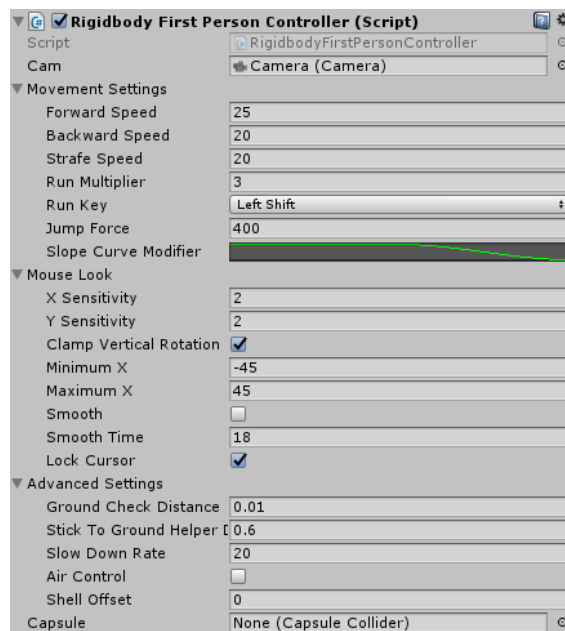# User Guide

Shooter Kit Guns
version 1.0

Player

RigidbodyFirstPersonController.
The script controls the movement of the player.

Cam   - camera.
Capsule — The current collider changes when the player lands.

Forward Speed – speed of moving the player forward.
Backward Speed – speed of moving the player back.
Strafe Speed – speed when moving sideways.
Run Multiplier - Speed at sprint**.**
Run Key – button when pressed which the player starts to run.
Jump Force – jump force.
Slope Curve Modifier - slope modifier.

X Sensitivity – sensitivity axis X.
Y Sensitivity - Y axis sensitivity.
Clamp Vertical Rotation – limitation vertical rotation.
Minimum X - The minimum angle of the player's inclination.
Maximum X – The maximum angle of the player's inclination.

Smooth - smoothing.
Smooth Time – smoothing time.
Lock Cursor – block the mouse cursor.

Ground Check Distance - distance to check if the controller is grounded (0.01f seems to be better suited for this).
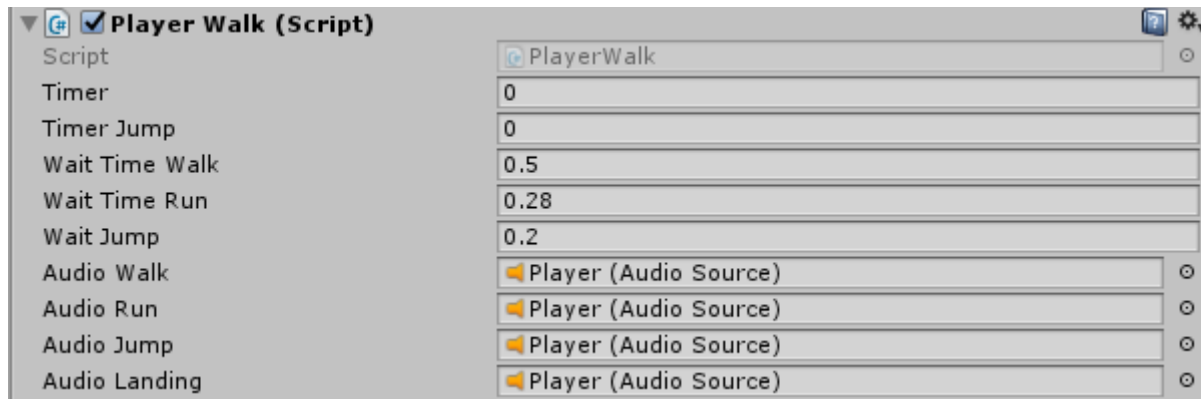
Stick To Ground Helper Distance - stops the player.

Slow Down Rate - the speed at which the controller stops when there is no input.

Air Control - whether the user can control the direction that moves in the air.

Shell Offset - we reduce the radius by this ratio to avoid getting stuck in the wall (the value 0.1f is nice).

PlayerWalk.
The scripts plays the sounds of moving.

Timer – timer.
TimerJump – jump time.
WaitTimeWalk – after what time to play the sound of walking.
WaitTimeRun — after what time to play the sound of running.
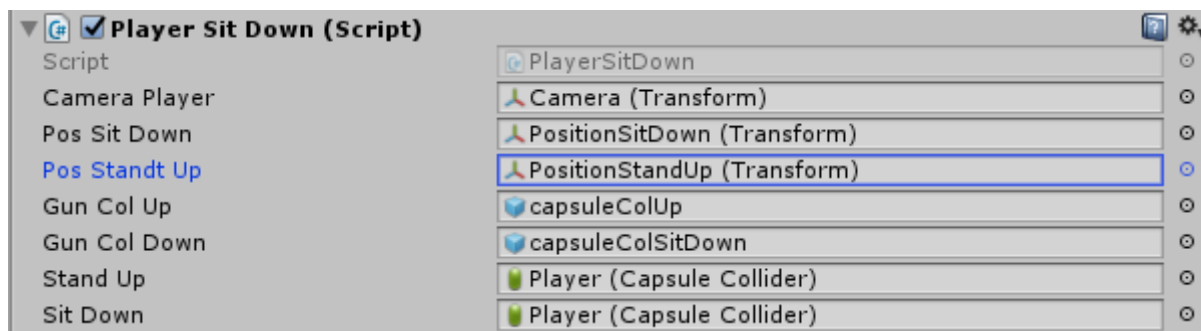**WaitJump** - after what time to play the sound of the jump.
AudioWalk — sound of walking
AudioRun — sound of running.
AudioJump — sound of a jump.
AudioLanding — sound of landing.

PlayerSitDown.

The script switches the player's collider when it sits or stands.

Camera Player – current camera coordinates.
Pos Sit Down - the player's coordinates when he sits.
Pos Stand Up - player coordinates when it costs.
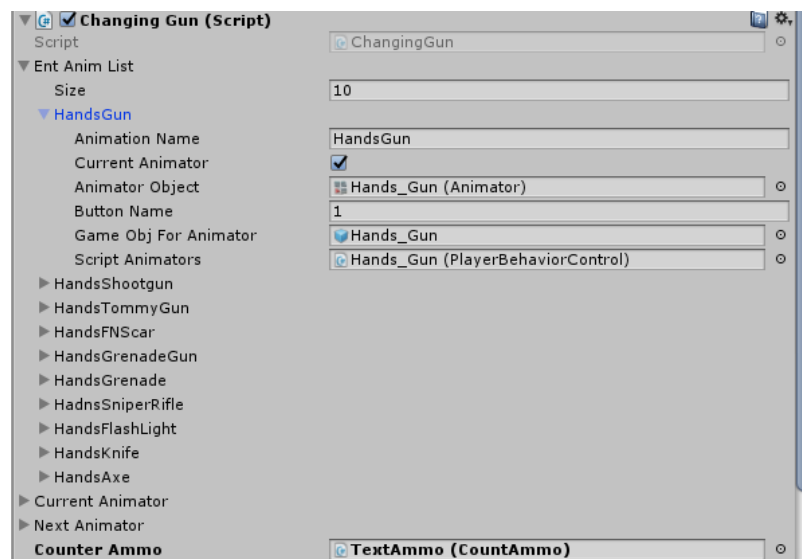**Gun Col Up** – Collider for weapons in a standing state.
Gun Col Down – collider for weapons in a sitting state.
Stand Up – the player's collider is in a standing state.
Sit Down – The player's collider is sitting.

