Final Exam Project

Introduction to JavaScript

- These are the instructions for your final project.
- The final project will count 20% of your final grade.
- The final project is to build the Snake Game
- Note: You can work with a partner if you like. This means that your team will submit one final project together.
- The deadline for the final project will be in early December. The exact date will be announced.
- You can find a grading rubric for the project at the end of this document.
- Don't copy code from the internet. Don't submit a project that you did not write yourself. Plagiarism will be severely penalized.

The Snake Game

This project is about building a Snake game. You can find the **starter files** on the LMS. You can also find the **video tutorial** files on the LMS. Build the snake game, so that you can:

- Create the board using a nested array
- Move the snake using the keyboard
- Eat an apple to grow the snake
- Die if you hit a wall or a snake segment

Once you have built the basic Snake game, you should make improvements. Here are some ideas:

Level Improvements:

- Make it so that after eating 10 apples, you complete the level
- Make it so that different levels have different maps. The levels should get more difficult as you progress

Gameplay Improvements:

- Add scores
- Add a timer
- Add new items that your snake can collect: powerups, bonus point rewards, etc
- Make the game multiplayer, so that two people can play on one computer
- Add a computer-controlled snake that you must play against

Visual and User Experience (UX) Improvements:

- Make the blocks more interesting, or use images instead of simple blocks
- Add sound
- Add a menu to the game and a pause button
- Make the snake explode when it dies

Final Project Grading Rubric

- **Name(s) & ID(s): _____**
- **Project description: _____**

Maximum Score	Component
/10	Basic Programming Concepts Have you demonstrated an understanding of basic concepts like variables, if-conditions, loops, data types, etc
/5	Commenting and Readable code Is your code easy to read and understand? Have you commented where necessary? Have you put your name and the date at the top of all your files? Have you indented (used spaces) properly?
/20	Functionality Does your program work properly? Does it do what it is supposed to do? (Does the snake game work properly?) Are there any bugs?
/15	Creativity, Originality, and Effort Have you shown creativity and originality? Have you added new functions or demonstrated that you have worked hard on the project? Have you done something new and interesting?
Total: (out of 50)	

Comments: