

First Person Platformer Blueprints Documentation

Player

The player is equipped with a basic gun, double jump and dash abilities, coin and health counters. The movement values are adjusted to suit the genre of First Person Platformer.

Each change regarding basic First-Person character is commented with **Teal** comment box

Features:

Gun: Basic First-Person example gun, modified to shoot at a straight line

Double Jump: Allows for the player to jump mid-air, resets when landing

Dash: Gives the ability to quickly dash forward, resets when landing

Coins: Counts the current and max coins gathered on the level

Health: Amount of damage the player can sustain before dying

Movement: Gravity scale and jump speed increased to make the movement more dynamic

Parameters:

Coins

- **Coins - Amount:** Current amount of coins collected
- **LevelCoinAmount:** Total coin amount on the level

Movement

- **Dash Power:** The strength of the dash
- **DashEnabled?:** Is the dash unlocked
- **DoubleJumpEnabled?:** Is double jump unlocked
- **DashReady?:** Did the player land to enable dash (cooldown system)

Health:

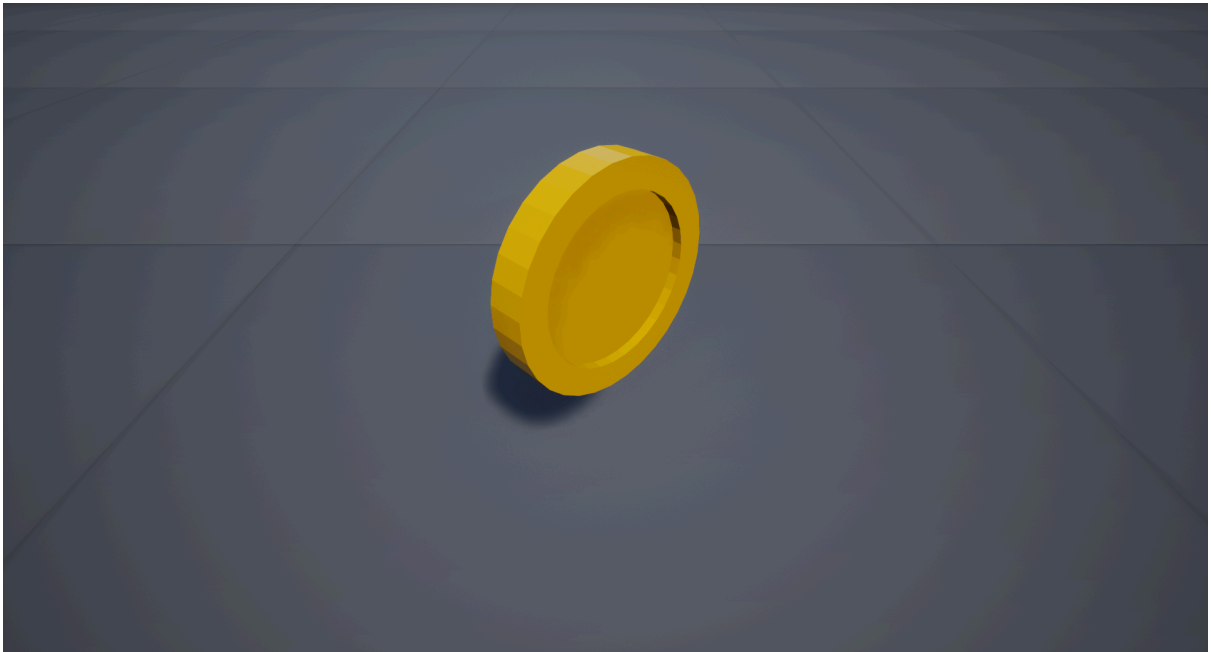
- **CurrentHealthPoints:** Amount of player's health left
- **MaxHealthPoints:** Maximal amount of player's health

Other:

- **ProjectileGravity:** Should the projectile be affected by gravity
- **CurrentCheckpoint:** Last unlocked checkpoint
- **EnableCheckpoints?:** Are the checkpoints enabled

