();
      }
      catch(Throwable e) {System.out.println("Eroare la incarcarea imaginilor!");}
   }

}
```

```
package comp.graphics;

import java.awt.*;



public class Buttons extends Button {
   Image img;
```

```
    public Buttons(String s) {
        super(s);
    }

    public Buttons(String s, Image img) {
        this(s);
            this.img=img;
    }

    public void paint(Graphics g) {
            g.drawImage(img,5,5,this);
    }

}
```

```
package comp.graphics;

import java.awt.*;


public class Pan extends Panels {

   public Font f=new Font("Helvetica", 1, 18);
   FontMetrics fm = getFontMetrics(f);
   public String s="";
   private int tip;

    public Pan() {
            super();
    }

    public Pan(int tip) {
            this();
            this.tip = tip;
    }

    public void setText(String s){
            this.s=s;
            repaint();
    }

    public String getText(){
            return s;
    }

    public void paint(Graphics g) {
            super.paint(g);
            g.setFont(f);

            if(tip==1){
                    g.setColor(Color.white);
                    g.drawString(s, size().width-fm.stringWidth(s)-6, 20);
            }else{
                    g.setColor(Color.black);
                    g.drawString(s, 10, 20);
            }
    }


}
```

```
package comp.graphics;


import java.awt.*;


public class Panels extends Panel {

   public Image im, im1;

   public Panels(Image im) {this.im = im;}

   public Panels() {}

   public void update(Graphics g) {paint(g);}

   public void paint(Graphics g) {
         super.paint(g);
         Dimension dimension = size();
         im1 = createImage(dimension.width, dimension.height);
         pan(im1.getGraphics());
         g.drawImage(im1, 0, 0, this);
   }

   public void pan(Graphics g) {
           Dimension dimension = size();
           int w = dimension.width;
           int h = dimension.height;
      Color color = getBackground();
      g.setColor(color);
      g.fillRect(0, 0, w, h);
      if(im!=null){
                for(int k = 0; k < w; k += im.getWidth(this))
                     for(int l = 0; l < h; l += im.getHeight(this))
                               g.drawImage(im, k, l, this);
      }
      g.setColor(color.brighter());
      g.drawRect(1, 1, w - 2, h - 2);
      g.setColor(color.darker());
      g.drawRect(0, 0, w - 2, h - 2);
   }
}
```

```
package comp.graphics;

import java.awt.*;


public class StatusBar extends Panel {

  public Pan pan1, pan2, pan3;
  public String s1, s2, s3;

   public StatusBar(int w, int h) {
           super();
      setLayout(new BorderLayout(10, 10));
      Panel pan = new Panel();

      pan1 = new Pan();
      add(pan1);
      pan1.setBounds(0, 0, w/3, h);
```

```
        pan2 = new Pan();
        add(pan2);
        pan2.setBounds(w/3-3, 0, w/3, h);

        pan3 = new Pan();
        add(pan3);
        pan3.setBounds((2*w)/3-6, 0, w/3, h);

        add("Center", pan);
    }

    public void setText(String s1, String s2, String s3){
            pan1.setText(s1);
            pan2.setText(s2);
            pan3.setText(s3);
    }


}
```

```
package comp.graphics;

import java.awt.*;

public class Ticker extends Panels implements Runnable {

    public Thread th;
    public int nrLines = 6;
    public String line[] = new String[nrLines];
    public Font f = new Font("Helvetica", 1, 12);
    public int i=0, j=0, jj=1;

    public Ticker() {
            super();
        setFont(f);
        line[0] = "Primul text  ";
        line[1] = "Al doilea text  ";
        line[2] = "Al treilea text  ";
        line[3] = "Al patrulea text  ";
        line[4] = "Al cincilea text  ";
        line[5] = "Al saselea text  ";
    }


    public void start() {if(th == null) {i=-2; repaint(); th = new Thread(this); th.start();}}
    public void stop() {if(th != null) {th.stop(); th = null;}}


    public void run(){
            try{Thread.sleep(1000);}
            catch(InterruptedException e){}
            catch(Exception e){}
            while(th!=null){
                    for(i=0; i<line.length; i++){
                            jj=1;
                            if(i==5) jj=60;
                            for(j=jj; j<line[i].length(); j++){
                                    repaint();
                                    try{Thread.sleep(100);}
                                    catch(InterruptedException e){}
                            }
                            if(i==1 || i==3 || i==5){
```

