

# GUI编程

October 27, 2020

# 概述

- 1 Java GUI的简要历史
- 2 Swing组件
- 3 布局管理器
- 4 事件响应

# 从AWT到Swing

- GUI
- AWT
- Swing
- 不只有Swing，还有SWT

# 顶层容器

# JLabel

# JTextField

# JButton

# JCheckBox



# JRadioButton

# 什么是布局管理器？

- 概念
- 为什么使用布局管理器？

# BorderLayout

可视化设计器：

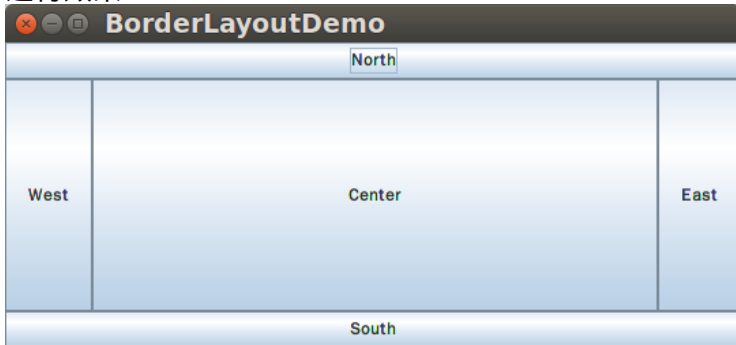
The screenshot shows a Java Swing visual designer interface. On the left, the 'Component Tree' panel lists the hierarchy: 'Form (cn.edu.sdut.softlab.BorderLayout)' containing 'panel1 : JPanel'. Under 'panel1', five buttons are listed: 'northButton : JButton', 'westButton : JButton', 'eastButton : JButton', 'southButton : JButton', and 'centerButton : JButton'. Below the tree is a 'Property' table with columns 'Property' and 'Value'. The 'field name' property is set to 'panel1'. The 'Layout Manager' property is set to 'BorderLayout', which is highlighted with a red box and a red arrow pointing to it from the text '修改为BorderLayout'. To the right of the tree is a visual representation of the BorderLayout layout, showing a central 'Center' area surrounded by 'North', 'South', 'West', and 'East' regions.

Property	Value
field name	panel1
Custom Create	<input type="checkbox"/>
Layout Manager	BorderLayout

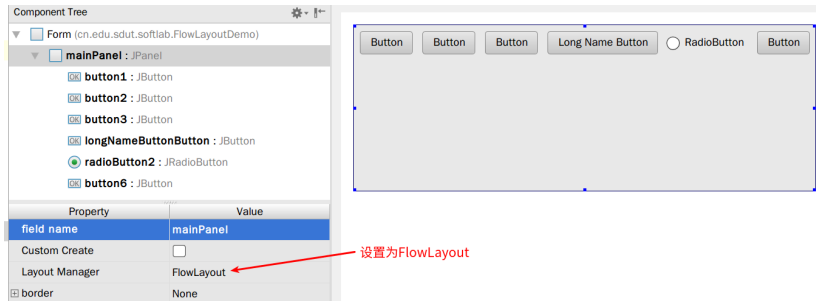
修改为BorderLayout

# BorderLayout

运行效果：



# FlowLayout



# CardLayout

The screenshot shows an IDE with two main panels. On the left is the 'Component Tree' panel, and on the right is a preview of a GUI window titled 'Card with JButton'.

**Component Tree:**

- Form (cn.edu.sdut.softlab.CardLayoutDemo)
  - mainPanel : JPanel
    - comboBox1 : JComboBox
    - cardPanel : JPanel
      - buttonPanel : JPanel
        - button1 : JButton
        - Vertical Spacer
        - button2 : JButton
        - button3 : JButton

Below the tree is a table of properties for the selected component:

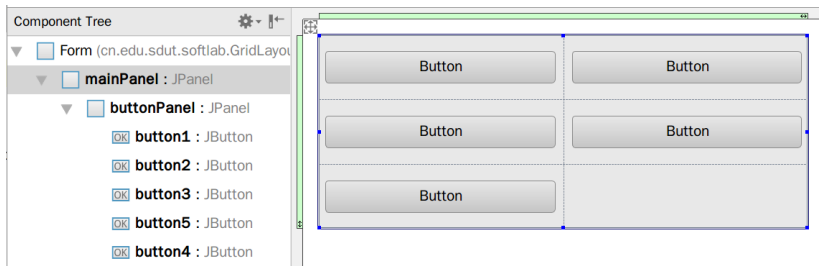
Property	Value
Custom Create	<input type="checkbox"/>
Layout Manager	GridLayoutManager (IntelliJ)
border	None
margins	[0, 0, 0, 0]
Horizontal Gap	-1
Vertical Gap	-1
Same Size Horizontally	<input type="checkbox"/>
Same Size Vertically	<input type="checkbox"/>
Card Name	Card with JButton
Client Properties	

**GUI Window:**

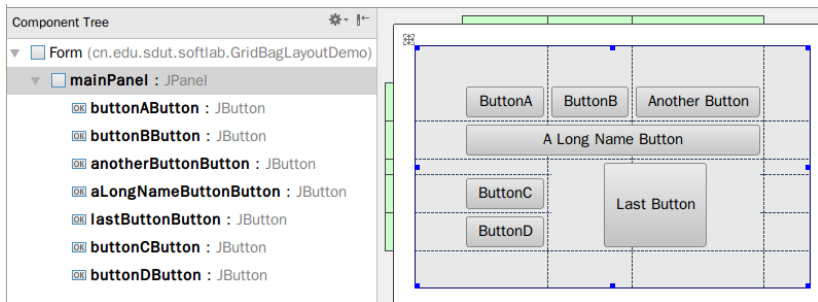
The window titled 'Card with JButton' displays a card layout with three buttons labeled 'Button' arranged horizontally. The card is currently showing the first card.

A red arrow points from the 'Card Name' property in the table to the window title, with the text '设置每张卡片的名字' (Set the name of each card) next to it.

# GridLayout



# GridBagLayout





# 基本原理