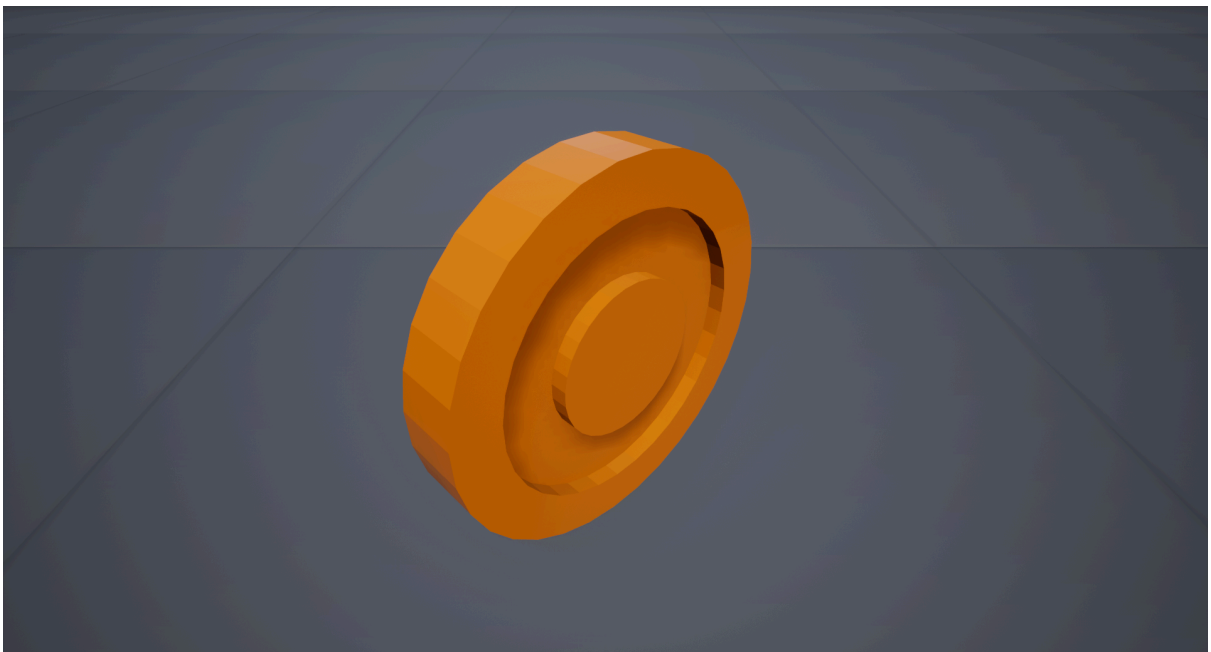
Collectibles

Coin



Upon picking up it automatically adds a coin, it has a value of 1.

Big Coin



Upon picking up it automatically adds coins (default value = 5).

Parameters:

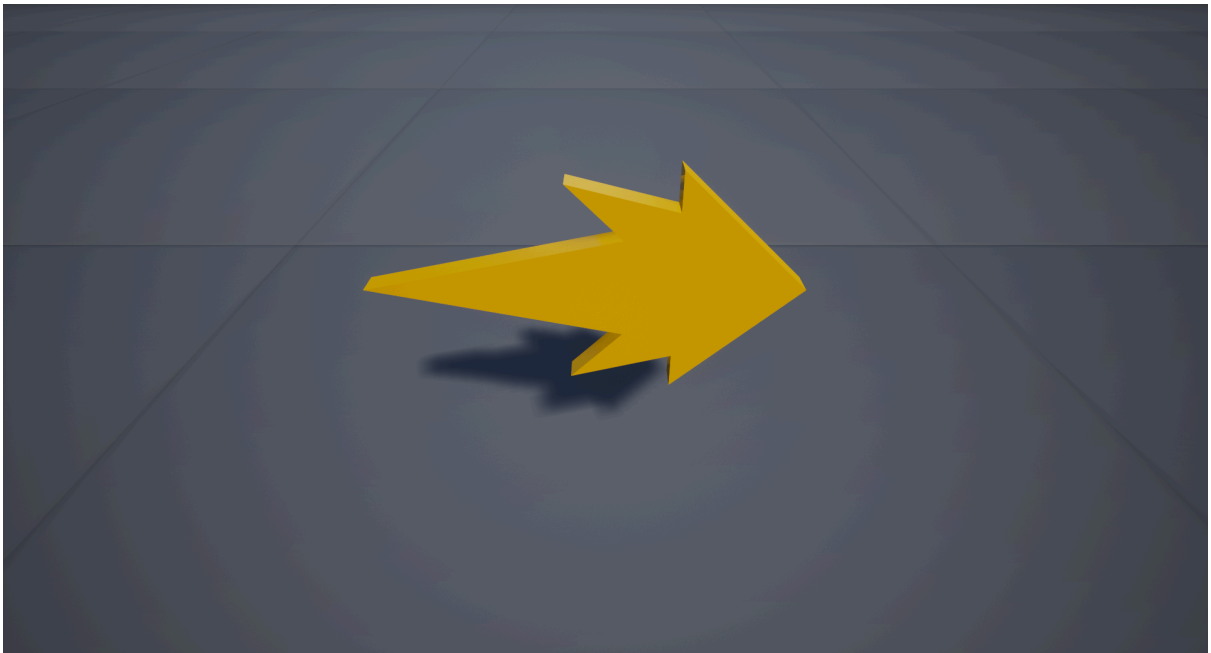
Value: How much worth is the coin

Double Jump PowerUp



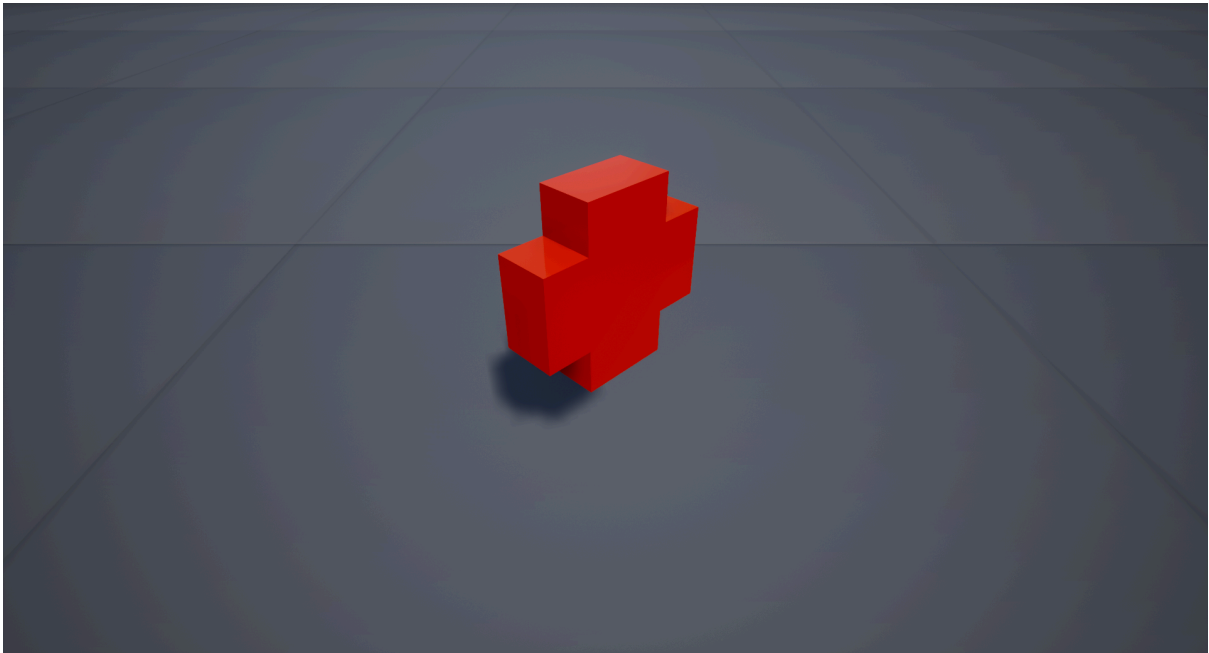
Upon picking up it unlocks the Double Jump ability

Dash PowerUp



Upon picking up it unlocks the Dash ability

Health Pickup



Upon picking up it restores health (default value = 1).

Parameters:

Health Amount: How much health should the Pickup restore

Key



Upon picking up allows to open corresponding Doors

Parameters:

Color: The color of the key and the doors it unlock

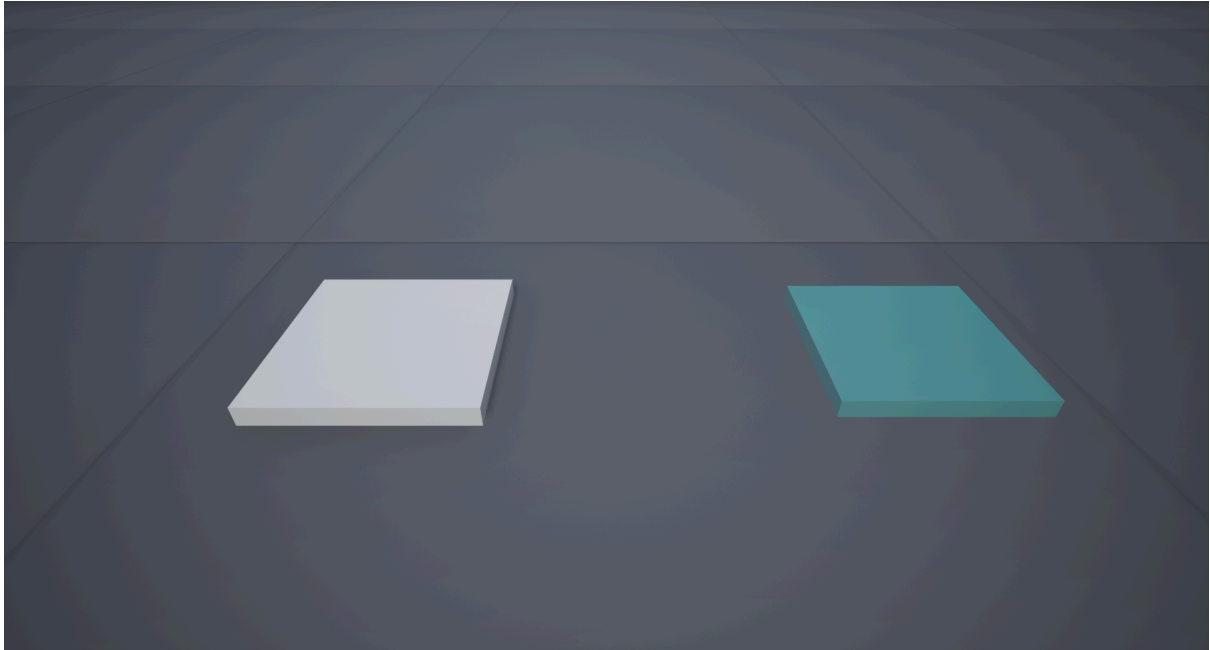
Door Reference: Reference* to the doors placed on the scene which the key should open

