Eval Function explanation:

Considering the input depth limit, my Eval Function judges the boardstates for that depth limit.

My Eval Function includes three sub Functions each of which returns its own scores. Eval Utility is weighted sum of these three scores returned by the three functions.

The functionality of the three sub functions under Eval Function are as follows:

1. **ScoreCheck(): This function checks the difference in the scores of the computer and human at that depth limit. Very less weightage is given for this feature compared to the weights assigned to the other two functions.**
2. **compCoordinatesCheck(): This function checks the position of each computer piece on the boardstate at the depth level and assigns weight by checking some conditions like:**
    a. **Assign more weight if greater than 4 in a row of computer pieces are present.**
    b. **Assign a little less weight if three in a row are present.**
    c. **Few strategic positions on the board are also assigned some weights**

    The weights assigned in this function are added as the respective 'if' conditions are hit. This function basically assigns weight predicting how much the current board state will influence in increasing the computer score in the further depths.

3. **humanMoveDefense(): This function checks the positions of the opponents pieces and judges a particular board state in which the computer blocks the opponents 4-in-a-row and likewise. This function gives more weights to boardstates where opponents move is blocked by the computer.**

Therefore, the total utility of the board state is weighted sum of the individual utilities returned by these three functions.

Depth Limit	CPU Runtime
1	0m0.053s
2	0m0.076s
3	0m0.089s
4	0m0.257s
5	0m0.404s
6	0m1.294s
7	0m1.834s
8	0m4.862s
9	0m24.430s
10	0m30.399s
11	5m52.387s