CPT208 Human-Centric Computing

Java Swing - NetBeans IDE GUI Builder
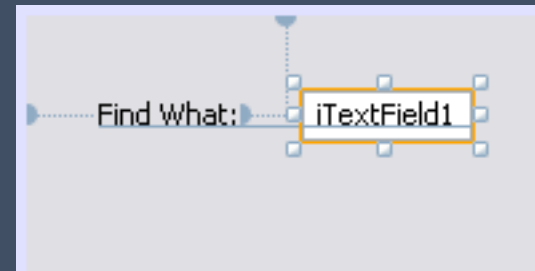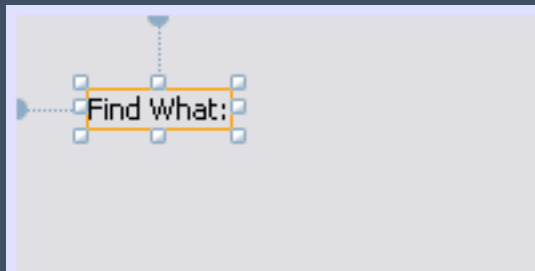
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GUI Builder's windows

- Design Area

  - The GUI Builder's primary window for creating and editing Java GUI forms.

- Navigator

  - Provides a representation of all the components (both visual and non-visual) in your application, as a tree hierarchy.

- Palette

  - A list of available components containing tabs

- Properties Window

  - Displays the properties of the component

Visual Feedback - Anchoring

- Once components have snapped into position, solid anchoring indicators appear illustrating the common alignments shared among components.
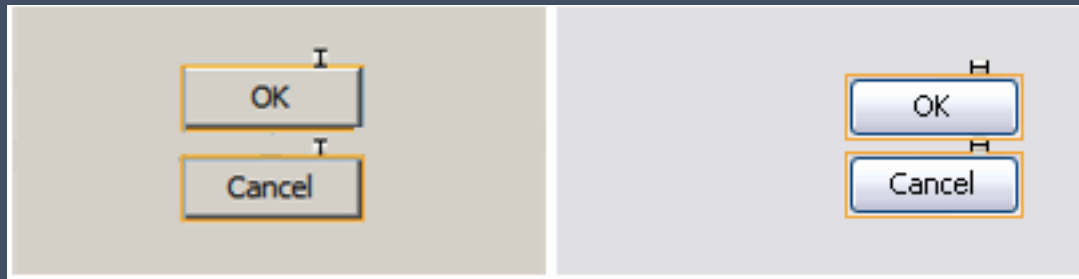
- Container

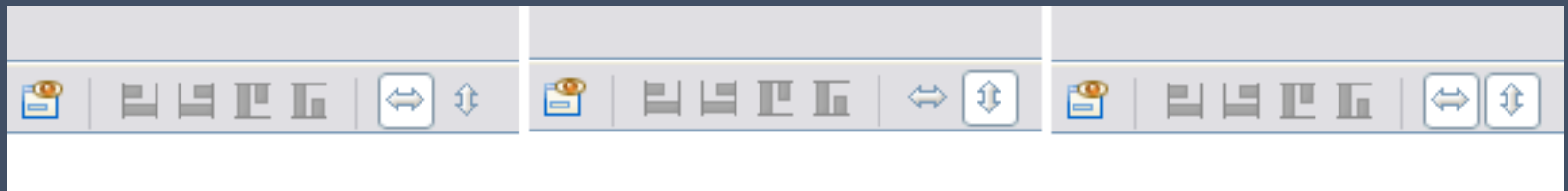- Component

Visual Feedback - Alignment

- **Insets** are the preferred spacings between components and the containers

- **Offsets** are the preferred spacings between adjacent components

- **Baseline** alignment is the preferred relationship between adjacent components containing display text

- **Edge** alignments (Top, Bottom, Left, and Right) are the alignment relationships possible between adjacent components

- **Indentation** alignment is a special alignment relationship in which one component is located below another and offset slightly to the right

- **Preferred distances** (Small, Medium, and Large) are gap sizes between adjacent components

Visual Feedback - sizing

- **Same Sizing** is the state in which a group of components (adjacent or otherwise) are all set to have the same width or height.

- **Auto-Resizing** is the state in which a component's width or height is set to resize dynamically at runtime.

Practice

PersonInfo

First Name [   ]   Family name [   ]

phone [   ]   Nick Name [   ]

Gender ○ Boy   ○ Girl

Birthday [Month ⇕] [Day ⇕]

[Add]

BookList

[   ]   [View]

[Remove]

Practice

- Adding Component

  - JPanel

    - Resize the JPanel

    - Add title borders to the JPanel

  - JLabel

    - Edit the display text

  - JTextField

    - Resize a JTextField

- Adding Multiple Components

  - Add multiple JLabels

- Inserting Components

  - Insert a JTextField between two JLabels

- Baseline Alignment

- JRadioButton (ButtonGroup)

- JComboBox

- JList (JScrollPanel)

Finish Up

- Edit all display text

- Change Variable Name

- Set model property

Source

- Get user input
  - JTextField.getText()
  - ButtonGroup.getElements()
  - Enumeration.hasMoreElements()
    - .nextElement()
  - AbstractButton.isSelected()
    - .getText()
  - JComboBox.getSelectedItem()
  - Jlist.getSelectedIndex()

- DefaultListModel
  - addElement()
  - remove()
- Set display info
  - JTextField.setText()
  - ButtonGroup.clearSelection()
  - AbstractButton.setSelected()
  - JComboBox.setSelectedIndex()
  - JList.setModel()