GUI+užduotys

MK

Kitos GUI alternatyvos

http://www.eclipse.org/swt/

http://buoy.sourceforge.net/

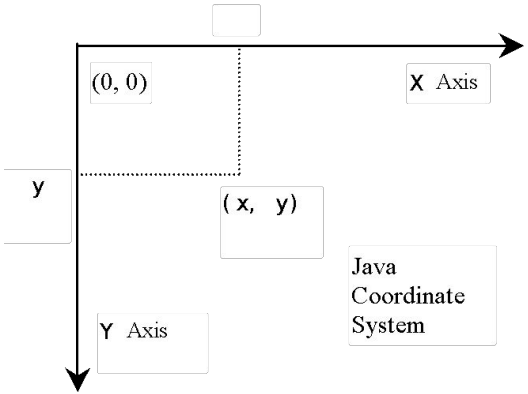
http://www.oracle.com/technetwork/java/javase/overview/index.html

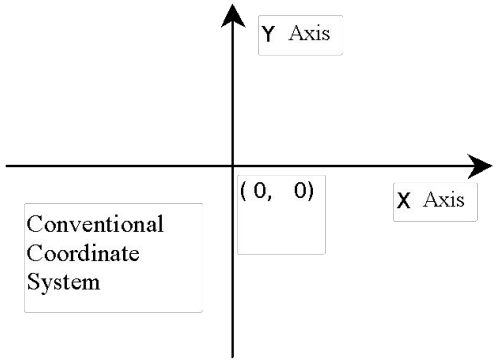
Išdėstymo valdymas

- Java kalboje komponentų išdėstymą valdo programos kodas, o ne resursai (kaip kitose sistemose)
- Komponentai išdėstomi ne absoliučiose koordinatėse, tai nusako išdėstymo *menedžeris*
- Skirtinguose išdėstymo menedžeriuose išdėstoma skirtingai
- Keičiant lango dydį išdėstymas, forma, dydis kinta

Display a Shape

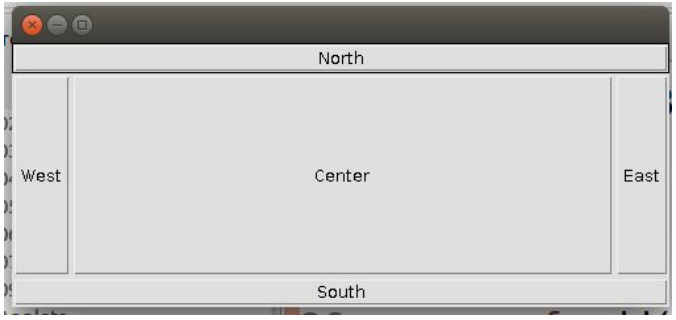
This example displays a circle in the center of the pane.





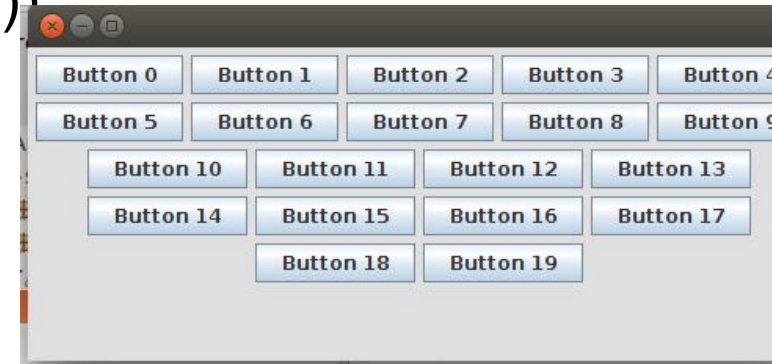
PVZ

```
public class Isdestymas {
	public static void main(String[] args) {
		Frame f = new Frame();
		f.setBounds(100, 100, 500, 200);
		f.add(BorderLayout.NORTH, new Button("North"));
		f.add(BorderLayout.SOUTH, new Button("South"));
		f.add(BorderLayout.EAST, new Button("East"));
		f.add(BorderLayout.WEST, new Button("West"));
		f.add(BorderLayout.CENTER, new Button("Center"));
		f.setVisible(true);
	}
}
```



