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1 package Project3;
2
3 /*****
4  * CIS 163 Section 01
5  * Project 3: Chess Game
6  * Rook Class
7  *
8  * This class represents a ChessPiece that is a rook.
9  *
10 * @author George Fayette
11 * @version 3/23/2019
12 *****/
13 public class Rook extends ChessPiece {
14
15     /**
16      * Public boolean representing whether or not the rook has moved.
17      */
18     public boolean firstMove;
19
20     /**
21      * Public constructor sets player to parameter value.
22      * @param player The player type.
23      *****/
24     public Rook(Player player) {
25         super(player);
26         firstMove = true;
27     }
28
29     /**
30      * Public String, returns the ChessPiece type.
31      * @return A string representing the ChessPiece type.
32      *****/
33     public String type() {
34         return "Rook";
35     }
36
37     /**
38      * Public boolean, returns true if the move is valid.
39      * @param move The move that is being checked.
40      * @param board The array of IChessPieces that is being checked.
41      * @return True if the move is valid.
42      *****/
43     public boolean isValidMove(Move move, IChessPiece[][] board) {
44         boolean valid = true;
45
46         if (!super.isValidMove(move, board)) {
47             valid = false;
48         } else {
49             int vDistance = move.toRow - move.fromRow;
50             int hDistance = move.toColumn - move.fromColumn;
51
52             if (vDistance != 0 && hDistance != 0) {
53                 valid = false;
54             } else {
55                 int absDistance = Math.abs(vDistance + hDistance);
56                 if (vDistance > 0) {
57                     for (int i = 1; i < absDistance; ++i) {
58                         if (board[move.fromRow + i][move.fromColumn] !=
59                             null) {
60                             valid = false;

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61         }
62     }
63     } else if (vDistance < 0) {
64         for (int i = 1; i < absDistance; ++i) {
65             if (board[move.fromRow - i][move.fromColumn] !=
66                 null) {
67                 valid = false;
68             }
69         }
70     } else if (hDistance > 0) {
71         for (int i = 1; i < absDistance; ++i) {
72             if (board[move.fromRow][move.fromColumn + i] !=
73                 null) {
74                 valid = false;
75             }
76         }
77     } else if (hDistance < 0) {
78         for (int i = 1; i < absDistance; ++i) {
79             if (board[move.fromRow][move.fromColumn - i] !=
80                 null) {
81                 valid = false;
82             }
83         }
84     }
85 }
86 }
87 return valid;
88 }
89 }
90 }
```