ChangingGun.

The script controls the player's weapon switching.

Size – the number of game objects to switch.

HandsGun – one of the game objects between which you can switch. Switching occurs by pressing the assigned button.

Animation Name - the name of the element of the array.
Current Animator – set as the current object, is activated when the scene starts.
Animator Object – animator of the current game object.
**Button Name –** The name of the button to select this object.
Game Obj For Animation - игровой объект.
Script Animators - player control script, switches animations.

Counter Ammo — counter ammunition, displays information about ammunition on the screen.

PlayerBehaviorListener.

Scripting switches the behavior of the player when you press the control buttons. It allows you to play animations of the model depending on the current behavior.
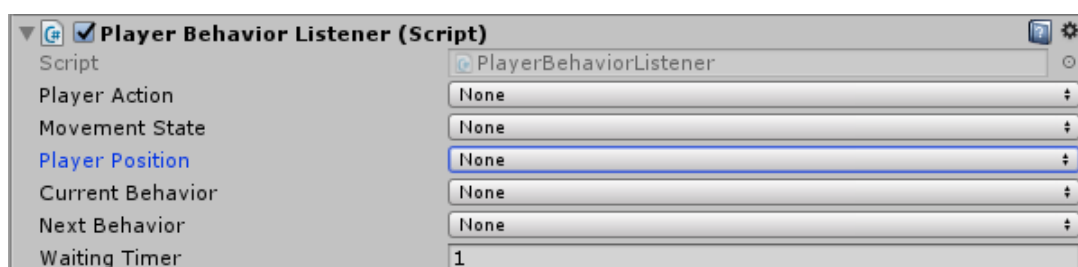
Player Action – listens to the player's behavior, whether he is shooting or not.
If the player does not perform any active actions, then his status is set to None.

Movement State – Determines the movement of the player, if the player stands still, then its state is set to Idle.

Player Position – It determines the current position of the player, whether he is standing or sitting.

Current Behavior – Determines the player's current behavior by priority. Behavior in Player Action is the highest priority.

Next Behavior – receives the following behavior of the player, if it is a priority, it is set as the current one.
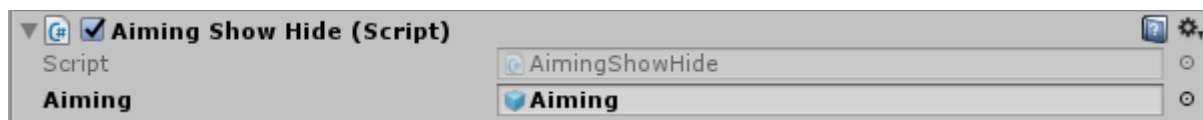
Waiting Timer – time through which Hide behavior switch to Idle.

HoteKey.
The script describes system buttons, for example, reload the scene, aiming.

AimingShowHide.

The script hides the cursor of the sight. When the player presses the right mouse button the crosshair of the sight is hidden.


Aiming – object UI crosshair sight.

PlayerCollisionDetection.

The script defines a collision with dynamic objects at the level and throws them aside. For example, if the boxes are installed at the level. For such dynamic objects, you need to install the «*BuildingBlock*»tag.

Health.
The script sets the amount of health to the player. Manages the change in health, if the health reaches 20 percent, then the show Blood texture is superimposed on the camera.
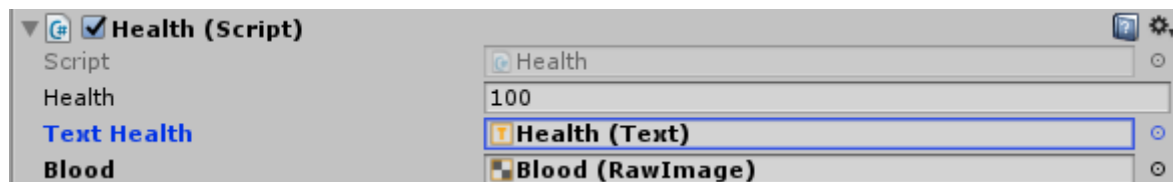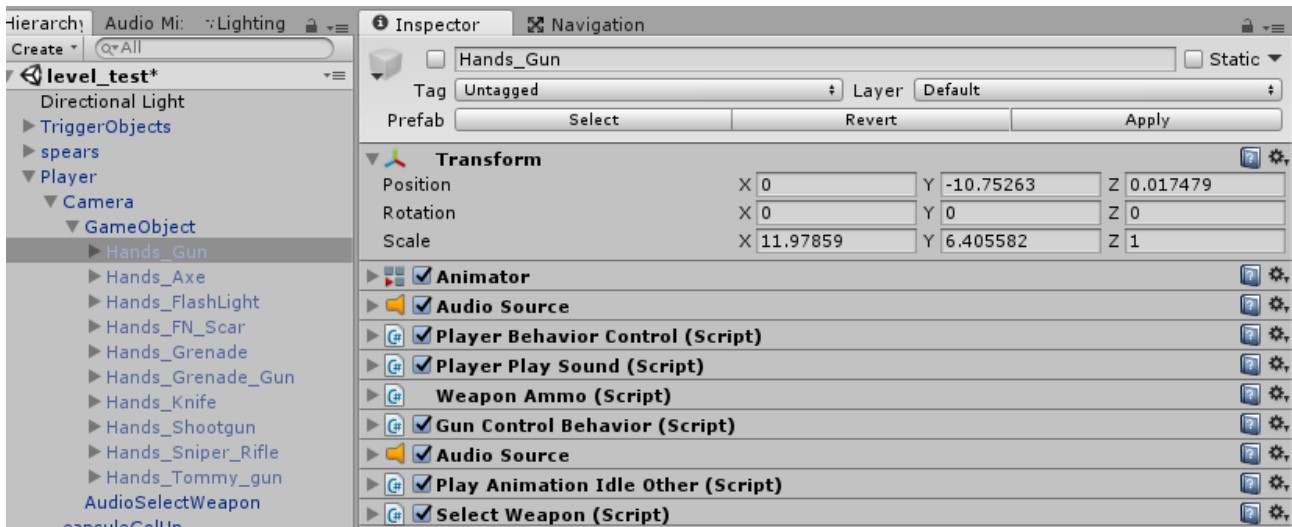

Health – the initial amount of health.
Text Health – object UI in which the amount of health is transferred.
Blood – the texture of critical damage.

Description of weapons.

