|  |  |  |
| --- | --- | --- |
| Project Design Document | |  | | --- | | *01/27/2025*  Qidan Chen | |

|  |  |  |  |
| --- | --- | --- | --- |
| Project Concept | | | |
| 1 **Player Control** |  | You control a   |  | | --- | | *Bear* | | in this   |  |  | | --- | --- | | *top Down* | game | |
|  | where   |  | | --- | | *Keyboard input(WSAD)* | | makes the player   |  | | --- | | *Move up/down/left/right* | |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2 **Basic**  **Gameplay** |  | During the game,   |  |  | | --- | --- | | *lumberman* | appear | | from   |  | | --- | | *Borders of the screen* | |
|  | and the goal of the game is to   |  | | --- | | *Beat all the lumberman* | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3 **Sound**  **& Effects** |  | There will be sound effects   |  | | --- | | *Screaming, roaring* | | and particle effects   |  | | --- | | *Explode, burst* | |
|  | [*optional*] There will also be   |  | | --- | | *description of any other expected special effects or animation in the project.* | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 4 **Gameplay**  **Mechanics** |  | As the game progresses,   |  | | --- | | *Bears win better weapons and grow stronger* | | making it   |  | | --- | | *More stronger to defend the forest* | |
|  | [*optional*] There will also be   |  | | --- | | *description of any other gameplay mechanic(s) and their effect on the game.* | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 5 **User**  **Interface** |  | The   |  | | --- | | *timer* | | will   |  | | --- | | *decrease* | | whenever   |  | | --- | | *Time goes by.* | |
|  | At the start of the game, the title   |  |  | | --- | --- | | *5 min to defend your forest* | will appear | | | and the game will end when   |  | | --- | | *Time up* | |

|  |  |  |  |
| --- | --- | --- | --- |
| 6 **Other Features** |  | |  | | --- | | *Any other notes about the project that you don’t feel were addressed in the above.* | |

# 

# Project Timeline

|  |  |  |
| --- | --- | --- |
| Milestone | Description | Due |
| **#1** | |  | | --- | | *Define Game Mechanics: Describe how the black bear will defend the forest.Specify actions (e.g., chasing, roaring, traps) and enemy behaviors (e.g., lumberjacks attacking trees)*  *Map Design and Layout: Sketch a fixed 2D forest map with defined boundaries and landmarks (e.g., trees, rivers).*  *Game Flow Planning: Outline the 5-minute gameplay structure (e.g., start, middle, end). Plan difficulty progression (e.g., increasing number of lumberjacks).* | | |  | | --- | | *02/04* | |
| **#2** | |  | | --- | | *Character Design: Create a 2D sprite for the black bear with animations (idle, move, attack).*  *Enemy Design: Design lumberjack sprites and behaviors (e.g., chopping, escaping).*  *Basic Gameplay Programming: Implement player controls for the bear. Create basic enemy AI for the lumberjacks.* | | |  | | --- | | *02/25* | |
| **#3** | |  | | --- | | *Map Interaction: Add trees, bushes, and interactive objects.*  *Program the lumberjacks to damage trees and the bear to defend them.*  *Game Progression: Introduce increasing waves of lumberjacks. Implement a timer for the 5-minute game duration.*  *Sound Effects and Music: Add sound effects for the bear’s actions and lumberjack chopping. Create background music to enhance the forest atmosphere.* | | |  | | --- | | *03/18* | |
| **#4** | |  | | --- | | *Bug Fixing: Test gameplay to identify and resolve bugs (e.g., collision issues, AI behavior).*  *UI and Feedback: Add a score system based on trees saved.*  *Implement end-screen feedback (win/lose based on trees saved).* | | |  | | --- | | *04/01* | |
| **#5** | |  | | --- | | *Final Optimization: Ensure smooth performance on target platforms.*  *Release and Feedback: Launch the game and collect player feedback for future updates* | | |  | | --- | | *04/08* | |
| **Backlog** | |  | | --- | | * *Feature on backlog - not a part of the minimum viable product* * *Feature on backlog - not a part of the minimum viable product* * *Feature on backlog - not a part of the minimum viable product* | | |  | | --- | | *mm/dd* | |

# Project Sketch

Home Tree

Player (bear)

Enemy trying to attack player and the tree

Timer counting down

