Chop-Off! GDD

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EGD-220-1

Team 01 - Chop-Off

Sprint 6

Intent:

The game we intend to make is an educational virtual simulation game surrounding the topic of Lumberjacking. Our desired player experience involves the player learning about specific lumbering activities. Meanwhile, they will receive new facts each time as they play, so they can continue to learn more on the subject. With the key idea of demonstrating the work of a lumberjack in a fast paced virtual manner, the game intends to be an experience which can be utilized for children between the first and third grade. The intention is that teachers or parents may use the game to prepare their students for a trip to a lumberjack attraction or even a lumber mill since it still involves the chopping of trees. The game will feature 3 separate lumberjack competitions which include; Chopping, Ax Throwing, and Sawing. Finally, we intend to excite the students, so they have a taste of what they are going to experience. We hope to demonstrate that lumberjacking can be very exciting and fun, but also that safety is needed around objects like axes.

Target Audience

The targeted audience for the game are students between the first and third grade as well as their parents and teachers. The students are targeted in a gameplay manner in which they will be able to play a game while they learn. The intent is for them to play this before going on a fieldtrip. The specific players the game will appeal to most according to the Quantic Foundry archetype is the Architect. These gamers in particular enjoy precision in their gameplay as well as an informative adventure. While our gameplay is rather quick, the brief pauses in between will be a nice break that will be informative for the players. The gameplay offers an interesting look at the different types of lumberjacking. This aspect is targeted to grasp the parents and teachers,

so they can provide it for their students. The simplistic gameplay and charming art style will appeal to the adults because it informs them that the game is safe to distribute to their children. The theme will appeal to those adults trying to inform their children on the subject while trying to provide them with a fun experience. The targeted audience is meant to enjoy the gameplay of the game, so they will go through multiple times. This will encourage learning and hand eye coordination. However, if they only choose to proceed even once, they will still be informed appropriately on each of the lumberjack practices.

Monetization

As the game is educational, monetization options are more limited. The first option to monetize the game is a crowdfunding campaign using a service such as GoFundMe or Patreon. Second, the game may be eligible for some sort of grant since the game promotes education for children. For this route, organizations such as Scholastic or the ESA Foundation are strong possibilities. Lastly, the game can be sold to schools and other educational organizations. If this route was taken, the school would make a one time purchase and would be able to use the game on an unlimited amount of devices. This would be done to make it as easy as possible for schools to use the game. All of these strategies could be used in combination in order to suit the needs of the game.

Context and Content

The game takes place in a forest where the player assumes the role of a lumberjack competing in a lumberjack tournament. The player will go through a series of minigames as they compete in different categories of the tournament. The player will be on a time limit where they try to go their fastest in order to beat the other lumberjacks. Once they finish playing through all of the minigames then their total score will be added up. Based on their performance will determine which medal they receive in the end; Bronze, Silver, Gold. The three minigames featured include; Chopping, Ax Throwing, and Sawing. The chopping minigame will have the player striking various pieces of wood from an incoming direction. This activity will demonstrate the

different ways that lumberjacks chop wood not only in a tournament setting, but in an average environment as well. The ax throwing minigame will have the player throwing axes at a board which features five different rings. The closer to the center the player gets, the better their score will be. This content is meant to reflect the ax throwing done in real life in competitive settings such as lumberjack tournaments. Finally, the sawing minigame will feature the player sawing as many pieces of wood off of a log as they can. This activity is meant to demonstrate the effort it takes to saw through a piece of wood especially when trying to be quick. This content will provide a brief look at the many forms of sawing.

Features:

The game will feature the player as a lumberjack who is participating in a multi-feat tournament. The tournament consists of three activities; Chopping, Ax Throwing, and Sawing. The player will be able to chop wood followed by throwing axes, and then sawing wood. The player can complete these activities in whatever time they choose. However, their speed is accounted for, and their medal in the end will be determined by cumulative score attained in each of the minigames. The better they do in each, the better the medal they receive. The players will be given intermittent breaks between each of the activities with little portions of information which will inform them on the activity they are performing. These texts will change with each playthrough to keep the information incoming while maintaining a fun pace to the game.

Chopping:

The chopping minigame will feature a log in the center of the screen for the player to hack away at. The minigame will open with directions showing the player how to play the minigame. Once the player swipes at the log the timer will begin. It is then their goal to chop through as many logs as they can within the given timeframe. Based on their performance they will be awarded a specific medal based on their swiftness when chopping through the wood. As the player chops through more and more wood, the world will begin to come to life as the wildlife comes out from the woodwork and cheers for the player. Once their time has run out they will be brought to a scene with

information regarding wood chopping before they proceed onto the next minigame.

Ax Throwing:

The ax throwing minigame will feature a board in the center in the center of the screen for the player to throw three axes at. The minigame will begin with an illustration showing the player how to throw the axes. Once the player throws all three of their axes then the minigame will finish sending them to an educational blurb about ax throwing before they proceed. Their score will be calculated based on their accuracy and how close they hit towards the center.

