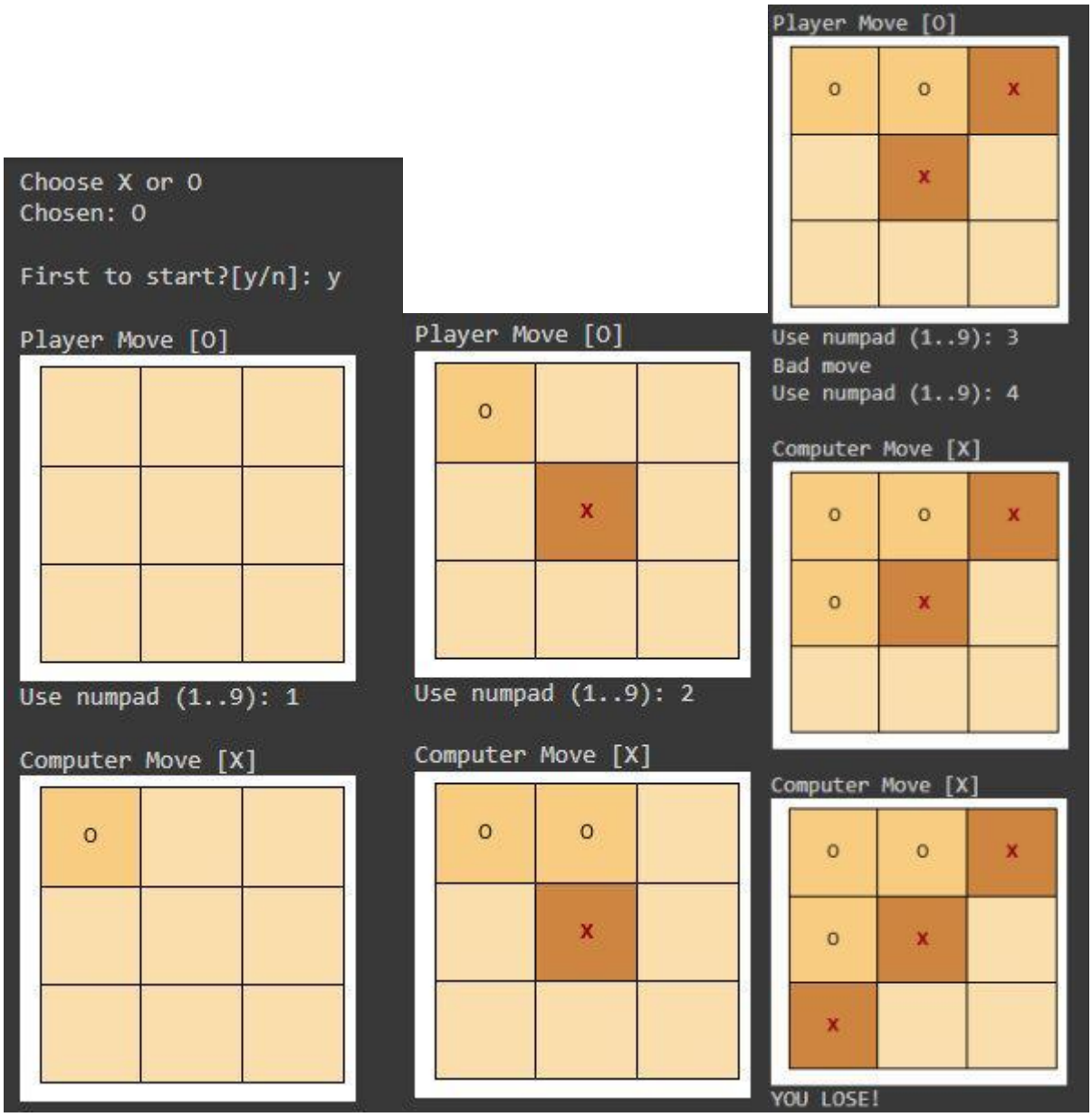
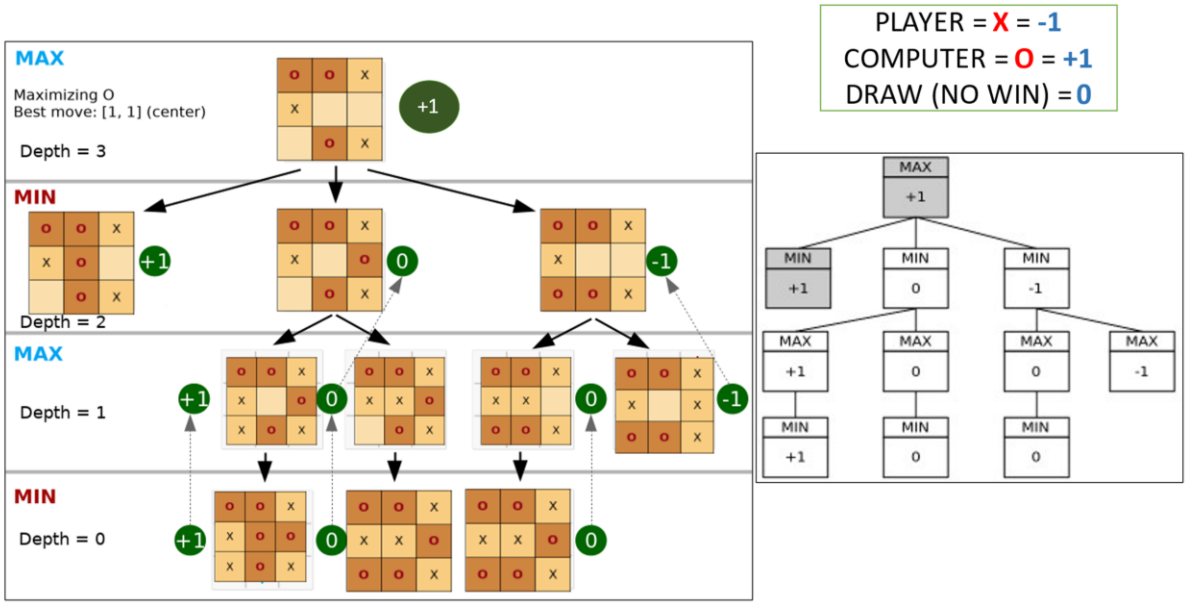
2CEIT602: Artificial Intelligence
Practical-4

Aim: Write a python program to create tic-tac-toe game using the minimax algorithm.

- Create class StateNode with its proper members (getScoreValue(), isValidMove(), isGameOver(), drawboard(), getEmptyCells(), setMove(), isWin(), etc.)
- Create class ticTacToe with its proper members (minimax(), computerMove(), playerMove(), start_game (), etc.)
- Output should be according shown in Output image
- Use only math, random, matplotlib libraries in python.

Output:






```
1  minimax(state, depth, player)
2      if (player = max) then
3          best = [null, -infinity]
4      else
5          best = [null, +infinity]
6      if (depth = 0 or gameover) then
7          score = evaluate this state for player
8          return [null, score]
9      for each valid move m for player in state s do
10         execute move m on s
11         [move, score] = minimax(s, depth - 1, -player)
12         undo move m on s
13         if (player = max) then
14             if score > best.score then best = [move, score]
15         else
16             if score < best.score then best = [move, score]
17     return best
18 end
```