*when no doors are referenced a message will appear "No Door Reference"

Mechanisms:

All mechanisms with the **Active?** Parameter can be activated by buttons

Floating Platform



Moving platform which travels to set location (indicated in-editor by the “ghost”), the platform can shrink and grow to be less predictable

Parameters:

Default

Auto Active?: True = Active on start / False = Needs to be activated externally

Shrinking?: Should the platform shrink and expand during movement

Big Platform?: Which mesh should be used, regular or big platform

Movement

Desired Location: The location where the platform will travel

Movement Speed: Speed with which the platform travels

Loop?: Should the platform loop the movement

Show Path?: Show the path indicator in-game

One Way?: Should the platform move only forward

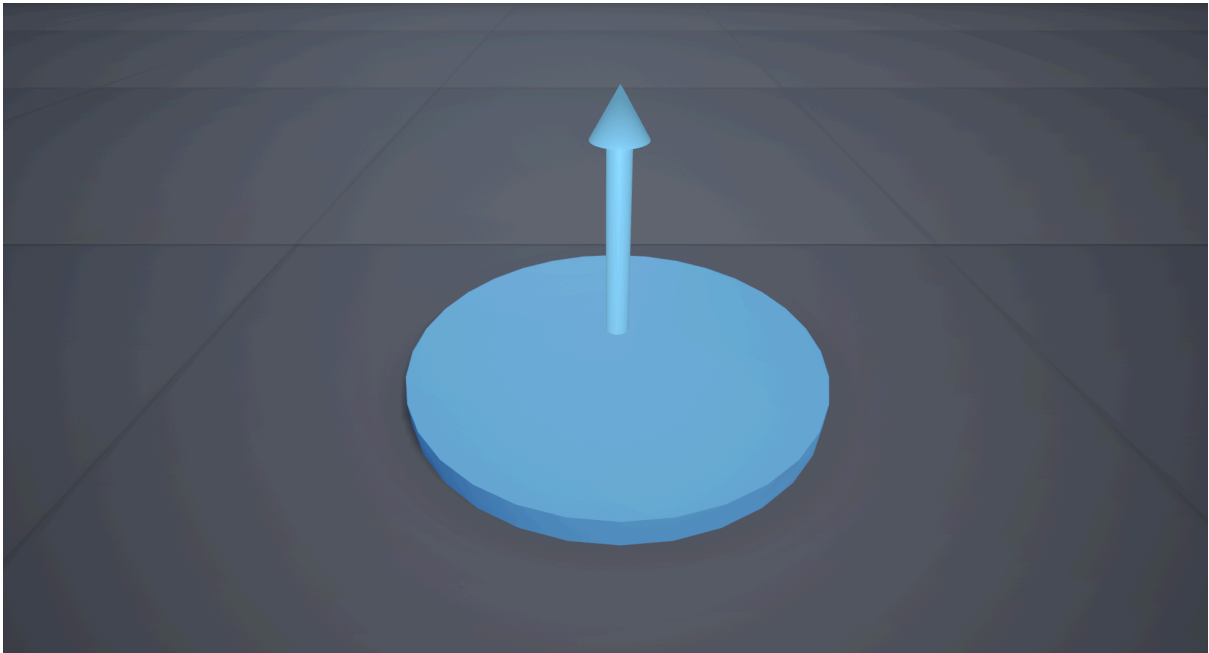
Shrinking

Time Multiplier: How fast should the platform shrink and grow

Scale Max: Maximal scale to grow to

Scale Min: Minimal scale to shrink to

LaunchPad



Upon entering launches the player into air in the direction indicated by the arrow

Parameters:

Active?: True = Active on start / False = Needs to be activated externally

Launch Power: Force with which to launch the player, the force determines the direction*

*direction is indicated by the arrow - pointing where player will be launched

Doors



Doors slide down when approached with matching key (and when Active)

Parameters:

Color: The color of the key (and the door itself) that unlocks them

Active?: True = Active on start / False = Needs to be activated externally

Key Reference: Reference to the key that opens the door

Button



Buttons are used to activate, deactivate or toggle mechanisms, hazards and other objects. Can be pressed by shoot or walking at it.

