

User Manual(image)

[Slot:11](#)

Group:6

Project Name: Quantum Tic Tac Toe

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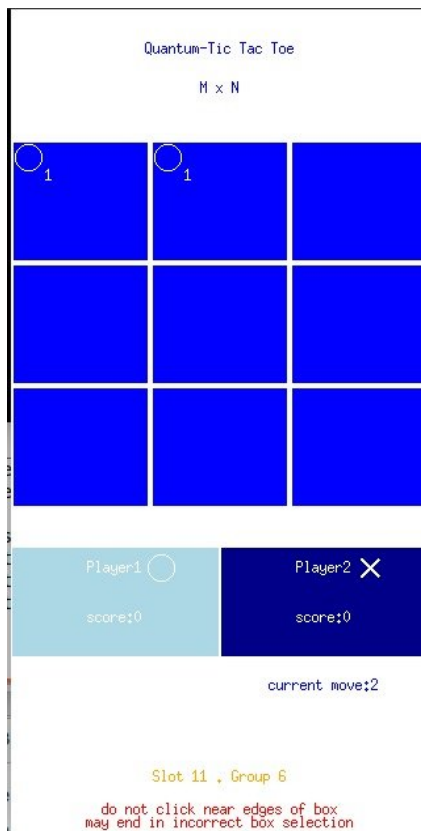
How To Play Quantum Tic Tac Toe:

in 3x3 grid:

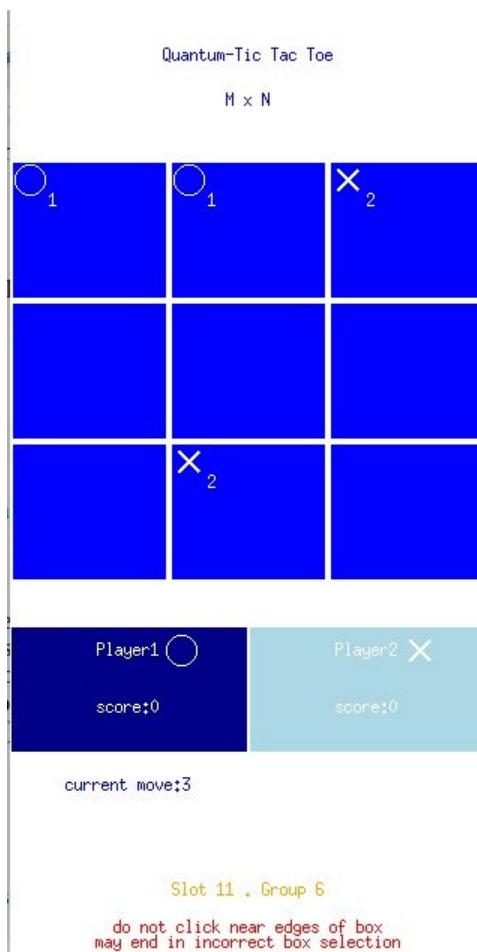
Tic Tac Toe that we are familiar with let's term it classical Tic Tac Toe. Aim of this game is same that of its classical version, make final line of 3 boxes to win. In quantum version you will play your move in two of boxes and this move will be finalised(fixed like classical version) in one of these 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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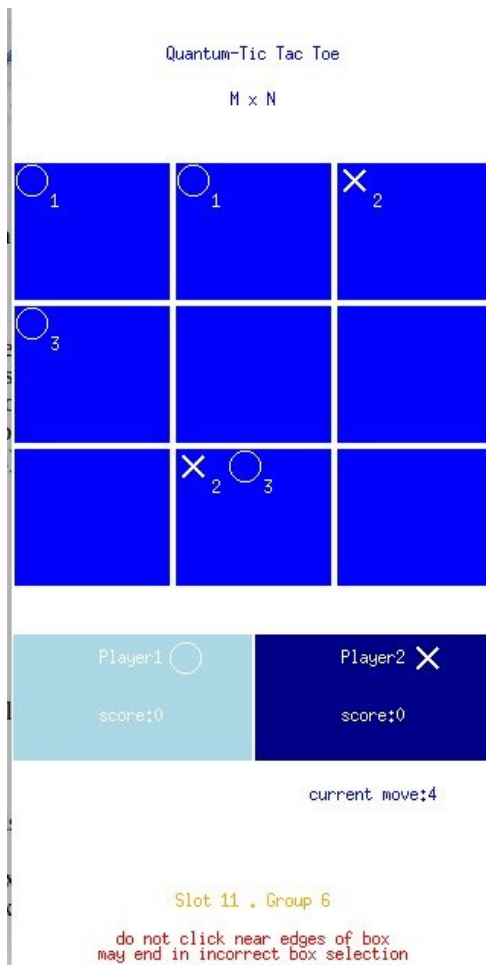


now imagine a virtual line is connecting both zero1.(1 indectes move number)



same way virtual line is connecting both cross2.

