Legend

Green -> New Additions

Red -> Removed from implementation

(Relationship lines marked with X to show removal of relationship)

java.lang.Thread

PerformThread

+ run()

javax.swing.JButton

MainPagePanel

+ addImage(String, int, int, int, int): void
+ createPlayButton(Dimension, String): JButton

javax.swing.JFrame

javax.swing.JLabel

javax.swing.JPanel

MainWindow

- mainWindow: MainWindow
- screenDimension: Dimension
- mainPanel: JPanel
- playerLabel1: JLabel
- playerLabel2: JLabel
- playerStateOfMoveLabel1 : JLabel
- playerStateOfMoveLabel2 : JLabel
- millLabel : JLabel

+ getInstance: MainWindow
+ voidInstance(): void
+ setupHomePageWindow(): void
+ setupPlayPageWindow(): void
+ addAllItems(): void
+ getPlayerLabel1(): JLabel
+ getPlayerLabel2(): JLabel
+ getPlayerStateOfMoveLabel1() : JLabel
+ getPlayerStateOfMoveLabel2() : JLabel
+ getMillLabel() : JLabel

Game

- player1: Player
- player2: Player
- instance: Game
- turn: int

+ getInstance(): Game
+ run(): void
+ checkIfPlayerHasNoValidSlidingMove():boolean
+ getPlayer1(): Player
+ getPlayer2(): Player
+ incrementTurn(): void
+ setPlayers(Actor, Actor): void

<<Enumeration>>
CurrentStateOfMove

PLACING
SLIDING
FLYING

Player

- tokenList: ArrayList<Token>
- currentStateOfMove: CurrentStateOfMove
isComputer: boolean

+ getCurrentStateOfMove(): CurrentStateOfMove
+ getTokenList() : ArrayList<Token>
+ *setPlayerTurn(boolean) : void*
+ addToken(Token) : void
+ getNumberOfTokens(): int
+ areAllTokensPlaced() : boolean
+ updateStateOfMove(): void
+ typeIsComputer(): boolean

HumanPlayer

+ setPlayerTurn(boolean): void

ComputerPlayer

+ setPlayerTurn(boolean): void
+ generateRandomNumber(int): int
+ produceDelay(int): void
+ generateRandomSlidingMove(): Token
+ generateRandomFlyingPlacingMove(): Token
+ generateRandomRemoveMove(): void

<< interface >>
TokenRemoval

+ performRemoval(Token): void

Token

- tokenColour: Color
- DIAMETER: int
- isTokenPlaced: boolean
- canBeUsed: boolean
- intersectionPoint: IntersectionPoint
- currentMoveListener: MouseAdapter
+ toRemove: boolean
+ inMill: boolean
- player : Player

+ paintComponent(Graphics): void
+ addTokenToIntersectionPoint(IntersectionPoint): void
+ getIntersectionPoint(): IntersectionPoint
+ removeFromIntersectionPoint(): void
+ setCanBeUsed(boolean) : void
+ canBeUsed() : boolean
+ changeListener(MouseAdapter,boolean): void
+ setIsTokenPlaced(boolean) : void
+ isTokenPlaced() : boolean
+ removeTemporaryListener :void
+ addPlayer(Player) : void
+ getPlayer() : Player

Move

- tokenInstance: Token
- xCoordinate: int
- yCoordinate: int
- offsetX : int
- offsetY: int

+ mouseReleased(MouseEvent): void
+ mouseDragged(MouseEvent):void
+ getTokenInstance() : Token
+ setOffSets(int,int) : void

FlyingMove

+ mousePressed(MouseEvent): void

SlidingMove

+ mousePressed(MouseEvent): void

GameBoard

- intersectionPointsList: ArrayList<IntersectionPoint>
- instance: GameBoard

+ getInstance(): GameBoard
+ voidInstance(): void
+ setDimensionsOfBoard(Dimension): void
+ addIntersections(int, int): void
+ paintComponent(Graphics): void
+ getIntersectionPoints(): ArrayList<IntersectionPoint>
+ drawLines(int,int,int,int,int,Graphics): void
+ resetAllIntersectionPoints() :void

javax.swing.Utilities.Colors

javax.swing.JComponent

java.awt.event.MouseAdapter

IntersectionPoint

- DIAMETER: int
- tokenInstance: Token
- pointSelected: boolean
- isMoveValid : boolean

+ paintComponent(Graphics): void
+ addToken(Token): void
+ removeToken(): void
+ hasToken(): boolean
+ setPointSelected(boolean): void
+ getTokenInstance() : Token
+ setMoveValid(boolean) : void
+ isMoveValid() : boolean

<< interface >>
NeighbourPointFinder

+ findNeighbouringIntersections(IntersectionPoint, ArrayList<IntersectionPoint>): ArrayList<IntersectionPoint>

MillChecker

- instance: MillChecker
- millTokens: ArrayList<ArrayList<Token>>

+ getInstance(): MillChecker
+ checkMill(IntersectionPoint, boolean): void
+ checkHorizontalVertical(IntersectionPoint, ArrayList<Token>, boolean): ArrayList<Token>
+ changeToRemoveState(Player): void
+ checkIfTokenInMill(Token) : boolean

RemoveMove

- tokenInstance: Token

+ mouseClicked(MouseEvent): void

has
played by
belongs to
uses
displays
contains
placed on
identifies
applies on
listens to