_01_CreandoYEscribiendoEnMarcos.java

```
1 package Graficos;
3 import java.awt.*;
4 import javax.swing.*;
6 public class _01_CreandoYEscribiendoEnMarcos {
8
      public static void main(String[] args) {
9
          Marco ventana = new Marco();
10
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
11
12 }
13
14 class Marco extends JFrame {
15
      public Marco() {
          Dimension pantalla = Toolkit.getDefaultToolkit().getScreenSize();
16
          int ancho = (int) pantalla.getWidth();
17
18
          int alto = (int) pantalla.getHeight();
19
          setBounds(ancho/3, alto/3, ancho/3, alto/3);
20
          setTitle(" Mi Ventana Java");
21
          ImageIcon icono = new ImageIcon("src/Graficos/images/icon.png");
22
          setIconImage(icono.getImage());
23
          Lamina laminaObj = new Lamina();
24
          add(laminaObj);
25
          setVisible(true);
26
      }
27 }
28
29 class Lamina extends JPanel {
      public void paintComponent(Graphics g) {
31
          super.paintComponent(g);
          g.setFont(new Font("Roboto", Font.BOLD, 20));
32
33
          g.setColor(new Color(153, 51, 255));
34
          g.drawString("Título del Contenido", 100, 100);
35
      }
36 }
```

_02_PruebaDibujo_TrabajandoConColores.java

```
1 package Graficos;
 3 import java.awt.Color;
 4 import java.awt.Graphics;
 5 import java.awt.Graphics2D;
 6 import java.awt.geom.Ellipse2D;
 7 import java.awt.geom.Rectangle2D;
8 import javax.swing.JFrame;
9 import javax.swing.JPanel;
11 public class _02_PruebaDibujo_TrabajandoConColores {
12
13
      public static void main(String[] args) {
14
          Marco2 ventana = new Marco2();
15
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
16
      }
17 }
18
19 class Marco2 extends JFrame {
      public Marco2 () {
21
          setSize(840, 840);
22
          setTitle(" Dibujos y Colores");
23
          setLocationRelativeTo(null);
24
          add(new Lamina2());
25
          setVisible(true);
26
      }
27 }
28
29 class Lamina2 extends JPanel {
      public Lamina2() {
          setBackground(new Color(179, 255, 255));
31
32
33
      @Override
      protected void paintComponent(Graphics g) {
34
35
          super.paintComponent(g);
          g.drawRect(100, 200, 150, 100);
36
37
          g.drawString("1 - Rectángulo Vacío Graphics", 100, 180);
38
          g.fillRect(100, 400, 150, 100);
          g.drawString("2 - Rectángulo Relleno Graphics", 100, 380);
39
40
          Graphics2D g2D = (Graphics2D) g;
          Rectangle2D rectangulo = new Rectangle2D.Double(500, 200, 150, 100);
41
42
          g2D.draw(rectangulo);
43
          g2D.drawString("3 - Rectángulo Graphics2D", 500, 120);
44
          Ellipse2D elipse = new Ellipse2D.Double();
45
          elipse.setFrame(rectangulo);
46
          g2D.draw(elipse);
47
          g2D.drawString("4 - Elipse Graphics2D", 500, 140);
          g2D.drawLine(500, 200, 650, 300);
48
49
          g2D.drawString("5 - Linea Oblicua Graphics2D", 500, 370);
50
          double centroX = rectangulo.getCenterX();
          double centroY = rectangulo.getCenterY();
51
52
          double radio = 90;
53
          Ellipse2D circulo = new Ellipse2D.Double();
54
          circulo.setFrameFromCenter(centroX, centroY, centroX+radio, centroY+radio);
          g2D.draw(circulo);
55
          g2D.drawString("6 - Círculo Graphics2D", 500, 390);
56
57
          g.drawString("7 - Rectángulo Relleno Graphics", 500, 430);
58
          g.setColor(new Color(255, 153, 255));
59
          g.fillRect(500, 480, 200, 200);
          g.setColor(new Color(0, 0, 0));
          g.drawString("8 - Círculo Relleno Graphics", 500, 460);
61
62
          g.setColor(new Color(179, 255, 179));
```

```
_02_PruebaDibujo_TrabajandoConColores.java
63 g.fillOval(500, 480, 200, 200);
64 }
65 }
```

_03_FuentesTipo_TrabajandoConFuentes.java

```
1 package Graficos;
 3 import java.awt.BorderLayout;
 4 import java.awt.Color;
 5 import java.awt.Font;
 6 import java.awt.GraphicsEnvironment;
 7 import javax.swing.JFrame;
 8 import javax.swing.JLabel;
 9 import javax.swing.JOptionPane;
10 import javax.swing.JPanel;
11 import javax.swing.SwingConstants;
13 public class _03_FuentesTipo_TrabajandoConFuentes {
14
15
       public static void main(String[] args) {
16
17
           Marco3 ventana = new Marco3();
18
           ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
19
       }
20 }
21
22 class <a href="Marco3">Marco3</a> extends <a href="Marco3">Extends</a> <a href="Marco3">JFrame</a> {
      public Marco3() {
23
24
           setSize(900, 300);
           setTitle(" Trabajando con Fuentes");
25
26
           setLocationRelativeTo(null);
27
28
           setLayout(new BorderLayout());
29
           add(new JLabel("
                                           "), BorderLayout.NORTH);
           add(new JLabel("
                                           "), BorderLayout.SOUTH);
30
           add(new JLabel("
                                           "), BorderLayout.WEST);
31
                                           "), BorderLayout.EAST);
           add(new JLabel("
32
33
34
           add(new Ventana3(), BorderLayout.CENTER);
35
36
           setVisible(true);
37
       }
38 }
39
40 class Ventana3 extends JPanel {
41
42
       String fuenteIn;
43
       boolean verificador = false;
44
       JLabel encabezadoText, fuenteText;
45
46
       public Ventana3() {
47
48
           setLayout(new BorderLayout());
49
           fuenteIn = JOptionPane.showInputDialog("Ingrese el nombre de la fuente a
50
  consultar").toUpperCase();
51
52
           GraphicsEnvironment e = GraphicsEnvironment.getLocalGraphicsEnvironment();
53
           String Fuentes[] = e.getAvailableFontFamilyNames();
54
55
           for(String fuente: Fuentes) {
56
               if(fuenteIn.equalsIgnoreCase(fuente)) {
57
                    verificador = true;
58
                    break;
59
               }
           }
60
61
```

_03_FuentesTipo_TrabajandoConFuentes.java

```
62
          if(verificador) {
              add(encabezadoText = new JLabel("El tipo de Fuente: " + fuenteIn + " Sí se
63
  encuentra instalada en el sistema."), JLabel.CENTER);
              encabezadoText.setFont(new Font(fuenteIn, Font.BOLD, 22));
64
              encabezadoText.setForeground(new Color(0, 153, 51));
65
              encabezadoText.setHorizontalAlignment(SwingConstants.CENTER);
67
              setBackground(new Color(204, 255, 221));
68
              System.out.println("El tipo de Fuente: " + fuenteIn + " Sí se encuentra
69
  instalada en el sistema.");
70
71
          } else {
              add(encabezadoText = new JLabel("E1 tipo de Fuente: " + fuenteIn + " No está
  instalada en el sistema."), JLabel.CENTER);
              encabezadoText.setFont(new Font("Arial", Font.BOLD, 22));
73
74
              encabezadoText.setForeground(new Color(153, 0, 61));
75
              encabezadoText.setHorizontalAlignment(SwingConstants.CENTER);
76
              setBackground(new Color(255, 204, 224));
77
              System.out.println("El tipo de Fuente: " + fuenteIn + " No está instalada en
78
  el sistema.");
79
          }
80
      }
81 }
```

_04_PruebaImagenes.java

```
1 package Graficos;
3 import java.awt.Graphics;
4 import java.awt.Image;
5 import java.io.File;
6 import javax.imageio.ImageIO;
7 import javax.swing.ImageIcon;
8 import javax.swing.JFrame;
9 import javax.swing.JPanel;
11 public class _04_PruebaImagenes {
12
13
      public static void main(String[] args) {
14
15
          Marco4 ventana = new Marco4();
16
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
17
      }
18 }
19
20 class Marco4 extends JFrame {
21
      public Marco4() {
22
23
          setSize(600, 500);
24
          setTitle(" Prueba Imágenes");
25
          setLocationRelativeTo(null);
26
27
          ImageIcon icono = new ImageIcon("src/Graficos/images/musicIco.png");
28
          setIconImage(icono.getImage());
29
30
          add(new Ventana4());
31
          setVisible(true);
32
33
      }
34 }
36 class Ventana4 extends JPanel {
37
38
      private Image radioImg;
39
      private Image musicImg;
40
      private int anchoImg;
41
      private int altoImg;
42
43
      protected void paintComponent(Graphics g) {
44
45
          super.paintComponent(g);
46
47
          // -----MUSIC IMG-----
48
49
          File musicPath = new File("src/Graficos/images/music.png");
50
51
          try {
52
              musicImg = ImageIO.read(musicPath);
53
          } catch (Exception e) {
54
              System.out.println("No File!");
55
56
57
          g.drawImage(musicImg, 0, 0, 100, 100, null);
58
59
          for (int i=0; i<600; i++) {
              for(int j=0; j<500; j++) {</pre>
                  g.copyArea(0, 0, 100, 100, i*100, j*100);
61
62
              }
```

```
_04_PruebaImagenes.java
```

```
63
         }
64
         // -----RADIO IMG-----
65
66
         File radioPath = new File("src/Graficos/images/radio.png");
67
68
69
         try {
70
             radioImg = ImageIO.read(radioPath);
71
         } catch (Exception e) {
72
             System.out.println("No File!");
73
74
75
         anchoImg = radioImg.getWidth(null);
76
         altoImg = radioImg.getHeight(null);
77
78
         int x = (this.getWidth() - anchoImg/2) / 2;
79
         int y = (this.getHeight() - altoImg/2) / 2;
80
81
         g.drawImage(radioImg, x, y, anchoImg/2, altoImg/2, null);
82
      }
83 }
```

