

```

1. /// Gets the winning player for a game
2. ///
3. /// Returns "X", "O", or "Draw" if a game has ended
4. ///
5. /// Returns "Neither" if a game has not ended
6. ///
7. fn get_winning_player(state: GameState) -> String {
8.     //possible combinations of boxes marked to be a winner
9.     let lines = [
10.         [0, 1, 2],
11.         [3, 4, 5],
12.         [6, 7, 8],
13.         [0, 3, 6],
14.         [1, 4, 7],
15.         [2, 5, 8],
16.         [0, 4, 8],
17.         [2, 4, 6],
18.     ]
19.     case check_lines(lines, state) {
20.         Neither -> {
21.             case list.contains(state.state, Neither) {
22.                 True -> "Neither"
23.                 _ -> "Draw"
24.             }
25.         }
26.         player -> {
27.             case player {
28.                 X -> "X"
29.                 _ -> "O"
30.             }
31.         }
32.     }
33. }
34.
35. /// Goes through all possible combinations for getting a three in a row and
36. /// checks if it exists on the current game grid
37. ///
38. fn check_lines(lines: List(List(Int)), state: GameState) -> Player {
39.     case lines {
40.         [first, ..rest] -> {
41.             let assert [a, b, c] = first
42.             let player = get_from_index(state.state, a)
43.             let res = case player {
44.                 X | O -> {
45.                     case
46.                         player == get_from_index(state.state, b)
47.                         && player == get_from_index(state.state, c)
48.                     {
49.                         True -> player
50.                         _ -> Neither
51.                     }
52.                 }
53.                 _ -> Neither
54.             }
55.             case res {
56.                 Neither -> check_lines(rest, state)
57.                 _ -> res
58.             }
59.         }
60.         [] -> Neither
61.     }
62. }
63.
64. /// Helper function to get an item from a list through its index
65. ///
66. fn get_from_index(list: List(a), index: Int) -> a {
67.     let assert Ok(last) = list.first(list.split(list, index).1)
68.     last
69. }

```