Homework 11

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**Homework Problem 1**

**Requirements**

Create a program that creates a GUI which allows for two integers entered into text fields to be added at the press of a button and displayed in a label.

**Design**

fields

*pubic C18h1()* //constructor

sets up GUI with a panel, actionlistener, text fields, and buttons and add them to the contentPane

*main(String[] args)*

creates the new GUI specified in the constructor

*private class Listener implements ActionListener*

*public void actionPerformed(ActionEvent e)*

uses changes in the GUI to receive information relevant to addition.

**Iterative Development Steps**

1. Create fields and implement them in the constructor to create the desired GUI.
2. Use an action listener to adjust the GUI according to input in the GUI.

**Tests**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | Input | Expected result | Actual result | Cause |
| GUI Test 1 | 2 5 | Sum is: 7 | Sum is: 7 | Good code |

**Homework Problem 2**

**Requirements**

Adjust the program in figure 18.7 (GUI5) so that the count can be incremented by steps of 1, 2, 3, 4, or 5.

**Design**

fields

*pubic C18h3()* //constructor

sets up GUI with a panel, actionlistener, text fields, and buttons and add them to the contentPane

*main(String[] args)*

creates the new GUI specified in the constructor

*private class Listener implements ActionListener*

*public void actionPerformed(ActionEvent e)*

uses the source of the action events to decide how to count (up or down) (increment of 1, 2, 3, 4, or 5).

**Iterative Development Steps**

1. Create fields and implement them in the constructor to create the desired GUI.
2. Use an action listener to adjust the GUI according to input in the GUI.

**Tests**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | Input | Expected result | Actual result | Cause |
| GUI Test 1 | N/A | JPanel with count button and up/down radio buttons.  Incrementing JPanel.  Count TextField in JPanel. | JPanel with count button and up/down radio buttons.  Incrementing JPanel.  Count TextField in JPanel. | Good code |

**Homework Problem 3**

**Requirements**

Write a program that creates a GUI where the text fields in one panel control the color of the other panel in the frame.

**Design**

fields

*C18h4()* //constructor

sets up GUI with a panel, actionlistener, text fields, and buttons and add them to the contentPane

*main(String[] args)*

creates the new GUI specified in the constructor

*private class Listener implements ActionListener*

*public void actionPerformed(ActionEvent e)*

uses the source of the action events to change the color.

**Iterative Development Steps**

1. Create fields and implement them in the constructor to create the desired GUI.
2. Use an action listener to adjust the GUI according to input in the GUI.

**Tests**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description of test | Input | Expected result | Actual result | Cause |
| GUI Test 1 | 25 0 0 | Color of panel2 changes | Color of panel2 stays the same | Not pressing enter |
| GUI Test 2 | 270 250 250 | Bluish color | Bluish color | Good code |

**References**

An Introduction to Programming Using Java, Anthony J Dos Reis.