_05_PruebaEventos_PruebaAcciones.java

```
1 package Graficos;
 3 import java.awt.*;
 4 import java.awt.event.*;
 5 import javax.swing.*;
7 public class 05 PruebaEventos PruebaAcciones {
9
      public static void main(String[] args) {
10
11
          Marco5 ventana = new Marco5();
12
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
13
      }
14 }
15
16 class Marco5 extends JFrame {
17
18
      public Marco5() {
19
20
          setSize(600, 500);
          setTitle(" Eventos y Acciones");
21
22
          setLocationRelativeTo(null);
23
24
          add(new Ventana5());
25
26
          setVisible(true);
27
      }
28 }
29
30 class Ventana5 extends JPanel {
31
32
      public Ventana5() {
33
          setLayout(new GridBagLayout());
34
35
          GridBagConstraints gbc = new GridBagConstraints();
          gbc.insets = new Insets(0, 10, 0, 10);
36
37
38
          AccionColor accionLima = new AccionColor("Lima", new
  ImageIcon("src/Graficos/images/lima.png"), new Color(204, 255, 153));
          AccionColor accionOrange = new AccionColor("Orange", new
39
  ImageIcon("src/Graficos/images/orange.png"), new Color(255, 204, 102));
          AccionColor accionGrape = new AccionColor("Grape", new
40
  ImageIcon("src/Graficos/images/grape.png"), new Color(204, 204, 255));
41
42
          add(new JButton(accionLima), gbc);
43
          add(new JButton(accionOrange), gbc);
44
          add(new JButton(accionGrape), gbc);
45
46
          KeyStroke tecladoLima = KeyStroke.getKeyStroke("ctrl L");
47
          KeyStroke tecladoOrange = KeyStroke.getKeyStroke("ctrl 0");
48
          KeyStroke tecladoGrape = KeyStroke.getKeyStroke("ctrl G");
49
50
          InputMap mapaEntrada = getInputMap(WHEN IN FOCUSED WINDOW);
51
          mapaEntrada.put(tecladoLima, "eventoLima");
52
53
          mapaEntrada.put(tecladoOrange, "eventoOrange");
54
          mapaEntrada.put(tecladoGrape, "eventoGrape");
55
56
          ActionMap mapaAccion = getActionMap();
57
          mapaAccion.put("eventoLima", accionLima);
58
          mapaAccion.put("eventoOrange", accionOrange);
59
```

```
_05_PruebaEventos_PruebaAcciones.java
```

```
60
           mapaAccion.put("eventoGrape", accionGrape);
61
       }
62
63
       private class AccionColor extends AbstractAction {
64
65
           public AccionColor(String nombre, Icon icono, Color color_boton) {
66
67
               putValue(Action.NAME, nombre);
               putValue(Action.SMALL_ICON, icono);
putValue(Action.SHORT_DESCRIPTION, "(Ctrl+" + nombre.charAt(0) + ") " + "Cambia
68
69
  el fondo a color " + nombre);
70
               putValue("color_de_fondo", color_boton);
           }
71
72
73
           public void actionPerformed(ActionEvent e) {
74
               Color c = (Color) getValue("color_de_fondo");
75
               setBackground(c);
76
           }
77
       }
78 }
```

_05_PruebaEventos_PruebaAcciones_ByPipe.java

```
1 package Graficos;
  3 import java.awt.Color;
  4 import java.awt.GridBagConstraints;
  5 import java.awt.GridBagLayout;
  6 import java.awt.event.ActionEvent;
  7 import javax.swing.AbstractAction;
  8 import javax.swing.ActionMap;
  9import javax.swing.ImageIcon;
10 import javax.swing.InputMap;
11 import javax.swing.JButton;
12 import javax.swing.JFrame;
13 import javax.swing.JPanel;
14 import javax.swing.KeyStroke;
15
16 public class _05_PruebaEventos_PruebaAcciones_ByPipe {
17
18
             public static void main(String[] args) {
19
20
                      MarcoAccionesPipe ventana = new MarcoAccionesPipe();
21
                      ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
22
             }
23 }
24
25 class <a href="MarcoAccionesPipe">MarcoAccionesPipe</a> extends <a href="MarcoAccionesPipe">extends</a> <a href="Janace: Janace: Ja
27
             public MarcoAccionesPipe() {
28
29
                      setTitle(" Eventos y Acciones by Pipe");
30
                      setSize(600, 400);
31
                      setLocationRelativeTo(null);
32
33
                      add(new VentanaAccionesPipe());
34
35
                      setVisible(true);
             }
36
37 }
38
39 class VentanaAccionesPipe extends JPanel {
40
41
             public VentanaAccionesPipe() {
42
43
                      setLayout(new GridBagLayout());
44
                      GridBagConstraints gbc = new GridBagConstraints();
45
                      gbc.insets.set(0, 0, 50, 10);
46
47
                      Acciones accionLima = new Acciones("Lima", new
     ImageIcon("src/Graficos/images/lima.png"), new Color(204, 255, 153));
48
                      Acciones accionOrange = new Acciones("Orange", new
     ImageIcon("src/Graficos/images/orange.png"), new Color(255, 204, 102));
                      Acciones accionGrape = new Acciones("Grape", new
49
     ImageIcon("src/Graficos/images/grape.png"), new Color(204, 204, 255));
50
51
                      add(new JButton(accionLima), gbc);
52
                      add(new JButton(accionOrange), gbc);
53
                      add(new JButton(accionGrape), gbc);
54
55
                      KeyStroke tecladoLima = KeyStroke.getKeyStroke("ctrl L");
56
                      KeyStroke tecladoOrange = KeyStroke.getKeyStroke("ctrl 0");
57
                      KeyStroke tecladoGrape = KeyStroke.getKeyStroke("ctrl G");
58
59
                      InputMap mapaEntrada = getInputMap(WHEN IN FOCUSED WINDOW);
```

_05_PruebaEventos_PruebaAcciones_ByPipe.java

```
60
           mapaEntrada.put(tecladoLima, "tecladoLima");
61
62
           mapaEntrada.put(tecladoOrange, "tecladoOrange");
           mapaEntrada.put(tecladoGrape, "tecladoGrape");
63
64
65
           ActionMap mapaAccion = getActionMap();
66
67
           mapaAccion.put("tecladoLima", accionLima);
           mapaAccion.put("tecladoOrange", accionOrange);
mapaAccion.put("tecladoGrape", accionGrape);
68
69
70
71
       class Acciones extends AbstractAction {
72
73
74
           public Acciones(String nombre, ImageIcon icon, Color color) {
75
               putValue(NAME, nombre);
               putValue(SMALL_ICON, icon);
76
77
               putValue("dameColor", color);
               putValue(SHORT_DESCRIPTION, "Ctr+" + nombre.charAt(0) + " Cambia el fondo a
78
  color: " + nombre);
79
           }
80
81
           @Override
           public void actionPerformed(ActionEvent e) {
82
               Color color = (Color) getValue("dameColor");
83
               setBackground(color);
84
85
           }
86
       }
87 }
```

```
1 package Graficos;
 3 import java.awt.event.KeyEvent;
 4 import java.awt.event.KeyListener;
 5 import java.awt.event.WindowAdapter;
 6 import java.awt.event.WindowEvent;
 7 import javax.swing.JFrame;
9 public class _06_EventosFocoVentanaTeclado {
10
11
      public static void main(String[] args) {
12
13
          Marco6 ventana1 = new Marco6();
14
          Marco6New ventana2 = new Marco6New();
15
      }
16 }
17
18 class Marco6 extends JFrame {
19
20
      private String nombreVentana;
21
22
      public Marco6() {
23
24
           setBounds(200, 200, 500, 300);
25
           setTitle(" Ventana 1º");
26
27
          nombreVentana = this.getTitle();
28
29
           addWindowFocusListener(new EventosVentana(nombreVentana));
30
          addWindowListener(new EventosVentana(nombreVentana));
31
          addWindowStateListener(new EventosVentana(nombreVentana));
32
33
          addKeyListener(new EventosTeclado());
34
35
          setVisible(true);
36
          setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
37
      }
38 }
39
40 class Marco6New extends JFrame {
41
42
      private String nombreVentana;
43
44
      public Marco6New() {
45
46
           setBounds(900, 200, 500, 300);
47
          setTitle(" Ventana 2º");
48
49
          nombreVentana = this.getTitle();
50
51
           addWindowFocusListener(new EventosVentana(nombreVentana));
52
           addWindowListener(new EventosVentana(nombreVentana));
53
           addWindowStateListener(new EventosVentana(nombreVentana));
54
55
          addKeyListener(new EventosTeclado());
56
57
          setVisible(true);
58
      }
59 }
61 class Eventos Ventana extends Window Adapter {
62
```