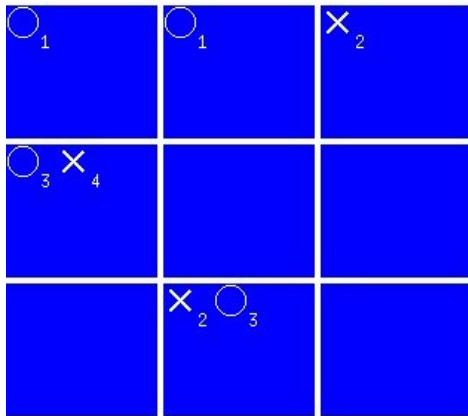
Now consider each box as a point. All lines will be starting and ending from points.
In this case middle box(point) in bottom row has two lines strting from it.



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

Quantum-Tic Tac Toe

M x N



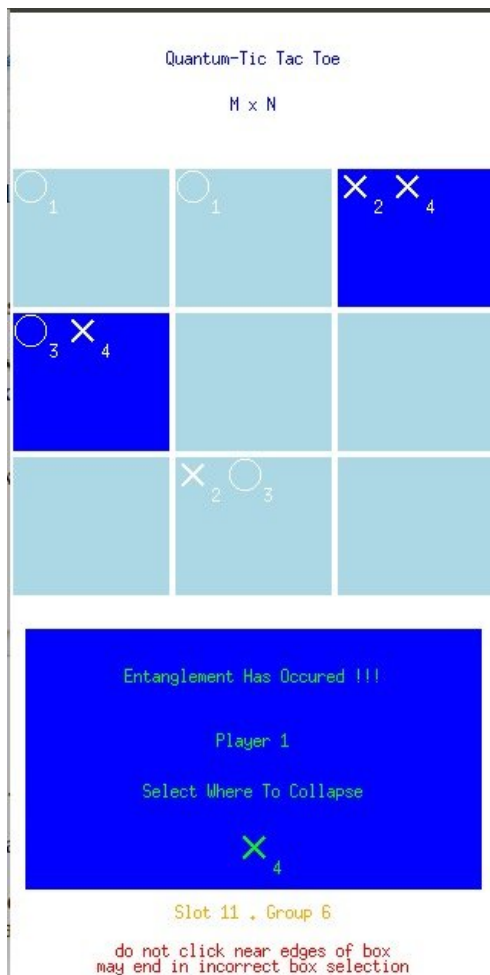
current move:4

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 will be formed.

This is time when player due to whoes move loop is NOT formed will decide 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 focus 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 column.

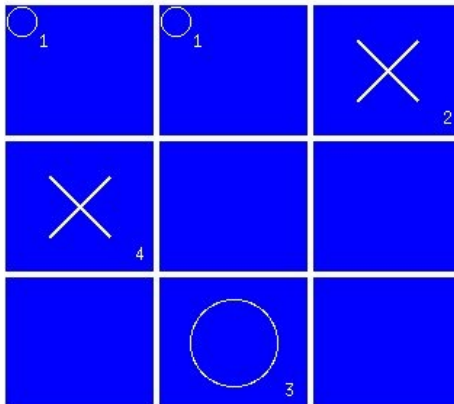
As per classical Tic Tac Toe, in one box only one move is fixed same in quantum version.

So in above specified box if cross4 is fixed so zero3 can not be in that box. But as per earlier 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 column.(As middle row left column 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.