The weapon control system is implemented in the same way, for this we consider an example of implementation on a pistol.
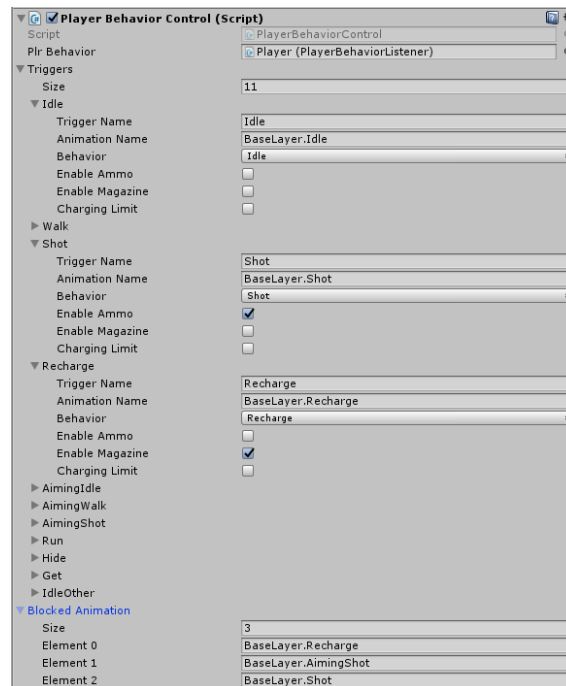

The system consists of scripts and shot sounds and recharges.

Sripts:

- **Player Behavior Control**

- **Player Play Sound**

- **Weapon Ammo**

- **Gun Control Behavior**

- **Play Animation Idle Other** (Used for an animator who has this animation)

- **SelectWeapon**

Player Behavior Control.
The script contains an array of behavior for the current animator.

Size – number of states for the current object.

Trigger Name – the name of the animation trigger in the animator.
Animation Name – the animation name in the animator.
Behavior – behavior for animation.

For each state, there are Boolean operators (Enable Ammo, Enable Magazine, Chargin Limit, Enable Ammo, Enable Magazine, Chargin Limit) is used for small arms.

Enable Ammo – checks the number of cartridges before the shot, if it is zero, then there is a reloading of the weapon.

Enable Magazine — checks the number of remaining stores at the weapon, if it is greater than zero, then recharging takes place.

Chargin Limit – Allows you to recharge weapons on one cartridge, used for Shotgun.

Also contains an array of blocking animations, for example, if a blocking animation is playing, then the next animation will be played after the current animation is completed.

Player Play Sound

The script plays the sound of recharging the weapon.
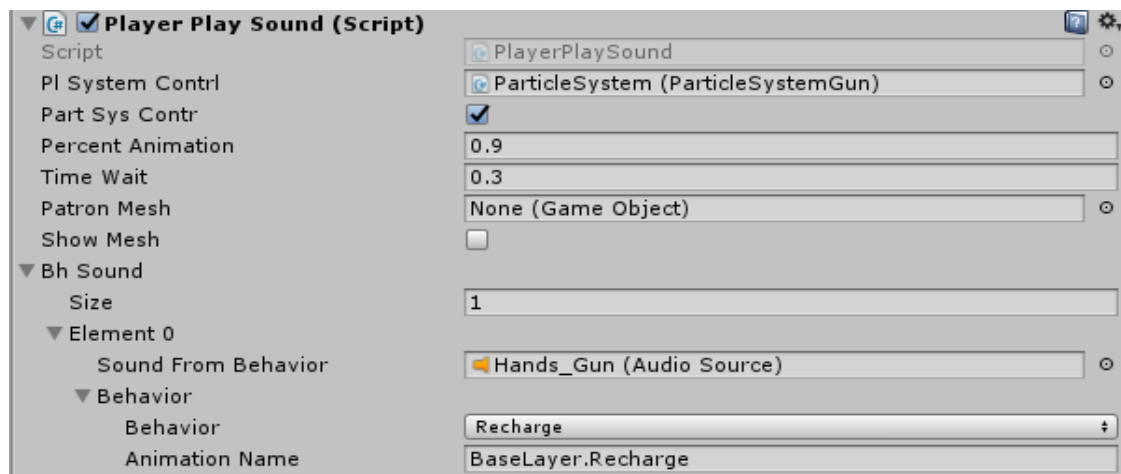
Pl System Control – a system of particles of weapons. (Manages the reproduction of special effects and the calculation of hits from this weapon).

Part Sys Contr – A Boolean operator defines the use of ParticleSystem. If false is set, then ParticleSystem is not used.

Percent Animation – the percentage of animation determines when to start the timer waiting for the completion of sound playback.

**Timer Wait** – the time to wait for the sound to end.

Patron Mesh – mesh cartridge (used for shotgun)
Show Mesh – displays the mesh of the cartridge when playing the recharge animation.

Bh Sound – array of sounds to play. The playback sound is indicated, for this sound the behavior and animation are indicated.

Weapon Ammo

The script controls the number of cartridges and stores for small arms, for a cold weapon set the Unlimited operator true.
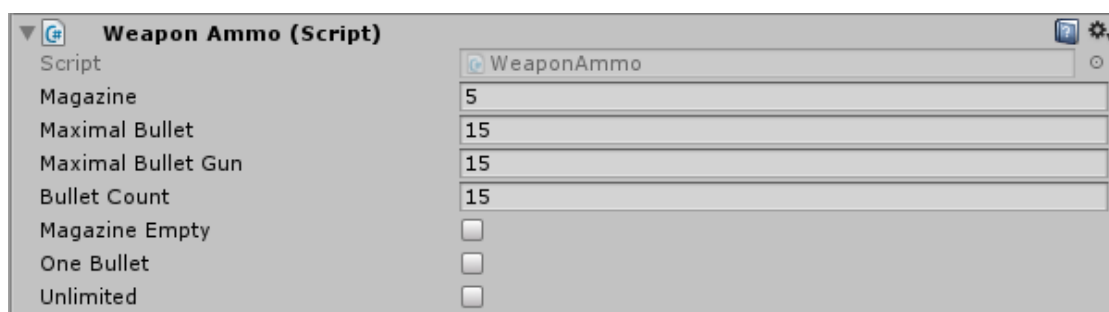
Magazine – number of shops at the weapon.
Maximal Bullet – the maximum number of bullets in the store.