```
                                        try{Thread.sleep(3000);}
                                        catch(InterruptedException e){}
                                }
                        }
                }
        }

    public void paint(Graphics g){super.paint(g); update(g);}


    public void update(Graphics g){
            g.setColor(Color.white);
            if((i & 1) == 0){
                    if(j==1)super.paint(g);
                            if(0<j && j<line[i].length()) g.drawString(line[i].substring(0, j), 7, 16);
            }else
                    if(0<j && j<line[i].length()) g.drawString(line[i].substring(0, j), 7, 30);
    }

}
```

```
package comp.graphics;

import java.awt.*;
import exemple.Exemple;

public class ToolBar extends Panels {

    public Buttons Newf;
    public Buttons Open;
    public Buttons Save;
    public Buttons Help;
    public Exemple ex;

    public ToolBar(Exemple ex, int w) {
        super();
        this.ex = ex;
        load(w);
    }

    private void load(int w) {
        setLayout(new BorderLayout(10, 10));
        Panels pan = new Panels();

        Newf = new Buttons("", ex.newIm);
        add(Newf);
        Newf.setBounds(5, 5, 25, 25);

        Open = new Buttons("", ex.openIm);
        add(Open);
        Open.setBounds(30, 5, 25, 25);

        Save = new Buttons("", ex.saveIm);
        add(Save);
        Save.setBounds(55, 5, 25, 25);

        Help = new Buttons("", ex.helpIm);
        add(Help);
        Help.setBounds(w - 40, 5, 25, 25);

        add("Center", pan);
```

```
    }

    public void resize(int w){
        load(w);
    }

    public boolean handleEvent(Event e) {
        if(e.id==504) setCursor(new Cursor(0));
        return super.handleEvent(e);
    }

}
```

```
package comp.windows;

import java.awt.*;
import exemple.Exemple;

public class Edit extends Frame{
        Exemple ex;
        TextArea ta;

public Edit(Exemple ex){
    this.ex = ex;
    setTitle("Edit");
    setIconImage(ex.ico);
    ta = new TextArea();
    add("Center", ta);
    ta.requestFocus();
    Toolkit tool=getToolkit();
    Dimension res=tool.getScreenSize();
    reshape((int)((res.width-400)/2+100),(int)((res.height-400)/2+100), 400, 400);
}

public boolean handleEvent(Event e){
    if(e.id==Event.WINDOW_DESTROY){
        dispose();
        return true;
    }else return false;
}

}
```

```
package comp.windows;

import java.awt.*;
import exemple.Exemple;

public class Window1 extends Frame{
        Exemple ex;

public Window1(Exemple ex){
    this.ex = ex;
    setTitle("Window1");
    setBackground(new Color(0,0,0));
    setFont(new Font("TimesRoman", Font.BOLD, 12));
    setForeground(new Color(255,255,255));
    setResizable(false);
    setCursor(12);
    setIconImage(ex.ico);
```

```
        resize(400,400);

        Toolkit tool=getToolkit();
        Dimension res=tool.getScreenSize();
        move((int)((res.width-400)/2+100),(int)((res.height-400)/2+100));
}


public boolean handleEvent(Event e){
        if(e.id==Event.WINDOW_DESTROY){
                dispose();
                return true;
        }else return false;
}


    public void paint(Graphics g){
        int ww = size().width, hh = size().height;
                for(int i = 0; i <= (int)(ww/176); i++)
                        for(int j = 0; j <= (int)(hh/136); j++)
                                g.drawImage(ex.backg, i*176, j*136, this);
        g.drawImage(ex.sunset,          (ww-ex.sunset.getWidth(this))/2, (hh-ex.sunset.getHeight(this))/2, this);
    }


}
```