

26.666666666666668 hours
Project Status Complete

Project 4

Tic-Tac-Toe

Submission Received

Your project was received. You're ready to continue!

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- [Instructions](#)
- [What makes a good project?](#)

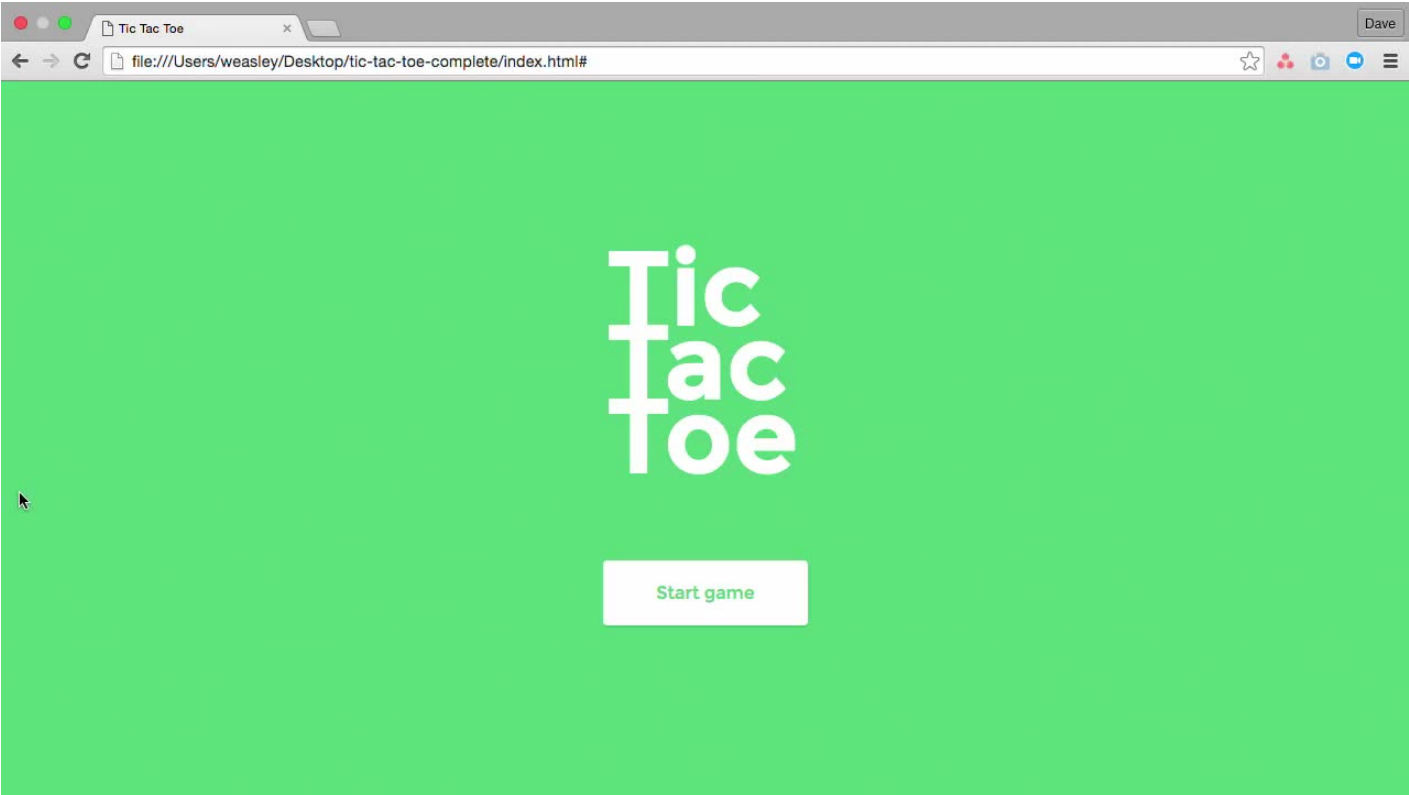
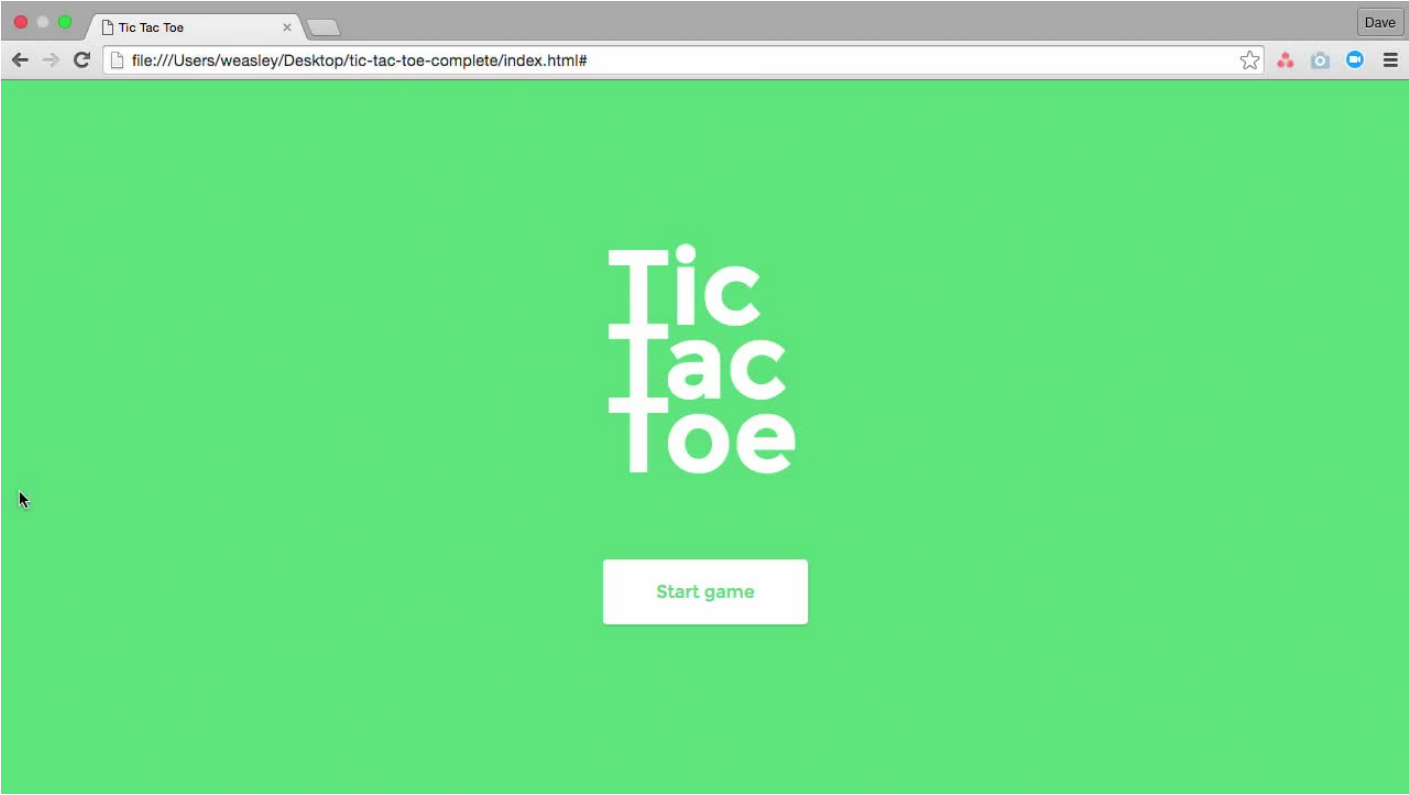
In this project, you'll build a functional, two-person Tic Tac Toe game. You'll use the provided mockups, HTML, CSS and image files to create a game that requires players to add their names, take turns adding an X or O to the game board, and announce when the game ends. You'll need to keep track of the state of the game -- whose turn it is, where the X's and O's are on the board, and whether the game is a draw or, if not, who won and lost.

