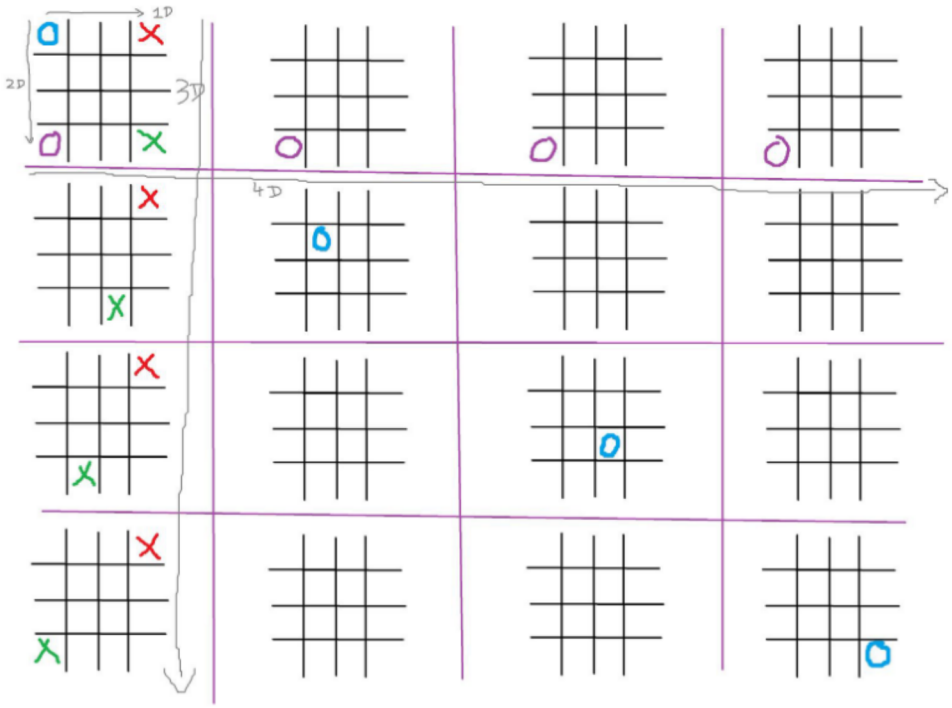
Extreme TicTacToe Tournament

Objective

To implement an 'Extreme TicTacToe' game playing agent for a 4x4x4x4 TicTacToe Game. This project can be done in teams, comprising of at most 2 students each. The teams need to register here by **February 2nd, 11:55 pm**: (https://goo.gl/forms/n5tJkah5kcEei7042)

The Game



- The Extreme TicTacToe is an extension of 4x4 TicTacToe which in turn is an extension of standard 3x3 TicTacToe. Extreme TicTacToe comprises of a 4x4 board in which each cell further is a 4x4 board.

- The game is between two teams.
- Coin is flipped to choose who will move first.
- Player 1 marks ‘x’ and Player 2 marks ‘o’ on the board.
- The player who makes a legitimate pattern wins the whole board.
- Note: Extreme TicTacToe is an extension of Ultimate TicTacToe and is different from it.
- The board structure is as shown above. We will refer to the whole board as BigBoard and each small board as SmallBoard from now on. Hence, each cell of BigBoard is a SmallBoard and SmallBoard itself has 16 cells.

Rules

- **FIRST MOVE:** The first player takes the first move and it is a free move. The player is free to move anywhere i.e. in any cell of any SmallBoard.
- **CORRESPONDENCE RULE:** When a player places his marker in any of the cell, the next player can only place marker in a SmallBoard corresponding to that cell. For Example: If a player places his marker in Top Right Corner cell of a SmallBoard then the next player can only place his marker in available cells of the Top Right Corner SmallBoard.
- **ABANDON RULE:** Once a SmallBoard is won by some player, that SmallBoard is abandoned and it has to be considered full, i.e. no more markers can be placed in that SmallBoard.
- **OPEN MOVE:** In case all the cells of the destined SmallBoard from “Correspondence Rule” are occupied or if the the destined SmallBoard is abandoned according to “Abandon Rule”, then the move is considered to be an open move, i.e. the player can move anywhere, on any available cell of any SmallBoard, given that SmallBoard is not abandoned.