Publisher:IvyMoon

Requires Unity 5.3.0 or higher.

Destroy Barrels & more! The script can handle anything you throw at it! Just switch in your own art and you're good to go. Otherwise, just use the barrel and place them all over your world. It's satisfying to watch barrels explode! So get to it!

Asset Notes:
Currently the asset is tested for a 3d project on PC and uses the FPS controller.
2D will work but the debris are currently connected to camera orientation for explosion direction.

PROJECT SETTINGS:

In your Project you will need to add Tags and Layers, They will do the following:

Weapon Tag – Allows any gameobject using this tag to interact(hit) the destructible

OnHit_SFX Tag – Allows Destructible script to see how many sounds are playing so you do not overload the amount of sounds playing

C**ollision** Layer – Set what objects the destruction debris will interact with(i.e. the ground). If this is not done the debris will fall through the ground.

NoPlayerCollide Layer – Set the Debris to this layer so they do not hinder player movement

note: Layers do not need to be added if you already have layers that separate player collision from effects collision.

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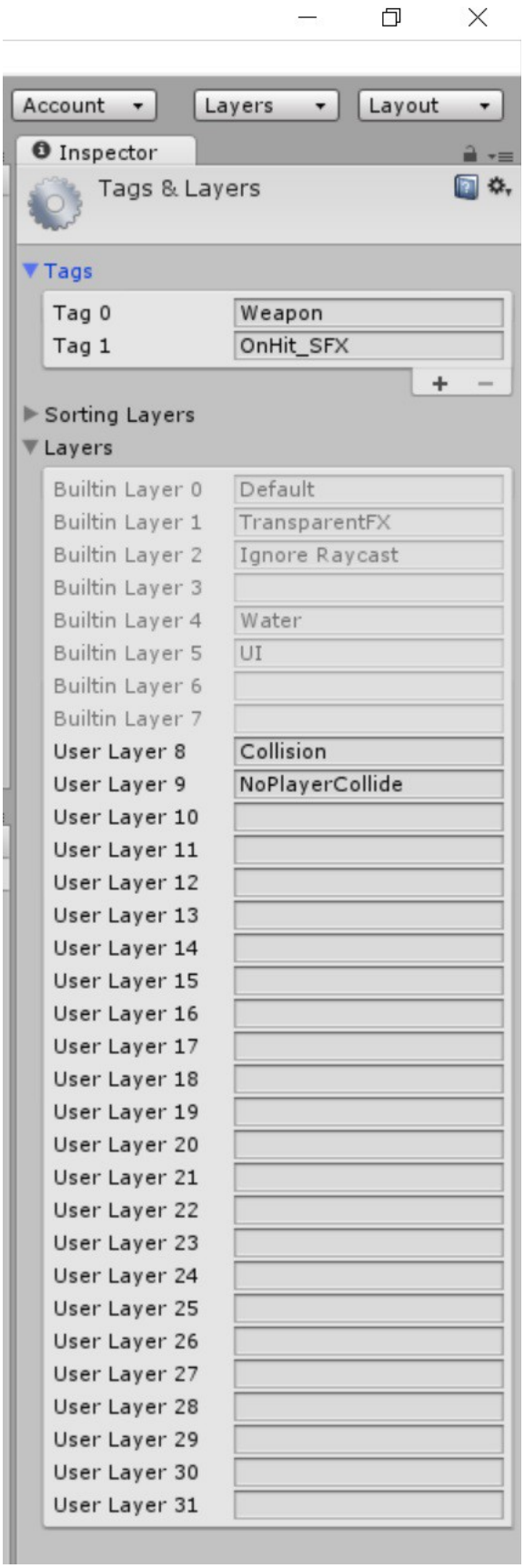
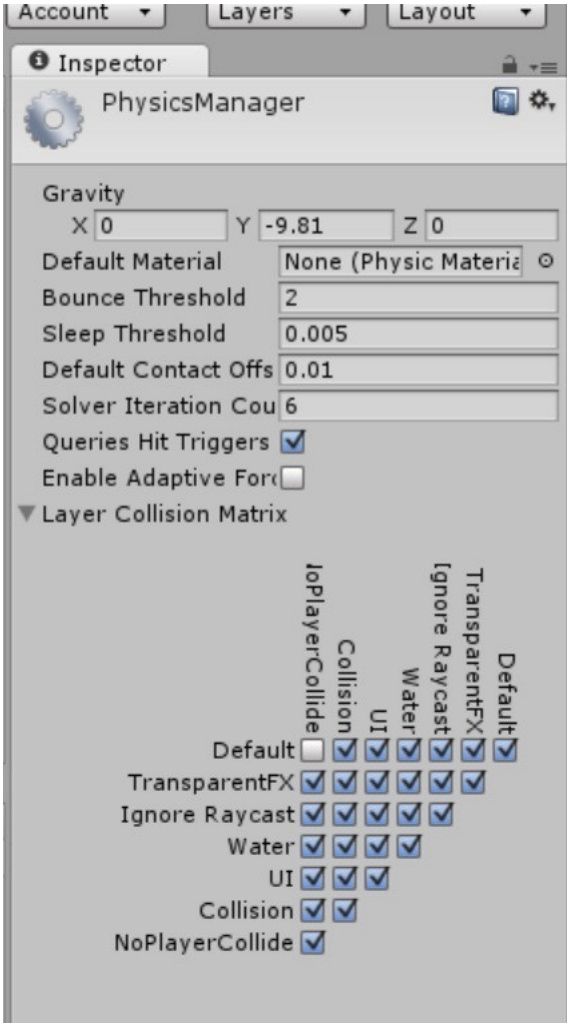
1. To add the tags and layers go to **Edit>Project Settings> Tags and Layers**
2. Look at the inspector window, drop down the Tags array, click on the plus button to add 2 Tags;
   "Weapon" (This is case sensitive, copy exactly)
   "OnHit_SFX" (This is case sensitive, copy exactly)
3. Look at the inspector window, add Layers;
   "Collision" (not case sensitive, can be any name you choose)
   "NoPlayerCollide" (not case sensitive, can be any name you choose)

