

Package src.game

Class SButton

```
java.lang.Object
    java.awt.Component
        java.awt.Container
            javax.swing.JComponent
                javax.swing.AbstractButton
                    javax.swing.JButton
                        src.game.SButton
```

All Implemented Interfaces:

ImageObserver , ItemSelectable , MenuContainer , Serializable , Accessible , SwingConstants

```
public class SButton
extends JButton
```

Custom button class representing a single cell in the Sudoku grid or a button in the number selection pad.

See Also:

Serialized Form

Nested Class Summary

Nested classes/interfaces inherited from class javax.swing.JButton

JButton.AccessibleJButton

Nested classes/interfaces inherited from class javax.swing.AbstractButton

AbstractButton.AccessibleAbstractButton , AbstractButton.ButtonChangeListener

Nested classes/interfaces inherited from class javax.swing.JComponent

JComponent.AccessibleJComponent

Nested classes/interfaces inherited from class java.awt.Container

Container.AccessibleAWTContainer

Nested classes/interfaces inherited from class java.awt.Component

Component.AccessibleAWTComponent , Component.BaselineResizeBehavior ,
Component.BltBufferStrategy , Component.FlipBufferStrategy

Field Summary

Fields inherited from class javax.swing.AbstractButton

```
actionListener , BORDER_PAINTED_CHANGED_PROPERTY , changeEvent , changeListener ,
CONTENT_AREA_FILLED_CHANGED_PROPERTY , DISABLED_ICON_CHANGED_PROPERTY ,
DISABLED_SELECTED_ICON_CHANGED_PROPERTY , FOCUS_PAINTED_CHANGED_PROPERTY ,
HORIZONTAL_ALIGNMENT_CHANGED_PROPERTY , HORIZONTAL_TEXT_POSITION_CHANGED_PROPERTY ,
ICON_CHANGED_PROPERTY , itemListener , MARGIN_CHANGED_PROPERTY ,
MNEMONIC_CHANGED_PROPERTY , model , MODEL_CHANGED_PROPERTY ,
PRESSED_ICON_CHANGED_PROPERTY , ROLLOVER_ENABLED_CHANGED_PROPERTY ,
ROLLOVER_ICON_CHANGED_PROPERTY , ROLLOVER_SELECTED_ICON_CHANGED_PROPERTY ,
SELECTED_ICON_CHANGED_PROPERTY , TEXT_CHANGED_PROPERTY ,
VERTICAL_ALIGNMENT_CHANGED_PROPERTY , VERTICAL_TEXT_POSITION_CHANGED_PROPERTY
```

Fields inherited from class javax.swing.JComponent

```
listenerList , TOOL_TIP_TEXT_KEY , ui , UNDEFINED_CONDITION ,
WHEN_ANCESTOR_OF_FOCUSED_COMPONENT , WHEN_FOCUSED , WHEN_IN_FOCUSED_WINDOW
```

Fields inherited from class java.awt.Component

```
accessibleContext , BOTTOM_ALIGNMENT , CENTER_ALIGNMENT , LEFT_ALIGNMENT ,
RIGHT_ALIGNMENT , TOP_ALIGNMENT
```

Fields inherited from interface java.awt.image.ImageObserver

```
ABORT , ALLBITS , ERROR , FRAMEBITS , HEIGHT , PROPERTIES , SOMEBITS , WIDTH
```

Fields inherited from interface javax.swing.SwingConstants

```
BOTTOM , CENTER , EAST , HORIZONTAL , LEADING , LEFT , NEXT , NORTH , NORTH_EAST ,
NORTH_WEST , PREVIOUS , RIGHT , SOUTH , SOUTH_EAST , SOUTH_WEST , TOP , TRAILING ,
VERTICAL , WEST
```

Constructor Summary

Constructors

Constructor	Description
SButton(int num, boolean boolFlag, int row, int col)	Constructs a Sudoku grid cell button.

Method Summary

[All Methods](#)
[Instance Methods](#)
[Concrete Methods](#)

Modifier and Type	Method	Description
int	<code>getCellNum()</code>	Gets the correct solution number for this cell.
int	<code>getCol()</code>	Gets the column index of this button in the grid.
int	<code>getRow()</code>	Gets the row index of this button in the grid.
void	<code>setDisplayValue(int value)</code>	Updates the value displayed on this cell.
void	<code> setSelectedVisual(boolean selected)</code>	Sets the visual style to indicate whether this cell is selected.