**Maximal Bullet Gun** - the maximum number of bullets in the weapon.
Bullet Count – the current number of bullets in the weapon.
Magazine Empty – magazine empty.
One Bullet – recharging occurs on one cartridge (used in Shotgun and Grenade)

Gun Control Behavior
The script controls the playback of animations and sounds if the current animation matches the animation in the **AnimList** array.
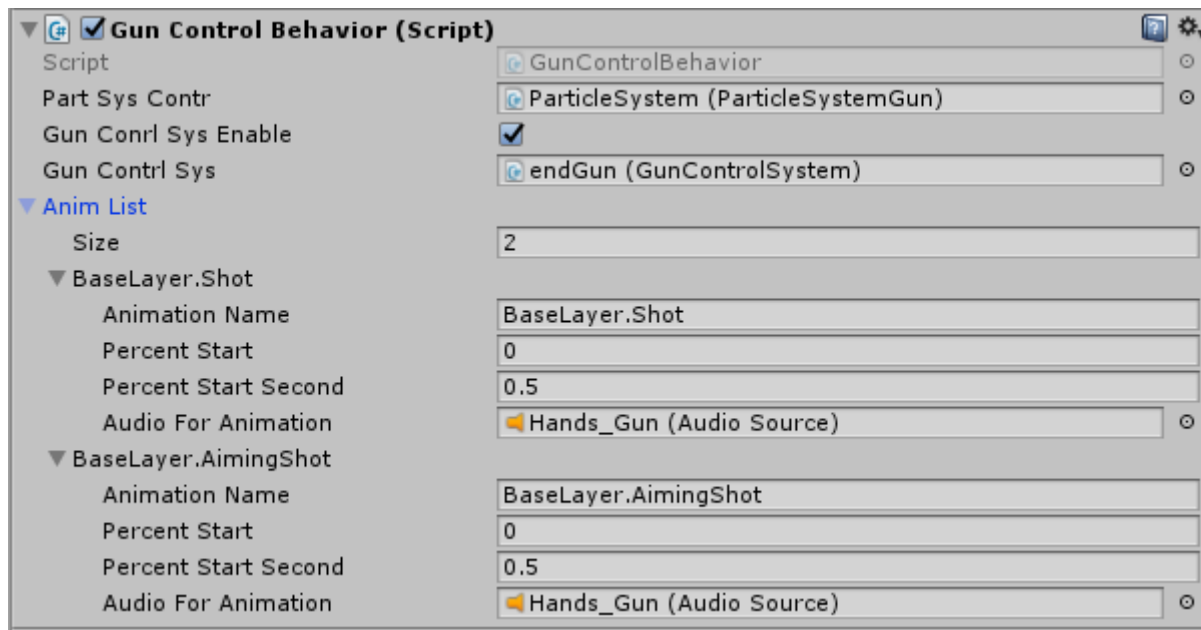
Size – number of elements in the array.

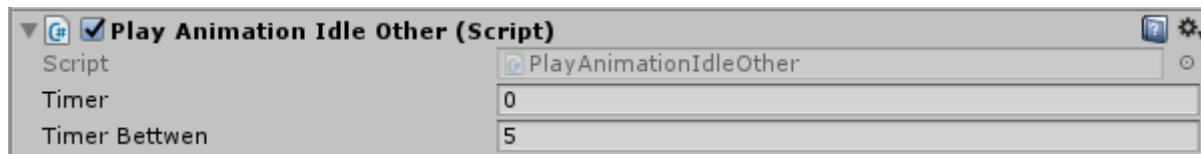**Animation Name** – name of the animation.

Percent Start – The percentage of the animation from which the sound effect is played.

Percent Start Second – the percentage of animation from which the special effect is reproduced (a physical object of the cartridge case is created).

Audio From Animation – sound effect (sound of a shot).

Play Animation Idle Other

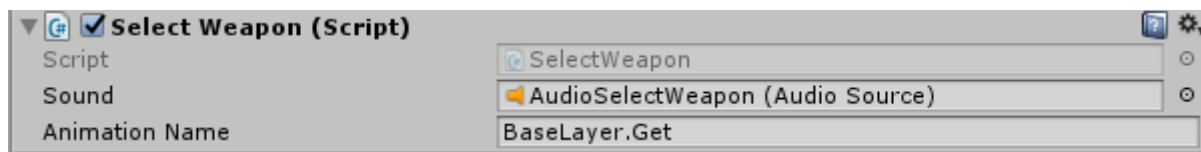The script calls the Idle Other animation if the player does not perform any actions.

Timer - timer.
Timer Bettwen – Player idle time.

Select Weapon

The script reproduces the sound of the weapon switching.
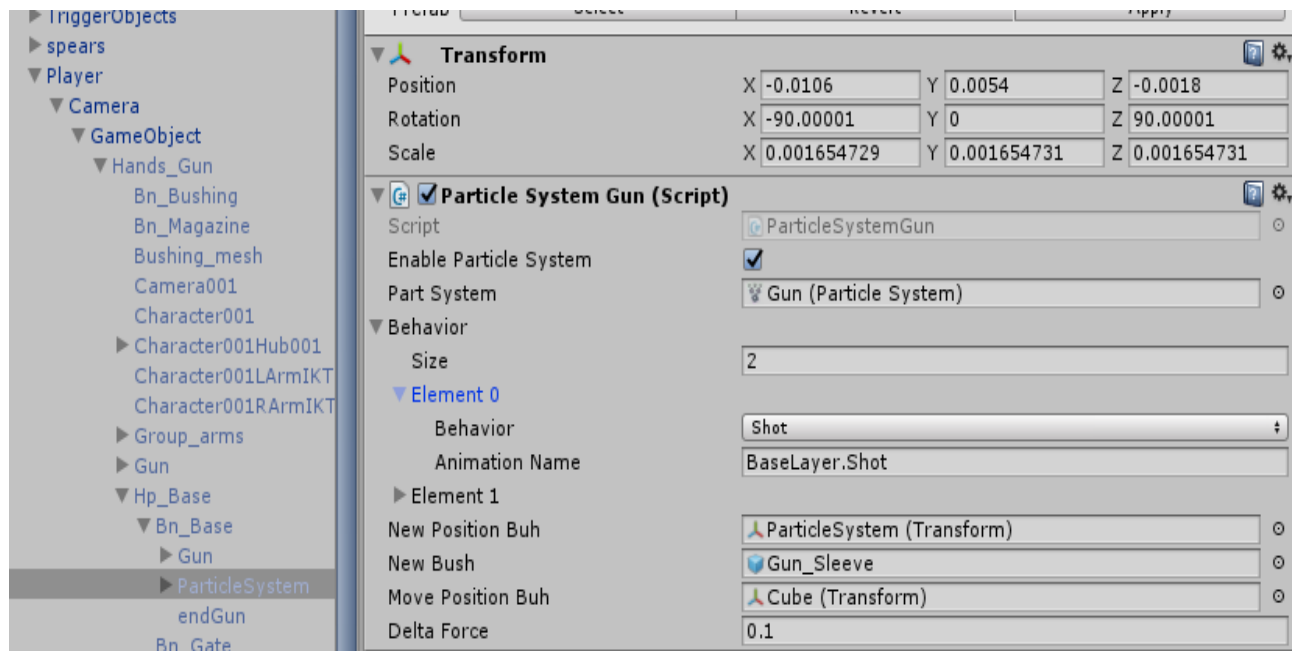

Sound – switching sound.
Animation Name – the name of the animation during playback of which the sound is played.

Particle System Gun

The script reproduces the shot's special effect and creates bullet case.

Enable Particle System – use a particle system.

Behavior – array of behaviors, contains Behavior and the name of the animation for which the special effect will be played.

