|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Tree**](http://docs.google.com/package-tree.html) | [**Index**](http://docs.google.com/index-all.html) | [**Help**](http://docs.google.com/help-doc.html) | | |  |
| [**PREV CLASS**](http://docs.google.com/Picture.html)   [**NEXT CLASS**](http://docs.google.com/PictureFrame.html) | [**FRAMES**](http://docs.google.com/index.html?PictureExplorer.html)    [**NO FRAMES**](http://docs.google.com/PictureExplorer.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#4d34og8) |

## Class PictureExplorer

[java.lang.Object](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html)  
 **PictureExplorer**

**All Implemented Interfaces:** [ActionListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/ActionListener.html), [MouseListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html), [MouseMotionListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseMotionListener.html), [EventListener](http://java.sun.com/j2se/1.5/docs/api/java/util/EventListener.html)

public class **PictureExplorer**extends [Object](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html)implements [MouseMotionListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseMotionListener.html), [ActionListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/ActionListener.html), [MouseListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html)

Displays a picture and lets you explore the picture by displaying the row, column, red, green, and blue values of the pixel at the cursor when you click a mouse button or press and hold a mouse button while moving the cursor. It also lets you zoom in or out. You can also type in a row and column value to see the color at that location. Originally created for the Jython Environment for Students (JES). Modified to work with DrJava by Barbara Ericson Also modified to show row and columns by Barbara Ericson

**Author:** Keith McDermottt, gte047w@cc.gatech.edu, Barb Ericson ericson@cc.gatech.edu

|  |  |
| --- | --- |
| **Constructor Summary** | |
| [**PictureExplorer**](http://docs.google.com/PictureExplorer.html#PictureExplorer(DigitalPicture))([DigitalPicture](http://docs.google.com/DigitalPicture.html) picture)            Public constructor |

|  |  |
| --- | --- |
| **Method Summary** | |
| void | [**actionPerformed**](http://docs.google.com/PictureExplorer.html#actionPerformed(java.awt.event.ActionEvent))([ActionEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/ActionEvent.html) a)            Controls the zoom menu bar |
| void | [**changeToBaseOne**](http://docs.google.com/PictureExplorer.html#changeToBaseOne())()            Changes the number system to start at one |
| void | [**checkScroll**](http://docs.google.com/PictureExplorer.html#checkScroll())()            Method to check that the current position is in the viewing area and if not scroll to center the current position if possible |
| [JPanel](http://java.sun.com/j2se/1.5/docs/api/javax/swing/JPanel.html) | [**createLocationPanel**](http://docs.google.com/PictureExplorer.html#createLocationPanel(java.awt.Font))([Font](http://java.sun.com/j2se/1.5/docs/api/java/awt/Font.html) labelFont)            Create the pixel location panel |
| void | [**displayPixelInformation**](http://docs.google.com/PictureExplorer.html#displayPixelInformation(java.lang.String,%20java.lang.String))([String](http://java.sun.com/j2se/1.5/docs/api/java/lang/String.html) xString, [String](http://java.sun.com/j2se/1.5/docs/api/java/lang/String.html) yString)            Method to display the pixel information from the passed x and y but also converts x and y from strings |
| static void | [**main**](http://docs.google.com/PictureExplorer.html#main(java.lang.String%5B%5D))([String](http://java.sun.com/j2se/1.5/docs/api/java/lang/String.html)[] args)            Test Main. |
| void | [**mouseClicked**](http://docs.google.com/PictureExplorer.html#mouseClicked(java.awt.event.MouseEvent))([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)            Method called when the mouse is clicked |
| void | [**mouseDragged**](http://docs.google.com/PictureExplorer.html#mouseDragged(java.awt.event.MouseEvent))([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)            Called when the mouse is dragged (button held down and moved) |
| void | [**mouseEntered**](http://docs.google.com/PictureExplorer.html#mouseEntered(java.awt.event.MouseEvent))([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)            Method called when the component is entered (mouse moves over it) |
| void | [**mouseExited**](http://docs.google.com/PictureExplorer.html#mouseExited(java.awt.event.MouseEvent))([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)            Method called when the mouse moves over the component |
| void | [**mouseMoved**](http://docs.google.com/PictureExplorer.html#mouseMoved(java.awt.event.MouseEvent))([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)            Method called when the mouse is moved with no buttons down |
| void | [**mousePressed**](http://docs.google.com/PictureExplorer.html#mousePressed(java.awt.event.MouseEvent))([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)            Method called when the mouse button is pushed down |
| void | [**mouseReleased**](http://docs.google.com/PictureExplorer.html#mouseReleased(java.awt.event.MouseEvent))([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)            Method called when the mouse button is released |
| void | [**repaint**](http://docs.google.com/PictureExplorer.html#repaint())()            Repaints the image on the scrollpane. |
| void | [**setTitle**](http://docs.google.com/PictureExplorer.html#setTitle(java.lang.String))([String](http://java.sun.com/j2se/1.5/docs/api/java/lang/String.html) title)            Set the title of the frame |
| void | [**zoom**](http://docs.google.com/PictureExplorer.html#zoom(double))(double factor)            Zooms in the on picture by scaling the image. |

|  |
| --- |
| **Methods inherited from class java.lang.**[**Object**](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html) |
| [clone](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#clone()), [equals](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#finalize()), [getClass](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#getClass()), [hashCode](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#hashCode()), [notify](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#notify()), [notifyAll](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#notifyAll()), [toString](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#toString()), [wait](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#wait()), [wait](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#wait(long)), [wait](http://java.sun.com/j2se/1.5/docs/api/java/lang/Object.html#wait(long,%20int)) |

|  |
| --- |
| **Constructor Detail** |

### PictureExplorer

public **PictureExplorer**([DigitalPicture](http://docs.google.com/DigitalPicture.html) picture)