Quantum-Tic Tac Toe

M x N



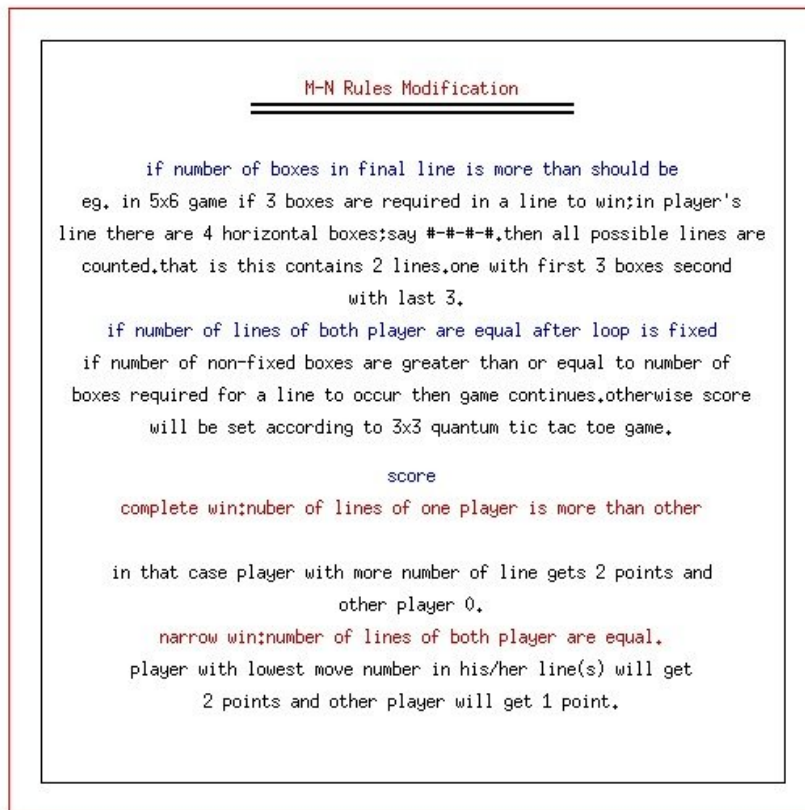
current move:5

current move:4

Slot 11 , Group 6

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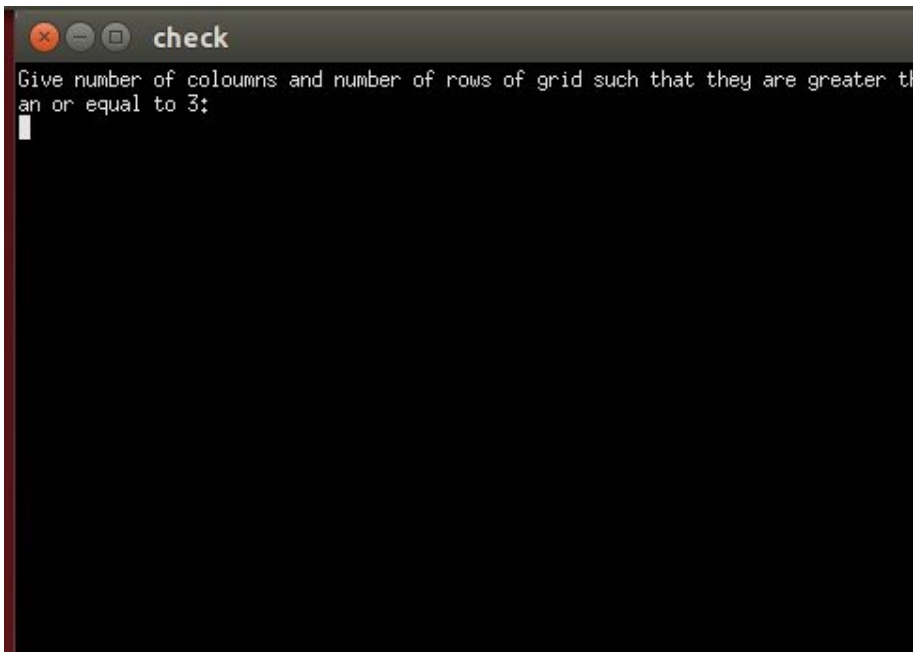
Now boxes in which move fixed will be treated same like boxes in classical Tic Tac Toe. i.e. you can't play your move in this box and these are the boxes those will be counted for final line.



