

[Title](#)

[Genre and synopsis](#)

[Controls](#)

[Game style](#)

[Systems and mechanics](#)

[Characteristics](#)

[Design](#)

[Progression](#)

[Interface](#)

Title

Demon Killer 3000

Genre and synopsis

Old style FPS, like DooM 1993.

Our player woke up brutally bitten in a dungeon with a chainsaw and a pistol in hand. He needs to figure out what's going on and get out of here.

Controls

Main movement devices: keyboard and mouse.

Available player actions:

- [Fire] - LMB/Holding LMB;

- [Jump] - Space;

- [Sprint] - Shift;

- [Interact] - E;

- [Change weapon to Chainsaw] - 1;

- [Change weapon to Pistol] - 2;

- [Change weapon to Shotgun] - 3;

[Change weapon to PlasmaGun] - 4;
[Main menu] - Esc;

PlasmaGun - time to activate while holding [Fire] action - 0.2 sec.
[Main menu] action will pause the game until it closed.

Game style

Style is inspired by Doom 1993 and Duke Nukem games,



with small and tight linear corridors where low light creates a horror atmosphere.



Players can use doors and a teleport to move between the rooms and levels.

Systems and mechanics

Combat system:

Players can use [Fire] action to kill enemies or to blow up explosive barrels with available weapons. [Fire] action creates sound that can trigger enemies PawnSensing component, the same as explosion sound from destroyed barrels.

If the enemy health becomes 0 - death animation and sound triggers. After 3 seconds the corpse will disappear.

Enemies can use [Attack] action to decrease player health and armor which results in player stats update in the HUD, screen becomes red for a second and special sound will be played. If a player has armor - it is decreased first, all what is left of damage will decrease the health.

If player health becomes 0 he dies and "Game Over" screen shows up.

Lava pools can only do damage to the player.

Detection system:

All enemies have a PawnSensing component that includes these 3 most important parameters among others: Hearing threshold, Sight radius, Peripheral vision angle. Each parameter is customized for each type of enemy.

When the player steps in Sight radius - enemy immediately starts [Chase] action to reach attack radius. When the radius reached - the [Attack] action triggered. If the enemy loses sight of the player - he continues the idle cycle from Behavior Tree.

Players also can be detected by the Hearing threshold when shooting the weapon. In that case the enemy turns to the player and again [Chase] action will start. All weapons have the same loudness.

Interaction system:

When player collides with any of the pickup objects:

- Ammo - it increases the current amount of ammo of the same type as picked up. The update will be visible in UI and players will receive feedback through sound.
- Health and armor - it increases the current player stat, also will be visible in UI + sound + the screen will flash for a second with green color.

When the player uses [Interact] action on the door - it opens up and becomes hidden, on the teleport - it will immediately load Level_2 with the boss.

Characteristics

Player stats:

- Max health - 100.
- Health - current health, at the start of the game 25.
- Max armor - 200.
- Armor - current armor, at the start of the game 15.
- Walk speed - 600 cm/s.
- Sprint speed - 1000 cm/s.
- Jump - 420 cm/s.
- Default weapons: Chainsaw, Pistol with 20 bullets.
- Weapon swap time - 0.5s.
- Shooting speed - 1 shot/s.

Weapon stats:

Type	Damage	Distance
Chainsaw	15	150
Pistol	20	2500
Shotgun	35	2000
Plasmagun	5	2500

Enemy stats:

Type	Health	Damage	Attack speed	Projectile speed
Melee	100	10	1/s	
Ranged	75	20	1/s	500
Boss	300	10*	1/s	500

** Boss has 2 guns, for that reason damage is lowered.*

Environment:

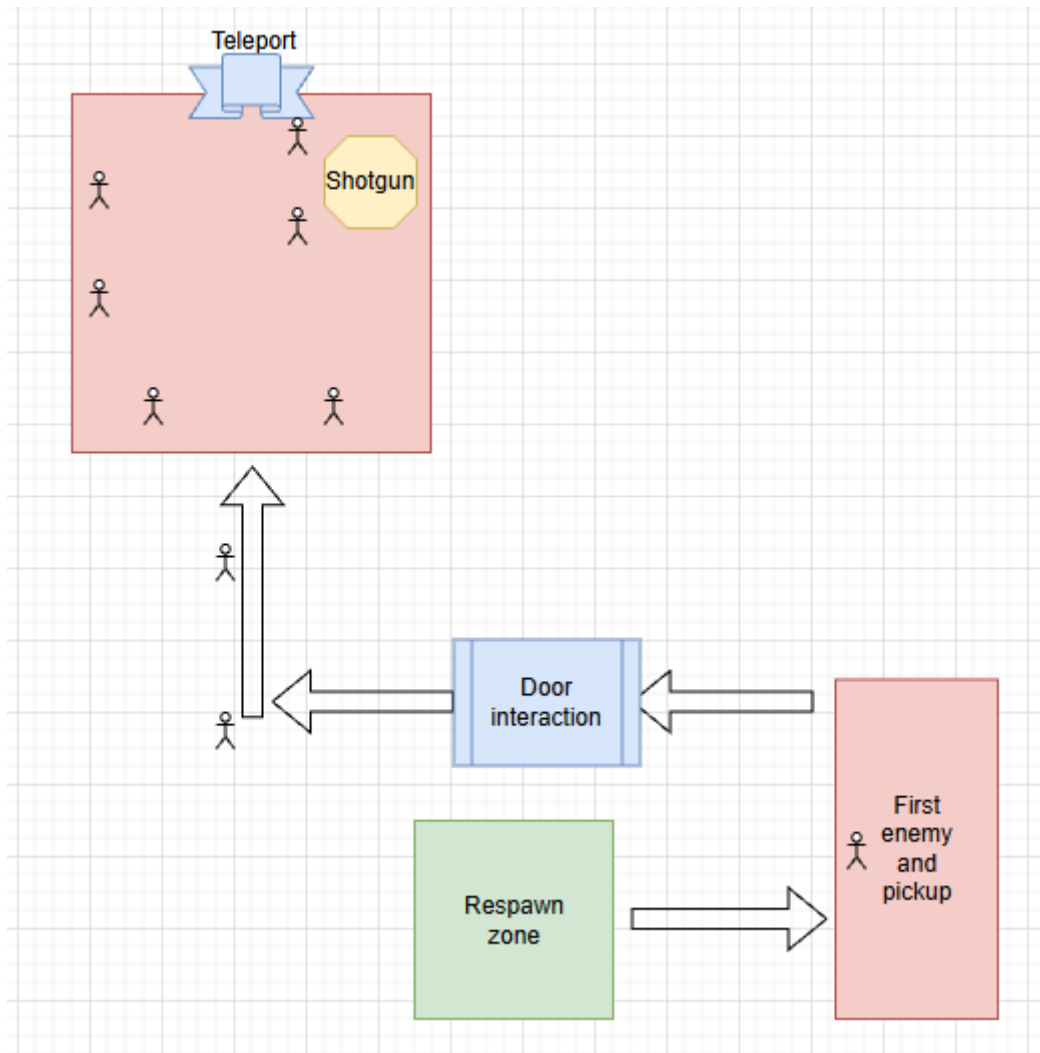
- Explosive barrels - 75 damage to the player.
- Lava pools - 5 damage to the player/0.5 sec.

Pickups:

- Health - recover 25 health to the player.