You'll use your knowledge of JavaScript data structures like arrays and objects as well as DOM-manipulation using jQuery or plain JavaScript to complete this project.

And, to ensure that you're using good programming practices, you'll use the module pattern to create your Tic-Tac-Toe game. In other words, you should wrap all of your code in a single global variable, or execute it all in a single self-invoking function. See the link in the project resources for a Treehouse workshop on the module pattern.

NOTE: To get an "Exceeds Expectations" grade for this project, you'll need to "exceed" on **every** requirement that has an "Exceeds Expectations" option.

Video Player



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- 1. 2x 2x
- 2. 1.75x 1.75x
- 3. 1.5x 1.5x
- 4. 1.25x 1.25x
- 5. 1.1x 1.1x
- 6. 1x 1x

7. 0.75x 0.75x

8. 0.5x 0.5x

☐

- ☒ None
- ☐ English

☐ [Use Up/Down Arrow keys to increase or decrease volume.](#)

☐

Before you start

To prepare for this project you'll need to make sure you complete and understand these steps.

[2 steps](#)

- **Make sure you have a GitHub account and know how to create a new repository and upload files to it. If you need a reminder on how to use GitHub and GitHub desktop, check out the workshop [Share Your Projects with GitHub Desktop](#).**
- **If you need a reminder on how to use GitHub and GitHub desktop to create a new repository check out the workshop 'Share Your Projects with GitHub Desktop' in the Project Resources.**

Download the project files. We've provided several files to help with this project:

- The mockups folder shows what the page should look like when it first loads, as the game is being played, and when the game is over.
- The html_snippets folder contains three files: `start.txt` includes the HTML for the opening screen. What players see when the page first loads. `board.txt` includes the HTML of the Tic Tac Toe gameboard. `win.txt` includes the HTML to display when the game is over. You'll need to modify this HTML for when player 0 or X wins or when there's a tie
- The css folder contains the CSS for the game
- The img folder contains two SVG images -- `o.svg` and `x.svg`. These images are used to display the players, and are used in the boxes of the board to indicate who claimed that square
 - The `index.html` file is the page where the game will be displayed
 - The `js` folder is empty -- that's where you'll add your JavaScript file or files.

Project Instructions

To complete this project, follow the instructions below. If you get stuck, ask a question in the community.

[7 steps](#)

- **Use the supplied mockup files and HTML snippets to guide you in building a Tic Tac Toe game. You can use jQuery or plain JavaScript to complete this project. Don't use an already programmed Tic Tac Toe plugin or library.**

- When the page loads, the startup screen should appear. Use the `tictactoe-01-start.png` mockup, and the `start.txt` HTML snippet to guide you.
- Add programming, so that when the player clicks the start button the start screen disappears, the board appears, and the game begins. Use the `tictactoe-02-inprogress.png` mockup, and the `board.txt` HTML snippet to guide you.
- Add the game play following these rules:
 - Play alternates between X and O.
 - The current player is indicated at the top of the page -- the box with the symbol O or X is highlighted for the current player. You can do this by simply adding the class `.active` to the proper list item in the HTML. For example, if it's player one's turn, the HTML should look like this: `<li class="players active" id="player1">`
 - When the current player mouses over an empty square on the board, it's symbol the X or O should appear on the square. You can do this using the `x.svg` or `o.svg` graphics (hint use JavaScript to set the background-image property for that box.)
 - Players can only click on empty squares. When the player clicks on an empty square, attach the class `box-filled-1` (for O) or `box-filled-2` (for X) to the square. The CSS we're providing will automatically add the proper image to the square marking it as occupied.
 - The game ends when one player has three of their symbols in a row either horizontally, vertically or diagonally. If all of the squares are filled and no players have three in a row, the game is a tie.
- Add programming so that when the game ends, the board disappears and the game end screen appears. Use the `tictactoe-03-winner1.png` and `tictactoe-04-winner2.png` mockups, and the `win.txt` HTML snippet for guidance. Depending on the game results the final screen should:
 - Show the word "Winner" or the phrase "It's a Tie!"
 - Add the appropriate class to the `<div>` for the winning screen: `<div class="screen screen-win" id="finish">` `screen-win-one` for player 1, `screen-win-two` for player two, or `screen-win-tie` if the game ends with no winner. For example, if player 1 wins, the HTML should look like this: `<div class="screen screen-win screen-win-one" id="finish">`
- Add programming so that when a player pushes the "New Game" button, the board appears again, empty, and a new game begins.
- Use the module pattern to wrap all of your JavaScript code into a single global variable or an immediately invoked function.

Extra Credit

To get an "exceeds" rating, you can expand on the project in the following ways:

[4 steps](#)

- On the start screen, prompt the user add their name before the game starts
- Display the player's name on the board screen during game play
- Add programming to support playing against the computer. Only one player plays; the other is controlled by your programming.
- Display the player's name if they win the game

NOTE:

- To get an "Exceeds Expectations" grade for this project, you'll need to complete **each** of the items in this section. See the rubric in the "**How You'll Be Graded**" tab above for details on how you'll be graded.
 - If you're shooting for the "Exceeds Expectations" grade, it is recommended that you mention so in your submission notes.
 - Passing grades are final. If you try for the "Exceeds Expectations" grade, but miss an item and receive a "Meets Expectations" grade, you won't get a second chance. Exceptions can be made for items that have been misgraded in review.
-

Download files

Zip file

Project Resources

[External Link](#)

[Tic-tac-toe](#)

[External Link](#)

[Understanding the Minimax Algorithm](#)

[Workshop](#)

[The Module Pattern in JavaScript](#)

[External Link](#)

[Immediately Invoked Function Expressions](#)

[External Link](#)

[Bookmarklet to Detect Global Variables](#)

Need Help?

Have questions about this project? Start a discussion with the community and Treehouse staff.

[Get Help](#)