_06_EventosFocoVentanaTeclado.java

```
63
       String nombre;
 64
 65
       public EventosVentana(String nombre) {
 66
           this.nombre = nombre;
 67
 68
       @Override
 69
 70
       public void windowActivated(WindowEvent e) {
 71
           System.out.println("La Ventana se ha Activado " + nombre);
 72
            super.windowActivated(e);
 73
       }
 74
 75
       @Override
 76
       public void windowDeactivated(WindowEvent e) {
           System.out.println("La Ventana se ha Desactivado" + nombre);
 77
 78
            super.windowDeactivated(e);
 79
       }
 80
 81
       @Override
 82
       public void windowOpened(WindowEvent e) {
 83
           System.out.println("La Ventana se ha Abierto" + nombre);
 84
           super.windowOpened(e);
 85
       }
 86
 87
       @Override
 88
       public void windowClosing(WindowEvent e) {
 89
           System.out.println("La Ventana se está Cerrando" + nombre);
 90
            super.windowClosing(e);
 91
       }
 92
 93
       @Override
 94
       public void windowClosed(WindowEvent e) {
 95
           System.out.println("La Ventana se ha Cerrado" + nombre);
            super.windowClosed(e);
 96
 97
       }
98
99
       @Override
100
       public void windowIconified(WindowEvent e) {
           System.out.println("La Ventana se ha Minimizado" + nombre);
101
102
            super.windowIconified(e);
103
       }
104
105
       @Override
106
       public void windowDeiconified(WindowEvent e) {
           System.out.println("La Ventana se ha Maximizado" + nombre);
107
108
            super.windowDeiconified(e);
109
       }
110
111
       @Override
112
       public void windowGainedFocus(WindowEvent e) {
           System.out.println("La Ventana ha Ganado el Foco" + nombre);
113
114
            super.windowGainedFocus(e);
115
       }
116
       @Override
117
118
       public void windowLostFocus(WindowEvent e) {
119
           System.out.println("La Ventana ha Perdido el Foco" + nombre);
120
            super.windowLostFocus(e);
121
       }
122
123
       @Override
124
       public void windowStateChanged(WindowEvent e) {
```

_06_EventosFocoVentanaTeclado.java

```
125
           System.out.println("La Ventana ha Cambiado de Estado" + nombre);
           super.windowStateChanged(e);
126
127
       }
128 }
129
131 class EventosTeclado implements KeyListener {
133
       @Override
134
       public void keyTyped(KeyEvent e) {
135
           System.out.println("Se ha Tecleado la tecla: " + e.getKeyChar());
136
137
       @Override
138
139
       public void keyPressed(KeyEvent e) {
140
           System.out.println("Se ha Presionado la tecla: " + e.getKeyChar());
141
142
143
       @Override
144
       public void keyReleased(KeyEvent e) {
145
           System.out.println("Se ha Levantado la tecla: " + e.getKeyChar());
146
       }
147 }
```

_07_EventosRaton.java

```
1 package Graficos;
 3 import java.awt.event.MouseAdapter;
 4 import java.awt.event.MouseEvent;
 5 import java.awt.event.MouseWheelEvent;
 6 import javax.swing.JFrame;
10
      public static void main(String[] args) {
11
12
          JFrame ventana = new JFrame();
13
14
          ventana.setTitle(" Eventos del Ratón");
15
          ventana.setSize(500, 400);
          ventana.setLocationRelativeTo(null);
16
17
18
          ventana.addMouseListener(new AccionesRaton());
19
          ventana.addMouseMotionListener(new AccionesRaton());
20
          ventana.addMouseWheelListener(new AccionesRaton());
21
22
          ventana.setVisible(true);
23
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
24
      }
25 }
26
27 class AccionesRaton extends MouseAdapter {
28
29
      @Override
30
      public void mouseClicked(MouseEvent e) {
          int boton = e.getButton();
31
          String click = "";
32
33
          if (boton == 1) {
              click = "Click Izquierdo";
34
35
          } else if (boton == 2) {
              click = "Rueda del Ratón";
36
          } else if (boton == 3) {
37
              click = "Click Derecho";
38
39
40
          int x = e.getX();
41
          int y = e.getY();
          System.out.println("Se ha hecho Click con: " + click + " en la coordenada: X=" + x +
42
    Y="+y);
43
          super.mouseClicked(e);
44
      }
45
46
      @Override
47
      public void mouseDragged(MouseEvent e) {
48
          System.out.println("Se ha Arrastrado el ratón");
49
          super.mouseDragged(e);
50
      }
51
52
      @Override
53
      public void mouseEntered(MouseEvent e) {
54
          System.out.println("El ratón ha Entrado en la ventana");
55
          super.mouseEntered(e);
56
      }
57
58
      @Override
59
      public void mouseExited(MouseEvent e) {
          System.out.println("El ratón ha Salido de la ventana");
60
61
          super.mouseExited(e);
```

_07_EventosRaton.java

```
62
      }
63
      @Override
64
65
      public void mouseMoved(MouseEvent e) {
          System.out.println("Se ha Movido el ratón");
66 //
67
          super.mouseMoved(e);
68
      }
69
70
      @Override
71
      public void mousePressed(MouseEvent e) {
          System.out.println("Se ha Presionado el ratón");
72
73
          super.mousePressed(e);
74
      }
75
76
      @Override
77
      public void mouseReleased(MouseEvent e) {
78
          System.out.println("Se ha Soltado la tecla del ratón");
79
          super.mouseReleased(e);
80
      }
81
82
      @Override
83
      public void mouseWheelMoved(MouseWheelEvent e) {
84
          System.out.println("Se ha Movido la Rueda del ratón");
85
          super.mouseWheelMoved(e);
86
      }
87 }
```

_08_FocoEvento.java

```
1 package Graficos;
 2 import java.awt.Color;
 3 import java.awt.GridBagLayout;
 4 import java.awt.GridLayout;
 5 import java.awt.event.FocusEvent;
 6 import java.awt.event.FocusListener;
 7 import javax.swing.JFrame;
8 import javax.swing.JLabel;
9import javax.swing.JPanel;
10 import javax.swing.JTextField;
12 public class _08_FocoEvento {
13
14
      public static JLabel aviso;
15
      public static void main(String[] args) {
16
17
18
          Color fondo = new Color(230, 204, 255);
19
          JTextField email;
20
21
          JFrame ventana = new JFrame();
22
          ventana.setTitle(" Foco Evento");
23
          ventana.setSize(600, 400);
24
          ventana.setLocationRelativeTo(null);
25
          ventana.setLayout(new GridBagLayout());
26
          ventana.getContentPane().setBackground(fondo);
27
28
          JPanel lamina = new JPanel();
29
          lamina.setBackground(fondo);
30
31
          CampoFoco oyenteFoco = new CampoFoco();
32
33
          lamina.setLayout(new GridLayout(10,1));
34
          lamina.add(new JLabel("eMail: ")).setForeground(Color.GRAY.darker());
35
          lamina.add(email = new JTextField(30));
36
37
          email.addFocusListener(oyenteFoco);
38
          lamina.add(new JLabel(
                                                   ")).setForeground(Color.GRAY.darker());
39
          lamina.add(aviso = new JLabel("
  ")).setForeground(Color.RED.darker());
          lamina.add(new JLabel("
                                                   ")).setForeground(Color.GRAY.darker());
40
41
          lamina.add(new JLabel("Contraseña: ")).setForeground(Color.GRAY.darker());
42
          lamina.add(new JTextField(30));
43
                                                   ")).setForeground(Color.GRAY.darker());
          lamina.add(new JLabel("
  Éstos labels son sólo para aumentar espacio
44
          lamina.add(new JLabel("
                                                   ")).setForeground(Color.GRAY.darker());
45
          lamina.add(new JLabel("
                                                   ")).setForeground(Color.GRAY.darker());
46
47
          ventana.add(lamina);
48
49
          ventana.setVisible(true);
50
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
51
52
53
      static class CampoFoco implements FocusListener {
54
55
          @Override
56
          public void focusGained(FocusEvent e) {
57
               // TODO Auto-generated method stub
58
          }
59
60
          @Override
```

```
_08_FocoEvento.java
```

```
61
           public void focusLost(FocusEvent e) {
               JTextField emailObj = (JTextField) e.getSource();
62
63
               String emailTxt = emailObj.getText();
64
               int arroba = 0;
65
               boolean punto = false;
67
68
               for (int i=0; i<emailTxt.length(); i++) {</pre>
69
                    if (emailTxt.charAt(i) == '@') {
70
                        arroba++;
71
72
                    if (emailTxt.charAt(i) == '.') {
73
                        punto = true;
74
                    }
75
               }
76
               if (arroba == 1 && punto) {
    aviso.setText(" ");
77
78
                    System.out.println("Email correcto");
79
80
               } else {
81
                   aviso.setText("eMail Incorrecto, corrija e intente nuevamente");
82
                    System.out.println("Email Incorrecto");
83
                    arroba = 0;
84
               }
85
           }
86
       }
87 }
```

_09_VariosOyentes.java

```
1 package Graficos;
 3 import java.awt.Color;
 4 import java.awt.Font;
 5 import java.awt.GridBagLayout;
 6 import java.awt.event.ActionEvent;
 7 import java.awt.event.ActionListener;
 8 import java.util.Random;
9import javax.swing.JButton;
10 import javax.swing.JFrame;
11 import javax.swing.JLabel;
12 import javax.swing.JPanel;
14 public class _09_VariosOyentes {
15
16
      public static void main(String[] args) {
17
          Ventana9 ventana = new Ventana9();
18
19 }
20
21 class Ventana9 extends JFrame {
      public Ventana9() {
22
          setSize(400, 300);
23
           setTitle(" Varios Oyentes");
24
25
          setBounds(1200, 200, 400, 300);
26
          add(new Lamina9());
27
          setVisible(true);
28
          setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
29
      }
30 }
32 class Lamina9 extends JPanel {
33
      JButton btn1, btn2;
34
      public Lamina9() {
35
           setBackground(new Color(255, 255, 153));
           setLayout(new GridBagLayout());
36
37
          add(btn1 = new JButton("Nueva Ventana"));
          add(btn2 = new JButton("Cerrar Ventanas"));
38
39
          btn1.addActionListener(new OyenteListener());
40
41
42
      public class OyenteListener implements ActionListener {
43
          @Override
44
          public void actionPerformed(ActionEvent e) {
45
               VentanaEmergente marco = new VentanaEmergente(btn2);
46
           }
47
      }
48
49
      int numero = 1;
50
51
      class VentanaEmergente extends JFrame {
52
53
           public VentanaEmergente(JButton btnCerrar) {
54
               setTitle("Ventana " + numero);
55
               setBounds(40*numero, 40*numero, 250, 200);
56
57
               add(new NombreAleatorio());
58
59
               setVisible(true);
60
               numero++;
               btnCerrar.addActionListener(new OyenteCerrar());
61
62
          }
```

_09_VariosOyentes.java

```
63
 64
           class OyenteCerrar implements ActionListener {
 65
                @Override
                public void actionPerformed(ActionEvent e) {
 66
 67
                    dispose();
 68
                    numero = 1;
 69
                }
 70
           }
 71
       }
 72 }
 73
 74 class NombreAleatorio extends JPanel {
 75
 76
       JLabel nombre;
 77
 78
       Random random = new Random();
 79
       int aleatorio1 = random.nextInt(100)+155;
 80
       int aleatorio2 = random.nextInt(100)+155;
 81
       int aleatorio3 = random.nextInt(100)+155;
 82
 83
       int vocalNro1 = random.nextInt(9);
 84
       int vocalNro2 = random.nextInt(9);
 85
       int vocalNro3 = random.nextInt(9);
86
       int vocalNro4 = random.nextInt(9);
 87
       int vocalNro5 = random.nextInt(9);
88
       int vocalNro6 = random.nextInt(9);
 89
       int consonanteNro1 = random.nextInt(27);
 90
       int consonanteNro2 = random.nextInt(27);
 91
       int consonanteNro3 = random.nextInt(27);
 92
       int consonanteNro4 = random.nextInt(27);
 93
       int consonanteNro5 = random.nextInt(27);
 94
       int consonanteNro6 = random.nextInt(27);
95
 96
       String vocales[] = {"A","E","I","O","U","AA","EE","II","OO","UU"};
 97
       String consonantes[] =
   {"B","C","D","F","G","H̄","J","K","L","M","N","Ñ","P","Q","R","S","T","V","W","X","Y","Z","L
   L", "BB", "RR", "MM", "PP", "SS", };
98
99
       String vocalRandom1;
100
       String vocalRandom2;
       String vocalRandom3;
101
102
       String vocalRandom4;
103
       String vocalRandom5;
104
       String vocalRandom6;
105
       String consonanteRandom1;
106
       String consonanteRandom2;
107
       String consonanteRandom3;
108
       String consonanteRandom4;
109
       String consonanteRandom5;
110
       String consonanteRandom6;
111
       public NombreAleatorio() {
112
113
114
            // -----VOCALES-----
115
           for(int i=0; i<vocales.length; i++) {</pre>
116
                if(i == vocalNro1) {
117
                    vocalRandom1 = vocales[i];
118
                }
119
120
            for(int i=0; i<vocales.length; i++) {</pre>
                if(i == vocalNro2) {
121
122
                    vocalRandom2 = vocales[i];
```

```
_09_VariosOyentes.java
```

```
123
                }
124
125
            for(int i=0; i<vocales.length; i++) {</pre>
126
                if(i == vocalNro3) {
127
                    vocalRandom3 = vocales[i];
128
                }
129
130
            for(int i=0; i<vocales.length; i++) {</pre>
131
                if(i == vocalNro4) {
132
                    vocalRandom4 = vocales[i];
133
                }
134
135
            for(int i=0; i<vocales.length; i++) {</pre>
136
                if(i == vocalNro5) {
137
                    vocalRandom5 = vocales[i];
138
                }
139
            for(int i=0; i<vocales.length; i++) {</pre>
140
141
                if(i == vocalNro6) {
142
                    vocalRandom6 = vocales[i];
143
                }
144
            }
145
            // -----CONSONANTES-----
146
            for(int i=0; i<consonantes.length; i++) {</pre>
147
                if(i == consonanteNro1) {
                    consonanteRandom1 = consonantes[i];
148
149
                }
150
151
            for(int i=0; i<consonantes.length; i++) {</pre>
                if(i == consonanteNro2) {
152
                    consonanteRandom2 = consonantes[i];
153
154
155
            for(int i=0; i<consonantes.length; i++) {</pre>
156
157
                if(i == consonanteNro3) {
158
                    consonanteRandom3 = consonantes[i];
159
                }
160
            for(int i=0; i<consonantes.length; i++) {</pre>
161
162
                if(i == consonanteNro4) {
163
                    consonanteRandom4 = consonantes[i];
164
                }
165
            for(int i=0; i<consonantes.length; i++) {</pre>
166
167
                if(i == consonanteNro5) {
168
                    consonanteRandom5 = consonantes[i];
169
                }
170
171
            for(int i=0; i<consonantes.length; i++) {</pre>
172
                if(i == consonanteNro6) {
173
                    consonanteRandom6 = consonantes[i];
                }
174
175
            }
176
177
            setBackground(new Color(aleatorio1, aleatorio2, aleatorio3));
            System.out.println("El color RGB de la ventana nueva es: " + aleatorio1 + " " +
178
   aleatorio2 + " " + aleatorio3);
179
            System.out.println("Letras aleatorias: " + vocalRandom1 + consonanteRandom1 +
   vocalRandom2 + consonanteRandom2 + vocalRandom3);
180
181
            setLayout(new GridBagLayout());
182
```

_09_VariosOyentes.java

```
183     add(nombre = new JLabel(vocalRandom1 + consonanteRandom1 + vocalRandom2 +
     consonanteRandom2 + vocalRandom3));
184     nombre.setFont(new Font("Roboto", Font.PLAIN, 24));
185   }
186 }
```

```
_10_Layouts.java
```

```
1 package Graficos;
3 import java.awt.BorderLayout;
4 import java.awt.Color;
 5 import java.awt.FlowLayout;
 6 import javax.swing.JButton;
 7 import javax.swing.JFrame;
8 import javax.swing.JPanel;
10 public class _10_Layouts {
11
12
      public static void main(String[] args) {
13
14
          Ventana10 ventana = new Ventana10();
15
      }
16 }
17
18 class Ventana10 extends JFrame {
19
20
      public Ventana10() {
21
22
          setSize(600, 500);
23
          setTitle(" Layouts");
24
          setLocationRelativeTo(null);
25
26
          add(new Lamina10());
27
28
          setVisible(true);
29
          setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
30
      }
31 }
32
33 class Lamina10 extends JPanel {
35
      public Lamina10() {
36
          setLayout(new BorderLayout());
37
          setBackground(new Color(204, 255, 102));
38
39
          JPanel lamina1 = new JPanel();
40
          add(lamina1, BorderLayout.NORTH);
41
          lamina1.setLayout(new BorderLayout());
42
43
          lamina1.add(new JButton("Botón 1"), BorderLayout.NORTH);
44
          lamina1.add(new JButton("Botón 2"), BorderLayout.SOUTH);
          lamina1.add(new JButton("Botón 3"), BorderLayout.EAST);
45
          lamina1.add(new JButton("Botón 4"), BorderLayout.WEST);
46
47
          lamina1.add(new JButton("Botón 5"), BorderLayout.CENTER);
48
49
          JPanel lamina2 = new JPanel();
50
          add(lamina2, BorderLayout.SOUTH);
51
          lamina2.setLayout(new FlowLayout(FlowLayout.RIGHT));
52
          lamina2.add(new JButton("Botón 1"));
53
          lamina2.add(new JButton("Botón 2"));
54
55
          lamina2.add(new JButton("Botón 3"));
56
      }
57 }
```