FlowLayout

```
class Isdestymas2 {
    public static void main(String[] args) {
        JFrame f = new JFrame();
        f.setBounds(100, 100, 500, 200);
        f.setLayout(new FlowLayout());
        for (int i = 0; i < 20; i++) {
            f.add(new Button("Button " + i));
        }
        f.setVisible(true);
    }
}
```



U9 Išdestymas GridLayout

.setLayout(new GridLayout(10,2));

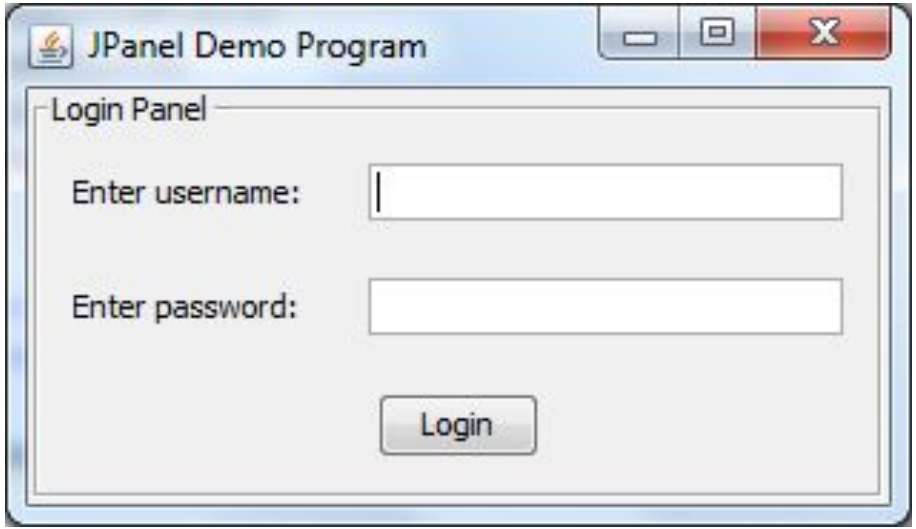
```
JFrame f = new JFrame();

f.setBounds(100, 100, 500, 200);

f.add()********

f.setVisible(true);
```

JPanel

`JPanel` is a Swing's lightweight container which is used to group a set of components together. `JPanel` is a pretty simple component which, normally, does not have a GUI (except when it is being set an opaque background or has a visual border).

In this article, we summarize the common practices when working with `JPanel` in Swing. At the end, we will create a sample program looks like this:

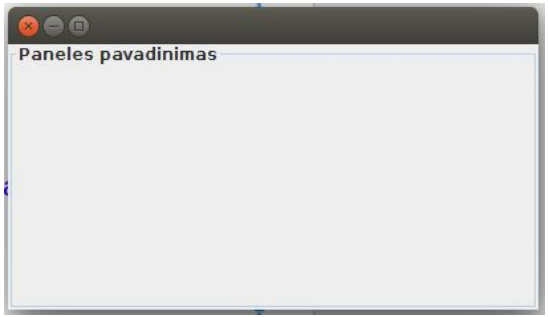
http://www.codejava.net/java-se/swing/jpanel-basic-tutorial-and-examples


JPanel Demo Program
Login Panel
Enter username:
Enter password:
Login

createTitledBorder

```
panele.setBorder(BorderFactory
                .createTitledBorder("Paneles pavadinimas"));
```

```
class Pa extends JFrame {
        Pa() {
            JPanel panele = new JPanel();
            panele.setBorder(BorderFactory.createTitledBorder("Paneles pavadinimas"));
            getContentPane().add(panele);    //add(panele);
            setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            setBounds(200, 200, 400, 200);
            setVisible(true);
        }
}
```

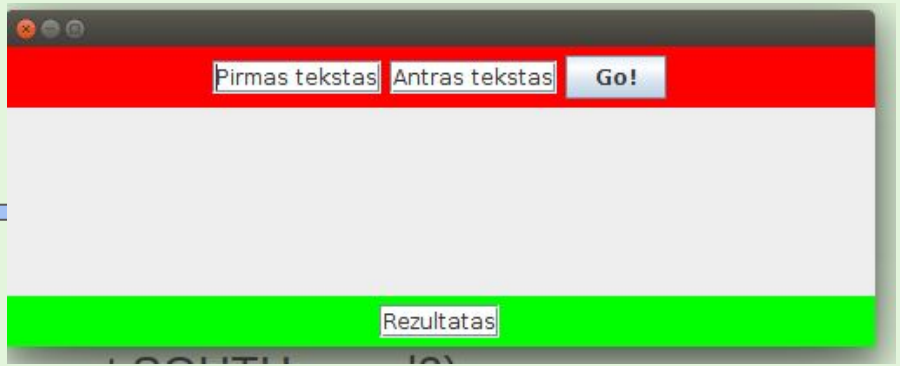


Panel awt

Panel is the simplest container class. A panel provides space in which an application can attach any other component, including other panels.

The default layout manager for a panel is the FlowLayout layout manager.

U10 Panel



1. Reikalinga awt
   a. Forma “Frame”
   b. Du *paneliai* “Panel”
   c. Pirmame
      i. Du teksto įvedimo laukai “TextField”
      ii. Mygtukas Button
      iii. *Panele* orentuotas į šiaurę frame.add(BorderLayout.NORTH, panel1);
      iv. Rudonos spalvos
   d. Antrama panele
      i. Teksto laukas “TextField”
      ii. *Panele* orentuotas į pietus frame.add(BorderLayout.SOUTH,panel2);
      iii. Žalios spalvos

lt.codeacademy.awt.U2

U11 JPanel swing

1. Reikalinga awt
   a. Forma “JFrame”
   b. Du paneliai “JPanel”
   c. Pirmame
      i. Du teksto įvedimo laukai “JTextField”
      ii. Mygtukas JButton
      iii. Panele orentuotas į šiaurę **add(BorderLayout.NORTH,panel1);**
      iv. Rudonos spalvos
   d. Antrama panele
      i. Teksto laukas “JTextField”
      ii. Panele orentuotas į pietus **add(BorderLayout.SOUTH,panel2);**
      iii. Žalios spalvos

lt.codeacademy.awt.U2

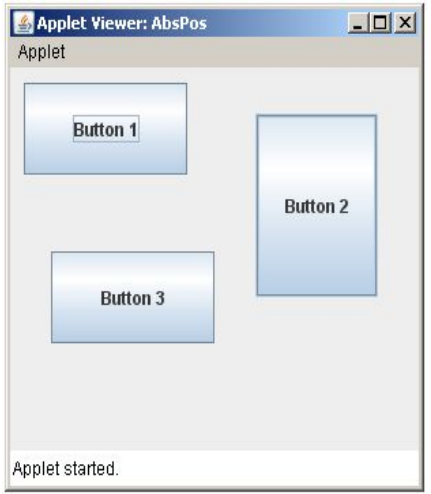
U12 JPanel swing

1. Reikalinga awt
   a. Forma “JFrame”
   b. Du paneliai “JPanel”
   c. Pirmame
      i. Du teksto įvedimo laukai “JTextField”
      ii. Mygtukas Button
      iii. Panele orentuotas į šiaurę frame.add(BorderLayout.NORTH,panel1);
      iv. Rudonos spalvos
   d. Antrama panele
      i. Teksto laukas “JTextField”
      ii. Panele orentuotas į pietus frame.add(BorderLayout.SOUTH,panel2);
      iii. Žalios spalvos
2. Action -> ??