Methods inherited from class javax.swing.JButton

`getAccessibleContext` , `getUIClassID` , `isDefaultButton` , `isDefaultCapable` , `paramString` , `removeNotify` , `setDefaultCapable` , `updateUI`

Methods inherited from class javax.swing.AbstractButton

`actionPropertyChanged` , `addActionListener` , `addChangeListener` , `addImpl` , `addItemListener` , `checkHorizontalKey` , `checkVerticalKey` , `configurePropertiesFromAction` , `createActionListener` , `createActionPropertyChangeListener` , `createChangeListener` , `createItemListener` , `doClick` , `doClick` , `fireActionPerformed` , `fireItemStateChanged` , `fireStateChanged` , `getAction` , `getActionCommand` , `getActionListeners` , `getChangeListeners` , `getDisabledIcon` , `getDisabledSelectedIcon` , `getDisplayedMnemonicIndex` , `getHideActionText` , `getHorizontalAlignment` , `getHorizontalTextPosition` , `getIcon` , `getIconTextGap` , `getItemListeners` , `getLabel` , `getMargin` , `getMnemonic` , `getModel` , `getMultiClickThreshold` , `getPressedIcon` , `getRolloverIcon` , `getRolloverSelectedIcon` , `getSelectedIcon` , `getSelectedObjects` , `getText` , `getUI` , `getVerticalAlignment` , `getVerticalTextPosition` , `imageUpdate` , `init` , `isBorderPainted` , `isContentAreaFilled` , `isFocusPainted` , `isRolloverEnabled` , `isSelected` , `paintBorder` , `removeActionListener` , `removeChangeListener` , `removeItemListener` , `setAction` , `setActionCommand` , `setBorderPainted` , `setContentAreaFilled` , `setDisabledIcon` , `setDisabledSelectedIcon` , `setDisplayedMnemonicIndex` , `setEnabled` , `setFocusPainted` , `setHideActionText` , `setHorizontalAlignment` , `setHorizontalTextPosition` , `setIcon` , `setIconTextGap` , `setLabel` , `setLayout` , `setMargin` , `setMnemonic` , `setMnemonic` , `setModel` , `setMultiClickThreshold` , `setPressedIcon` , `setRolloverEnabled` , `setRolloverIcon` , `setRolloverSelectedIcon` , `setSelected` , `setSelectedIcon` , `setText` , `setUI` , `setVerticalAlignment` , `setVerticalTextPosition`

Methods inherited from class javax.swing.JComponent

```

addAncestorListener , addNotify , addVetoableChangeListener , computeVisibleRect ,
contains , createToolTip , disable , enable , firePropertyChange , firePropertyChange
, firePropertyChange , fireVetoableChange , getActionForKeyStroke , getActionMap ,
getAlignmentX , getAlignmentY , getAncestorListeners , getAutoscrolls , getBaseline ,
getBaselineResizeBehavior , getBorder , getBounds , getClientProperty ,
getComponentGraphics , getComponentPopupMenu , getConditionForKeyStroke ,
getDebugGraphicsOptions , getDefaultLocale , getFontMetrics , getGraphics , getHeight
, getInheritsPopupMenu , getInputMap , getInputMap , getInputVerifier , getInsets ,
getInsets , getListeners , getLocation , getMaximumSize , getMinimumSize ,
getNextFocusableComponent , getPopupLocation , getPreferredSize ,
getRegisteredKeyStrokes , getSize , getToolTipLocation , getToolTipText
, getToolTipText , getTopLevelAncestor , getTransferHandler ,
getVerifyInputWhenFocusTarget , getVetoableChangeListeners , getVisibleRect ,
getWidth , getX , getY , grabFocus , hide , isDoubleBuffered ,
isLightweightComponent , isManagingFocus , isOpaque , isOptimizedDrawingEnabled ,
isPaintingForPrint , isPaintingOrigin , isPaintingTile , isRequestFocusEnabled ,
isValidRoot , paint , paintChildren , paintComponent , paintImmediately ,
paintImmediately , print , printAll , printBorder , printChildren , printComponent ,
processComponentKeyEvent , processKeyBinding , processKeyEvent , processMouseEvent ,
processMouseMotionEvent , putClientProperty , registerKeyboardAction ,
registerKeyboardAction , removeAncestorListener , removeVetoableChangeListener ,
repaint , repaint , requestDefaultFocus , requestFocus , requestFocus ,
requestFocusInWindow , requestFocusInWindow , resetKeyboardActions , reshape ,
revalidate , scrollRectToVisible , setActionMap , setAlignmentX , setAlignmentY ,
setAutoscrolls , setBackground , setBorder , setComponentPopupMenu ,
setDebugGraphicsOptions , setDefaultLocale , setDoubleBuffered ,
setFocusTraversalKeys , setFont , setForeground , setInheritsPopupMenu , setInputMap
, setInputVerifier , setMaximumSize , setMinimumSize , setNextFocusableComponent ,
setOpaque , setPreferredSize , setRequestFocusEnabled , setToolTipText ,
setTransferHandler , setUI , setVerifyInputWhenFocusTarget , setVisible ,
unregisterKeyboardAction , update