_11_Calculadora.java

```
1 package Graficos;
 3 import java.awt.BorderLayout;
 4 import java.awt.Color;
 5 import java.awt.Dimension;
 6 import java.awt.Font;
 7 import java.awt.GridLayout;
 8 import java.awt.event.ActionEvent;
9import java.awt.event.ActionListener;
10 import javax.swing.JButton;
11 import javax.swing.JFrame;
12 import javax.swing.JPanel;
13 import javax.swing.SwingConstants;
15 public class _11_Calculadora {
16
17
      public static void main(String[] args) {
18
19
          Ventana11 ventana = new Ventana11();
20
      }
21 }
22
23 class Ventana11 extends JFrame {
25
      public Ventana11() {
          setTitle(" Calculadora");
26
27
          setSize(300, 350);
28
          setLocationRelativeTo(null);
29
30
          add(new Lamina11());
31
32
          setVisible(true);
33
          setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
34
      }
35 }
36
37 class Lamina11 extends JPanel {
38
39
      JPanel lamina1, lamina2;
40
      JButton display, btn1, btn2, btn3, btn4, btn5, btn6, btn7, btn8, btn9, btn0, btnSum,
  btnRes, btnMul, btnDiv, btnClr, btnEqu;
41
42
      public Lamina11() {
43
           setLayout(new BorderLayout());
44
45
           add(lamina1 = new JPanel(), BorderLayout.NORTH);
46
           lamina1.setLayout(new BorderLayout());
47
           lamina1.add(display = new JButton("0"));
48
           display.setHorizontalAlignment(SwingConstants.RIGHT);
49
           display.setFont(new Font("Arial", Font.PLAIN, 24));
50
          display.setPreferredSize(new Dimension(300,80));
51
          display.setEnabled(false);
52
53
           add(lamina2 = new JPanel(), BorderLayout.CENTER);
54
           lamina2.setLayout(new GridLayout(4,4));
55
           lamina2.add(btn1 = new JButton("1"));
56
           lamina2.add(btn2 = new JButton("2"));
57
           lamina2.add(btn3 = new JButton("3"));
58
           lamina2.add(btnSum = new JButton("+"));
           lamina2.add(btn4 = new JButton("4"));
59
           lamina2.add(btn5 = new JButton("5"));
60
61
           lamina2.add(btn6 = new JButton("6"));
```

```
_11_Calculadora.java
 62
           lamina2.add(btnRes = new JButton("-"));
 63
           lamina2.add(btn7 = new JButton("7"));
 64
           lamina2.add(btn8 = new JButton("8"));
 65
           lamina2.add(btn9 = new JButton("9"));
           lamina2.add(btnMul = new JButton("*"));
 66
           lamina2.add(btnClr = new JButton("clr"));
 67
           lamina2.add(btn0 = new JButton("0"));
 68
           lamina2.add(btnEqu = new JButton("="));
 69
 70
           lamina2.add(btnDiv = new JButton("/"));
 71
 72
           OyenteNumeros oyenteNro = new OyenteNumeros();
 73
 74
           btn1.addActionListener(oyenteNro);
 75
           btn2.addActionListener(oyenteNro);
 76
           btn3.addActionListener(oyenteNro);
 77
           btn4.addActionListener(oyenteNro);
 78
           btn5.addActionListener(oyenteNro);
 79
           btn6.addActionListener(oyenteNro);
 80
           btn7.addActionListener(oyenteNro);
 81
           btn8.addActionListener(oyenteNro);
 82
           btn9.addActionListener(oyenteNro);
 83
           btn0.addActionListener(oyenteNro);
 84
 85
           OyenteOperandos oyenteOperando = new OyenteOperandos();
 86
 87
           btnSum.addActionListener(oyenteOperando);
 88
           btnRes.addActionListener(oyenteOperando);
 89
           btnMul.addActionListener(oyenteOperando);
 90
           btnDiv.addActionListener(oyenteOperando);
 91
           btnClr.addActionListener(oyenteOperando);
 92
           btnEqu.addActionListener(oyenteOperando);
 93
 94
           btn1.setBackground(new Color(230, 255, 204));
 95
           btn2.setBackground(new Color(230, 255, 204));
 96
           btn3.setBackground(new Color(230, 255, 204));
 97
           btn4.setBackground(new Color(230, 255, 204));
           btn5.setBackground(new Color(230, 255, 204));
98
99
           btn6.setBackground(new Color(230, 255, 204));
           btn7.setBackground(new Color(230, 255, 204));
100
101
           btn8.setBackground(new Color(230, 255, 204));
102
           btn9.setBackground(new Color(230, 255, 204));
103
           btn0.setBackground(new Color(230, 255, 204));
104
105
           btnSum.setBackground(new Color(230, 204, 255));
106
           btnRes.setBackground(new Color(230, 204, 255));
107
           btnMul.setBackground(new Color(230, 204, 255));
           btnDiv.setBackground(new Color(230, 204, 255));
108
109
           btnClr.setBackground(new Color(230, 204, 255));
110
           btnEqu.setBackground(new Color(230, 204, 255));
       }
111
112
113
       class OyenteNumeros implements ActionListener {
114
           @Override
           public void actionPerformed(ActionEvent e) {
115
116
117
                JButton btnNro = (JButton) e.getSource();
118
                double nro = Double.parseDouble(btnNro.getText());
119
120
                if(display.getText() == "0") {
                    display.setText("");
121
122
                    display.setText(btnNro.getText());
123
                } else {
```

```
_11_Calculadora.java
124
                    display.setText(display.getText() + btnNro.getText());
125
                }
126
           }
127
       }
128
129
       class OyenteOperandos implements ActionListener {
130
131
           double resultado = 0;
132
           String simbolo = "";
133
134
           @Override
135
           public void actionPerformed(ActionEvent e) {
136
137
                JButton operandoBtn = (JButton) e.getSource();
138
                String operando = operandoBtn.getText();
139
140
                if(operando.equals("+")) {
141
                    resultado = resultado + Double.parseDouble(display.getText());
142
                    display.setText("0");
143
                    simbolo = "+";
144
145
                if(operando.equals("-")) {
146
                    if(resultado == 0) {
147
                        resultado = Double.parseDouble(display.getText());
148
                        display.setText("0");
149
                        simbolo = "-";
150
                    } else {
151
                        resultado = resultado - Double.parseDouble(display.getText());
152
                        display.setText("0");
                        simbolo = "-";
153
154
                    }
155
156
                if(operando.equals("*")) {
157
                    if(resultado == 0) {
                        resultado = (resultado+1) * Double.parseDouble(display.getText());
158
159
                        display.setText("0");
                        simbolo = "*";
160
161
                    } else {
                        resultado = resultado * Double.parseDouble(display.getText());
162
163
                        display.setText("0");
                        simbolo = "*";
164
165
                    }
166
                if(operando.equals("/")) {
167
168
                    if(resultado == 0) {
169
                        resultado = Double.parseDouble(display.getText());
170
                        display.setText("0");
171
                        simbolo = "/";
172
                    } else {
173
                        resultado = resultado / Double.parseDouble(display.getText());
174
                        display.setText("0");
                        simbolo = "/";
175
176
                    }
                }
177
178
179
                if(operando.equals("=")) {
180
                    if(simbolo.equals("+")) {
181
                        resultado = resultado + Double.parseDouble(display.getText());
182
                        display.setText(String.valueOf(resultado));
183
                        resultado = 0;
```

if(simbolo.equals("-")) {

184 185

_11_Calculadora.java

```
186
                        resultado = resultado - Double.parseDouble(display.getText());
187
                        display.setText(String.valueOf(resultado));
                        resultado = 0;
188
189
                   if(simbolo.equals("*")) {
190
                        resultado = resultado * Double.parseDouble(display.getText());
191
192
                        display.setText(String.valueOf(resultado));
193
                        resultado = 0;
194
                   if(simbolo.equals("/")) {
195
196
                        resultado = resultado / Double.parseDouble(display.getText());
                        display.setText(String.valueOf(resultado));
197
198
                        resultado = 0;
199
                   }
200
               }
201
202
               if(operando.equals("clr")) {
203
                   resultado = 0;
204
                   display.setText("0");
205
                    simbolo = " ";
206
               }
207
           }
208
       }
209 }
```

_12_PruebaTexto.java

```
1 package Graficos;
3 import java.awt.Color;
4 import java.awt.GridBagConstraints;
 5 import java.awt.GridBagLayout;
 6 import java.awt.GridLayout;
 7 import java.awt.event.ActionEvent;
8 import java.awt.event.ActionListener;
9import javax.swing.JButton;
10 import javax.swing.JFrame;
11 import javax.swing.JLabel;
12 import javax.swing.JPanel;
13 import javax.swing.JTextField;
14
15 public class _12_PruebaTexto {
16
17
      public static void main(String[] args) {
18
19
          Marco12 ventana = new Marco12();
20
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
21
      }
22 }
23
24 class Marco12 extends JFrame {
25
      Color fondo = new Color(51, 204, 204);
26
27
28
      public Marco12() {
29
30
          setSize(600, 500);
          setTitle(" Prueba Texto");
31
32
          setLocationRelativeTo(null);
33
          getContentPane().setBackground(fondo);
34
35
          setLayout(new GridBagLayout());
36
          GridBagConstraints gbc = new GridBagConstraints();
37
          gbc.insets.set(0, 0, 60, 0);
38
39
          add(new Ventana12(), gbc);
40
41
          setVisible(true);
42
      }
43
      class Ventana12 extends JPanel {
44
45
46
          JTextField campoTexto;
47
          JLabel aviso;
48
          JButton btn;
49
50
          public Ventana12() {
51
               setBackground(fondo);
52
53
54
               setLayout(new GridLayout(7,1));
55
               add(new JLabel("Ingrese su eMail:"));
56
57
               add(new JLabel(""));
58
               add(campoTexto = new JTextField(30));
               add(new JLabel(""));
59
60
               add(aviso = new JLabel(""));
               add(new JLabel(""));
61
               add(btn = new JButton("Enviar"));
62
```