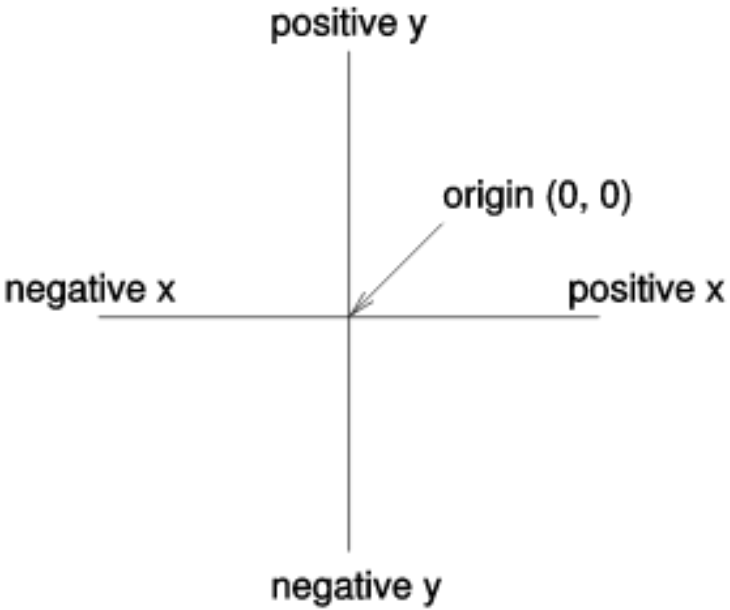
lt.codeacademy.awt.U2

Talpinimas absoliučiose koordinatėse

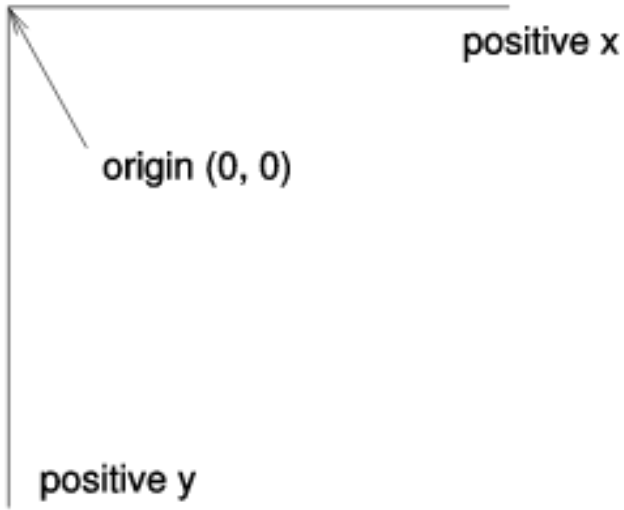
java.awt.Component.setBounds(int x, int y, int width, int height)