Parameters:

Activation Type:

- **Push to Toggle** - toggle the state of the object by pressing the button
- **Hold to Toggle** - whether player or a physics object needs to hold the button

Projectile Only: Should the button be pressed only by players projectiles

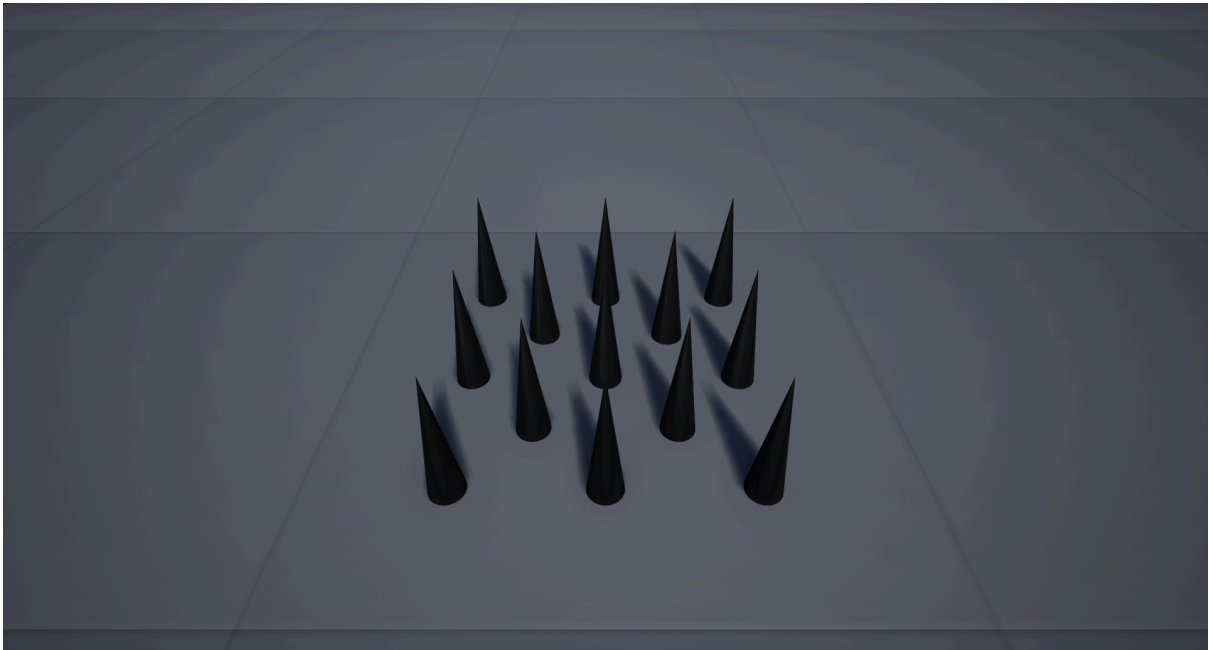
Single Use: The button can be pressed only once

