**CLASS:** GameInterface

**IMPLEMENTATION**

**INHERITS**

javax.swing.JPanel

**USES**

java.awt.BasicStroke, java.awt.Color, java.awt.Graphics, java.awt.Graphics2D, java.awt.Rectangle, java.awt.TexturePaint, java.awt.image.BufferedImage, java.io.File, java.io.IOException, java.util.ArrayList, javax.imageio.ImageIO, javax.swing.JPanel, model.Board, model.BoardLayout

**VARIABLES**

WINDOW\_HEIGHT : int

*Height of the window in pixels*

WINDOW\_WIDTH : int

W*idth of the window in pixels, must be greater than WINDOW\_HEIGHT*

BOARD\_SIZE : int

*Dimension of the board drawn on screen*

TILE\_SIZE : int

*Size for image to be scaled to and used as background*

START\_WIDTH : int

*x-coordinate (in pixels) for left edge of the board*

START\_HEIGHT : int

*x-coordinate (in pixels) for left edge of the board*

RADIUS : int

*Radius of the pieces*

**ACCESS** **PROGRAMS**

GameInterface ( ) : GameInterface

*Constructs a new instance of the GameInterface*

*Triggers instantiation of the state data*

*Should only be called once*

update ( ) : void

*Updates the graphical representation to reflect the current state*

paintComponent (g : Graphics) : void

*paintComponent should not be called directly from within or outside this module*

drawBackground (g : Graphics) : void

*Creates and draws the background*

*Requires image named "texture2.bmp" to be located in resources folder*

drawBoard (g : Graphics) : void

*Creates and draws the board for the game*

*Requires image named "texture3.bmp" to be located in resources folder*

drawNodes (g : Graphics) : void

*Calls methods to draw nodes representing possible piece locations onto the board*

drawCircles (g : Graphics2D) : void

*Draws the nodes in their respective locations on the board*

drawOutlines (g : Graphics2D) : void

*Draws the outline for the nodes on the board*

drawOuterLines (g : Graphics2D) : void

*Draws the connecting lines for the outer nodes*

drawInnerLines (g : Graphics2D) : void

*Draws the connecting lines for the inner nodes*

drawJointLines (g : Graphics2D) : void

*Draws the connecting lines between inner and outer nodes*

drawTemplate (g : Graphics) : void

*Indicates board orientation by drawing pieces of the two colours on the top and bottom of the board, respectively*

drawPieces (g : Graphics) : void

*Uses resource model.Board.getPiece(array of integers)*

*Uses resource model.BoardError*

drawPiece (g : Graphics; x, y, z : int; player : boolean) : void

*Draws pieces that have been placed on the board in their respective locations*

highlightPiece (g : Graphics; x, y, z : int; player : boolean; status: integer) : void

*Highlights any and all pieces that are currently in an error state*

*Multi-color highlighting indicates multiple pieces in the same location*

*A consistent yellow highlight indicates that too many pieces of the colour have been placed on the game board*

getOuterWidth (x, h : int) : int

*Returns the x-coordinate of where to draw a piece located within the outer frame of the board*

getInnerWidth (x, h : int) : int

*Returns the x-coordinate of where to draw a piece located within the inner frame of the board*

getOuterHeight (x, h : int) : int

*Returns the y-coordinate of where to draw a piece located within the outer frame of the board*

getInnerHeight (x, h : int) : int

*Returns the y-coordinate of where to draw a piece located within the inner frame of the board*

**RESTRICTIONS**

*This module is responsible for the graphical user interface of the software product.*

*Only one instance of the class GameInterface should be invoked*

*The paintComponent method overwrites the method in JComponent, and hence visibility cannot be reduced*