| **Project Design Document** | | *01/27/2025*  Name  Jinhe HU | | --- | |
| --- | --- | --- |

| **Project Concept** | | | |
| --- | --- | --- | --- |
| **1** **Player Control** |  | You control a   | *Human Hero* | | --- | | in this   | *top-down view* | game | | --- | --- | |
|  | where   | ***keyboard input (WASD keys)*** | | --- | | makes the player   | *Using* ***WASD keys****, the player moves the hero across the battlefield, and* ***left mouse click*** *triggers regular attacks, while* ***right mouse click*** *activates special skills.* | | --- | |

| **2** **Basic**  **Gameplay** |  | During the game,   | ***various monsters (e.g., slimes, skeleton warriors, and demons)*** | appear | | --- | --- | | from   | *spawn* ***randomly in different areas of the map*** | | | --- | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | and the goal of the game is to   | *defeat as many monsters as possible, complete objectives (such as protecting zones or collecting items), and level up the hero.* | | --- | | |

| **3** **Sound**  **& Effects** |  | There will be sound effects   | *Weapon attacks (sword slash, arrow shot, or magic cast).*  *Monster sounds (death, attack, or growling).*  *Background music that dynamically changes with the battle intensity.* | | | --- | --- | | and particle effects   | *Explosions and glowing lights for skills like fireballs or area-of-effect attacks.*  *Distinctive death effects, such as poison splashes for slimes or bone fragments for skeletons.* | | | --- | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | [*optional*] There will also be   | *description of any other expected special effects or animation in the project.* | | | --- | --- | | |

| **4** **Gameplay**  **Mechanics** |  | As the game progresses,   | ***Combat System*** | | | --- | --- | | making it   | * *Players can chain basic attacks to defeat monsters.* * *Special skills (with cooldowns) allow for massive damage or area control.* * *Weapons and skills can be swapped to suit different enemy types.* | | | --- | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | [*optional*] There will also be   | ***Leveling System****:*   * *Defeating monsters grants experience points, and leveling up improves attributes like health, attack power, and skill cooldowns.* * *Players can choose upgrades, such as increasing melee damage, boosting ranged accuracy, or enhancing magical skills.* | | | --- | --- | | |

| **5** **User**  **Interface** |  | The   | ***Score****:* | | --- | | will   | *increase* | | --- | | whenever   | *the player defeats a monster or completes a specific objective* | | | --- | --- | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | At the start of the game, the title   | *Hero's Last Stand* | will appear | | --- | --- | | | and the game will end when   | *lives reach zero* | | | --- | --- | |

| **6** **Other Features** |  | | ***Lives****:*   * ***Decreases*** *whenever the player takes damage from a monster or hazard.* * *If the player runs out of lives, the game ends.*   ***Timer*** *(optional):*   * *A countdown timer appears during certain timed missions or challenges.* * *The timer* ***decreases*** *as time progresses and ends the game or mission when it reaches zero.* | | | --- | --- | | |
| --- | --- | --- | --- | --- | --- |

# **Project Timeline**

| **Milestone** | **Description** | **Due** |
| --- | --- | --- |
| **#1** | | * *Basic player movement and attack mechanics* | | --- | | | *2/23* | | --- | |
| **#2** | | * *Enemy spawning and simple collision detection* | | --- | | | *3/8* | | --- | |
| **#3** | | * *Experience and leveling system implementation* | | --- | | | *3/23* | | --- | |
| **#4** | | * *UI, sound effects, and particle effects added* | | --- | | | *4/8* | | --- | |
| **#5** | | * *Complete game loop with win/lose conditions* | | --- | | | *4/23* | | --- | |
| **Backlog** | | * *Add advanced enemy types like flying monsters or bosses.* * *Randomly generated maps with hidden treasures.* * *Hero customization with different skins or appearances.* | | --- | | | *5/3* | | --- | |

# **Project Sketch**