4. Your Tags and Layers should look like the following picture below



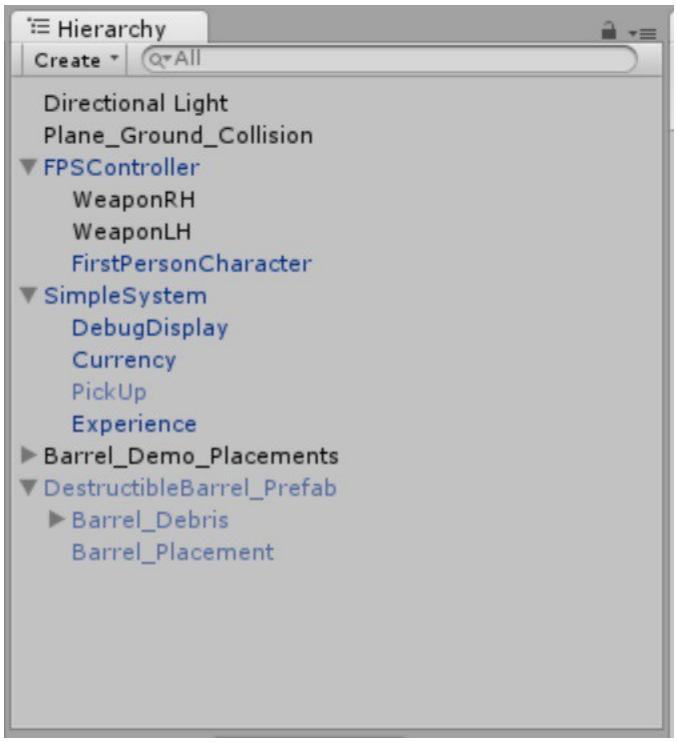
5. Go to **Edit>Project Settings>Physics**
   In the inspector window uncheck the NoPlayerCollide/Default check-box.
   This will make it so the FPSController (which is on layer Default) will not be affected by the Debris but will still be affected by the ground. It should look like the following picture.



