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<center>**Project 2: Proposal**</center>

Artistic Vision of the Project:

For the Artistic version of my project, I wish to create a Christmas-themed video game. I am inspired by the holiday season to create a series of small games themed around the holidays. My project will allow players to escape into a nostalgic world of point-and-click video games inspired by the free online games of my childhood in the early 2000s. In fact, many early free online games in the 2000s and 2010s were flash games which were relatively small and focused on a particular theme such as cooking, decorating, and dressing up a character. The controls of such games were also considered simple and encompassed a variety of click, point, scroll, and key press actions. For my prototype, I have decided to create a simple Christmas tree decorating game where the player must choose the star, Christmas tree toys, and the gift near the tree. If the player successfully decorates the tree before the one-minute timer runs out, he wins the game. However, if the player is unsuccessful at choosing these three types of decorations before one minute is up, then he loses the game. The prototype represents only one part of my second project. I want to create multiple mini-games for players in my project such as a gingerbread game, building a snowman, and playing as one of Santa's gnomes who is tasked to build a toy. I would also like to include, a secret Grinch mini-game where the player must earn points by stealing gifts. Here is an overview of each type of game that I would like to include. The gingerbread game would be a maze-type minigame where the player plays as the gingerbread man trying to escape milk. Furthermore, the snowman minigame would allow the player to build a snowman using mouse click and drop actions. The minigame where the player would be allowed to play as one of Santa's gnomes building toys, would be a click game where the user must correctly remember the building pattern of a toy. Finally, the mini-game where the player would be playing as Grinch stealing gifts is inspired by the juggle-garden exercise where the player scores points by catching floating gifts.

Technical challenges:

There are several technical challenges that I might encounter when working on my second project. First and foremost, one of the challenges would be to organize all my code according to the object-oriented programming structure. Since my project will be very large in size, I will need to establish a clear and concise structure between all my mini-games to ensure that my code runs smoothly and avoids logical errors. Another technical challenge that I am expecting to encounter is for my gingerbread mini-game. I have never previously created a maze in any of my coding projects so far, and I will need to learn on my

own how creating maze structures works in JavaScript. In my mini-game where one plays as Santa's helper building toys, I would like to use music patterns in my game. This is the way that the player will be able to correctly build a toy, for Santa, only if he remembers the correctly played music pattern. I want to increase the length of these patterns to make the game more difficult as time progresses, but I am not sure what will be an efficient way to store these patterns on my page. Another challenge that I have already experienced is creating an interactive timer game like I have done for my prototype. I was able to find an interactive clock example on the p5.js documentation page, but I found it difficult to understand, and I was not sure how to combine this interactive clock with my in-game 60 seconds counter. I am considering improving this part of my Christmas tree decorating game.
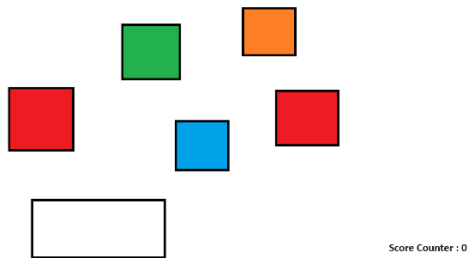
Visual Sketches:

Figure 1: The Grich mini-game where multicolored boxes are gifts that the Grinch must steal, by catching them in his bag (shown here as the white box). A score counter keeps track of the score in the right-hand corner.
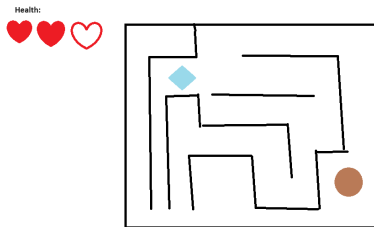

Figure 2: The gingerbread maze mini-game where the gingerbread man must escape milk. In tis case the blue diamond is the milk, and the brown circle is the gingerbread man. A health bar keeps track of the health of the gingerbread man.
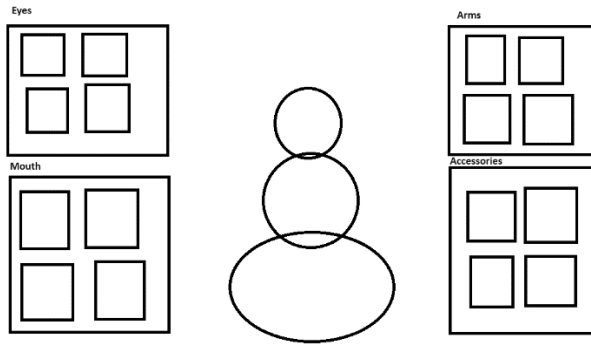
Figure 3: The build a snowman mini-game where the player drags and selects parts of the snowman. Each part of a snowman has its own section on the page. The player must select and drag a part on the snowman in the middle.
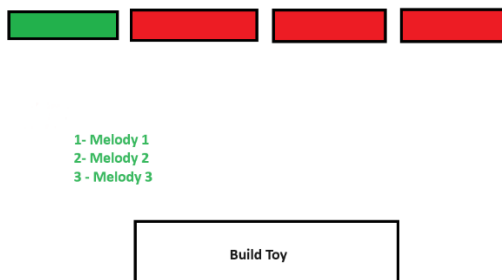

Figure 4: The building toys mini-game where the player puts in order the correct music pattern to build toys. The green rectangle is the current melody sequence that the user must select the correct pattern from. The red rectangles are the next sequences. After the player has chosen all sequences, he must select "Build Toy" which checks if the chosen pattern is correct.