Zombie House

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Abstract

The zombie house is a survival game where the player attempts to navigate a dungeon and find the exit while evading its dangers.

Objective

In each level the player attempts to navigate the dungeon while having limited vision. The player must survive until he finds an exit and reach it to complete the level.

Controls

The player can move using the arrow keys and WASD. The player may move at twice the movement speed by holding down the R key while moving. Moving at double speed causes the player to detonate traps resulting in his death. The player can use the P key to place or pick up traps. To do this, the player must stand in place for 5 seconds and hold down the key.

Settings

The settings for the game can be set when the game is started.

The following settings are adjustable before the game window is launched:

- Exit Distance, the minimum distance that the dungeon attempts to place the exit.
- Frame Rate, the frame rate for the game.
- Sight Radius, the visible radius of the player.
- Tile Size, the tile size for the game units.
- Trap Spawn, the chance of spawning a trap in each of the floor tiles in the dungeon.
- Zombie Spawn, the chance of spawning a zombie in each of the floor tiles in the dungeon.
- Hearing, the maximum distance that the player can hear zombie foot steps.
- Stamina, the duration for which a player can run before becoming exhausted.
- Regeneration, the rate at which the player regains stamina.
- Run Speed, movement speed when running.

- Traps, the number of traps the player carries when a level begins.
- Walk Speed, the movement speed when walking.
- Decision Rate, the time between each decision made by zombies.
- Smell, the maximum distance that the zombie can detect a player.
- Speed, zombie movement speed.
- Turn Angle, the minimum angle that a zombie turns upon impacting with another object.

Known Issues:

- The vision radius sometimes does not render properly.
- Some house items may not reset properly upon resetting a level.
- Some zombies pathfinding causes IndexOutOfBoundsException crashing the game when in certain positions.