# GameScreen + makePosition(IGameBoard, Scanner, char): BoardPosition

### **BoardPosition**

- row: int [1] - column: int [1]

+ BoardPosition(int,int): BoardPosition + getRow(void): int + getColumn(void): int + equals(BoardPosition): boolean + toString(void): String

#### GameBoard

- board: char[1..N] - numRow: int[1] - numCol: int[1]
- + Gameboard(void): GameBoard
- + checkSpace(BoardPosition): boolean + placeMarker(Boardposition, char): void
- + checkForWinner(BoardPosition): boolean
- + checkForDraw(void): boolean
- + checkHorizontalWin(BoardPosition, char): boolean + checkVerticalWin(BoardPosition, char): boolean + checkDiagonalWin(BoardPosition, char): boolean + isPlayerAtPos(BoardPosition, char): boolean

- + whatsAtPos(BoardPosition): char
- + getNumRows(void): int
- + getNumColumns(void): int
- + getNumToWin(void): int

**AbsGameBoard** 

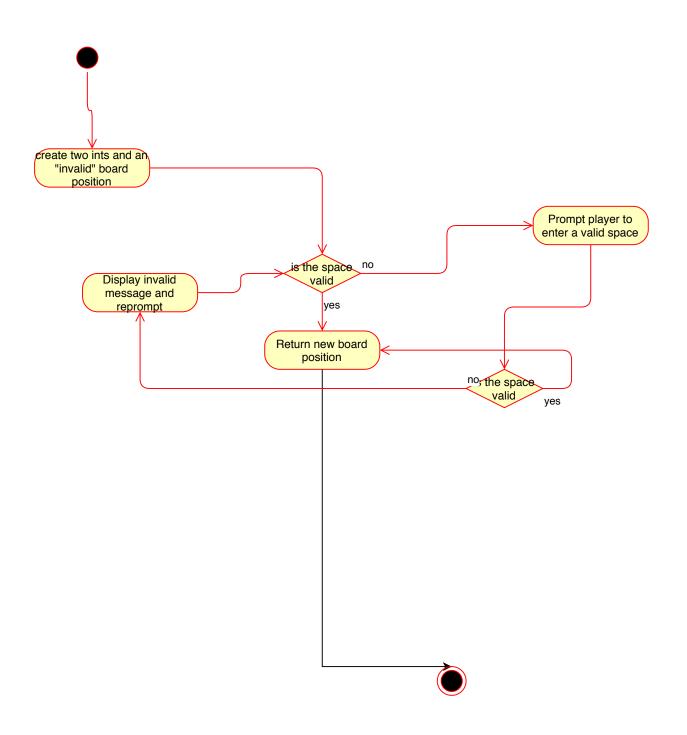
toString(void): String

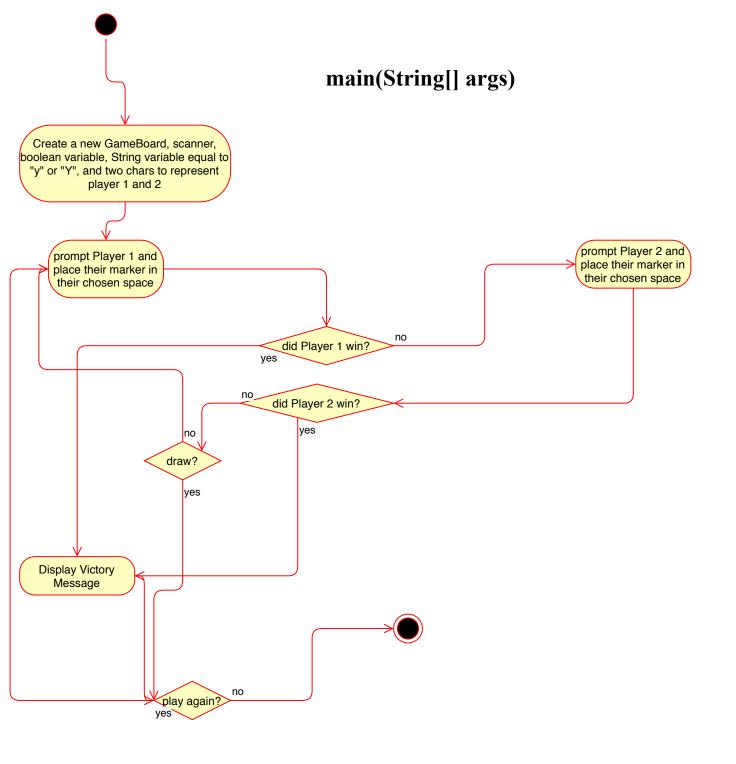
#### «interface» **IGameBoard**

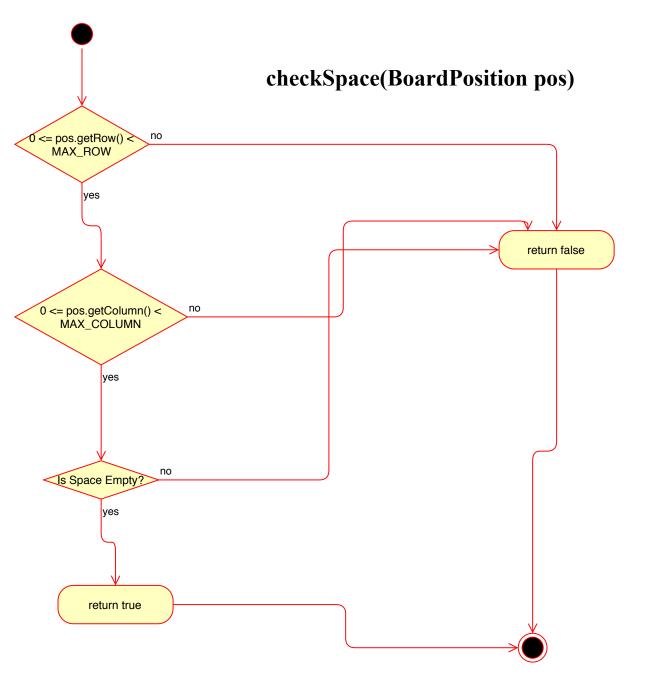
- + checkSpace(BoardPosition): boolean
- + placeMarker(Boardposition, char): void + checkForWinner(BoardPosition): boolean
- + checkForDraw(void): boolean
- + checkHorizontalWin(BoardPosition, char): boolean
- + checkVerticalWin(BoardPosition, char): boolean
- + checkDiagonalWin(BoardPosition, char): boolean
- + isPlayerAtPos(BoardPosition, char): boolean + whatsAtPos(BoardPosition): char + getNumRows(void): int

- + getNumColumns(void):int + getNumToWin(void): int

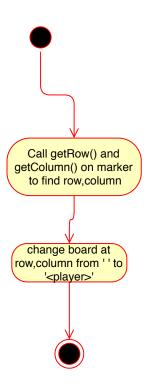
# makePosition(void)