Actors: All the actors influenced by the button

Color: The color of the button

Hazards

Spikes

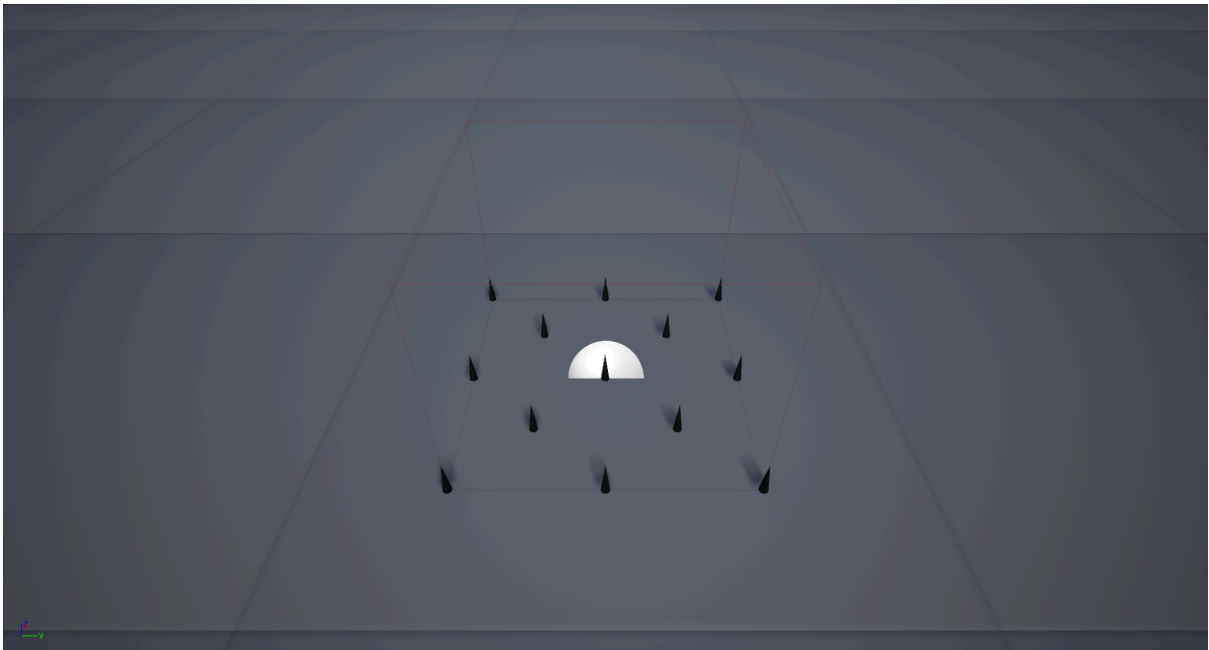


Basic environmental hazard, deals damage upon entering

Parameters:

Damage: Amount of damage to deal when touched

Retractable Spikes



Spike trap, less visible than regular spikes, can be dodged if fast enough

Parameters:

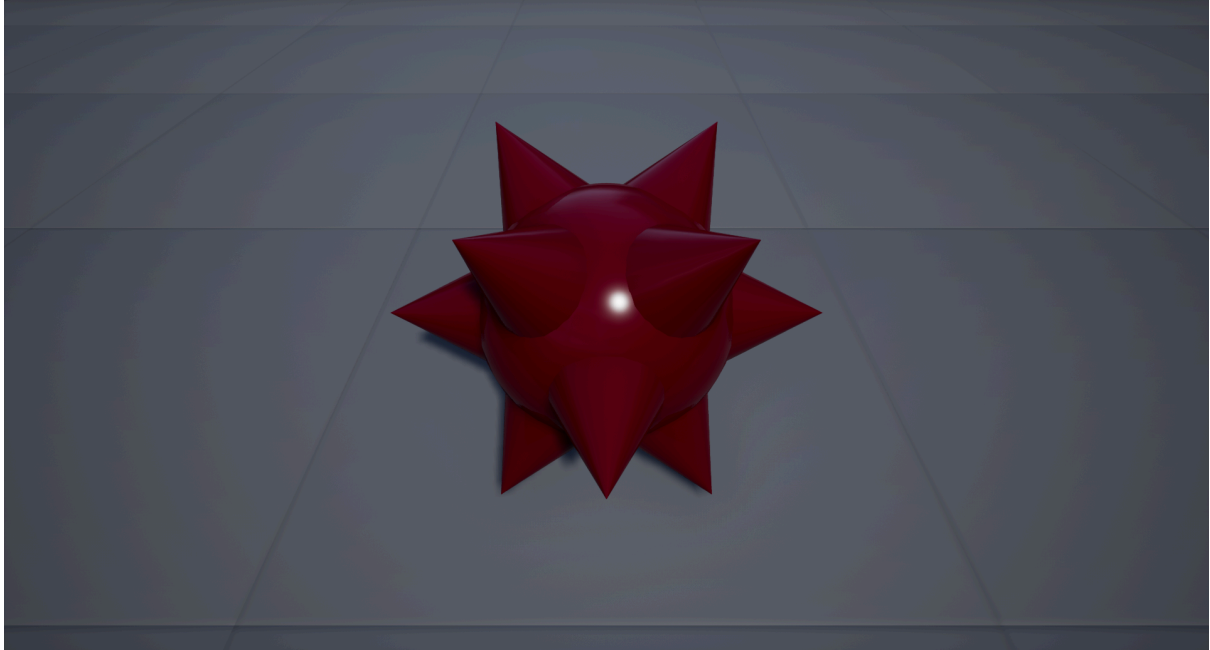
Damage: Amount of damage to deal when activated

Range: How far can the spikes reach when activated

Retraction Speed: Speed with which the spikes reset

Active?: True = Active on start / False = Needs to be activated externally

Spiky Ball



A physics based hazard, deals damage upon contact, can be moved away by shooting it.

Parameters:

Preset:

- **Light** - Very light with low damage
- **Regular** - Moderate mass with low damage
- **Heavy** - Heavy with high damage
- **Custom** - Mass and damage determined by the user

Damage: Amount of damage to deal when touched

Mass in Kg: How heavy should the ball be

Spiky Mine



A movable hazard which travels to set location (indicated in-editor by the “ghost”), the mine can shrink and grow to be less predictable

Parameters:

Default

Auto Active?: True = Active on start / False = Needs to be activated externally

Shrinking?: Should the mine shrink and expand during movement

Damage: Amount of damage to deal when touched

Movement

Desired Location: The location where the mine will travel

Movement Speed: Speed with which the mine travels

Loop?: Should the mine loop back or move just one time

Shrinking

Time Multiplier: How fast should the mine shrink and grow

Scale Max: Maximal scale to grow to

Scale Min: Minimal scale to shrink to

Basic Enemy



Basic enemy, roams random points in vicinity and chases player upon spotting. **Enemies require Nav Mesh Volumes placed to indicate the area they can walk on.**

Parameters:

Damage: How much damage should it deal to player when attacking

Enemy Speed: How fast the enemy moves

Others

Checkpoint

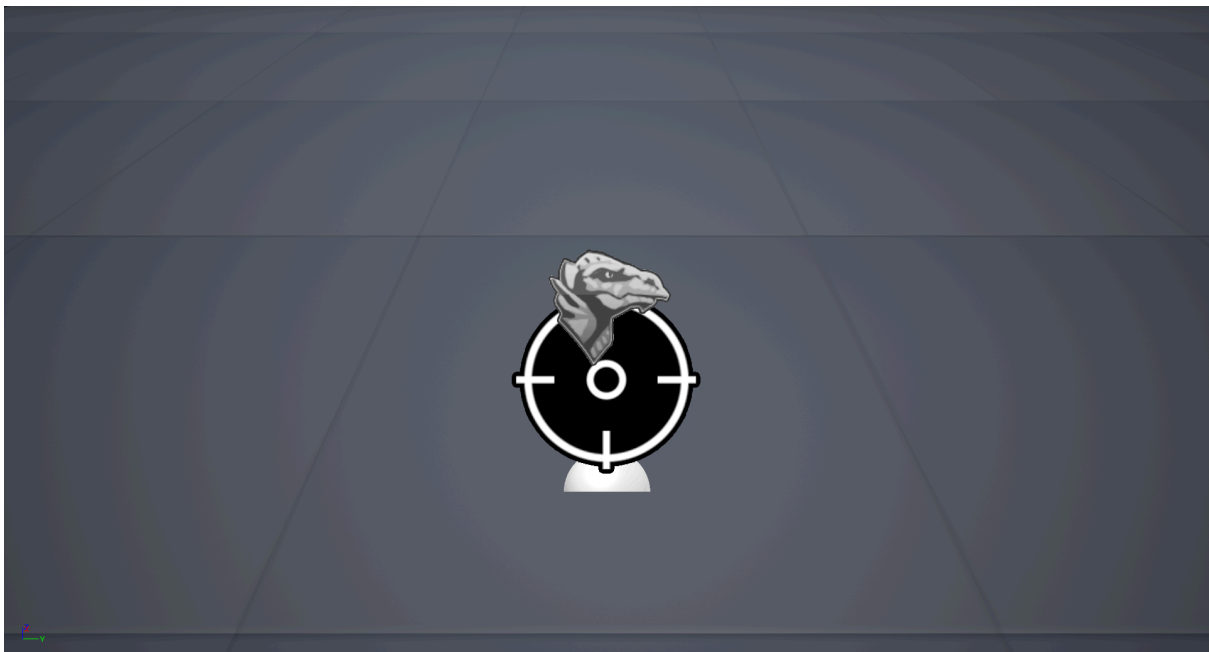


Checkpoint to which the player returns if killed during a level, enter the trigger box to activate. The red arrow indicates the direction after respawning. **System needs to be enabled in FirstPersonCharacter (set Enable Checkpoints boolean to true).**

Parameters:

X/Y/Z: The trigger box scale multipliers

Pickup Spawner



Object spawner, can be activated with a button, desired object spawns at the target icon.

Parameters:

Object To Spawn: Which object to spawn (from the **E_PickUpTypes**)

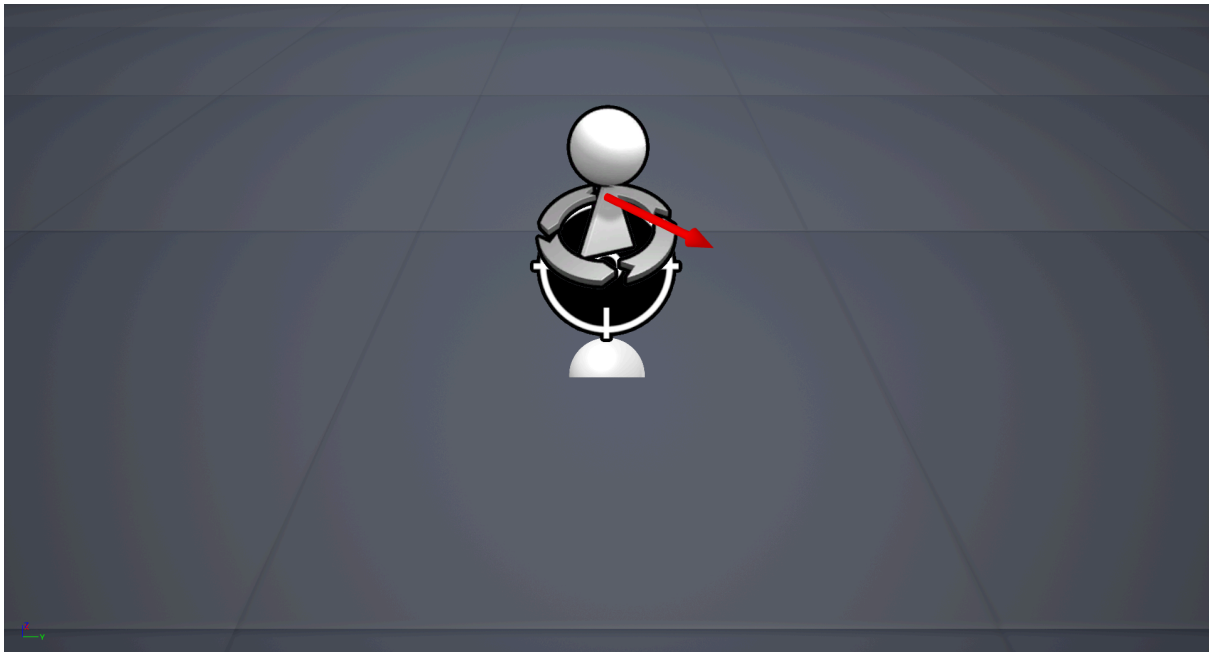
- Coin
- Big Coin
- Health Pack
- Key
- Dash Power Up
- Double Jump Power Up