_12_PruebaTexto.java

```
63
64
              btn.addActionListener(new ClaseOyente());
65
          }
66
          class ClaseOyente implements ActionListener {
67
68
69
              @Override
70
              public void actionPerformed(ActionEvent e) {
71
72
                   int arroba = 0;
73
                   boolean punto = false;
74
75
                   for (int i = 0; i < campoTexto.getText().length(); i++) {</pre>
76
                       if(campoTexto.getText().charAt(i) == '@') {
77
                           arroba++;
78
79
                       if(campoTexto.getText().charAt(i) == '.') {
80
                           punto = true;
81
                       }
82
                   }
83
                   if(arroba == 1 && punto) {
                       aviso.setForeground(new Color(102, 153, 0));
84
                       aviso.setText("eMail correcto, Bienvenido!");
85
86
                       arroba = 0;
                   } else {
87
                       aviso.setForeground(new Color(255, 0, 102));
88
89
                       aviso.setText("eMail incorrecto, corrija e intente nuevamente");
90
                       arroba = 0;
91
                   }
92
              }
93
          }
94
      }
95 }
```

```
1 package Graficos;
 3 import java.awt.Color;
 4 import java.awt.GridBagLayout;
 5 import java.awt.GridLayout;
 6 import javax.swing.JButton;
 7 import javax.swing.JFrame;
 8 import javax.swing.JLabel;
9 import javax.swing.JPanel;
10 import javax.swing.JPasswordField;
11import javax.swing.JTextField;
12 import javax.swing.event.DocumentEvent;
13 import javax.swing.event.DocumentListener;
15 public class _13_CampoPassword {
16
17
      public static void main(String[] args) {
18
19
          Marco13 ventana = new Marco13();
20
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
21
      }
22 }
23
24 class Marco13 extends JFrame {
25
26
      public Marco13() {
27
28
           setSize(550, 600);
29
          setTitle(" Campo Password");
30
          setLocationRelativeTo(null);
31
32
          add(new Ventana13());
33
34
          setVisible(true);
35
      }
36 }
37
38 class Ventana13 extends JPanel {
39
40
      JLabel emailTxt, passTxt, avisoMail, avisoPass;
41
      JTextField emailField;
42
      JPasswordField passField;
43
      JButton enviarBtn;
44
      JPanel lamina;
45
      Color fondo = new Color(204, 255, 153);
46
47
      public Ventana13() {
48
49
          setBackground(fondo);
50
51
           setLayout(new GridBagLayout());
52
53
           add(lamina = new JPanel());
54
           lamina.setBackground(fondo);
55
           lamina.setLayout(new GridLayout(10,1));
56
57
           lamina.add(emailTxt = new JLabel("Email:"));
58
           lamina.add(emailField = new JTextField(40));
59
           lamina.add(avisoMail = new JLabel(" "));
           lamina.add(new JLabel(" "));
60
61
           lamina.add(passTxt = new JLabel("Contraseña:"));
           lamina.add(passField = new JPasswordField(40));
62
```

```
lamina.add(avisoPass = new JLabel(" "));
 63
 64
           lamina.add(new JLabel(" "));
 65
           lamina.add(enviarBtn = new JButton("Enviar"));
 66
 67
           emailField.getDocument().addDocumentListener(new OyenteEmail());
 68
           passField.getDocument().addDocumentListener(new OyentePassword());
 69
       }
 70
 71
       // -----OYENTE EMAIL-----
 72
       class OyenteEmail implements DocumentListener {
 73
           @Override
 74
           public void insertUpdate(DocumentEvent e) {
 75
               String email = emailField.getText();
 76
               int arroba = 0;
 77
               boolean punto = false;
 78
 79
               for (int i = 0; i < email.length(); i++) {</pre>
 80
                   if (email.charAt(i) == '@') {
 81
                        arroba++;
 82
                   }
                   if (email.charAt(i) == '.') {
 83
 84
                        punto = true;
                   }
 85
 86
               if (email.length() > 8) {
 87
 88
                   if (arroba == 1 && punto) {
 89
                        emailField.setBackground(Color.WHITE);
 90
                       avisoMail.setText(" ");
 91
                       arroba = 0;
                   } else {
 92
 93
                       emailField.setBackground(new Color(255, 102, 153));
 94
                       avisoMail.setForeground(new Color(255, 102, 153));
 95
                        avisoMail.setText("eMail incorrecto, corrija!");
 96
                   }
 97
               }
98
99
           @Override
100
           public void removeUpdate(DocumentEvent e) {
101
               String email = emailField.getText();
102
               int arroba = 0;
               boolean punto = false;
103
104
               for (int i = 0; i < email.length(); i++) {</pre>
105
                   if (email.charAt(i) == '@') {
106
107
                       arroba++;
108
109
                   if (email.charAt(i) == '.') {
110
                       punto = true;
111
                   }
112
               if (email.length() > 8) {
113
                   if (arroba == 1 && punto) {
114
                        emailField.setBackground(Color.WHITE);
115
116
                        avisoMail.setText(" ");
117
                       arroba = 0;
                   } else {
118
119
                       emailField.setBackground(new Color(255, 102, 153));
120
                       avisoMail.setForeground(new Color(255, 102, 153));
121
                        avisoMail.setText("eMail incorrecto, corrija!");
122
                   }
123
               }
124
           }
```

```
125
           @Override
126
           public void changedUpdate(DocumentEvent e) {
127
               String email = emailField.getText();
               int arroba = 0;
128
129
               boolean punto = false;
130
               for (int i = 0; i < email.length(); i++) {</pre>
131
132
                   if (email.charAt(i) == '@') {
133
                       arroba++;
134
                   if (email.charAt(i) == '.') {
135
136
                        punto = true;
137
                   }
138
               if (email.length() > 8) {
139
140
                   if (arroba == 1 && punto) {
                       emailField.setBackground(Color.WHITE);
141
142
                       avisoMail.setText(" ");
143
                       arroba = 0;
144
                   } else {
145
                       emailField.setBackground(new Color(255, 102, 153));
                       avisoMail.setForeground(new Color(255, 102, 153));
146
                        avisoMail.setText("eMail incorrecto, corrija!");
147
148
                   }
               }
149
150
           }
151
       }
152
       // -----OYENTE
153
   PASSWORDFIELD-----
154
       class OyentePassword implements DocumentListener {
155
156
           public void insertUpdate(DocumentEvent e) {
157
               char password[] = passField.getPassword();
158
               for (int i = 0; i < password.length; i++) {</pre>
                   if(password.length < 6 || password.length > 12) {
159
                       passField.setBackground(new Color(255, 102, 153));
160
161
                       avisoPass.setForeground(new Color(255, 102, 153));
                       avisoPass.setText("La contraseña debe tener mínimo 6 y máximo 12
162
   letras!");
163
                   } else {
164
                       passField.setBackground(Color.WHITE);
                       avisoPass.setText(" ");
165
166
                   }
167
               }
168
           @Override
169
170
           public void removeUpdate(DocumentEvent e) {
171
               char password[] = passField.getPassword();
               for (int i = 0; i < password.length; i++) {</pre>
172
                   if(password.length < 6 || password.length > 12) {
173
174
                        passField.setBackground(new Color(255, 102, 153));
                        avisoPass.setForeground(new Color(255, 102, 153));
175
176
                        avisoPass.setText("La contraseña debe tener mínimo 6 y máximo 12
   letras!");
177
                   } else {
178
                       passField.setBackground(Color.WHITE);
179
                       avisoPass.setText(" ");
180
                   }
               }
181
182
           @Override
183
```

```
184
           public void changedUpdate(DocumentEvent e) {
185
                char password[] = passField.getPassword();
                for (int i = 0; i < password.length; i++) {</pre>
186
                    if(password.length < 6 || password.length > 12) {
187
                        passField.setBackground(new Color(255, 102, 153));
188
                        avisoPass.setForeground(new Color(255, 102, 153));
189
190
                        avisoPass.setText("La contraseña debe tener mínimo 6 y máximo 12
   letras!");
191
                    } else {
                        passField.setBackground(Color.WHITE);
192
                        avisoPass.setText(" ");
193
194
                    }
195
                }
196
           }
197
       }
198 }
```

_14_EjemploArea.java

```
1 package Graficos;
 3 import java.awt.BorderLayout;
4 import java.awt.Color;
 5 import java.awt.FlowLayout;
 6 import java.awt.event.ActionEvent;
 7 import java.awt.event.ActionListener;
8 import javax.swing.JButton;
9 import javax.swing.JFrame;
10 import javax.swing.JLabel;
11 import javax.swing.JPanel;
12 import javax.swing.JScrollPane;
13 import javax.swing.JTextArea;
14
15 public class _14_EjemploArea {
16
17
      public static void main(String[] args) {
18
19
          Marco14 ventana = new Marco14();
20
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
21
      }
22 }
23
24 class Marco14 extends JFrame {
25
26
      public Marco14() {
27
28
          setSize(350, 500);
29
          setTitle(" Ejemplo Área");
30
          setLocationRelativeTo(null);
          getContentPane().setBackground(new Color(153, 204, 255));
31
32
33
          setLayout(new BorderLayout());
34
          // -----Espacios en los Bordes-----
35
                                    "), BorderLayout.NORTH);
          add(new JLabel("
36
          add(new JLabel("
                                    "), BorderLayout.SOUTH);
37
                                    "), BorderLayout. EAST);
          add(new JLabel("
38
          add(new JLabel("
                                    "), BorderLayout.WEST);
39
40
          // -----Espacios en los Bordes-----
41
42
          add(new Ventana14(), BorderLayout.CENTER);
43
44
          setVisible(true);
45
      }
46 }
47
48 class Ventana14 extends JPanel {
49
50
      JPanel lamina;
51
      JTextArea areaIn, areaOut;
52
      JLabel textoOut;
53
      JButton btnEnviar;
54
      JScrollPane vistaScroll;
55
56
      public Ventana14() {
57
58
          setBackground(new Color(153, 204, 255));
59
          setLayout(new FlowLayout(FlowLayout.LEFT, 20,20));
60
61
          add(new JLabel(" "));
62
```

```
_14_EjemploArea.java
          add(new JLabel(" "));
63
64
          add(areaIn = new JTextArea(8,20));
65
          areaIn.setText(lorem);
66
          areaIn.setLineWrap(true);
          add(vistaScroll = new JScrollPane(areaIn));
67
68
          add(btnEnviar = new JButton("Enviar"));
          add(new JLabel(" "));
69
          add(new JLabel(" "));
70
71
          add(areaOut = new JTextArea(8,20));
72
          areaOut.setLineWrap(true);
73
          areaOut.setEnabled(false);
          areaOut.setDisabledTextColor(Color.DARK_GRAY);
74
          areaOut.setBackground(new Color(179, 204, 230));
75
76
          add(vistaScroll = new JScrollPane(areaOut));
77
          add(textoOut = new JLabel(" "));
78
79
          btnEnviar.addActionListener(new ClaseOyente());
80
      }
81
82
      class ClaseOyente implements ActionListener {
83
84
          @Override
85
          public void actionPerformed(ActionEvent e) {
86
87
              String entrada = areaIn.getText();
88
              areaOut.setText(entrada);
89
90
              textoOut.setText("Data enviada!");
91
          }
92
      }
93
94
```

String lorem = "There are many variations of passages of Lorem Ipsum available, but the majority have suffered alteration in some form, by injected humour, or randomised words which don't look even slightly believable. If you are going to use a passage of Lorem Ipsum, you need to be sure there isn't anything embarrassing hidden in the middle of text. All the Lorem Ipsum generators on the Internet tend to repeat predefined chunks as necessary, making this the first true generator on the Internet. It uses a dictionary of over 200 Latin words, combined with a handful of model sentence structures, to generate Lorem Ipsum which looks reasonable. The generated Lorem Ipsum is therefore always free from repetition, injected humour, or non-characteristic words etc.";

_15_PruebaArea.java

```
1 package Graficos;
 3 import java.awt.BorderLayout;
 4 import java.awt.Color;
 5 import java.awt.event.ActionEvent;
 6 import java.awt.event.ActionListener;
 7 import javax.swing.JButton;
8 import javax.swing.JFrame;
9 import javax.swing.JPanel;
10 import javax.swing.JScrollPane;
11 import javax.swing.JTextArea;
13 public class _15_PruebaArea {
14
15
      public static void main(String[] args) {
16
17
          Marco15 ventana = new Marco15();
18
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
19
      }
20 }
22 class Marco15 extends JFrame {
23
24
      public Marco15() {
25
26
          setSize(400, 300);
27
          setTitle(" Prueba Área");
28
          setLocationRelativeTo(null);
29
30
          add(new Ventana15());
31
32
          setVisible(true);
33
      }
34 }
36 class Ventana15 extends JPanel {
37
38
      JTextArea areaTxt;
39
      JScrollPane vistaScroll;
40
      JPanel lamina;
41
      JButton btn1, btn2;
      String lorem = "Al contrario del pensamiento popular, el texto de Lorem Ipsum no es
  simplemente texto aleatorio. | Al contrario del pensamiento popular, el texto de Lorem Ipsum
  no es simplemente texto aleatorio. | Al contrario del pensamiento popular, el texto de Lorem
  Ipsum no es simplemente texto aleatorio. | Al contrario del pensamiento popular, el texto de
  Lorem Ipsum no es simplemente texto aleatorio. | ";
43
      public Ventana15() {
44
45
46
          setLayout(new BorderLayout());
47
48
          add(areaTxt = new JTextArea(), BorderLayout.CENTER);
49
          areaTxt.setBackground(new Color(204, 255, 255));
50
          areaTxt.setForeground(new Color(153, 0, 115));
51
          add(vistaScroll = new JScrollPane(areaTxt));
52
53
          add(lamina = new JPanel(), BorderLayout.SOUTH);
54
          lamina.setBackground(new Color(204, 204, 255));
55
          lamina.add(btn1 = new JButton("Agregar texto"));
56
57
          lamina.add(btn2 = new JButton("Insertar salto de línea"));
58
```

```
_15_PruebaArea.java
```

```
btn1.setBackground(new Color(204, 204, 255));
59
          btn2.setBackground(new Color(204, 204, 255));
60
61
          btn1.addActionListener(new ClaseOyente());
62
63
          btn2.addActionListener(new ClaseOyente());
64
      }
65
      class ClaseOyente implements ActionListener {
66
67
68
          @Override
69
          public void actionPerformed(ActionEvent e) {
70
               if (e.getSource() == btn1) {
71
72
                   areaTxt.append(lorem);
73
74
               if (e.getSource() == btn2) {
75
                   if (areaTxt.getLineWrap() == false) {
76
                       areaTxt.setLineWrap(true);
77
                       btn2.setText("Quitar salto de línea");
78
                       btn2.setBackground(new Color(255, 153, 204));
79
                   } else {
                       areaTxt.setLineWrap(false);
80
81
                       btn2.setText("Insertar salto de línea");
                       btn2.setBackground(new Color(153, 255, 204));
82
83
                   }
84
              }
85
          }
86
      }
87 }
```

_16_PruebaChecks.java

```
1 package Graficos;
 3 import java.awt.BorderLayout;
 4 import java.awt.Color;
 5 import java.awt.Font;
 6 import java.awt.GridLayout;
 7 import java.awt.event.ActionEvent;
8 import java.awt.event.ActionListener;
9import javax.swing.JCheckBox;
10 import javax.swing.JFrame;
11 import javax.swing.JLabel;
12 import javax.swing.JPanel;
13 import javax.swing.SwingConstants;
15 public class _16_PruebaChecks {
16
17
      public static void main(String[] args) {
18
19
          Marco16 ventana = new Marco16();
20
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
      }
21
22 }
23
24 class Marco16 extends JFrame {
25
26
      JLabel east;
27
      Color fondo = new Color(179, 255, 179);
28
29
      public Marco16() {
30
31
          setSize(900, 400);
          setTitle(" Prueba Checks");
32
33
          setLocationRelativeTo(null);
34
35
          setLayout(new BorderLayout());
36
37
          // -----Espacios en los Bordes-----
          add(new JLabel("
                                   "), BorderLayout.NORTH);
38
          add(new JLabel("
                                   "), BorderLayout. SOUTH);
39
          add(east = new JLabel("
40
                                                                   "), BorderLayout. EAST);
                                    41
          east.setForeground(new Color(0, 0, 0, 0));
          add(new JLabel("
42
                                   "), BorderLayout.WEST);
          // -----Espacios en los Bordes------
43
44
45
          add(new Ventana16(fondo), BorderLayout.CENTER);
46
47
          getContentPane().setBackground(fondo);
48
49
          setVisible(true);
      }
50
51 }
53 class Ventana16 extends JPanel {
54
55
      JLabel texto1, texto2;
56
      JCheckBox check1, check2;
57
      JPanel lamina1, lamina2;
58
59
      public Ventana16(Color fondo) {
60
          setLayout(new BorderLayout());
61
62
```

```
_16_PruebaChecks.java
```

```
63
           add(lamina1 = new JPanel(), BorderLayout.CENTER);
 64
           lamina1.setLayout(new GridLayout(7,1));
 65
           lamina1.setBackground(fondo);
 66
           lamina1.add(new JLabel("
 67
                                        "));
           lamina1.add(new JLabel("
 68
                                        "));
           lamina1.add(new JLabel("
 69
           lamina1.add(texto1 = new JLabel("\"Es capaz el que piensa que es capaz.\""));
 70
           texto1.setFont(new Font("Verdana", Font.PLAIN, 34));
 71
 72
           texto1.setHorizontalAlignment(SwingConstants.RIGHT);
 73
           lamina1.add(new JLabel("
           lamina1.add(texto2 = new JLabel("Buda"));
 74
           texto2.setFont(new Font("Verdana", Font.PLAIN, 24));
 75
 76
           texto2.setHorizontalAlignment(SwingConstants.RIGHT);
 77
 78
           add(lamina2 = new JPanel(), BorderLayout.SOUTH);
 79
           lamina2.setBackground(fondo);
 80
 81
           lamina2.add(check1 = new JCheckBox("Negrita", false));
 82
           check1.setFont(new Font("Verdana", Font.PLAIN, 18));
 83
           check1.setBackground(fondo);
 84
           lamina2.add(check2 = new JCheckBox("Cursiva", false));
 85
           check2.setFont(new Font("Verdana", Font.PLAIN, 18));
 86
           check2.setBackground(fondo);
 87
 88
           check1.addActionListener(new ClaseOyente());
 89
           check2.addActionListener(new ClaseOyente());
 90
       }
 91
 92
       class ClaseOyente implements ActionListener {
 93
           @Override
 94
 95
           public void actionPerformed(ActionEvent e) {
 96
 97
                int constante = 0;
98
99
                if (check1.isSelected() && !check2.isSelected()) {
100
                    constante = 1;
                } else if (!check1.isSelected() && check2.isSelected()) {
101
                    constante = 2;
102
                } else if (check1.isSelected() && check2.isSelected()) {
103
104
                    constante = 3;
105
                } else {
106
                    constante = 0;
107
                }
108
109
               texto1.setFont(new Font("Verdana", constante, 34));
110
           }
111
       }
112 }
```

```
_17_SintaxisRadio_EjemploRadio_PruebaCombo_MarcoSlider_MarcoSpinner.java
```

```
1 package Graficos;
 3 import java.awt.BorderLayout;
 4 import java.awt.Color;
 5 import java.awt.Dimension;
 6 import java.awt.Font;
 7 import java.awt.GraphicsEnvironment;
8 import java.awt.GridLayout;
9import java.awt.event.ActionEvent;
10 import java.awt.event.ActionListener;
11 import javax.swing.ButtonGroup;
12 import javax.swing.JComboBox;
13 import javax.swing.JFrame;
14 import javax.swing.JLabel;
15 import javax.swing.JPanel;
16 import javax.swing.JRadioButton;
17 import javax.swing.JSlider;
18 import javax.swing.JSpinner;
19 import javax.swing.SpinnerListModel;
20 import javax.swing.SpinnerNumberModel;
21 import javax.swing.event.ChangeEvent;
22 import javax.swing.event.ChangeListener;
24 public class _17_SintaxisRadio_EjemploRadio_PruebaCombo_MarcoSlider_MarcoSpinner {
25
26
      public static void main(String[] args) {
27
28
          Marco17 ventana = new Marco17();
29
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
30
      }
31 }
32
33 class Marco17 extends JFrame {
      Color fondo1 = new Color(179, 255, 224);
35
36
37
      public Marco17() {
38
39
          setSize(1000, 900);
40
          setTitle(" Ejercicio 3.17");
41
          setLocationRelativeTo(null);
42
          getContentPane().setBackground(fondo1);
43
44
          setLayout(new BorderLayout());
45
46
          // -----Espacios en los Bordes-----
47
          add(new JLabel("
                                    "), BorderLayout.NORTH);
          add(new JLabel("
                                    "), BorderLayout.SOUTH);
48
          add(new JLabel("
                                    "), BorderLayout.EAST);
49
          add(new JLabel("
                                    "), BorderLayout.WEST);
50
51
          // -----Espacios en los Bordes-----
52
          add(new Ventana17(fondo1), BorderLayout.CENTER);
53
54
55
          setVisible(true);
56
      }
57 }
59 class Ventana17 extends JPanel {
60
      JPanel lamina1, lamina2, laminaGrid, laminaGroup1, laminaGroup2, laminaSeparator,
61
  laminaSpinners;
```

```
_17_SintaxisRadio_EjemploRadio_PruebaCombo_MarcoSlider_MarcoSpinner.java
 62
       JLabel texto1, texto2;
 63
       JRadioButton radioPequeño, radioMediano, radioGrande, radioMuyGrande, radioNegrita,
   radioCursiva, radioNormal;
       JComboBox comboFuentes;
 64
 65
       JSlider slider;
       JSpinner spinnerFuente, spinnerTamanio;
 66
 67
       String fuentes[] =
   GraphicsEnvironment.getLocalGraphicsEnvironment().getAvailableFontFamilyNames();
 68
       String fuenteTipo = "Arial";
 69
       int fuenteFormat = 0;
 70
       int fuenteSize = 30;
 71
 72
       public Ventana17(Color fondo1) {
 73
 74
          setBackground(fondo1);
 75
          add(laminaGrid = new JPanel());
 76
          laminaGrid.setLayout(new GridLayout(2,1));
 77
 78
          // -----LÁMINA 1------
 79
          laminaGrid.add(lamina1 = new JPanel());
          lamina1.setPreferredSize(new Dimension(800,200));
 80
 81
          lamina1.setLayout(new GridLayout(2,1));
 82
          lamina1.setBackground(fondo1);
 83
          // -----TEXTO PRINCIPAL------
 84
          lamina1.add(texto1 = new JLabel("\"Todo es un pensamiento.\""));
 85
 86
          texto1.setFont(new Font(fuenteTipo, fuenteFormat, fuenteSize));
 87
          texto1.setHorizontalAlignment(JLabel.CENTER);
 88
          lamina1.add(texto2 = new JLabel("Buda
                                                            "));
          texto2.setFont(new Font("Arial", Font.PLAIN, 22));
 89
 90
          texto2.setHorizontalAlignment(JLabel.RIGHT);
 91
 92
          // -----LÂMINA 2-----
 93
          laminaGrid.add(lamina2 = new JPanel());
          lamina2.setLayout(new GridLayout(9,1));
 95
96
          // -----GRUPO 1 RADIOS-----
97
          lamina2.add(laminaGroup1 = new JPanel());
98
          laminaGroup1.add(radioPequeño = new JRadioButton("Pequeña", false));
99
          laminaGroup1.add(radioMediano = new JRadioButton("Mediana", true));
100
          laminaGroup1.add(radioGrande = new JRadioButton("Grande", false));
101
          laminaGroup1.add(radioMuyGrande = new JRadioButton("Muy Grande", false));
102
103
          ButtonGroup grupo1 = new ButtonGroup();
104
          grupo1.add(radioPequeño);
105
          grupo1.add(radioMediano);
          grupo1.add(radioGrande);
106
          grupo1.add(radioMuyGrande);
107
108
109
          lamina2.add(laminaSeparator = new JPanel());
                                                         "));
          laminaSeparator.add(new JLabel("
110
                                                         "));
          laminaSeparator.add(new JLabel('
111
112
          // -----GRUPO 2 RADIOS------
113
          lamina2.add(laminaGroup2 = new JPanel());
114
          laminaGroup2.add(radioNegrita = new JRadioButton("Negrita", false));
115
116
          laminaGroup2.add(radioCursiva = new JRadioButton("Cursiva", false));
          laminaGroup2.add(radioNormal = new JRadioButton("Normal", true));
117
118
          ButtonGroup grupo2 = new ButtonGroup();
119
120
          grupo2.add(radioNegrita);
121
          grupo2.add(radioCursiva);
```

```
_17_SintaxisRadio_EjemploRadio_PruebaCombo_MarcoSlider_MarcoSpinner.java
122
           grupo2.add(radioNormal);
123
124
           lamina2.add(laminaSeparator = new JPanel());
125
                                                          "));
           laminaSeparator.add(new JLabel("
126
127
           // -----SPINNERS-----
128
           lamina2.add(laminaSpinners = new JPanel());
129
           laminaSpinners.add(spinnerFuente = new JSpinner(new SpinnerListModel(fuentes)));
130
           spinnerFuente.setPreferredSize(new Dimension(150,30));
131
           laminaSpinners.add(spinnerTamanio = new JSpinner(new SpinnerNumberModel(30, 10, 60,
132
   2)));
133
           spinnerTamanio.setPreferredSize(new Dimension(50,30));
134
135
           lamina2.add(laminaSeparator = new JPanel());
136
           laminaSeparator.add(new JLabel("
                                                          "));
137
138
           // -----SLIDER-----
139
           lamina2.add(slider = new JSlider(10, 60, 30));
140
           slider.setMajorTickSpacing(5);
141
           slider.setMinorTickSpacing(1);
142
           slider.setPaintLabels(true);
143
           slider.setPaintTicks(true);
144
145
           lamina2.add(laminaSeparator = new JPanel());
                                                          "));
146
           laminaSeparator.add(new JLabel("
147
           // -----COMBOBOX-----
148
149
           lamina2.add(comboFuentes = new JComboBox());
150
           for (int i = 0; i < fuentes.length; i++) {</pre>
              comboFuentes.addItem(fuentes[i]);
151
152
           }
153
           // -----OYENTES-----
154
155
          ActionOyente oyenteAction = new ActionOyente();
156
157
          radioPequeño.addActionListener(oyenteAction);
158
           radioMediano.addActionListener(oyenteAction);
159
           radioGrande.addActionListener(oyenteAction);
160
           radioMuyGrande.addActionListener(oyenteAction);
161
           radioNegrita.addActionListener(oyenteAction);
162
           radioCursiva.addActionListener(oyenteAction);
163
           radioNormal.addActionListener(oyenteAction);
164
           comboFuentes.addActionListener(oyenteAction);
165
166
          ChangeOyente oyenteChange = new ChangeOyente();
167
168
           slider.addChangeListener(oyenteChange);
169
           spinnerFuente.addChangeListener(oyenteChange);
170
           spinnerTamanio.addChangeListener(oyenteChange);
       }
171
172
173
       // -----OYENTES ACTION-----
174
       class ActionOyente implements ActionListener {
175
176
           public ActionOyente() {
177
178
179
          @Override
          public void actionPerformed(ActionEvent e) {
180
181
              if (e.getSource() == comboFuentes) fuenteTipo =
182
```

```
_17_SintaxisRadio_EjemploRadio_PruebaCombo_MarcoSlider_MarcoSpinner.java
   (String)comboFuentes.getSelectedItem();
183
184
              if (radioNegrita.isSelected()) fuenteFormat = 1;
              if (radioCursiva.isSelected()) fuenteFormat = 2;
185
              if (radioNormal.isSelected()) fuenteFormat = 0;
186
187
188
               if (radioPequeño.isSelected()) fuenteSize = 20;
               if (radioMediano.isSelected()) fuenteSize = 30;
189
190
              if (radioGrande.isSelected()) fuenteSize = 40;
191
              if (radioMuyGrande.isSelected()) fuenteSize = 50;
192
              texto1.setFont(new Font(fuenteTipo, fuenteFormat, fuenteSize));
193
194
          }
195
       }
196
197
       // -----OYENTES CHANGE-----
198
       class ChangeOyente implements ChangeListener {
199
200
          @Override
201
          public void stateChanged(ChangeEvent e) {
202
203
               if (e.getSource() == slider) fuenteSize = (int) slider.getValue();
204
              if (e.getSource() == spinnerTamanio) fuenteSize = (int)
   spinnerTamanio.getValue();
205
              if (e.getSource() == spinnerFuente) fuenteTipo = (String)
```

texto1.setFont(new Font(fuenteTipo, fuenteFormat, fuenteSize));

spinnerFuente.getValue();

}

}

206 207

208

209

210 }

_18_MarcoMenu.java

```
1 package Graficos;
 3 import java.awt.BorderLayout;
4 import java.awt.Color;
 5 import javax.swing.JFrame;
 6 import javax.swing.JLabel;
 7 import javax.swing.JMenu;
8 import javax.swing.JMenuBar;
9import javax.swing.JMenuItem;
10 import javax.swing.JPanel;
11 import javax.swing.JSeparator;
13 public class _18_MarcoMenu {
14
      public static void main(String[] args) {
15
16
17
          Marco18 ventana = new Marco18();
18
          ventana.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
19
      }
20 }
21
22 class Marco18 extends JFrame {
23
24
      Color fondo = new Color(230, 204, 255);
25
26
      public Marco18() {
27
28
          setSize(600, 500);
29
          setTitle(" Marco Menú");
30
          setLocationRelativeTo(null);
          getContentPane().setBackground(fondo);
31
32
33
          setLayout(new BorderLayout());
34
          // -----Espacios en los Bordes-----
35
                                    "), BorderLayout.NORTH);
          add(new JLabel("
36
          add(new JLabel("
                                    "), BorderLayout.SOUTH);
37
                                    "), BorderLayout. EAST);
          add(new JLabel("
38
          add(new JLabel("
                                    "), BorderLayout.WEST);
39
40
          // -----Espacios en los Bordes-----
41
42
          add(new Ventana18(fondo), BorderLayout.CENTER);
43
44
          setVisible(true);
45
      }
46 }
47
48 class Ventana18 extends JPanel {
49
50
      JMenuBar barra;
51
      JMenu menu1, menu2, menu3, menu4, menu5;
      JMenuItem item1, item2, item3, item4, item5, item6, item7, item8, item9, item10;
52
53
      JSeparator separador;
54
55
      public Ventana18(Color fondo) {
56
57
          setBackground(fondo);
58
59
          add(barra = new JMenuBar());
60
          barra.add(menu1 = new JMenu("Inicio"));
61
          barra.add(menu2 = new JMenu("Servicios"));
62
```

```
_18_MarcoMenu.java
```

```
63
          barra.add(menu3 = new JMenu("Galería"));
64
          barra.add(menu4 = new JMenu("Contacto"));
65
              menu1.add(item1 = new JMenuItem("Ofertas"));
66
              menu1.add(item2 = new JMenuItem("Productos"));
67
              menu1.addSeparator();
68
              menu1.add(menu5 = new JMenu("Novedades"));
69
70
                  menu5.add(item10 = new JMenuItem("Año 2020"));
71
72
              menu2.add(item4 = new JMenuItem("Básicos"));
              menu2.add(item5 = new JMenuItem("Exclusivos"));
73
              menu2.add(item6 = new JMenuItem("Outlet"));
74
75
76
              menu3.add(item7 = new JMenuItem("Clientes"));
77
              menu3.add(item8 = new JMenuItem("Eventos"));
78
              menu4.add(item9 = new JMenuItem("Reservas"));
79
80
      }
81 }
```