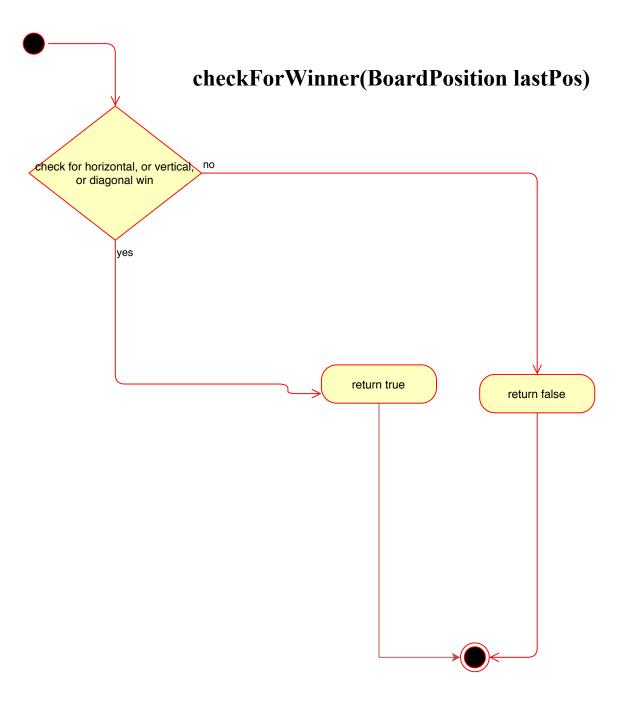


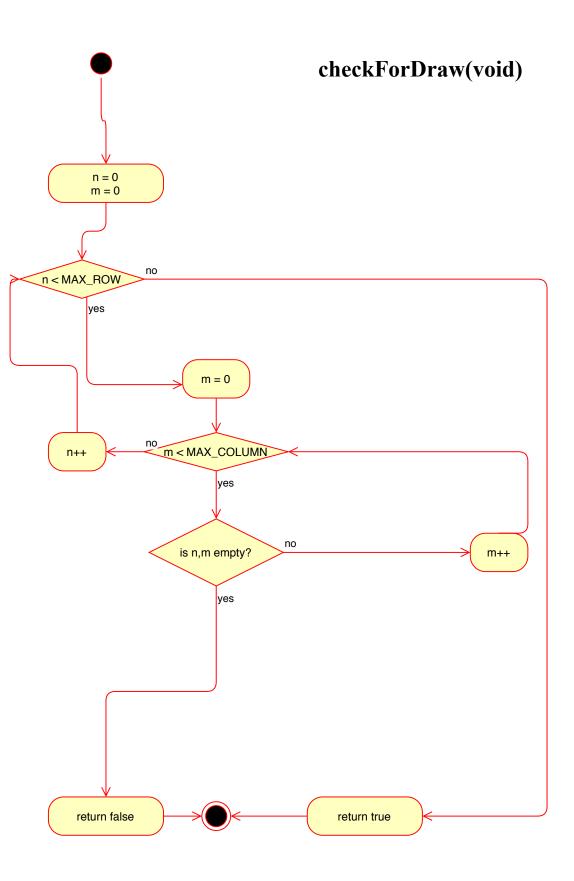




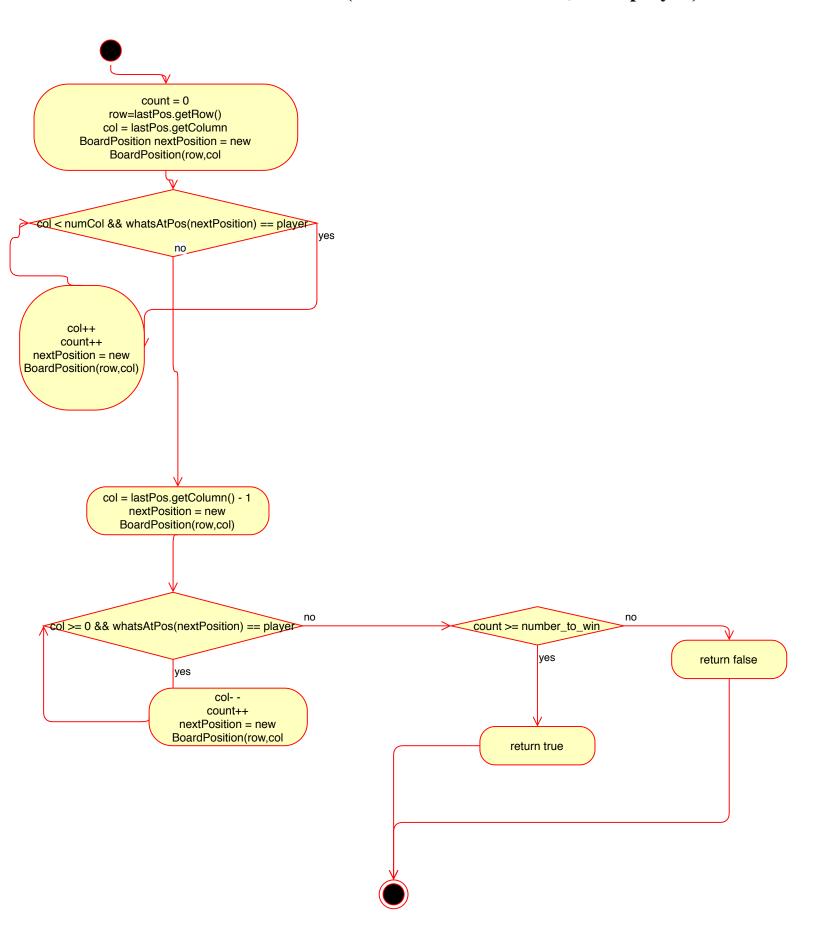
# placeMarker(BoardPosition marker, char player)



