### Other

**Enemy Spawn**

* Enemies spawn at random locations on the edge of the map over time.
* The key “g” spawns an enemy.

### Render

**Map**

* There is a map of grass tiles.
* There are scorched earth titles on the edges of the map.

**UI**

* There is the player's health bar. It decreases when zombies successfully attack the player. If the health is critical, the health bar darkens in colour.
* There is the player’s experience bar. It increases when the player successfully kills a zombie. If the experience bar is close to filling up, the experience bar darkens in colour. If it ever exceeds the maximum level, the experience bar resets to zero.
* There is a pause button and a toolbar, but those are purely cosmetic for the time being.

**Enemy Count**

* The number of zombies alive appears in the console. It updates when zombies spawn or are killed.

**Player**

* The player has:  
   - Idle (Sprite)  
   - Move (Animation)  
   - Attack (Animation)
* The scale and position are correct.

**Player Damage**

* When the player takes damage:  
   - The player sprite flashes red.

**Enemy**

* The enemy has:  
   - Move (Animation)
* The scale and position are correct.

**Enemy Death**

* When an enemy is killed:  
   - The enemy is knocked back while fading out.

**Enemy Damage**

* When an enemy takes damage:  
   - The enemy sprite flashes white.

### Player

**Death**

* When the player’s health reaches 0:  
   - The player is destroyed and game over is triggered.

**Attack**

* Pressing “mouse-left” triggers an attack. The health of all enemies in range is reduced.

**Attack Cooldown**

* The weapon enters cooldown when used.
* The weapon cannot be used while on cooldown.

**Move**

* Single Input  
   - Holding “w” moves the player up based on its speed.  
   - Holding “a” moves the player left based on its speed.  
   - Holding “s” moves the player down based on its speed.  
   - Holding “d” moves the player right based on its speed.
* Multi Input  
   - Holding “w+d” moves the player up-right based on its speed.  
   - Holding “w+a” moves the player up-left based on its speed.  
   - Holding “s+d” moves the player down-right based on its speed.  
   - Holding “s+a” moves the player down-left based on its speed.
* Other  
   - Holding opposite keys (“w+s” or “a+d”) results in no movement.  
   - The player cannot move on scorched earth (map edges).

### Enemy

**Death**

* When the enemy’s health reaches 0:  
   - The enemy is destroyed and player experience is updated.

**Attack**

* When an enemy touches the player it triggers an attack. The health of the player is reduced.

**Attack Cooldown**

* The enemy enters cooldown after attacking.
* The enemy cannot attack while on cooldown.

**Move**

* Enemies move to the player.

### Game Over

**Screen**

* When the player is killed:  
   - The game over screen appears then fades out.  
   - All systems are disabled (including player input).

**Retry**

* In the game over screen:  
   - Press "r" restarts the game. This can be performed even when the game is in progress.

**Score**

* ~~The number of zombies killed appears in the console.~~

### Audio

**Music**

* There are two tracks of background music. One track is played when there are no zombies present, and another track is played when zombies are present.

**SFX**

* There is SFX during:  
   - Player Attack  
   - Enemy Attack  
   - Player Death