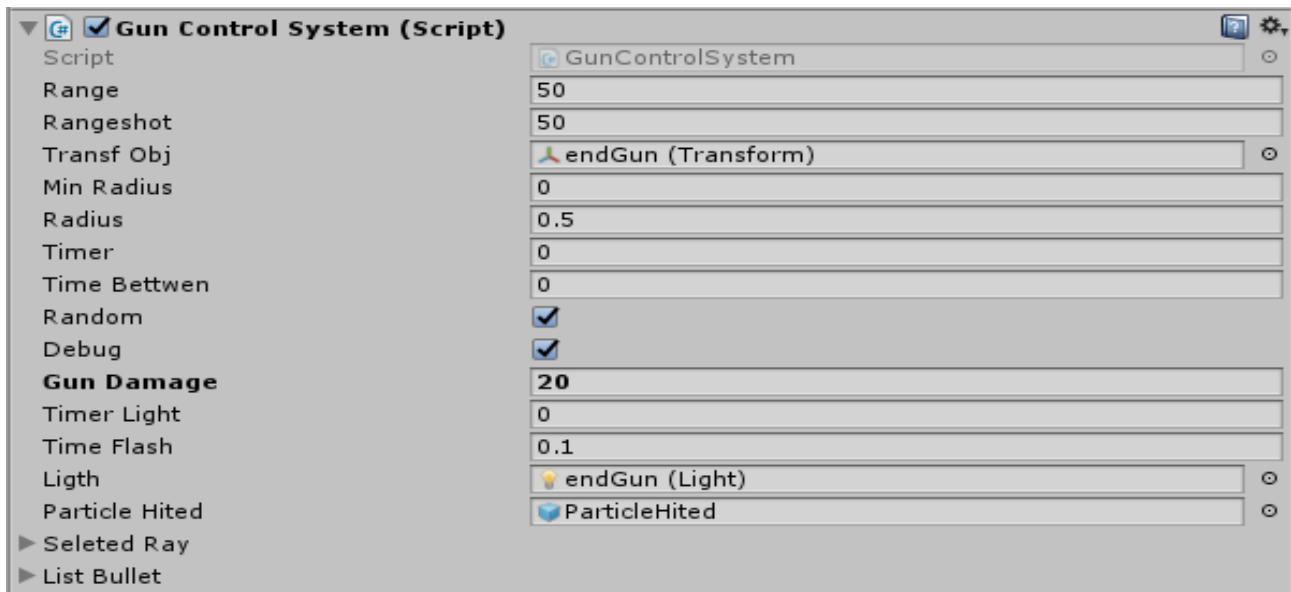**New Position Buh** – the starting position of the bullet case.
New Buh –The object of the bullet case, the game object that will be created.
Move Position Buh – the direction of movement of the bullet case.
Delta Force – force of acceleration of bullet case.

Gun Control System

The script determines the vector of the shot and hits the opponents.

Gun Control System (Script)	
Script	GunControlSystem
Range	50
Rangeshot	50
Transf Obj	endGun (Transform)
Min Radius	0
Radius	0.5
Timer	0
Time Bettwen	0
Random	☑
Debug	☑
Gun Damage	20
Timer Light	0
Time Flash	0.1
Ligth	endGun (Light)
Particle Hited	ParticleHited
▶ Seleted Ray	
▶ List Bullet	

Range – length of the beam for debugging.
RangeShot – range of shot.
Transf Obj – source of the shot.
Min Radius – the minimum radius of spread of bullets.
Radius - the maximum radius of the spread of bullets.
Timer – timer (the frequency of calculation of the spread of bullets).
Timer Bettwen – the time between the calculation of the spread of bullets (it is better to use 0).
Random – select a random vector from the **ListBullet** list.
Debug – enable debugging in the editor.
Gun Damage – damage done by the weapon.
Timer Light – timer (used for light flashes).
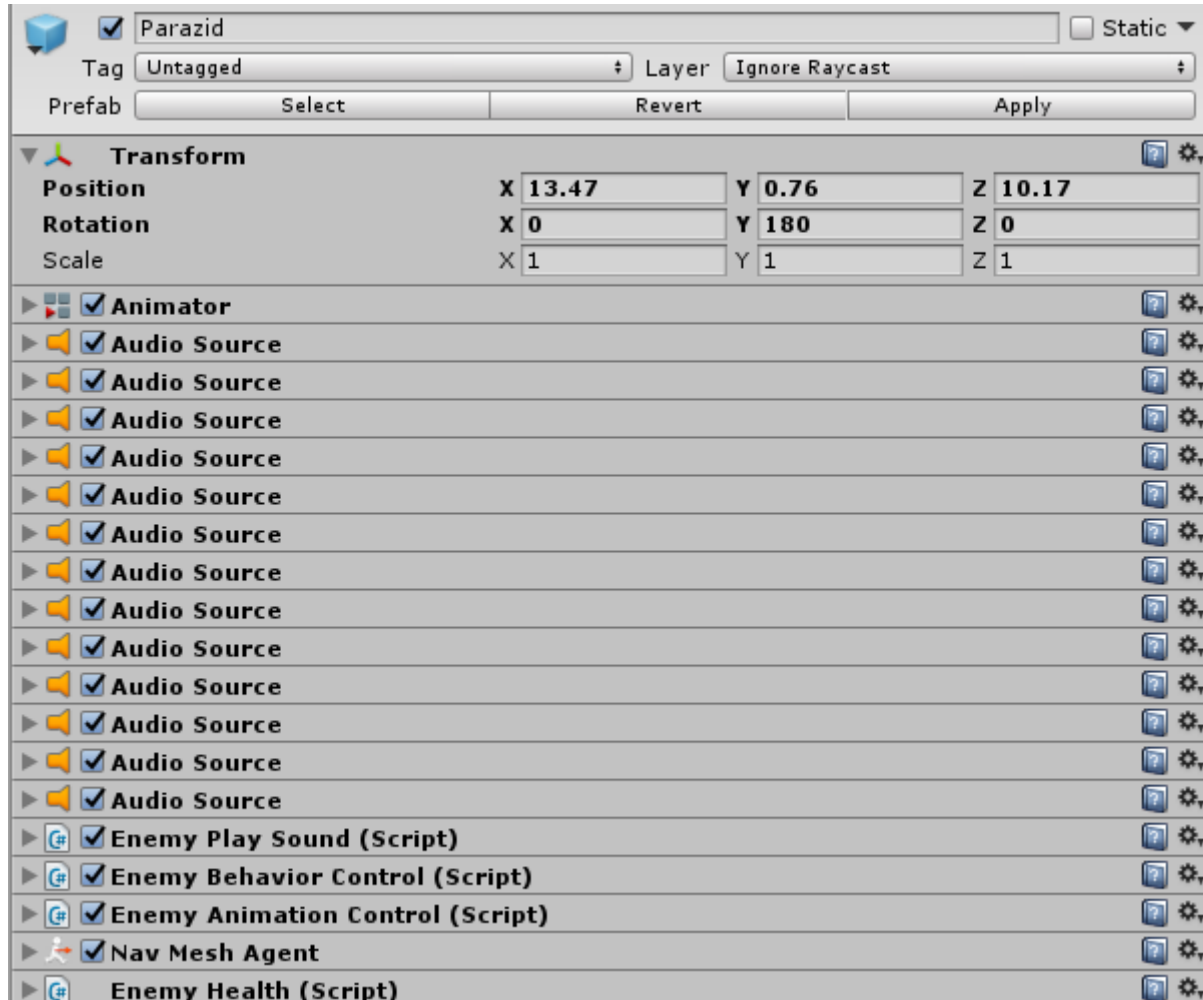**Timer Flash** – time flash of light.
Light – Light source.
Select Ray – The selected shot vector from the **List Bullet.**
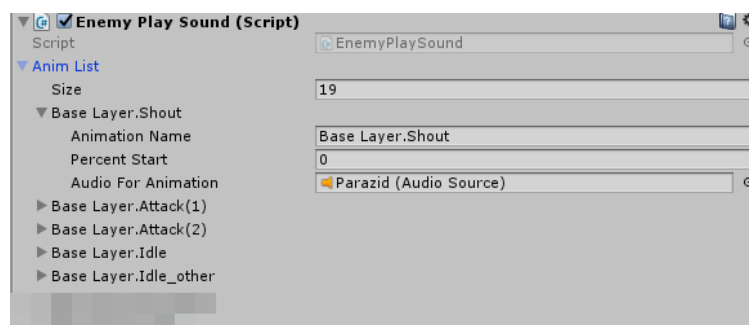**List Bullet** – list of random vectors for a shot.

Enemy

The management system for non-player characters consists of scripts, sounds, animator, NavMeshAgent, artificial intelligence and attack system.

Enemy Play Sound
The script reproduces the sounds issued by the enemy.

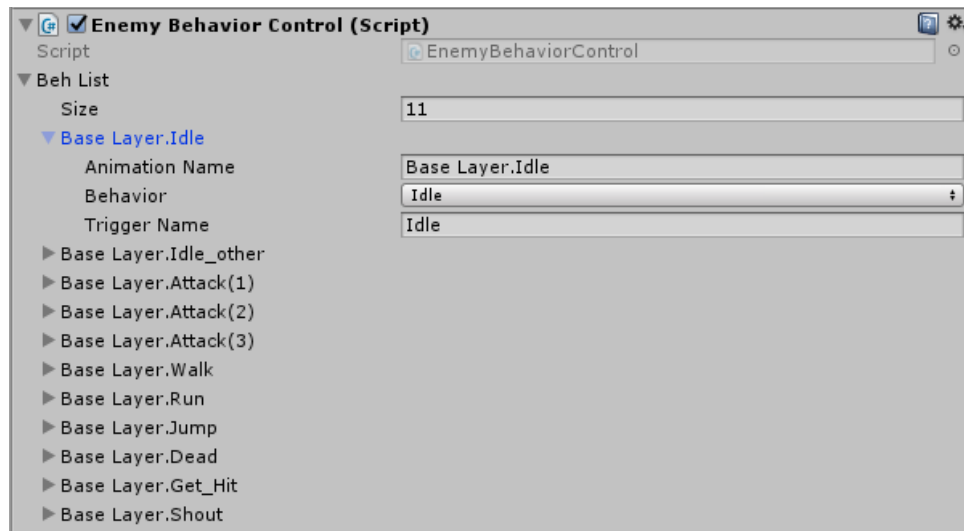**Anim List** – array of elements.
Size – number of elements.
Animation Name — name of the animation.
Percent Start —percent of animation playback for audio playback.

Audio For Animation – sound for playback.

Enemy Behavior Control

The script controls the behavior of the enemy.

Beh List – list of enemy behavior.
**Size –** number of behaviors.
Animation Name – name of the animation.
Behavior - player behavior.
**Trigger Name -** the name of the trigger to be called.

Enemy Animation Control

The script controls the switching animation. Checks compare current behavior with the following if the behaviors are not equal then the following behavior becomes current and the animation switches.
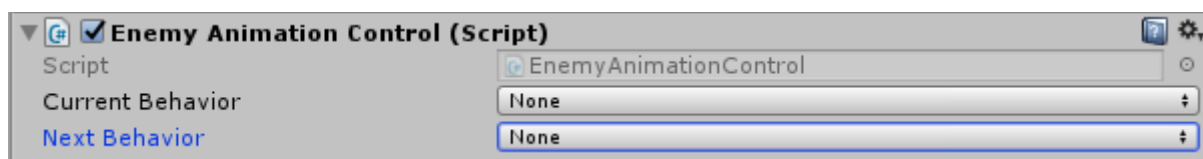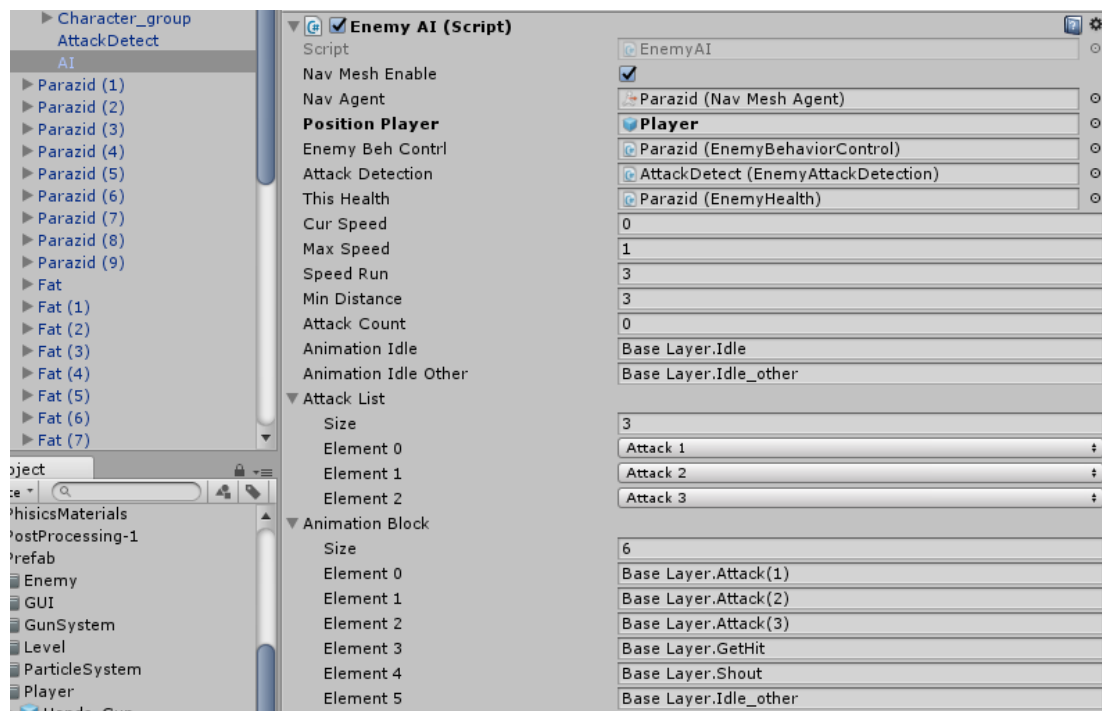

Enemy Health

The script manages the health of the enemy, as well as information about the colliders. Colliders determine the damage inflicted by the player. The system of colliders implements point damage. This allows you to adjust different damage for each part of the body.
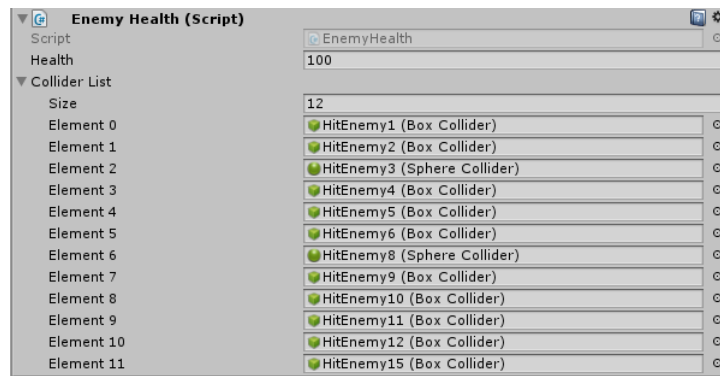
Enemy AI

The script controls the behavior of the enemy, moving, attacking.

