

Mini Project: Connect4

The background of the slide is a dark blue-grey color. On the right side, there is a decorative graphic consisting of numerous parallel diagonal lines. These lines are colored in a gradient from bright green at the top to yellow at the bottom, and they fan out from the top right towards the bottom right corner.

Objectives

- Introduction to the scope.
- Breakdown of milestones.
- Show of example solution.

Scope

- It's Connect4.
- Individual project.
- Due week 6.
- Use Javascript.

Milestones

- Each week we'll handout goals for that given week.
- Core goals
 - show key learning objectives have been met.
 - to be completed by end of week.
- Stretch goals
 - **not** mandatory, purely designed to challenge you.

Connect4 Mini Project: Week 1

Goals

- Get Naughts and Crosses working... (huh?!)

Core Goals (Mini-Project)

- Place noughts and crosses on a grid.
- Alternate turns between noughts and crosses players.
- Detect a winner.
- Detect a draw.

Stretch Goals (Mini-Project)

- Add player names and declare the victor!
- Reset the game for another round.

Bonus Stretch Goals

- Have a computer player that plays randomly.
- Have a computer player that plays optimally.

Connect4 Mini Project: Week 2

Goals

- Source control.
- Start Connect4.
- Unit tests.

Core Goals (Mini-Project)

- Create a repository for your mini-project
- Have a front-end for your mini-project; render it from an index.html file
- Be able to place pieces on your connect4 grid; it should respond to click events
- Have some unit tests that pass for your mini-project; test your functions

Stretch Goals (Mini-Project)

- Add player names and declare the victor!
- Reset the game for another round.

Bonus Stretch Goals

- Integrate a CSS framework into your front-end
- Produce some UX designs for your mini-project

Connect4 Mini Project: Week 3

Goals

- Advance JS

Core Goals (Mini-Project)

- Refactor your project to use JQuery
- Document your mini-project
- Refactor your mini-project to use OOP or Functional styles
- Detect victory conditions

Stretch Goals (Mini-Project)

- Run a linter over your mini-project and correct issues
- Detect victory conditions without using a for loop

Bonus Stretch Goals

- Git hooks for linting

Connect4 Mini Project: Week 4

Goals

- Networking
- Backend code

Core Goals (Mini-Project)

- Post game scores to a server (also running locally)
- Display scores on the frontend
- Use NPM for package management in your project
- Produce unit tests for the API server

Stretch Goals (Mini-Project)

- Use NPM scripts to manage lifecycle for your server
- Improved scoreboard tracking player victories

Connect4 Mini Project: Week 5

Goals

- Adding depth to your game.

Core Goals (Mini-Project)

- Integration tests for the mini-project
- Persist game scores on the server
- Implement multiplayer via the server

Stretch Goals (Mini-Project)

- Front-end testing
- API contract testing

Bonus Stretch Goals

- Authenticate users connecting to the game server
- Use NPM to manage client-side dependencies

Connect4 Mini Project: Week 6 Goals

- The big finish

Core Goals (Mini-Project)

- Deploy your application with a single command
- Make your game as pretty as possible
- Mini project demos

Stretch Goals (Mini-Project)

- Add a Computer player
- Host your mini project on the internet
- Run tests against your application over the internet
- Create a logging interface for your back-end