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ECE 131

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Design: Tic-Tac-Toe (updated)

1. First create a function that will draw a “x”
    a. In each grid we are going to find the center of the region we want to draw the “x”
    b. Once we find the center we use the length of each square and divide it by two to find the corners. Or the points for our lines
        i. Ex: (x+(L/2)), (y+(L/2))
2. Second create a function that will draw a “0”
    a. In each grid find the center
    b. We will use the gfx point to put a point at every angle
    c. Use a for loop from 0 -> 2pi
    d. Increment 1 degree or pi/180
    e. Use a math.h library for cos and sin function as well as M_PI
3. Take input of dimension
    a. Take the input of the user’s dimension
    b. Draw a window (with gfx function) with the users given dimensions
4. As for first player
    a. Take an input of x or 0 to determine who goes first
5. Use a function that calls to drawboard
    a. drawboard will draw the gameboard according to dimensions
        i. use middle as center point

   b. use gfx draw lines to make grid

6. Use the gfx gamewait function to detect clicks
   a. Use the return x and y functions to return coordinates
   b. Once returned check where that point lays, or which grid its in, so you know where to draw symbol
7. Make sure all moves are saved in an output file
   a. fprint and append files
8. Check if boxes are filled if everyone is game is over
   a. Create a 2x2 dimensional area
   b. Every time a square is marked put someone in the spot for corresponding array (ie click top left put a value in array[0][0]
   c. Make a function check-over
      i. Nested loops that check if every value in array contains the value demoted it has been used
         1. If so return true (stdbool.h)
         2. If not return false
9. Have a loop to see if user wants to play again.
   a. Have everything inside while(1) infinite loop.
   b. At end have a if statement checking if game is over using our game over function
   c. If it is as the user to play again
   d. If yes
      i. Clear board
      ii. Clear array

iii. While loop starts again

e. If no

i. break