6. Now it's time to pick a scene. Onto the Setup guide...

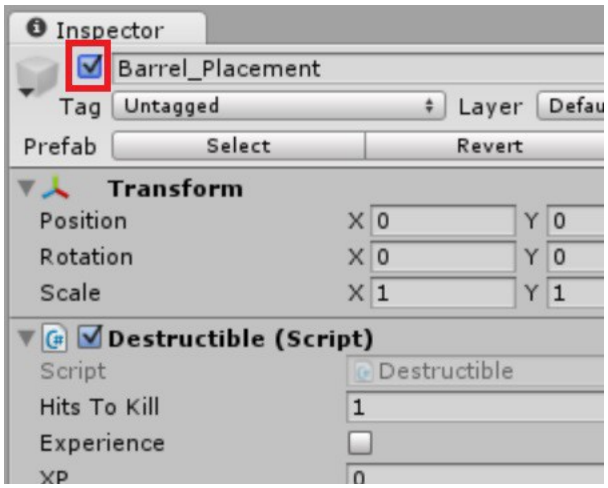
SETUP GUIDE:

- In the Project window go to **Scenes>BarrelExample** and double-click to open it
- Here is the Scene in Detail:



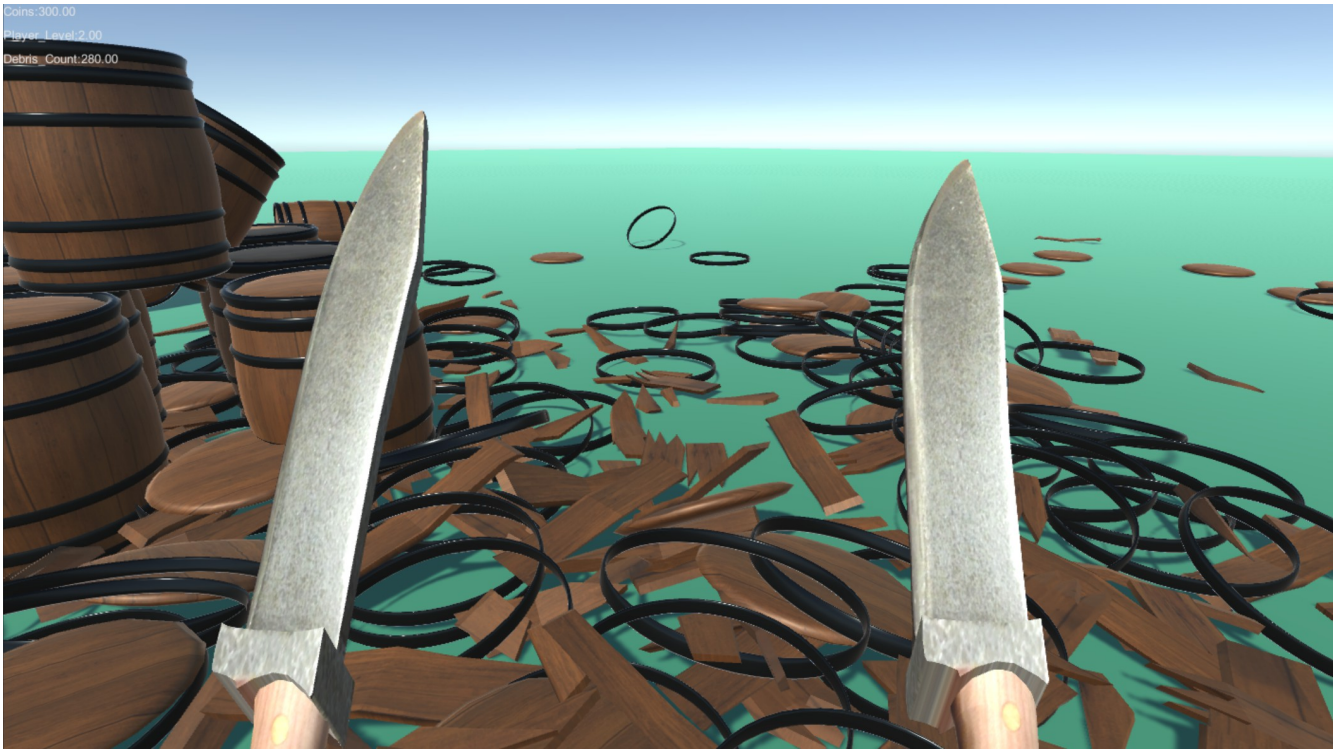
Directional Light – Unity's Default light for lighting a scene
Plane_Ground_Collision – Ground plane for demo, so player doesn't fall forever
FPSController – Unity FPSController
WeaponRH – game object tagged with Weapon Tag so it will hit barrels
WeaponLH – game object tagged with Weapon Tag so it will hit barrels
FirstPersonCharacter – Unity FPS system
SimpleSysten – IvyMoon simple game system
DebugDisplay- Show Coins and Player Level on screen
Currency – Script to store players coins collected
PickUp – Item that can be picked up by player, you can set the coin value
Experience – Stores player level and experience total
Barrel_Demo_Placements – Set of all the barrels placed in the scene
DestructibleBarrel_Prefab – Prefab for the Destructible
Barrel_Debris - all of the parts that will spawn on destruction of a barrel
Barrel_Placement – Default barrel

- Be sure if you make duplicates of Barrel_Placement to **take it out of the Prefab Group** and that the check mark to enable it is checked.