Cartesian coordinates



Java graphical coordinates



U13 sveikų skaičių skaičiuotuvas ND

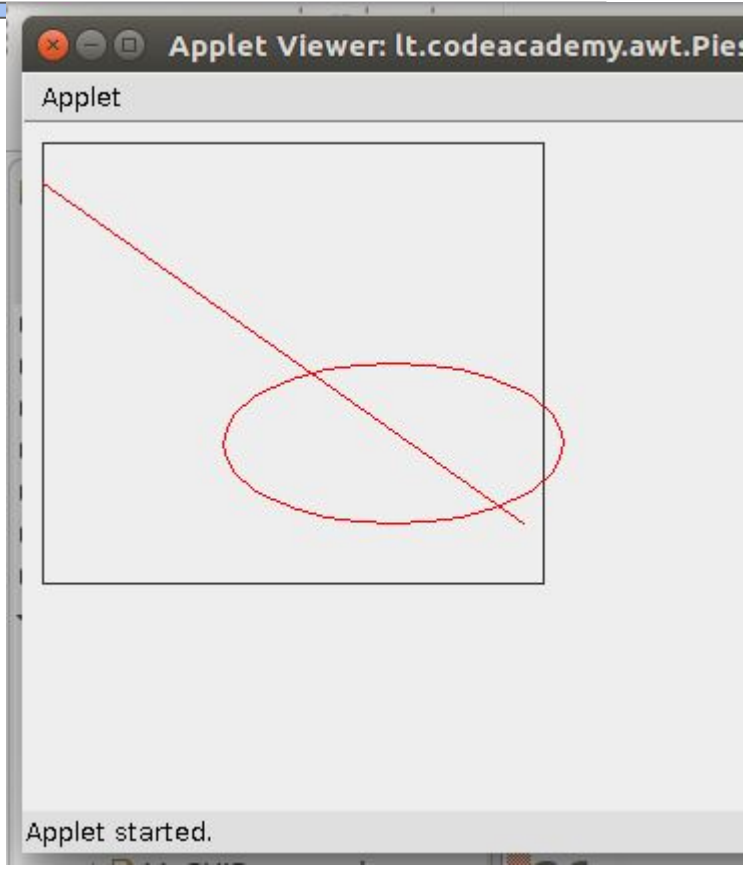
ND

Grafika: naujo komponento kūrimas

```
class Piesinys extends Component {
    public void paint(Graphics g) {
        g.drawRect(10, 10, 250, 220);
        g.setColor(new Color(255, 0, 0));
        g.drawLine(10, 30, 250, 200);
        g.drawOval(100, 120, 170, 80);
    }
}
```

Piesinys testuojame

```
public class Piesimas extends JApplet {
1       public void init() {
                getContentPane().add(new Piesinys());
        }
}
class PTest {
        public static void main(String[] args) {
2               Frame f = new Frame();
                f.add(new Piesinys());
                f.setVisible(true);
        }
}
class PTestJ {
        public static void main(String[] args) {
3               JFrame f = new JFrame();
                f.add(new Piesinys());
                f.setVisible(true);
        }
}
```



U14 piešimas **swing** (nupiešti 3 kvadratus)

```
class Kvadratai extends JFrame {
        Kvadratai() {
                JPanel panele = new JPanel() {
                        @Override
                        protected void paintComponent(Graphics g) {
                                super.paintComponent(g);
                                //g
                        }
                };
                panele.setBorder(BorderFactory.createTitledBorder("Paneles pavadinimas"));
                add(panele);
                setLayout(new BoxLayout(getContentPane(), BoxLayout.Y_AXIS));
                setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
                setBounds(200, 200, 400, 200);
                setVisible(true);
        }
}
```

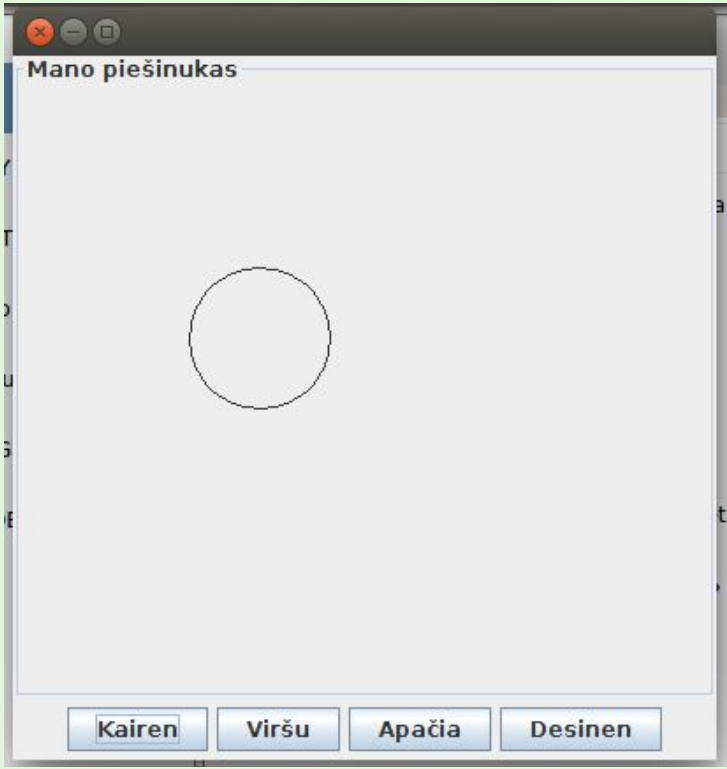
```
public class U5 {
        public static void main(String[] args) {
                new Kvadratai();
        }}
```