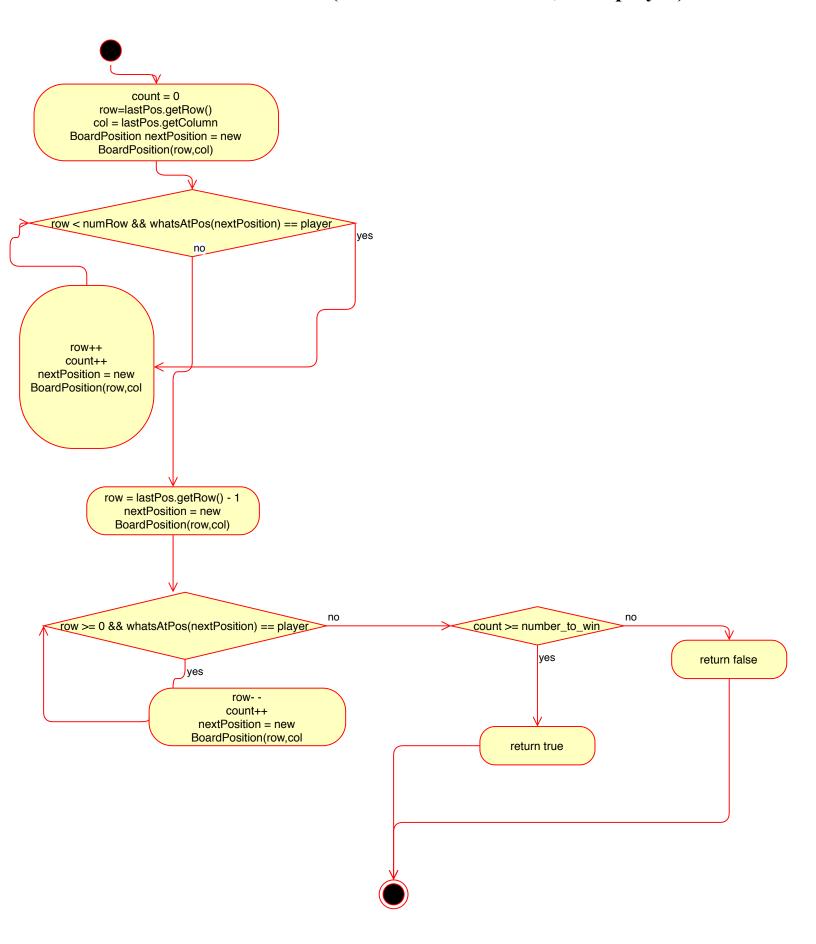




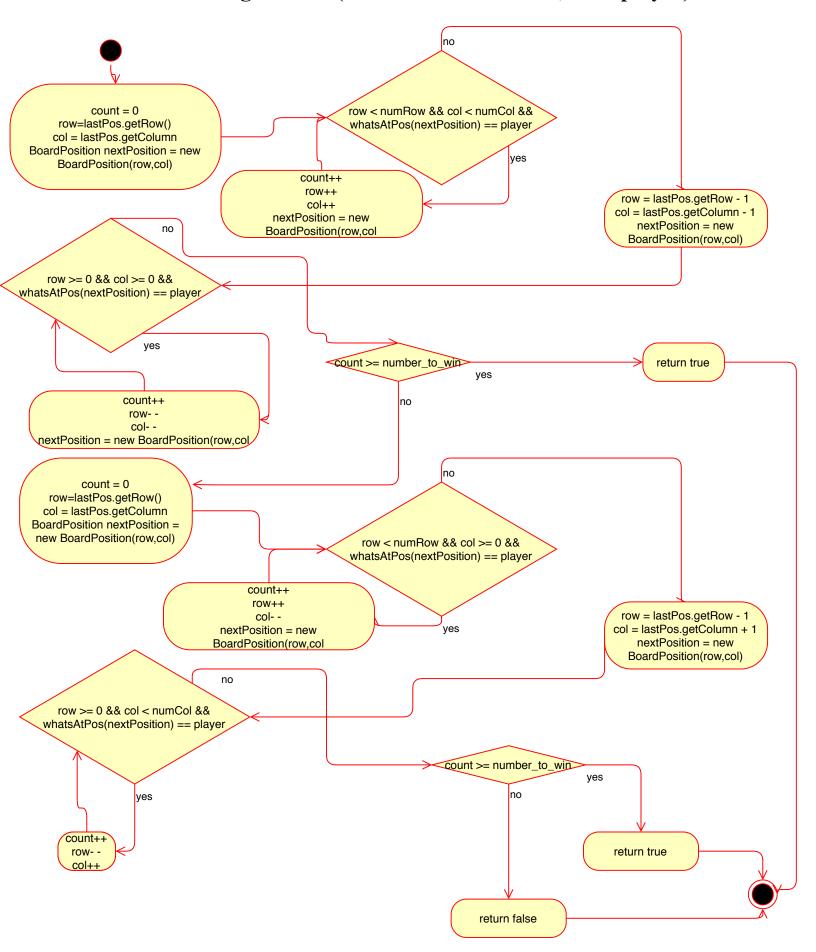
# checkHorizontalWin(BoardPosition lastPos, char player)



