

WETHINKCODE\_

WEB II

PROJECT I

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# Red Tetris:

A Full Stack Web Program

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## SUMMARY

The objective of this project is to develop a networked multiplayer tetris game from a stack of software. **WeThinkCode\_** has provided students with two options. "Python Django" or "Ruby-On-Rails", which allows for options.

The onus is on the student to pick their own technology stack.

## OBJECTIVES

1. Learn JavaScript
2. Learn Python Django
3. Learn Socketio
4. Full-Stack Development Methodology
5. Unit-testing
6. Asynchronous Client and Server
7. Reagents
8. React & Node.js Libraries

### Limitations

- DOM Manipulation Library
- Canvas
- SVG
- **Keep The File Structure!**

## TO DO LIST

List of things that need to be done

1. Decorations of the landing page (SPA)
2. sweet welcome message
3. game rules
4. ability to choose and/enter a room
5. ability to enter an alias / name / identifier
6. Create waiting room so people can join another game

7. list of people in the room
8. first person to enter is the admin
9. only admin has a start button
10. if admin leave, one person becomes the admin
11. maybe the scoreboard for people in the room [if we are doing bonus]

#### GamePlay

1. Canvas sharing
2. Socketio work
3. Score keeping methods
4. Potential Bonus: Snake from the Nokia 3310!

More to follow

## 1 INTRODUCTION

## 2 METHODS

A Section or subsection covering unit testing will be key either here or on it's own chapter

### 3 RESULTS AND DISCUSSION



## 4 CODE SNIPPET AS A FIGURE

Reference to Figure 1.

```
import { Button } from "@material-ui/core"
import React, { useState } from "react"
import GameCanvas from "../GameCanvas"

5 const Game = (props) => {
  const [gameOver, setGameOver] = useState(true)

  const handleStart = () => setGameOver(false)

10  return (
    <>
      {gameOver ? (
        <Button color="primary" onClick={handleStart}>
          start
15        </Button>
      ) : (
        <GameCanvas setGameOver={setGameOver} />
      )}
    </>
20  )
}

export default Game
```

Listing 1: Game Start Code.

Figure 1: Code Snippet from the game front-end to get it running *localhost limitation*, JSX Component, from <http://localhost:3000/>.

## 5 BIBLIOGRAPHY

### REFERENCES

## 6 STUDENT HONESTY DECLARATION

Engaging in any cheating or dishonesty in any form of assessment, assignment, test or examination or other WeThinkCode\_ prescribed work is considered cheating and is grounds for disciplinary action. Plagiarism, which is to present work (or a portion of work) as your own when it is not, is considered cheating and is not accepted at WeThinkCode\_.

An evaluator can flag one for plagiarism on one of the following grounds :

- The evaluator (marker) identifies that the student does not understand all or part of the work they have submitted.
- If all or part of the work presented is plagiarised ,i.e. copied from another source without reference.

### **Cheating in group projects**

The main purpose for a group project is to give students the experience of working in a team, by coming up with a solution to a problem together.

- Each member must be able to show which portion of the project they worked on.
- Failure to do so will result in the student being flagged for cheating which will be grounds for disciplinary action.
- This is to avoid single members doing the majority of the group project at the benefit of a member who is not contributing.
- In this way we are able to ensure fair assessment of each WTC\_ student's competence.

Group projects can be approached in two ways.

1. Divide and conquer: This is usually preferred and advised when working on big projects. The project is divided into segments, in which each member of the group can accomplish. Once completed, the group will then integrate the segments to complete the project

2. One for all: This method is usually preferred and advised when a group is working on a small project. The group will work on the solution together from the start of the project until the end. This will require the members to move at a pace in which everyone in the team can keep up with.

NOTE: At the end of each group project, each member should have a general and basic understanding of the project and the solution found. This will include running, testing and explaining the solutions of the project.

## DECLARATION

I hereby declare that the work submitted by me and/or my group members is:

- Original (not plagiarised)
- References listed
- Honest & in Good Faith
- Subject to WeThinkCode\_policies

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