Sawing:

The sawing minigame will feature a log on its side with a saw the player must work their way through. The minigame will begin with an illustration showing the player how to use the saw. Following, the player will try to cut through as many pieces of wood as possible in the allotted time. Once the time runs out the player will be sent to their final educational blurb before they are shown their final score. Once they proceed they will see one of the three potential medals they have achieved based on their performance.

Player Motivation

The primary goal of the game is to perform as best the player can in each of the activities. The sub goals would be the individualized performance in each category. The player will want to play the game because the game loop creates a fast paced, fun experience which they may inadvertently learn from. The appealing art style and gameplay will encourage the player to keep playing through multiple times trying to achieve the best possible score. As well as personal progress, players will likely want to compare themselves to their classmates. This should create a sense of healthy competition similar to the event itself.

Game States

Beginning: The player is greeted with a piece of wood with an arrow indicating which way to slice.

Second: An informational text regarding the previous game is displayed.

Third: The player is greeted with a board and a directional arrow informing them to throw axes at the board.

Fourth: An informational text regarding the previous game is displayed.

Fifth: The player is greeted with a wood log on its side which they will be shown to saw back and forth.

End: The player has completed all feats and gone past their final informational section to reveal their score along with their medal for their hard work.

Mechanics and Systems

The following are the Core Game Loop Features which will be implemented into the game. Each of these features have a low risk of implementation as the team is familiar with developing features close to these.

Core Game Loop Features

- UI **HIGH**
  - Main Menu
  - Informational Screens
  - Game Completed Screen
  - Credits
  - Informational Keys to Demonstrate How to Play
- Timer **MEDIUM**
  - Track and Record Player Time
- Medals **LOW**
  - A Final Calculated Score that Results in 1 of 3 Medals
- Chopping Wood Minigame **HIGH**
  - Directional Arrow from Randomized Direction
  - Wood Cuts Properly when Sliced in the Correct Direction

- ○ Adds up Score Based on Logs Chopped
- Sawing Wood Minigame **HIGH**
  - ○ Saw Moves Back and Forth
  - ○ Wood Falls When Completed and Score Goes Up
- Ax Throwing Minigame **HIGH**
  - ○ Swipe and Throw Axe
  - ○ Ax Collides with Board and Adds up Score
- Music **MEDIUM**
  - ○ A tune that will play during gameplay

These are additional features which may vary should time permit.

Other Features

- Multiple Music Tracks **LOW**
  - ○ Multiple Tunes
- Woodland Creatures Cheering for Player **LOW**

Game Engine

Chop-Off! Will be developed in Unity version 2022.3.19f1, utilizing Microsoft Visual Studio for programming the C# scripts. Using Unity as our engine will be great as it maintains a well kept resource page that will assist should our team run into any issues. If their answers are not present on that page then others on the internet may be able to provide a solution thanks to the open accessibility which is the unity platform.

Aesthetic Direction

Design:

The game takes place in a forest surrounded by trees, stumps, and logs. As the game progresses the player will accumulate a score which will be provided at the end in the form of a medal based on their score. To incorporate learning into these activities we have provided informational blurbs which will separate each of the games with information about the

previous one they played. We figured that putting the information after will allow the game to hold the players attention as they are able to jump right in as opposed to reading for a minute before playing.

Art Direction:

The art will be done in a fairly simple art style with minimal shading which is easy for younger audiences to read. This artistic style is valuable to the game as it contributes to the friendly woodsy feel which the game displays. Due to the appeal to younger audiences, the simplistic style will be vibrant and inviting for children to enjoy. The game will replicate a forest in which the player will act as a lumberjack, participating in a tournament. This role will make the player want to perform as best they can without being discouraged by any negativity.

Art assets made in Adobe Photoshop and Illustrator to capture a simplistic yet satisfying overall aesthetic. Assets will be exported as clear back PNGs for easy implementation into the Unity engine.

Sound Design:

The sound of the game is intended to immerse the player into the forest environment of the game. Our intention is to create realistic noises that the player can hear to feel the effort that is put into each of these events. Meanwhile, we want to keep the atmosphere fun and entertaining for our younger audiences. Due to our audience our music is very upbeat and fun, while adding in realistic sound effects to provide the players with an efficient experience.

Minigame Background Music

- Looping Song
- Earthbound Style 8-Bit Music
- Upbeat
- Country/Outdoorsy theme
- One for each game, if time

Sound Effects

- Wood Chopping - Wood Being Split Apart
- Ax Hitting into Target
- Sawing
- Crowd Cheering
- Whoosh for Ax Throwing
- Bell for Point Gain

Sources:

Quantic Foundry, 8 Nov. 2022, quanticfoundry.com/.