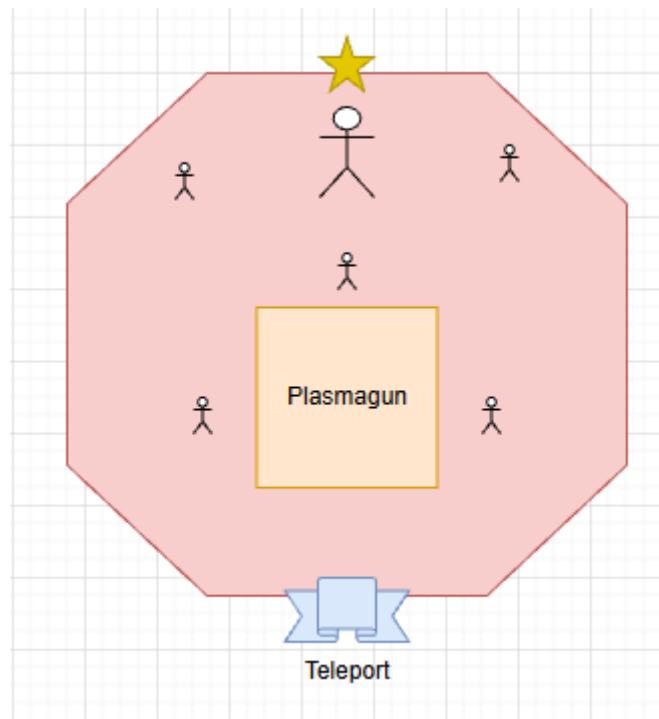
- Armor - recover 50 armor to the player.
- Pistol bullets - add 25 bullets.
- Shotgun bullets - add 10 bullets.
- Plasmagun charges - add 30 charges.

Design



First level map

At this level we want players to understand the main controls of the game and get the understanding how to play. Starting slow with a few enemies, we show all of the types in the room with teleport.



Second level map

In the second level we have a lot of enemies as well as ammo and pickups to help the player. When the player enters the map - battle music starts.

When the boss is killed - at his original location "Star" object spawns. If the player collides with it - the game will be completed.

Visual:



Pickups: 3 ammo types, health and armor



Enemies: 2 melee, 2 ranged and Boss

Audio:

We have shot sounds for each type of weapon, ammo and health/armor pickups, for taking damage.

Enemies have sounds for taking damage as well, for attacking and dying.

The explosive barrel has an explosion sound.

In the menu we have clicking sound when hovering the buttons.

Last one is picking up “Star” in the second level - the sound of winning plays.

Progression

Levels progression: as mentioned in the Game style chapter - players can use doors and a teleport to move between the rooms and levels by interacting with it with [Interact] action. One player teleported to second level, he can't go back.

Weapons: player can find 2 additional types of weapon at first and second level.

Enemies: when a player goes deep into the dungeon he can find more types of enemies and their count will increase.

Interface

Main menu:

- New game - start the game.
- Options - opens screen with volume settings.
 - Volume settings screen - has a progress bar to control the game sound volume and Back button, to return to the main menu.
- Quit Game - close the game.

Pause menu:

- Continue Game - close the pause menu and the game continues.
- Options - same as in Main Menu.

- Quit game - same as in Main Menu.

Level Complete menu:

- When the player collides with the “Star” that appears in the second level after the boss is killed - game pauses and a new screen with the text “Level completed!” will popup. There also will be a button “Main menu” that returns the player to level_0 and shows the Main menu screen.

Death screen:

- When the player dies, the game pauses and the “Game Over” screen shows up. It has only 1 button “Restart”, that restarts the game from the start.

Player HUD:

- Main goal - in the top left corner of the screen we have the title “Mission” and text below it “Find the exit and survive”.
- Attributes and ammo - in the bottom we have a bar with count of players ammo (current and max), current Health and current Armor.
- Weapon switch panel - right above Attributes and ammo panel we have a widget that shows small weapons icons with buttons from the keyboard dedicated to switch to this weapon. If the player does not possess some weapon yet(for example Shotgun), the icon remains translucent.
- Damage and heal feedback: screen flashes red - when the player gets hit by an enemy or environment and green - when the player gets healed or picked up armor.