User Manual(image)

<u>Slot:11</u>

Group:6

Project Name: Quantum Tic Tac Toe

Team:

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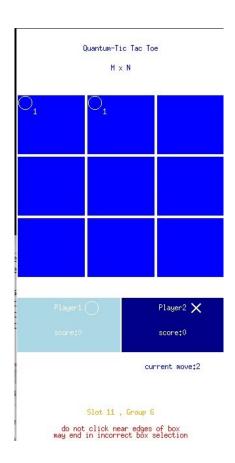
How To Play Quantum Tic Tac Toe:

in 3x3 gird:

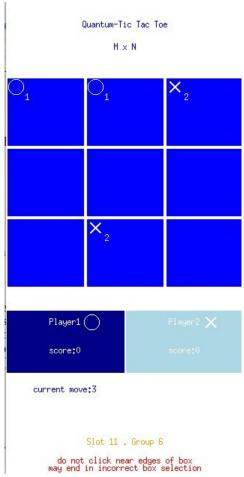
Tic Tac Toe that we are familiar with let's term it classical Tic Tac Toe. Aim of this game is same that of its classical version, make final line of 3 boxes to win. In quantum version you will play your move in two of boxes and this move will be finalised(fixed like classical version) in one of these boxes. To chose box you need to click on box. (do not click near edges of box, may end in incorrect box selection)

Note: you can't choose your both current moves in same box. And you may play in box where there is already some move(unless fixed- will come soon)

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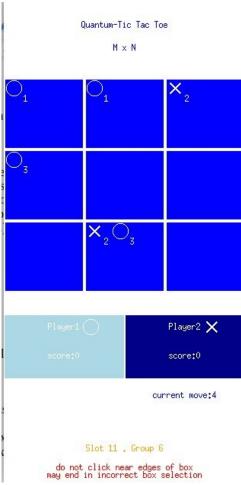


now imagine a virtual line is connecting both zero1.(1 indectes move number)

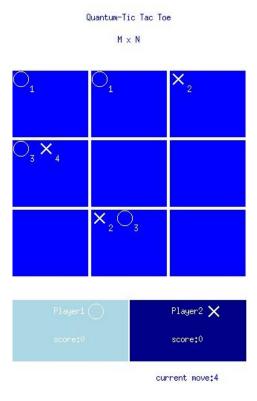


same way virtual line is connecting both cross2.

Now consider each box as a point. All lines will be starting and ending from points. In this case middle box(point) in bottom row has two lines strting from it.



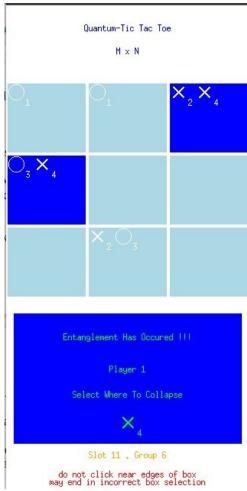
While keep playing like this at one moment these lines will form a closed loop.(like virtual polygon with boxes as vertices).



Slot 11 , Group 6 do not click near edges of box may end in incorrect box selection

in this case if player places second move cross4 at box located in top row rightmost box; loop wiil be formed.

This is time when player due to whoes move loop is NOT formed will deside in which of two boxes last move of formar player will be fixed.Click where in box to fix move.

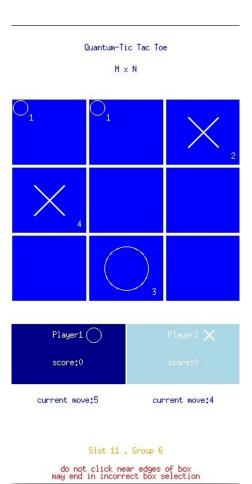


Note: loop is also termed entanglement.

First focous what will happen if player1 chooses to fix player2's last move that caused loop formation(cross4) in box that is in middle row leftmost coloumn.

As per classical Tic Tac Toe, in one box only one move is fixed same in quantum version. So in above specified box if cross4 is fixed so zero3 can not be in that box. But as per earlierly mentioned move will be finalised in one of the boxes selected for the move.so zero3 must be fixed in box that is bottom row middle coloumn.(As middle row left coloumn is fixed by cross4) Same way cross2 can't be in bottom middle box as zero3 will be fixed there so cross4 will be finalised in top right box.

Click where in box to fix move.



Now boxes in which move fixed will be treated same like boxes in classical Tic Tac Toe. i.e. you can't play your move in this box and these are the boxes those will be counted for final line.

M-N Rules Modification

if number of boxes in final line is more than should be
eg. in 5x6 game if 3 boxes are required in a line to win;in player's
line there are 4 horizontal boxes;say #-#-#-#.then all possible lines are
counted.that is this contains 2 lines.one with first 3 boxes second
with last 3.

if number of lines of both player are equal after loop is fixed if number of non-fixed boxes are greater than or equal to number of boxes required for a line to occur then game continues.otherwise score will be set according to 3x3 quantum tic tac toe game.

score

complete win:nuber of lines of one player is more than other

in that case player with more number of line gets 2 points and other player 0.

narrow win:number of lines of both player are equal.

player with lowest move number in his/her line(s) will get
2 points and other player will get 1 point.

Note:To have simultaneously same number of lines after loop is fixed is common case in M x N.

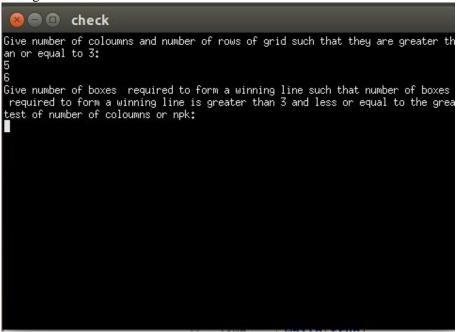
User Manual:

At start of your game you need to insert coloumn number and row number of M x N grid respectively in terminal.(both must be greater than or equal to 3)

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Give number of coloumns and number of rows of grid such that they are greater than or equal to 3:
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Then you need to insert number of boxes (in succession-may be horizontal, vertical or like diagonal) required to form a winning line.

//image 9



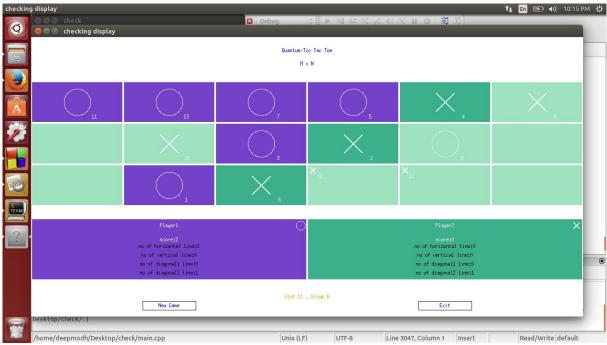
Then game starts with player1 being first player to play and whose icon is zero. player2's icon is cross.

Click at box where you want play your move or fix player's move.

At the end of the game colour code for boxes are.

Boxes those contribute in final lines of winning player are coloured :60,176,139-RGB Boxes those contribute in final lines of loosing player are cloured: 116,66,200-RGB

Rest boxes are coloured: 159,226,191-RGB



Player 1 is winner here