Nav Mesh Enable – set true if the enemy moves level.

Nav Agent – agent of enemy navigation.

Position Player – current position of the player.

Enemy Beh Contrl - the current behavior of the enemy.

Attack Detection – the ability to conduct an attack on the player.

Enm Health – amount of health.

Cur Speed - current speed.

Max Speed – maximum speed.

Speed Run - running speed.

Min Distance - the minimum distance to the player.

Attack Count – counter attacks before playing animation Shout.

Animation Idle – the name of the Idle animation.

Animation Idle Other – the name of the Idle Other animation.

Attack List – list of attack animations.

Animation Block – list of blocking animations (if a blocking animation is played then another animation can not be played until this ends).
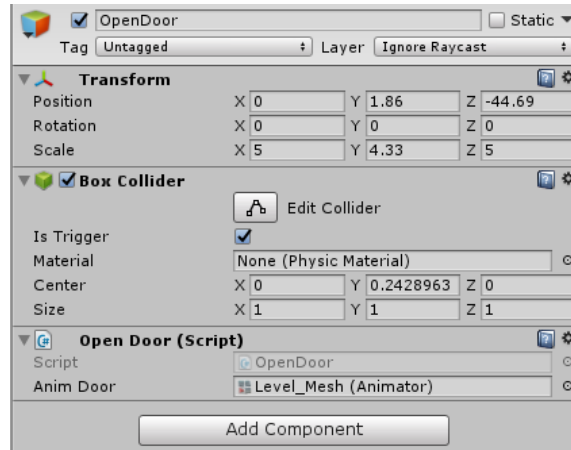
Enemy Attack Detection

The script determines the location of the player in the attack zone of the opponent.
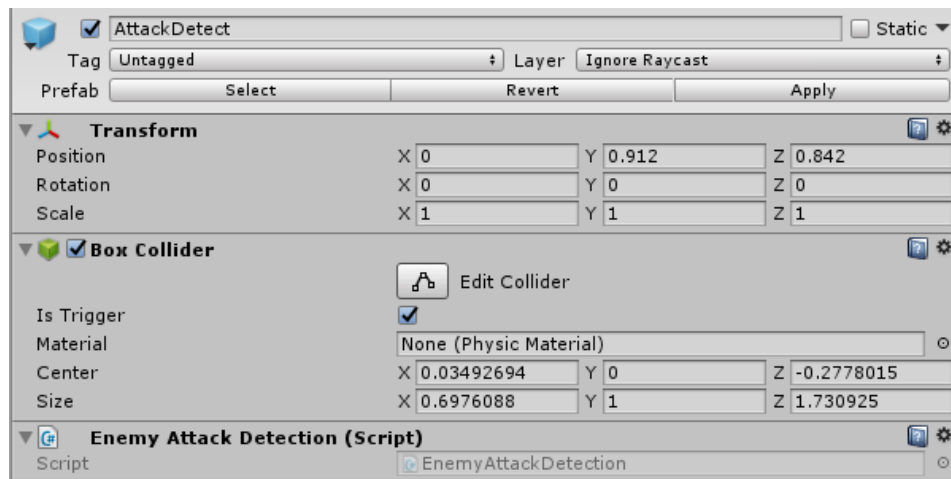
# Objects of the level.

OpenDoor

The script opens the door opening animation.

Anim Door – animator controlling the animation of the door.

FirstAidKit

The script controls the first aid kit. When a player crosses the first aid kit trigger, his health is checked, if the player's health is 100 then the first-aid kit stays on level. If the health is less than 100 then the first-aid kit is removed from the level and the health of the player
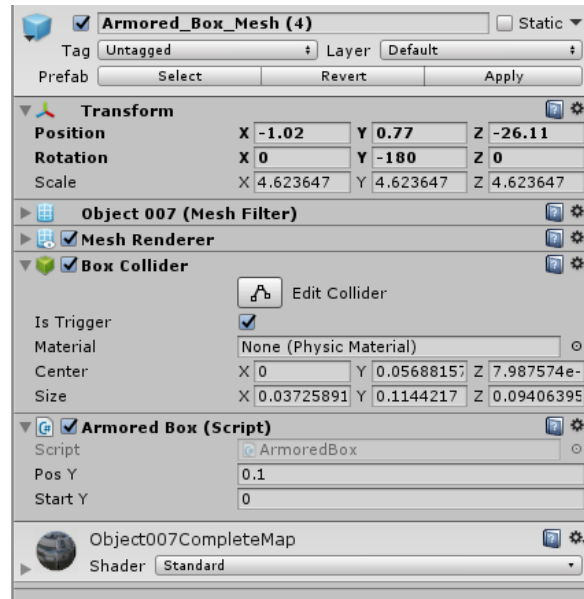.
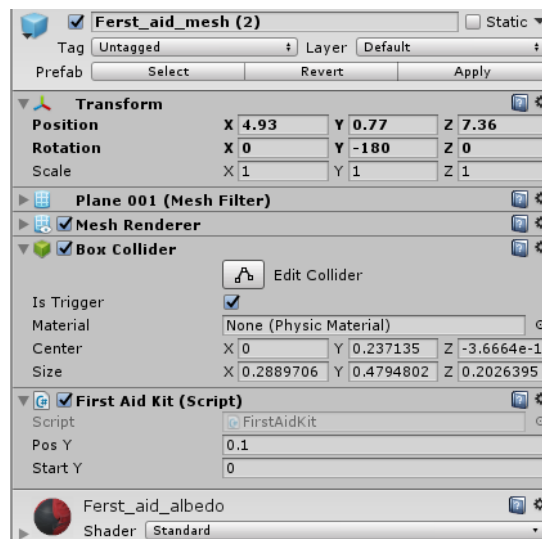
Pos Y - end position Y.
Start Y – initial position Y.

