***Documentation Packet [ 11 08 11 24 ] Nov 8th 2024***

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| Student Name: |  |
| Goals:  1. Use websockets to make multiplayer games 2. Analyze what a server and client should be responsible for | Events:  1. No School Wed, 6th |
| Included Documentation  1. Multiplayer Game 2. Server/Client Responsibilities 3. Load Balancing Server for Games 4. Reflections | Required Documentation:  1. Multiplayer Game 2. Server/Client Responsibilities 3. Load Balancing Server for Games 4. Reflections |
| Changes/Notes:  * None | |

# Multiplayer Game

Using past materials, such as Canvas Mover and Websockets Chat, put together a multiplayer game that allows for two or more players to play together over the internet.

* It can be any type of game, but it you should probably keep the scope simple to make sure you can complete it.
* You can use any method to use websockets. You do not have to stick to what the instructions in Websockets Chat
* You may need your VSCode/Nodejs added to Windows Firewall exceptions to test
* Test your project thoroughly. Make sure it is obvious how the game is to be tested and played.
* [Bonus] Add permanent features, such as authorization, highscores, winrate, etc.

# [Bonus] RPG Maker Websockets

* Make a Nodejs Server and RPG Maker MZ Script that allows for basic multiplayer in RPG Maker MZ

**What are the main roles of a client and a server, and why does assigning tasks properly between them matter?**

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**In a multiplayer game, which tasks should be managed by the server? What happens if they are handled by the client instead?**

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**In a multiplayer game, which tasks should be managed by the client? What happens if they are handled by the server instead?**

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**What are ways players can “hack” a game if the server and client roles are not assigned properly?**

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# Reflection

**What is a project you could accomplish using all of the things you’ve learned in this year’s lessons so far? What techniques would you need to complete it?**

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**What was one mistake you made in school or otherwise that you can recognize? What can you do in the future to prevent it from happening again?**

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**If your name is Hayden, what is a second mistake you made this week? What can you do in the future to prevent it from happening again?** (If your name is not Hayden, skip this question)

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**How difficult was the assignment this week? What made it difficult/easy for you?**

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# A picture containing text, monitor, screen, clipart Description automatically generatedGrading

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| 10 | You went above and beyond expectations. You applied knowledge that was not taught in this class in addition to what was taught. Additional rewards are given | * ***If the assignment does not have its own rubric, it will default to the rubric on the left.*** * All assignments start at 10/10 possible points * 1 point is deducted per infraction   + Lateness   + Mistakes   + Unprofessionalism   + Not following instructions * Outstanding submissions, or submissions on assignments not marked in “Required Documentation” can reward pogs |
| 10 | You performed as well as can be expected for this class. You show a complete understanding and made no mistakes. You have mastered the subject. |
| 8 | Assignment is complete. You show a good understanding of the subject, but there are mistakes or minor incorrect details. You are ready to move to new subjects. |
| 7 | You show and understanding of the subject, but there are serious errors, or there are pieces you can practically use without understanding them. Remediation needed. |
| 6 | Assignment is incomplete but/or you showed that you understand at least the fundamentals of the subject. Assignment is low effort. Serious need of remediation. |
| 5 | You show minimum effort, assignment is incomplete, or have serious mistakes. You did not demonstrate that you understand the content or purpose of the submission. |
| 0 | The work was not submitted, damaged, seriously incorrect, or unprofessional. The submission is rejected. |

# Server/Client Responsibilities

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|  | Spelling and handwriting |  |
|  | Correct information |  |
|  | Complete answers |  |

# Multiplayer Game *Nodejs Submission Rules, DP09*

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| **1-2** | Correct directory structure, with correct naming convention |  |
| **3-5** | Intact package.json, correct file name, test user ready. |  |
|  | Program works as intended |  |
|  | Code is functional, efficient, and *your own code* |  |
| **7** | Deleted node\_modules folder |  |
| **8** | Files structure intact (did not change or delete files not part of your assignment |  |

# DocPac and Reflection *DocPac Submission Rules, DP09*

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| **1** | DocPac is turned in on time |  |
| **3** | a. DocPac is neatly folded |  |
| **3** | b. DocPac is not stained or damaged |  |
| **3** | c. No doodles, scribbles, or unnecessary writing |  |
| **4** | a. Answered each question in each prompt |  |
| **4** | b. Spelling and handwriting |  |
| **4** | c. No repeated answers from other DocPacs |  |
| **4** | d. Did not paraphrase assigned work |  |
| **6** | You are prepared to justify the use of any AI (you know what it does and why) |  |

# Load Balancing Server for Games

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|  | Integration with existing game |  |
|  | Works as described in guide |  |
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