U15 piešimas

ND

Forma turi turėti du panel’ius

1. Pirmame viršutineme nupieškime apskritimą
2. Antrame keturius mygtukus
3. Mygtuku pagalba valdome apskritimo pozisija



U16

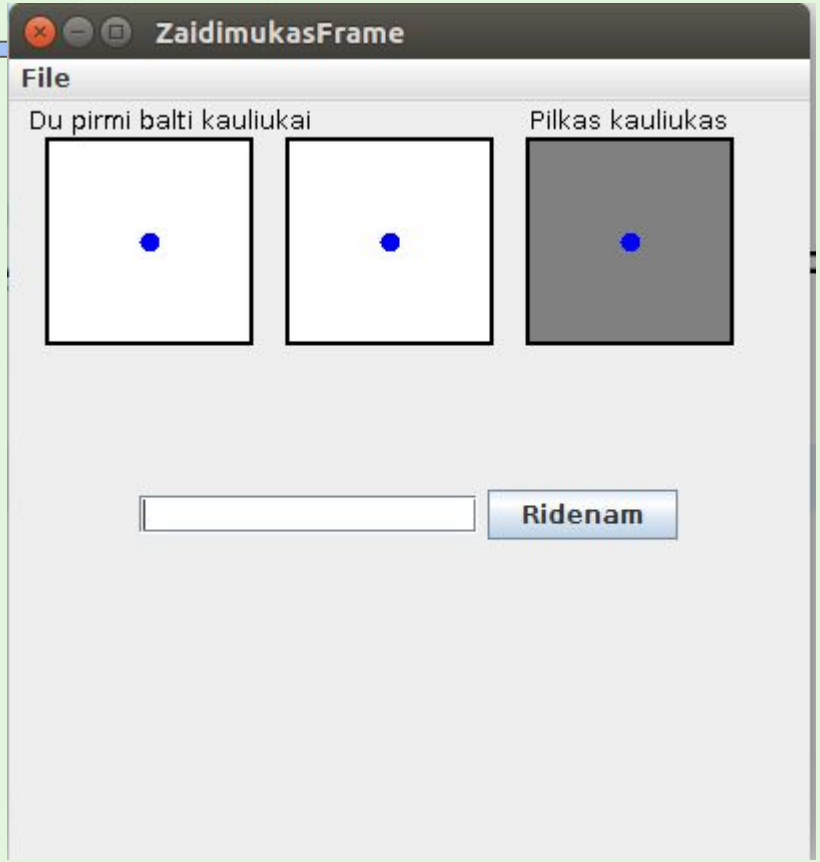

Privaloma Informacija
Vardas
Pavardė
Papildoma Informacija
El. paštas
Komentaras
Išsaugoti
Atšaukti

U17 Kauliukai

ND

Turime tris kauliukus: du balti ir pilkas

((baltas)+(baltas))*(pilkas)



U18

- BorderLayout
- BoxLayout
- CardLayout
- FlowLayout
- GridBagLayout
- GridLayout
- GroupLayout
- SpringLayout

http://www.java2s.com/Tutorial/Java/0240__Swing/HowtoUseGridLayout.htm

http://docs.oracle.com/javase/tutorial/uiswing/components/table.html

http://www.java2s.com/Code/Java/Swing-Components/ButtonTableExample.htm

http://www.java2s.com/Code/Java/Swing-Components/TableRowHeaderExample.htm