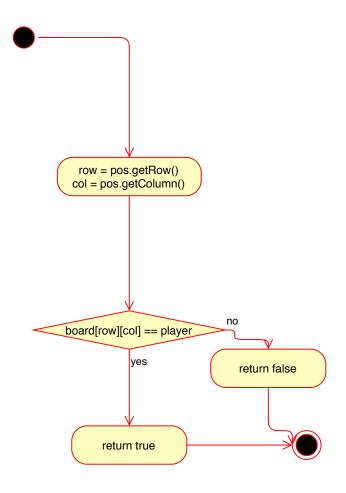
## checkVerticalWin(BoardPosition lastPos, char player)



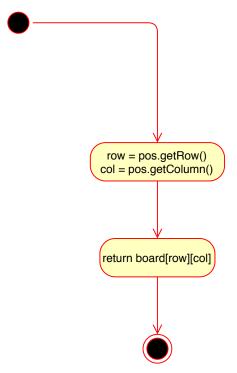
## checkDiagonalWin(BoardPosition lastPos, char player)

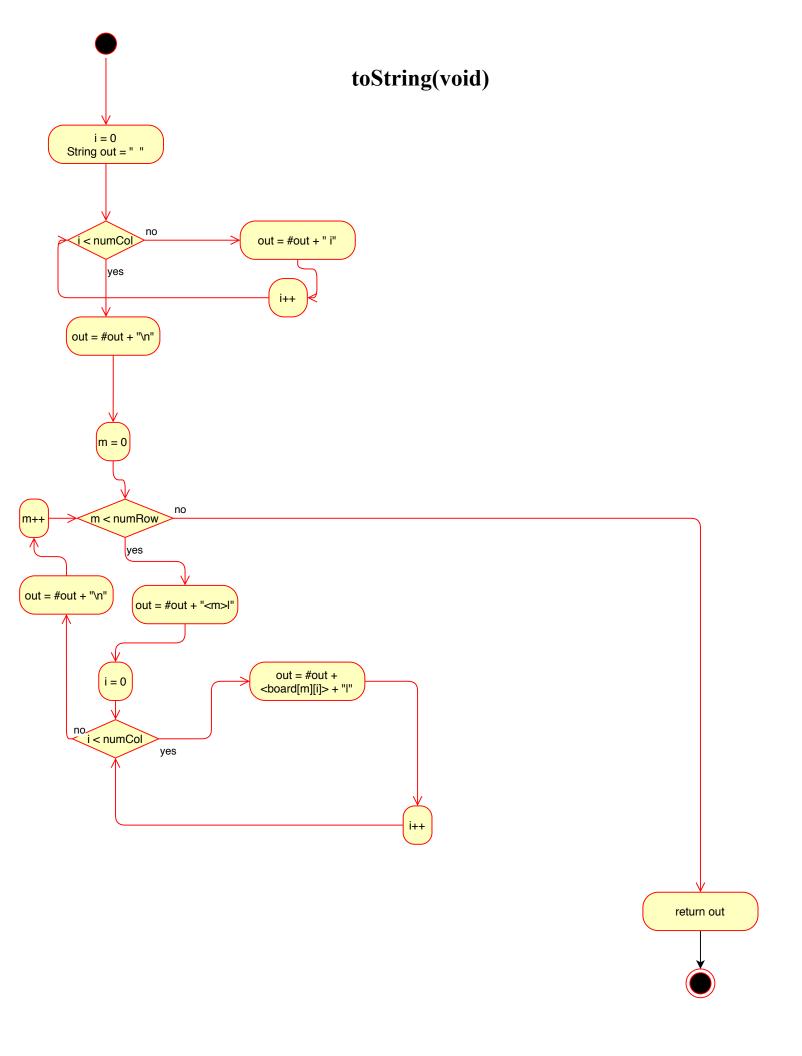


# isPlayerAtPos(BoardPosition pos, char player)

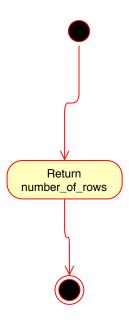


# whatsAtPos(BoardPosition pos)

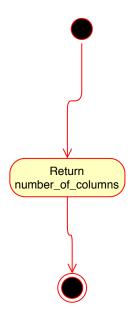




# getNumRows(void)



# getNumColumns(void)



# getNumToWin(void)