Public constructor

**Parameters:**picture - the picture to explore

|  |
| --- |
| **Method Detail** |

### actionPerformed

public void **actionPerformed**([ActionEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/ActionEvent.html) a)

Controls the zoom menu bar

**Specified by:**[actionPerformed](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/ActionListener.html#actionPerformed(java.awt.event.ActionEvent)) in interface [ActionListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/ActionListener.html) **Parameters:**a - the ActionEvent

### changeToBaseOne

public void **changeToBaseOne**()

Changes the number system to start at one

### checkScroll

public void **checkScroll**()

Method to check that the current position is in the viewing area and if not scroll to center the current position if possible

### createLocationPanel

public [JPanel](http://java.sun.com/j2se/1.5/docs/api/javax/swing/JPanel.html) **createLocationPanel**([Font](http://java.sun.com/j2se/1.5/docs/api/java/awt/Font.html) labelFont)

Create the pixel location panel

**Parameters:**labelFont - the font for the labels **Returns:**the location panel

### displayPixelInformation

public void **displayPixelInformation**([String](http://java.sun.com/j2se/1.5/docs/api/java/lang/String.html) xString,  
 [String](http://java.sun.com/j2se/1.5/docs/api/java/lang/String.html) yString)

Method to display the pixel information from the passed x and y but also converts x and y from strings

**Parameters:**xString - the x value as a string from the useryString - the y value as a string from the user

### main

public static void **main**([String](http://java.sun.com/j2se/1.5/docs/api/java/lang/String.html)[] args)

Test Main. It will explore the beach

### mouseClicked

public void **mouseClicked**([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)

Method called when the mouse is clicked

**Specified by:**[mouseClicked](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html#mouseClicked(java.awt.event.MouseEvent)) in interface [MouseListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html) **Parameters:**e - the mouse event

### mouseDragged

public void **mouseDragged**([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)

Called when the mouse is dragged (button held down and moved)

**Specified by:**[mouseDragged](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseMotionListener.html#mouseDragged(java.awt.event.MouseEvent)) in interface [MouseMotionListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseMotionListener.html) **Parameters:**e - the mouse event

### mouseEntered

public void **mouseEntered**([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)

Method called when the component is entered (mouse moves over it)

**Specified by:**[mouseEntered](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html#mouseEntered(java.awt.event.MouseEvent)) in interface [MouseListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html) **Parameters:**e - the mouse event

### mouseExited

public void **mouseExited**([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)

Method called when the mouse moves over the component

**Specified by:**[mouseExited](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html#mouseExited(java.awt.event.MouseEvent)) in interface [MouseListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html) **Parameters:**e - the mouse event

### mouseMoved

public void **mouseMoved**([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)

Method called when the mouse is moved with no buttons down

**Specified by:**[mouseMoved](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseMotionListener.html#mouseMoved(java.awt.event.MouseEvent)) in interface [MouseMotionListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseMotionListener.html) **Parameters:**e - the mouse event

### mousePressed

public void **mousePressed**([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)

Method called when the mouse button is pushed down

**Specified by:**[mousePressed](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html#mousePressed(java.awt.event.MouseEvent)) in interface [MouseListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html) **Parameters:**e - the mouse event

### mouseReleased

public void **mouseReleased**([MouseEvent](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseEvent.html) e)

Method called when the mouse button is released

**Specified by:**[mouseReleased](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html#mouseReleased(java.awt.event.MouseEvent)) in interface [MouseListener](http://java.sun.com/j2se/1.5/docs/api/java/awt/event/MouseListener.html) **Parameters:**e - the mouse event

### repaint

public void **repaint**()

Repaints the image on the scrollpane.

### setTitle

public void **setTitle**([String](http://java.sun.com/j2se/1.5/docs/api/java/lang/String.html) title)

Set the title of the frame

**Parameters:**title - the title to use in the JFrame

### zoom

public void **zoom**(double factor)

Zooms in the on picture by scaling the image. It is extremely memory intensive.

**Parameters:**factor - the amount to zoom by

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Tree**](http://docs.google.com/package-tree.html) | [**Index**](http://docs.google.com/index-all.html) | [**Help**](http://docs.google.com/help-doc.html) | | |  |
| [**PREV CLASS**](http://docs.google.com/Picture.html)   [**NEXT CLASS**](http://docs.google.com/PictureFrame.html) | [**FRAMES**](http://docs.google.com/index.html?PictureExplorer.html)    [**NO FRAMES**](http://docs.google.com/PictureExplorer.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#4d34og8) |