**GroupLayout**

GroupLayout groups its components and places them in a Container hierarchically.A GroupLayout uses the concept of a group. A group consists of elements. An element of a group may be a component, a gap, or another group.

A gap is an invisible area between two components.

There are two types of groups:

1.Sequential group 2.Parallel group

The GroupLayout class provides methods such as createParallelGroup() and createSequentialGroup() to create groups.There is a group representing the horizontal axis, and a group representing the vertical axis. Each component must exists in both a horizontal and vertical group.

The code given below elaborate a lot on GroupLayout.

**package** layout;

**import** java.awt.\*;

**import** javax.swing.\*;

**import** javax.swing.GroupLayout;

**import** javax.swing.JButton;

**import** javax.swing.JFrame;

**import** javax.swing.JPanel;

**public** **class** GroupLayoutDemo

{

**public** GroupLayoutDemo()

{

makeGroupLayout();

}

**public** **void** makeGroupLayout()

{

JFrame.*setDefaultLookAndFeelDecorated*(**true**);

JFrame frame = **new** JFrame("Group Layout Demo");

JPanel panel = **new** JPanel();

GroupLayout layout = **new** GroupLayout(panel);

panel.setLayout(layout);

JButton b[] = **new** JButton[5];

**for**(**int** i = 0; i<5; i++)

{

b[i] = **new** JButton("Student "+(i+1));

}

GroupLayout.SequentialGroup leftToRight = layout.createSequentialGroup();

GroupLayout.ParallelGroup columnMiddle = layout.createParallelGroup();

columnMiddle.addComponent(b[1]);

columnMiddle.addComponent(b[2]);

columnMiddle.addComponent(b[3]);

leftToRight.addComponent(b[0]);

leftToRight.addGroup(columnMiddle);

leftToRight.addComponent(b[4]);

GroupLayout.SequentialGroup topToBottom = layout.createSequentialGroup();

GroupLayout.ParallelGroup rowTop = layout.createParallelGroup();

rowTop.addComponent(b[0]);

rowTop.addComponent(b[1]);

rowTop.addComponent(b[4]);

topToBottom.addGroup(rowTop);

topToBottom.addComponent(b[2]);

topToBottom.addComponent(b[3]);

layout.setHorizontalGroup(leftToRight);

layout.setVerticalGroup(topToBottom);

frame.add(panel);

frame.setDefaultCloseOperation(JFrame.***EXIT\_ON\_CLOSE***);

frame.setSize(300,200);

frame.setVisible(**true**);

}

**public** **static** **void** main(String[] arguments)

{

**new** GroupLayoutDemo();

}

}//end of the class.