Lab: ButtonDemo from Java Tutorials Code Sample: <http://docs.oracle.com/javase/tutorial/displayCode.html?code=http://docs.oracle.com/javase/tutorial/uiswing/examples/components/ButtonDemoProject/src/components/ButtonDemo.java>

**import** javax.swing.AbstractButton;

**import** javax.swing.JButton;

**import** javax.swing.JPanel;

**import** javax.swing.JFrame;

**import** javax.swing.ImageIcon;

**import** java.awt.event.ActionEvent;

**import** java.awt.event.ActionListener;

**import** java.awt.event.KeyEvent;

**public** **class** ButtonDemo **extends** JPanel **implements** ActionListener {

**protected** JButton b1, b2, b3; // restricted only to subclasses

**public** ButtonDemo() {

ImageIcon leftButtonIcon = *createImageIcon*("images/right.gif");

ImageIcon middleButtonIcon = *createImageIcon*("images/middle.gif");

ImageIcon rightButtonIcon = *createImageIcon*("images/left.gif");

b1 = **new** JButton("Disable middle button", leftButtonIcon);

b1.setVerticalTextPosition(AbstractButton.*CENTER*);  
 //LEFT for left-to-right locales

b1.setHorizontalTextPosition(AbstractButton.*LEADING*);   
 b1.setMnemonic(KeyEvent.*VK\_D*); b1.setActionCommand("disable");

b2 = **new** JButton("Middle button", middleButtonIcon);

b2.setVerticalTextPosition(AbstractButton.*BOTTOM*);

b2.setHorizontalTextPosition(AbstractButton.*CENTER*);

b2.setMnemonic(KeyEvent.*VK\_M*);

b3 = **new** JButton("Enable middle button", rightButtonIcon);

//Use the default text position of CENTER, TRAILING (RIGHT).

b3.setMnemonic(KeyEvent.*VK\_E*); b3.setActionCommand("enable");

b3.setEnabled(**false**);

//Listen for actions on buttons 1 and 3.

b1.addActionListener(**this**); b3.addActionListener(**this**);

b1.setToolTipText("Click this button to disable the middle button.");

b2.setToolTipText("This middle button does nothing when you click it.");

b3.setToolTipText("Click this button to enable the middle button.");

//Add Components to this container, using the default FlowLayout.

add(b1); add(b2); add(b3);

}

**public** **void** actionPerformed(ActionEvent e) {

**if** ("disable".equals(e.getActionCommand())) {

b2.setEnabled(**false**); b1.setEnabled(**false**) b3.setEnabled(**true**);

} **else** {

b2.setEnabled(**true**); b1.setEnabled(**true**); b3.setEnabled(**false**);

}

}

/\*\* Returns an ImageIcon, or null if the path was invalid. \*/

**protected** **static** ImageIcon createImageIcon(String path) {

java.net.URL imgURL = ButtonDemo.**class**.getResource(path);

**if** (imgURL != **null**) {

**return** **new** ImageIcon(imgURL);

} **else** {

System.*err*.println("Couldn't find file: " + path);

**return** **null**;

}

}

**private** **static** **void** createAndShowGUI() {

JFrame frame = **new** JFrame("ButtonDemo");

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

ButtonDemo newContentPane = **new** ButtonDemo();

newContentPane.setOpaque(**true**);

frame.setContentPane(newContentPane);

frame.pack();

frame.setVisible(**true**);

}

**public** **static** **void** main(String[] args) {

//Schedule a job for the event-dispatching thread: creating and showing GUI.

javax.swing.SwingUtilities.*invokeLater*(**new** Runnable() {

**public** **void** run() {

*createAndShowGUI*();

}

});

}

}