**CLASS:** GameController

**IMPLEMENTATION**

**IMPLEMENTS**

java.awt.event.MouseListener

**USES**

java.awt.Color, java.awt.Point, java.awt.MouseEvent, java.awt.MouseListener, javax.swing.JFrame, model.Board, view.UserInterface

**TYPES**

None

**VARIABLES**

gameWindow : JFrame

*Indicate the current game phase*

controlPanel : JFrame

*Button to click before initializing a new game*

board : model.Board

*Button to click to indicate start of piece placement phase*

GM : view.GameInterface

*Button to click to trigger analysis (and validation) of current board layout*

UI : view.UserInterface

*Button to click to switch the colour of pieces being placed on the game board*

**ACCESS** **PROGRAMS**

GameController ( ) : GameController

*Constructs a new instance of the GameController*

*Calls methods to initialize instances of GameInterface and UserInterface*

*Should only be called once*

initGameManager ( ) : void

*Initializes and customizes the GameInterface window*

initUserInterface ( ) : void

*Initializes and customizes the UserInterface window*

startGame ( ) : void

*Enters the game phase of the execution loop*

resetGame ( ) : void

*Resets the state of the board (and game) so a new game can be started from scratch*

analyseGame ( ) : void

*Analyzes the current position of the board to check for errors*

getStartPosition (e : MouseEvent ) : integer

*Takes MouseEvent and uses it to process piece selection*

makeMove (e : MouseEvent ) : void

*Checks and then performs the current player's turn using click*

mouseClicked (e : MouseEvent) : void

*Checks if mouse was positioned over a node when clicked . If the click is within range of the node a piece is placed at that node*

*Tells GameInterface to update itself*

mouseEntered (e: MouseEvent) : void

*Is invoked when mouse enters the window space of a component*

*Checks the state of the UserInterface then updates GameInterface accordingly*

mouseExited (e: MouseEvent) : void

*Is invoked when mouse exited the window space of a component*

mousePressed (e: MouseEvent) : void

*Is invoked when mouse button is pressed while inside the window space of a component*

mouseReleased (e: MouseEvent) : void

*Is invoked when mouse button is released while the window space of a component*

**RESTRICTIONS**

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

*Only one instance of the class UserInterface should be invoked.*