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| Omok |
| +console : Console  + table : int [ ] [ ]  + board : Board  + strat : SmartStrategy  + mode : int  + match : Game  + victory : boolean |
| + main (String[] args) : void |

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| Console |
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| + welcome () : void  + scanMode () : int  + getInput () : int[ ]  + victoryMessage (int playerNumber): void  + askCoordinates () : void  + invalidInput () : void  + drawMessage () : void  + endMessage () : void  + printBoard (int[][] table) : void |

Has – a >

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Has – a >

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| Board  1 |
| -prevPlayer1Mov : int [ ]  -prevPlayer2Mov : int [ ]  + table : int [ ][ ] |
| + validMovement(int x, int y, int player) : Boolean  + getPrevPlayer1Mov () : int  + getPrevPlayer2Mov () : int  + hasWon(int x, int y, int player) : boolean  -helper ( int x, int y, int dx, int dy, int player) : int |

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| Game |
| + players : ArrayList  \* |
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| Player {abstract} |
| 1, 2 |
| + createMove () : int[ ] {abstract}  + getPlayerNumber () : int {abstract} |

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| SmartStrategy |
| -board : Board |
| + makeMove () : int[ ] |

Employs

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| Human  Has – a > |
| -UI : Console  -playerNumber : int |
| + createMove () : int[ ]  + getPlayerNumber () : int |

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| AI |
| -playerNumber : int  -strat : SmartStrategy |
| + createMove () : int[ ]  + getPlayerNumber () : int |

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**Class Descriptions**

**Omok Class**

The class name Omok has main() method and is used as a controller. In main, is where the skeleton of the game is implemented, e.g. a loop that will keep prompting the user(s) for movements until a winning streak or the board is completely full. This class implements Console class to communicate with user(s).

**Console Class**

Console has a variety of void type methods that print different messages or scan input from user, their use depends on what step the main method is at.

**Game Class**

Game’s class importance resides on creating the players that are needed, it receives a parameter which the game mode that the user selected and depending on the selection, the constructor will create two human players, or 1 human and 1 AI player.

**Board Class**

The importance of Board’s class is that using a 2D array and its methods, it keeps track of the status of the game. ValidMovement method checks if the players movements are valid and in case they do, the array is updated. Also, hasWon method and its helper function are in here which take care of detecting a winning streak.

**Player (abstract) Class**

This is the declaration of an abstract class which will inherit its methods to Human and AI classes.

**Human Class**

Human class inherits createMove method from Player’s superclass, using the console parameter it indirectly prompts the user to input his new coordinates.

**AI Class**

Artificial Intelligence Class also inherits createMove methos from Player’s superclass and it implements “SmartStrategy” to make a decision for it’s next move.

**SmartStrategy Class**

This class receives the board as a parameter and after some logical operations its method decide the next AI’s player movement.