

```

import javax.swing.*;
class ap1
{
    public static void main(String args[])
    {
        JFrame win=new JFrame("Seminar 3 - 2022");
        win.setSize(300,200);
        win.setLocation(20,20);
        win.setResizable(false);
        win.getContentPane().add(new JLabel("Utilizare swing!"));
        win.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        win.setVisible(true);
    }
}

```

---

```

import javax.swing.*;
import javax.swing.border.TitledBorder;

public class Ap2 extends JFrame
{
    JComponent comp =new JLabel("Test lable");
    public Ap2()
    {
        comp.setBorder(new TitledBorder("Titlu border"));
        getContentPane().add(comp);
        setSize(250,250);
        setVisible(true);
    }
    public static void main(String args[])
    {
        new Ap2();
    }
}

```

---

### Utilizarea diferitelor tipuri de layout

```

import java.awt.*;
import javax.swing.*;
public class Ex1
{
    public static void main(String[] args)
    {
        JFrame f=new JFrame("Dispunere cu FlowLayout");
        JButton b1=new JButton("1");
        JButton b2=new JButton("2");
        JButton b3=new JButton("3");
        JButton b4=new JButton("4");
        JButton b5=new JButton("5");
        JButton b6=new JButton("6");
        Container cp=f.getContentPane();
        cp.setLayout(new FlowLayout());
        cp.add(b1);
    }
}

```

```

        cp.add(b2);
        cp.add(b3);
        cp.add(b4);
        cp.add(b5);
        f.setSize(200,100);
        f.setVisible(true);
    }
}

import java.awt.*;
import javax.swing.*;

public class Ex2
{
    public static void main(String[] args)
    {
        JFrame f=new JFrame("Disponere cu BorderLayout");
        Container cp=f.getContentPane();
        cp.setLayout(new BorderLayout());
        cp.add(new JButton("Nord"),BorderLayout.NORTH);
        cp.add(new JButton("Sud"),BorderLayout.SOUTH);
        cp.add(new JButton("Est"),BorderLayout.EAST);
        cp.add(new JButton("Vest"),BorderLayout.WEST);
        cp.add(new JButton("Centru"),BorderLayout.CENTER);
        f.setSize(300,200);
        f.setVisible(true);
    }
}

import java.awt.*;
import javax.swing.*;

public class ex3
{
    public static void main(String[] args)
    {
        JFrame f=new JFrame("Disponere cu GridLayout");
        Container cp=f.getContentPane();
        cp.setLayout(new GridLayout(3,4));
        cp.add(new JButton("1"));
        cp.add(new JButton("2"));
        cp.add(new JButton("3"));
        cp.add(new JButton("4"));
        cp.add(new JButton("5"));
        cp.add(new JButton("6"));
        cp.add(new JButton("7"));
        f.setSize(300,200);
        f.setVisible(true);
    }
}

import java.awt.*;

```

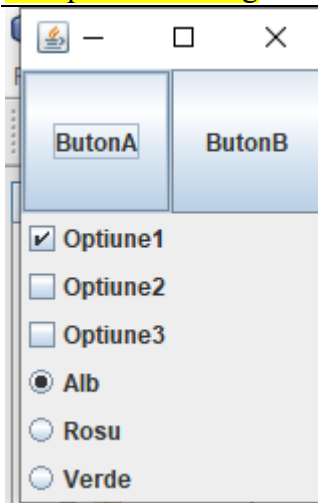
```

import javax.swing.*;

public class ex4
{
    public static void main(String[] args)
    {
        JFrame f=new JFrame("Dispunere cu GridLayout");
        Container cp=f.getContentPane();
        cp.setLayout(new GridLayout(3,2));
        cp.add(new JButton("1"));
        cp.add(new JButton("2"));
        cp.add(new JButton("3"));
        cp.add(new JButton("4"));
        cp.add(new JButton("5"));
        cp.add(new JButton("6"));
        f.setSize(300,200);
        f.setVisible(true);
        cp.add(new JButton("7"));
        cp.add(new JButton("8"));
        if(!cp.isValid())
            cp.validate();
    }
}

```

## Componente Swing



```

import javax.swing.*;
import java.awt.*;

public class app1_1 extends JFrame
{
    public static void main(String args[])
    {
        //create obiecte
        app1_1 app = new app1_1();
        Butoane panouButoane = new Butoane();
        CheckBoxuri panouCheckBoxuri = new CheckBoxuri();
    }
}

```

```

ButoaneRadio panouButoaneRadio = new ButoaneRadio();
JPanel panou = new JPanel();
panou.setLayout(new GridLayout(0,1));
//aduagare obiecte la panou
panou.add(panouButoane);
panou.add(panouCheckBoxuri);
panou.add(panouButoaneRadio);
//functii
app.getContentPane().add(panou);
app.pack();
// app.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
app.show();
}
}

```

```

class Butoane extends JPanel

```

```

{
    public Butoane()
    {
        JButton b1 = new JButton("ButonA");
        JButton b2 = new JButton("ButonB");
        this.setLayout(new GridLayout(1,0));
        add(b1);
        add(b2);
    }
}

```

```

class CheckBoxuri extends JPanel

```

```

{
    public CheckBoxuri()
    {
//cream butoane de tip checkBox
        JCheckBox cb1 = new JCheckBox("Optiune1");
        cb1.setSelected(true);//alegem ca primul buton sa fie bifat la pornire
        JCheckBox cb2 = new JCheckBox("Optiune2");
        JCheckBox cb3 = new JCheckBox("Optiune3");

        this.setLayout(new GridLayout(0,1));//dispunere de tip Grid
        add(cb1);//adaugam butonul b1
        add(cb2);//adaugam butonul b2
        add(cb3);//adaugam butonul b3
    }
}

```

```

class ButoaneRadio extends JPanel

```

```

{
    public ButoaneRadio()
    {
// Creare butoane radio
        JRadioButton butonAlb = new JRadioButton("Alb");

```

```
butonAlb.setActionCommand("Alb");
butonAlb.setSelected(true);

JRadioButton butonRosu = new JRadioButton("Rosu");
butonRosu.setActionCommand("Rosu");

JRadioButton butonVerde = new JRadioButton("Verde");
butonVerde.setActionCommand("Verde");
// Adaugarea butoanelor la grup
ButtonGroup group = new ButtonGroup();
group.add(butonAlb);
group.add(butonRosu);
group.add(butonVerde);
// Adaugarea butoanelor la Layout
this.setLayout(new GridLayout(0,1));
add(butonAlb);
add(butonRosu);
add(butonVerde);
}
}
```

---