**GUI - Glue and Filler**

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| Code:  import javax.swing.event.\*;  import javax.swing.\*;  import java.awt.\*;  import java.awt.event.\*;  public class GUI  {    JFrame f;  JPanel pnlA, pnlB, pnlFrame;  JLabel lblA, lblB;  JTextField txtA, txtB;    public GUI()  {  f = new JFrame();    // JPanel pnlA  pnlA = new JPanel();  pnlA.setBorder(BorderFactory.createLineBorder(Color.RED));  pnlA.setLayout(new BoxLayout(pnlA, BoxLayout.X\_AXIS));    lblA = new JLabel("Label A", JLabel.CENTER);  lblA.setMaximumSize(lblA.getPreferredSize());    txtA = new JTextField(10);  txtA.setText("Text A");  txtA.setMaximumSize(txtA.getPreferredSize());    pnlA.add(lblA);  pnlA.add(Box.createRigidArea(new Dimension(15,20)));  pnlA.add(txtA);    // JPanel pnlB  pnlB = new JPanel();  pnlB.setBorder(BorderFactory.createLineBorder(Color.BLUE));  pnlB.setLayout(new BoxLayout(pnlB, BoxLayout.X\_AXIS));    lblB = new JLabel("Label B", JLabel.CENTER);  lblB.setMaximumSize(lblB.getPreferredSize());    txtB = new JTextField(10);  txtB.setText("Text B");  txtB.setMaximumSize(txtB.getPreferredSize());    pnlB.add(Box.createVerticalStrut(30));  pnlB.add(lblB);  pnlB.add(Box.createHorizontalStrut(15));  pnlB.add(txtB);  pnlB.add(Box.createHorizontalGlue());    // JPanel pnlFrame    pnlFrame = new JPanel();  pnlFrame.setBackground(Color.GREEN);  pnlFrame.setLayout(new BoxLayout(pnlFrame, BoxLayout.Y\_AXIS));  pnlFrame.add(pnlA);  pnlFrame.add(pnlB);    f.add(pnlFrame);  f.pack();  f.setVisible(true);  f.setLocationRelativeTo(null);    }    public static void main(String[] args)  {  new GUI();  }  } |
| Screenshot (original look): |
| Screenshot (stretch the corner of the JFrame so that it gets bigger): |
| **How does the space between the components change for pnlA, pnlB, and pnlFrame when the JFrame is stretched?**  The space inside the JPanels remains the same, but the as the JFrame stretches, the pnlFrame size increases as well however, the size of the pnlA remains fixed and at the center of NORTH. Besides this, the pnlB stretches and fills itself with the remaining area but the lblB and the txtB remains at the center as well. Thus, the labels and JTextFields stays at the same places when the JFrame is strecthed or compressed. |