

Tic Tac Toe Project

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Introduction

- We decided to make a game for our project
- Tic Tac Toe is both simple to play yet fun and ubiquitous so we went with that
- And two people can play on one computer

Game Rules

- Players take turns doing X's and O's on the board
- People take turns playing on one computer and put in the coordinates of the tile they want to fill
- Player that gets 3 in a row wins
- Can either be a draw or tie and computer will tell you if you make an illegal move

Setting up the board

- First we declare all the text that appears in the game
- Then we set up the board and the print the board
- Then we have the print board function itself which goes through the board array we used and prints whatever's inside it

Making your move

- Next are the `get_x_coordinate` and `get_y_coordinate` functions which is what asks the user to input an x coordinate and y coordinate
- We then print this input after so the user can confirm the coordinate they put in and also check to see whether the coordinate is valid
- After this is checked then the actual move can be played and is logged so that it appears in the array and an X appears in the Board

Checking if the game is over

- We then designed a function that checks every single possible row and column and diagonal to see if there is a three in a row, or if no more possible moves can be made
- If there is a win confirmed then the `won_game` method runs and the winning message is displayed
- If there is a tie then the `drawn_game` method runs and the corresponding message is displayed
- Finally there's another check to make sure that input was valid

Timeline

April 22nd: First meeting; decided to implement a simple MIPS game and possible game ideas

April 23rd: Settled on implementing tic tac toe, refreshed our MIPS knowledge

April 24th - April 28th: Saketh worked on board setup, Andrew worked on getting player input / processing, pair programmed some days

April 29th: Created slides and recorded video demo