ArmoredBox

The script manages the box with ammunition. When the player crosses the trigger, his ammo is replenished and the object is removed from the scene.
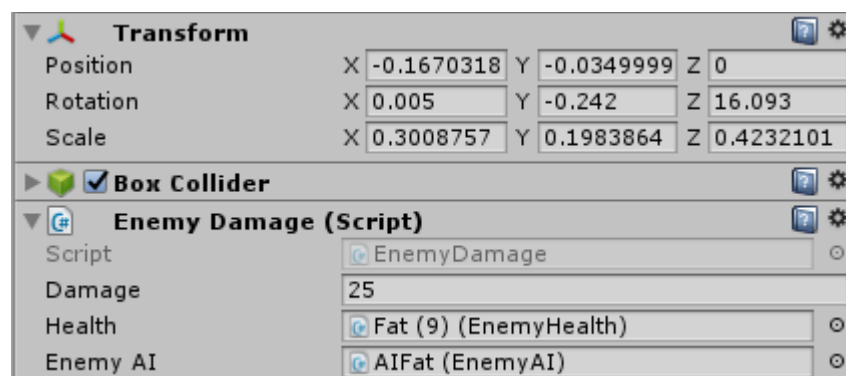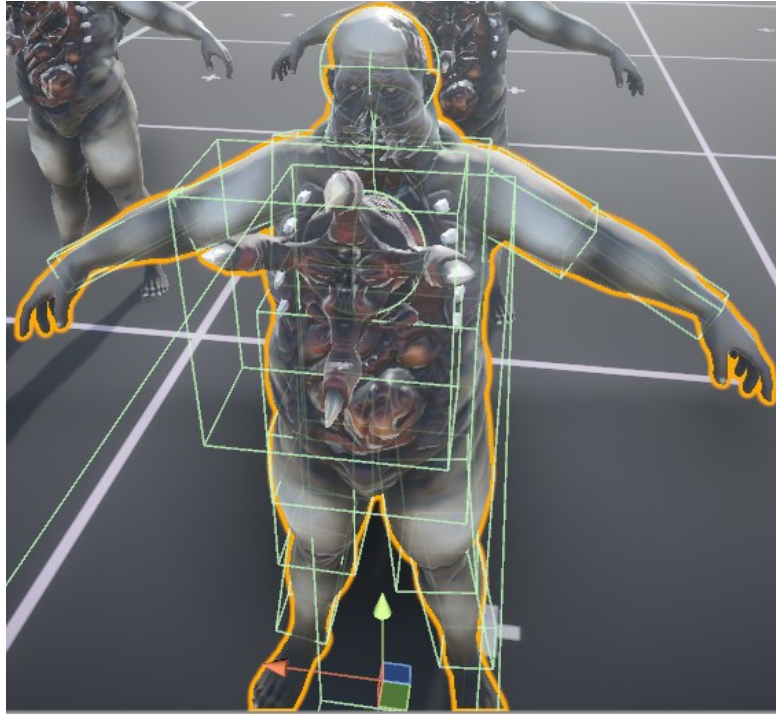

Pos Y - end position Y.
Start Y – start position Y.

Enemy Damage

A script for determining the damage taken by the enemy. The enemy's body is divided into zones of damage, each zone of damage determines the damage dealt. For each box collider, you can set the amount of damage received. For this the EnemyDamage.cs script responds

Damage – basic damage dealt to the enemy.
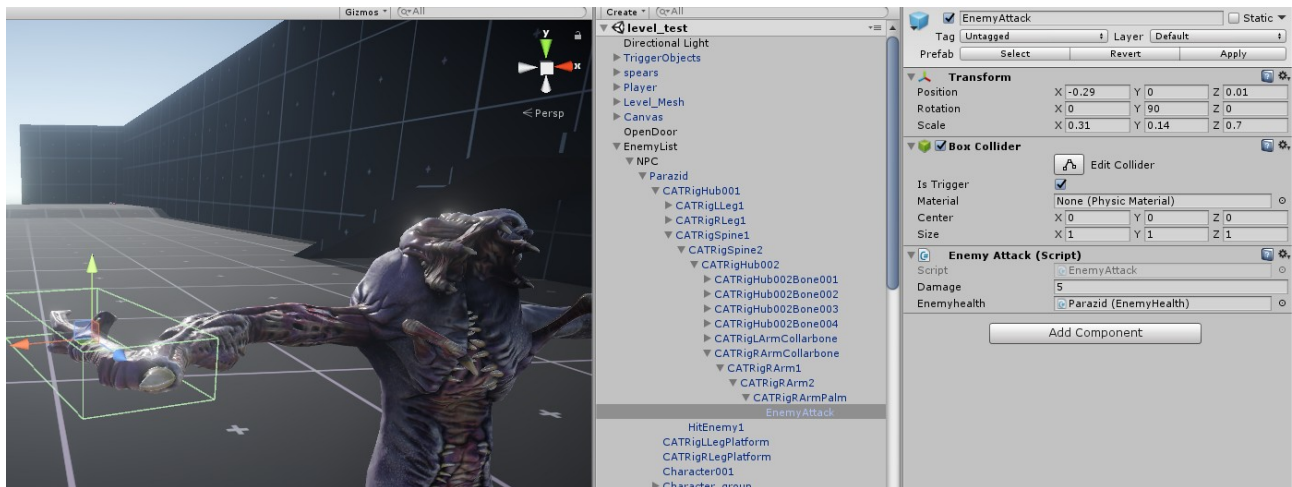**Health –** health of the enemy (reduces health).
Enemy AI – a class of artificial intelligence (transmits in AI information about the hit).

Total damage is calculated by the formula:

Full damage = Damage + Weapon Damage.

Enemy Attack

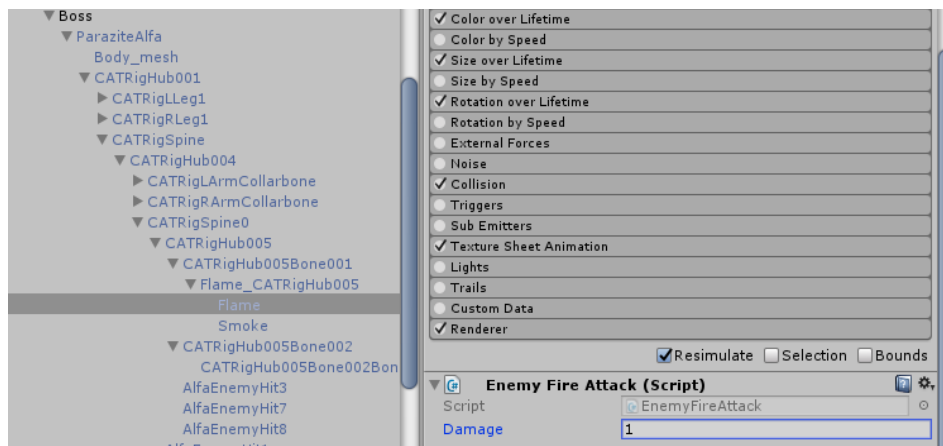The script determines the damage to the player by the enemy.

Damage – damage dealt.
Enemy health – health of the enemy (if the enemy's health is less than or equal to 0, the script stops working).

Enemy Fire Attack

Fire damage script. If the particle collides with the player, then the player is dealt damage. Damage is set by the Damage parameter.

Damage – damage inflicted by one particle.