

Link to GitHub repo:

<https://github.com/Boryslavc/FPS-arena>

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Overview

First person shooter, dynamic gameplay Rock - paper - scissors type of balance. 3 Types of enemies, 3 types of guns. Level design supports this balance, by providing different types of spaces, each is most proper for specific gun.

Jigsaw

Players task is to manage where enemies are and where are they gonna go, so that he has enough time and space to deal with the rest of them. In the "game" there are too many enemies that corner you, utilizing unique combat styles (for more info see "Enemies" section). In order to prevail, player should move and think strategically and use level geometry to his advantage. He will be given tools to block path of an enemy, making them taking longer paths, while player deals with other enemies. He will be able to block sight lines and implement strategy "Divide and conquer" in its fullest. Level design supports making use of the whole map, choosing place of encounter depends on the gun you have most ammo of. (for more details see Map section) When? Every enemy type after start of the combat runs to some target position (cover, hide spot, player himself) without actually attacking him. This means that while enemies are taking positions - player is safe and has time to think. Enemies take positions every time they go from one room into another.

Actions

- Movement
 - Walk
 - Run
 - Jump
- Shooting (standard for FPS)
- Moving parts of geometry of the map by shooting (for detailed info see "Movable" section)
- Heal yourself with stationary kits

Enemies

Red

Shape

Rectangular to emphasize physical strength

HP

RPG damage X 5 or assault rifle single shot damage X bust size X 6-8 (X = times)

Weapon

Axe.

Attack distance

1-2m

Combat behaviour

Slowly chases player, when in melee attack range (1-2m.)- he attacks

Speed

Fast enough, as to prevent player from staying in one position, but slow enough as to player would not be constantly running (needs playtesting)

Size

2.5-3 m, can be easily seen

Blue

Shape

Cylindric, should resemble turret

HP

AR single shot damage X burst size X 2 (X = times).

Weapon

Assault rifle

Attack distance

Whole room

Combat behaviour

When player enters a combat arena, finds a random cover, if player is in sight, turns towards player, if player is straight forward - shoots, else stays in the same position and rotation (so that when

player hops out of other side, he can easily kill blue one and feel that he has outsmarted the enemy) If player runs in another room - chases the player there and repeat the cycle.

Speed

Fast enough to quickly take cover, but still provide the opportunity for player to quickly react and shoot him down on his way

Size

same as player

Yellow

Shape

streamlined, no sharp corners to emphasize its behaviour in combat (constantly hiding)

HP

as single shot damage X burst size or single shot of rpg (X = times)

Weapon

Kamikaze bomb

Attack distance

Whole map

Combat behaviour

if player is in sight - find some place to hide , then release kamikaze bomb each K seconds

Speed

slightly faster than player (after all player has a gun, he doesn't need to run fast)

Size

slightly smaller than player

Weapons

Type	Shooting type	Damage	Magazine size	Spread	Optimal range	Reload time
RPG	single (one in a sec)	75	10-15	none	long (damages everything in a radius)	none for now
AR	burst (3 shots in a burst)	25	30	small, but increases, if equipped on enemy	close to medium	none for now
Submachine gun	spray	15	40-50	progressive (longer player holds the button - the bigger spread)	close	none for now

Movable

Description

Objects that can be moved, rotated and scaled dynamically on run time according to predefined settings. Allows player to change geometry of the map to his favor. Prerequisite for that is that player shoots movable game object. Transition can be initiated by specific gun type or by any, depending on the settings. It can be

triggered by shooting in the movable object itself or a specific place/game object named button. If movable block collides with a character it might deal some amount of damage.

Parameters

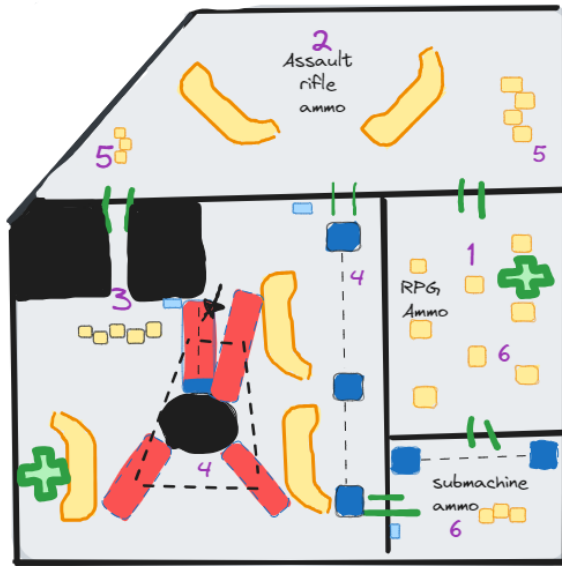
Position related

- position
- rotation
- scale

Transition related

- delay
- duration
- cooldown (in sec)
- number of positions
- (optional) damage on collision

Map



☆ - that block scales up

number =
gameplay expectations

Legend

|| - pass

— - cover

□ - crate

□ - button

■ ■ - movable block

- - - transition path

Color = gun type to shoot from, to evoke transition. Blue for assault rifle, Red for RPG,

+ - healing kit

1
enemies chasing player, he ought to choose one of those (ammo vs. heal)

2
get ammo and prepare to encounter enemies. More long range, linear space

3
bottleneck, best spot to make use of rpg

4
use assault rifle to set the block up and rpg to move it. Block sight lines for the shooters, redirect enemies to your advantage

5
running into the room and shooters took covers - use crates as a cover

6
Smaller, closed spaces. Perfect for submachine gun.