Automatic Respawn?: Should the object be respawned after delay?

Respawn Delay: Time between picking up and spawning new object

Spawn on Start?: Should spawn the object at startup?

Enemy Spawner



Enemy spawner, can be activated with a button.

Parameters:

Automatic Respawn?: Should spawn an enemy periodically?

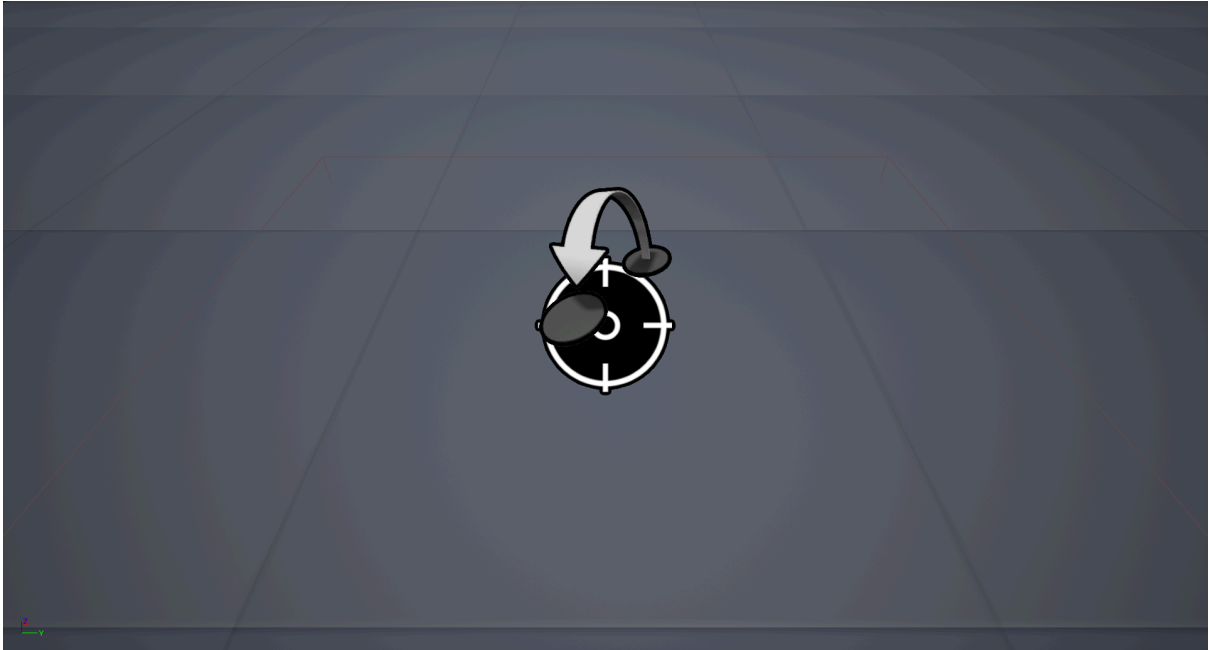
Respawn Delay: Intervals between Automatic Respawns

Spawn on Start?: Should spawn on Level Begin Play

Custom Enemy Speed: Override basic enemy movement speed value

Custom Enemy Damage: Override basic enemy damage value

Recovery Teleport



Returns the player to the target icon location after touching the trigger box, useful when the player falls outside of the level's path.

Parameters:

X/Y/Z: The trigger box scale multipliers

Description?: Should the description text be visible?

Description: The custom description text

Visible?: Should be visible while in-game?

Actors To Restart: Which objects to restart after teleporting the player