```

Methods inherited from class java.awt.Container

```

add , add , add , add , add , addContainerListener , addPropertyChangeListener ,
addPropertyChangeListener , applyComponentOrientation , areFocusTraversalKeysSet ,
countComponents , deliverEvent , doLayout , findComponentAt , findComponentAt ,
getComponent , getComponentAt , getComponentAt , getComponentCount , getComponents ,
getComponentZOrder , getContainerListeners , getFocusTraversalKeys ,
getFocusTraversalPolicy , getLayout , getMousePosition , insets , invalidate ,
isAncestorOf , isFocusCycleRoot , isFocusCycleRoot , isFocusTraversalPolicyProvider ,
isFocusTraversalPolicySet , layout , list , list , locate , minimumSize ,
paintComponents , preferredSize , printComponents , processContainerEvent ,
processEvent , remove , remove , removeAll , removeContainerListener ,
setComponentZOrder , setFocusCycleRoot , setFocusTraversalPolicy ,
setFocusTraversalPolicyProvider , transferFocusDownCycle , validate , validateTree

```

Methods inherited from class java.awt.Component

```

action , add , addComponentListener , addFocusListener , addHierarchyBoundsListener ,
addHierarchyListener , addInputMethodListener , addKeyListener , addMouseListener ,
addMouseMotionListener , addMouseWheelListener , bounds , checkImage , checkImage ,
coalesceEvents , contains , createImage , createImage , createVolatileImage ,
createVolatileImage , disableEvents , dispatchEvent , enable , enableEvents ,
enableInputMethods , firePropertyChange , firePropertyChange , firePropertyChange ,
firePropertyChange , firePropertyChange , firePropertyChange , getBackground ,
getBounds , getColorModel , getComponentListeners , getComponentOrientation ,
getCursor , getDropTarget , getFocusCycleRootAncestor , getFocusListeners ,
getFocusTraversalKeysEnabled , getFont , getForeground , getGraphicsConfiguration ,
getHierarchyBoundsListeners , getHierarchyListeners , getIgnoreRepaint ,
getInputContext , getInputMethodListeners , getInputMethodRequests , getKeyListeners ,
getLocale , getLocation , getLocationOnScreen , getMouseListeners ,
getMouseMotionListeners , getMousePosition , getMouseWheelListeners , getName ,
getParent , getPropertyChangeListeners , getPropertyChangeListeners , getSize ,
getToolkit , getTreeLock , gotFocus , handleEvent , hasFocus , inside ,
isBackgroundSet , isCursorSet , isDisplayable , isEnabled , isFocusable ,
isFocusOwner , isFocusTraversable , isFontSet , isForegroundSet , isLightweight ,
isMaximumSizeSet , isMinimumSizeSet , isPreferredSizeSet , isShowing , isValid ,
isVisible , keyDown , keyUp , list , list , list , location , lostFocus , mouseDown ,
mouseDrag , mouseEnter , mouseExit , mouseMove , mouseUp , move , nextFocus ,
paintAll , postEvent , prepareImage , prepareImage , processComponentEvent ,
processFocusEvent , processHierarchyBoundsEvent , processHierarchyEvent ,
processInputMethodEvent , processMouseWheelEvent , remove , removeComponentListener ,
removeFocusListener , removeHierarchyBoundsListener , removeHierarchyListener ,
removeInputMethodListener , removeKeyListener , removeMouseListener ,
removeMouseMotionListener , removeMouseWheelListener , removePropertyChangeListener ,
removePropertyChangeListener , repaint , repaint , repaint , requestFocus ,
requestFocus , requestFocusInWindow , resize , resize , setBounds , setBounds ,
setComponentOrientation , setCursor , setDropTarget , setFocusable ,
setFocusTraversalKeysEnabled , setIgnoreRepaint , setLocale , setLocation ,
setLocation , setMixingCutoutShape , setName , setSize , setSize , show , show ,
size , toString , transferFocus , transferFocusBackward , transferFocusUpCycle

```

Methods inherited from class java.lang.Object

```

clone , equals , finalize , getClass , hashCode , notify , notifyAll , wait , wait ,
wait

```

Constructor Details

SButton

```

public SButton(int num,
              boolean boolFlag,
              int row,
              int col)

```

Constructs a Sudoku grid cell button.

Parameters:

num - the correct solution number for this cell

boolFlag - true if this is a pre-filled cell, false if user-editable

row - the row index (0-8) in the grid

col - the column index (0-8) in the grid

Method Details

setDisplayValue

```
public void setDisplayValue(int value)
```

Updates the value displayed on this cell. Only used for non-fixed cells; pre-filled cells cannot be modified.

Parameters:

value - the new value to display (0 to clear the cell)

setSelectedVisual

```
public void setSelectedVisual(boolean selected)
```

Sets the visual style to indicate whether this cell is selected. Selected cells display with a blue border; unselected with default border.

Parameters:

selected - true to show selected state, false to show normal state

getRow

```
public int getRow()
```

Gets the row index of this button in the grid.

Returns:

the row index (0-8)

getCol

```
public int getCol()
```

Gets the column index of this button in the grid.

Returns:

the column index (0-8)

getCellNum

```
public int getCellNum()
```

Gets the correct solution number for this cell.

Returns:

the cell's solution number