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

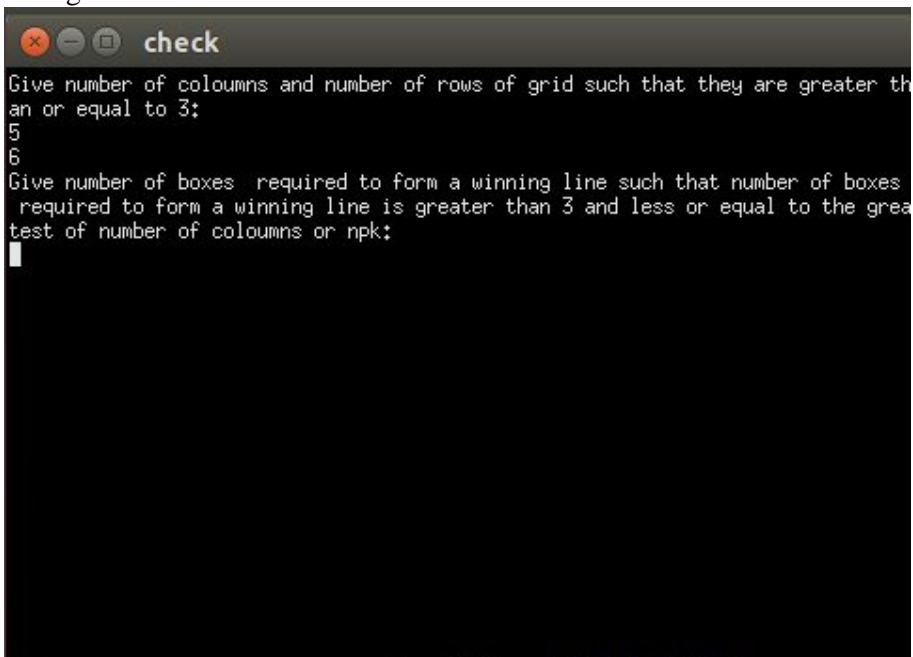
User Manual:

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



Then you need to insert number of boxes (in succession-may be horizontal, vertical or like diagonal) required to form a winning line.

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

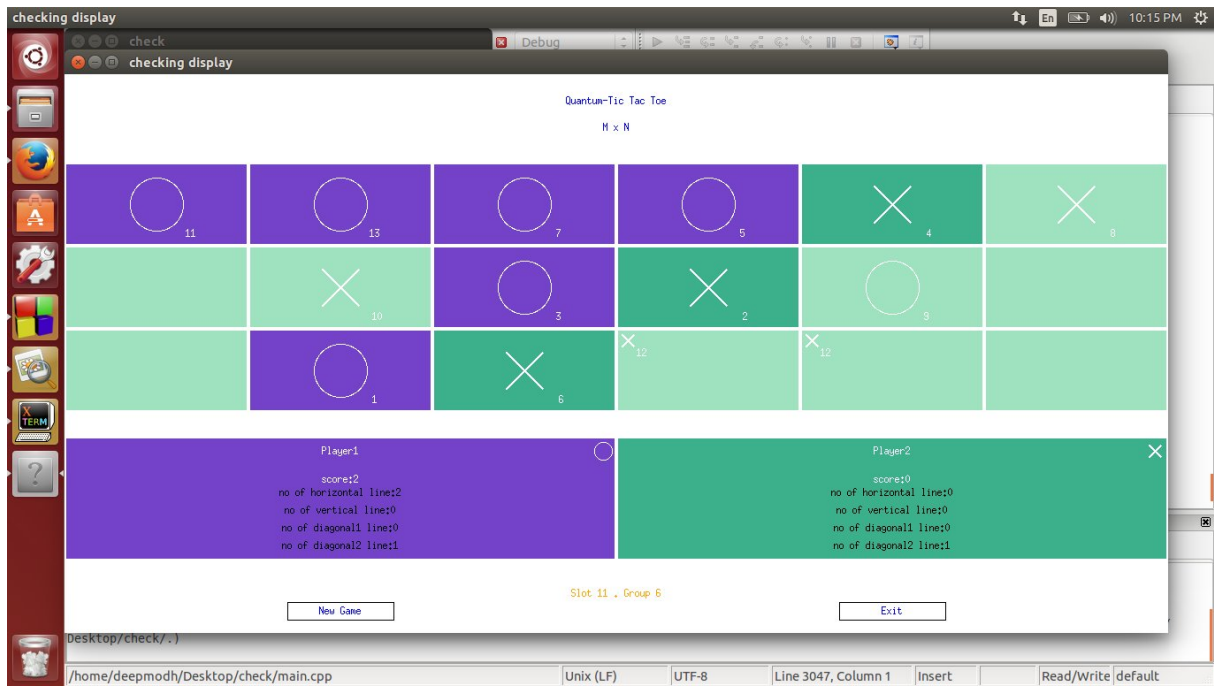
Click at box where you want play your move or fix player's move.

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 coloured: 116,66,200-RGB

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



Player 1 is winner here