(INSERT TITLE LATER)

Zombie Game GDD

The goal for this game is to provide a survival challenge to the player. The player will start the game after the onset of a zombie apocalypse. Game play will include scavenging, thirst and hunger management, inventory and equipment management, combat (both ranged and melee), looting from structures and possibly a fortify or build mechanic (stretch goal).

1. The Player
   1. Movement
      1. The player will be able to move forward and backward using “W” and “S”.
      2. “A” and “D” will rotate the character’s facing direction.
      3. “Q” and “E” will offer a strafing ability meaning the player will move left and right without altering the facing direction.
      4. Walking towards stairs allows the player to traverse them moving the player to a different floor of the structure he is currently inside.
      5. The player’s mouse will be covered in a later section, suffice to say that the mouse has no impact to the player’s movement.
   2. Inventory Management
      1. Several menus will be offered to assist the player in managing their inventory
         1. Backpack
         2. Character Sheet
         3. Inventory (contains the player’s currently equipped items as well as any quick use belt items
      2. The game will pause when an inventory is opened
      3. The player will use his mouse to manipulate all applicable aspects of the various management screens
      4. Clicking, holding, dragging and right clicking will all by acceptable commands to manipulate the items contained within the backpack and inventory
   3. World Interactions
      1. The player will need to manage a survival system while traversing the dangers of zombies. To maintain the need for food and water the player will need to loot and scavenge around the town.
      2. The player will be able to open doors, open windows, use beds, open loot locations and transfer items from external inventories using the mouse in combination with the left and right clicks. Either a scroll wheel or a tab system will be implemented to navigate multiple sheets of loot.
      3. Stairs when stepped on by the player will move the player up or down them allowing the player to access multiple floors of a building
   4. Combat
      1. Melee combat will be possible without a weapon (fists) albeit at a very low damage. The player will engage in an attack using spacebar. The attack will be committed in the facing direction of the player and have its range determined by the currently equipped weapon.
      2. Ranged combat will only take place when a ranged weapon is equipped with the proper ammunition. The ranged weapon will fire using the spacebar in a cone in the direction the player is facing. Different weapons may have different cones of fire. Damage will also be determined by the equipped weapon.
      3. The player may use “R” to switch between melee and ranged weapons (assuming one is equipped)
      4. If no weapons are equipped the player will always have “Fists” as a default weapon.
   5. Survival System
      1. The player will be in a constant state of water, food and sleep drain.
      2. Water will drain faster than food and sleep faster than either, however if either food or water reaches zero at any point the player will begin dying. If sleep reaches a “exhausted” state, the player will be given speed and vision penalties.
      3. The player must replenish his food and water by scavenging and consuming supplies they find.
      4. Sleep can only be refilled in beds where the buildings or immediate area has been secured (Cleared of Zombies)
      5. The current statues of the player’s survival stats will be visible on the HUD as well as accessible from the inventory management screens.
      6. If the player is bit during combat with a zombie an infection countdown will begin, the player will have a set period of time to stave off the infection using antibiotics (if they have any) or by removing the affected limb, Removing a limb causes a massive and significant damage to players abilities (determined by which limb is removed) as well as a massive hit to their health. If the health falls below a certain threshold the player could pass out and/or die.
   6. Leveling system and character sheet
      1. The player will receive experience points from completing various action within the world. Opening locked doors, killing zombies, finding loot, consuming consumables, and sleeping.
      2. The player will have several attributes and skills that will increase their proficiency/speed at certain activities, as the player levels up they will be able to add points to these things increasing their capabilities.
2. Zombies
   1. Movement
      1. Movement for the zombie will be slower than player, unless the player is in an exhausted state.
      2. The zombies will wander aimlessly typically staying near their spawn location unless given outside stimuli, ie sight or sound.
   2. AI Logic
      1. The Logic will allow the zombie to exist in only a few states idle, investigating and hunting.
      2. Idle state will be a listener state allowing the zombie to either hold position or slowly pick nearby location to wander to.
      3. When the zombie is given a listen event (in the form of a sight or sound) the zombie will begin to investigate, this involves the zombie approaching the location of the listen event and remaining on alert for a set period of time.
      4. If while in an investigative state the zombie directly sees the player, or potentially other non-Zombie NPC’s the zombie will engage in hunting mode and will beeline to the player and attempt to attack them. If the zombie loses sight of the player, they move to the last known location of the player and begin an investigate period again.
   3. Combat
      1. Zombies will always attempt to grab a player and bite them. These are two different attack types the first, grab, will be an attempt by the zombie to pin the player. Once pinned the player will be in danger of being bit. If the player is bit, they begin the infection countdown. If the player breaks free from a pin they will take damage, but the infection countdown will not begin.
      2. Zombies will have a set amount of health that will be subtracted as the player makes successful attacks against them
   4. Sensory Perception
      1. The zombie will have limited sight and sound capabilities that will be range determined. If movement or sound falls within the set range the zombie will engage in an investigative period.
3. Map
   1. Procedural Generation (Stretch Goal)
      1. A simple procedurally generated neighborhood will be a stretch goal the details of which will be determined later.
   2. Loot locations
      1. Common locations within a house and around a neighborhood will be lootable. Such as dressers, fridges, cabinets, drawers, piles of junk etc.
      2. The time required to loot each location will vary and may be randomized slightly. It will also be dependent of the player’s skill level.
   3. Multiple level/height navigation
      1. Staircases or ladders will exist in the map allowing the player to traverse multiple levels within their environment.
      2. The exact functionality of these objects will be determined later.
4. Build Mechanics
   1. Currently a stretch goal