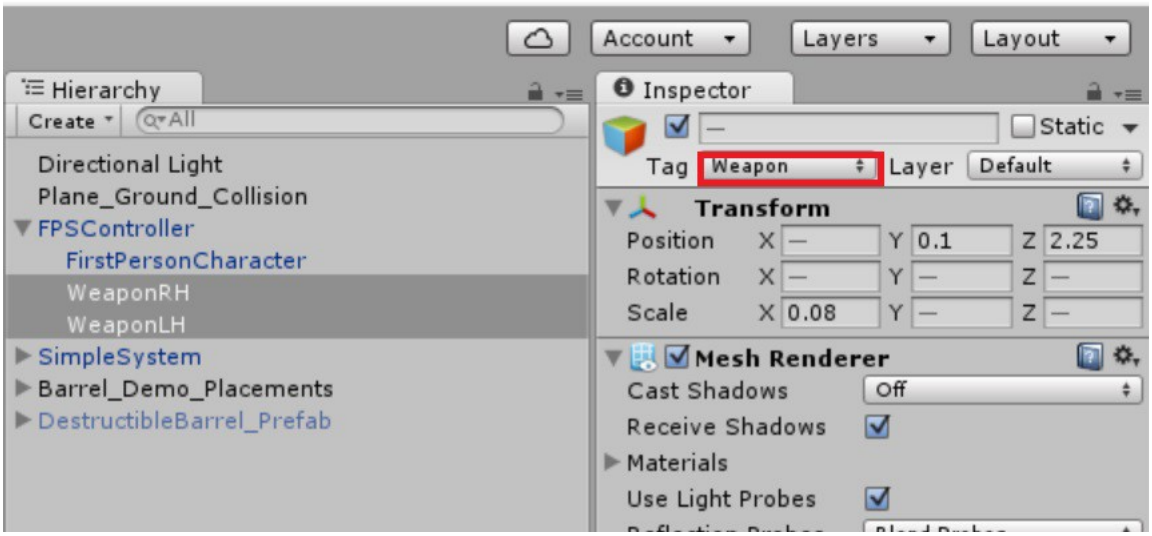
This will make it appear in the scene/game.

- Hit the play button and destroy some barrels, you've earned it!

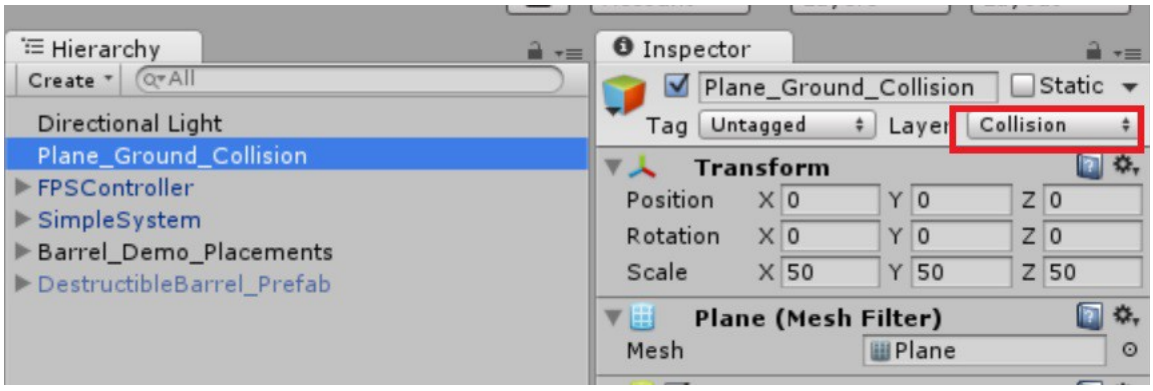


PROBLEMS? Check that the following are correct:

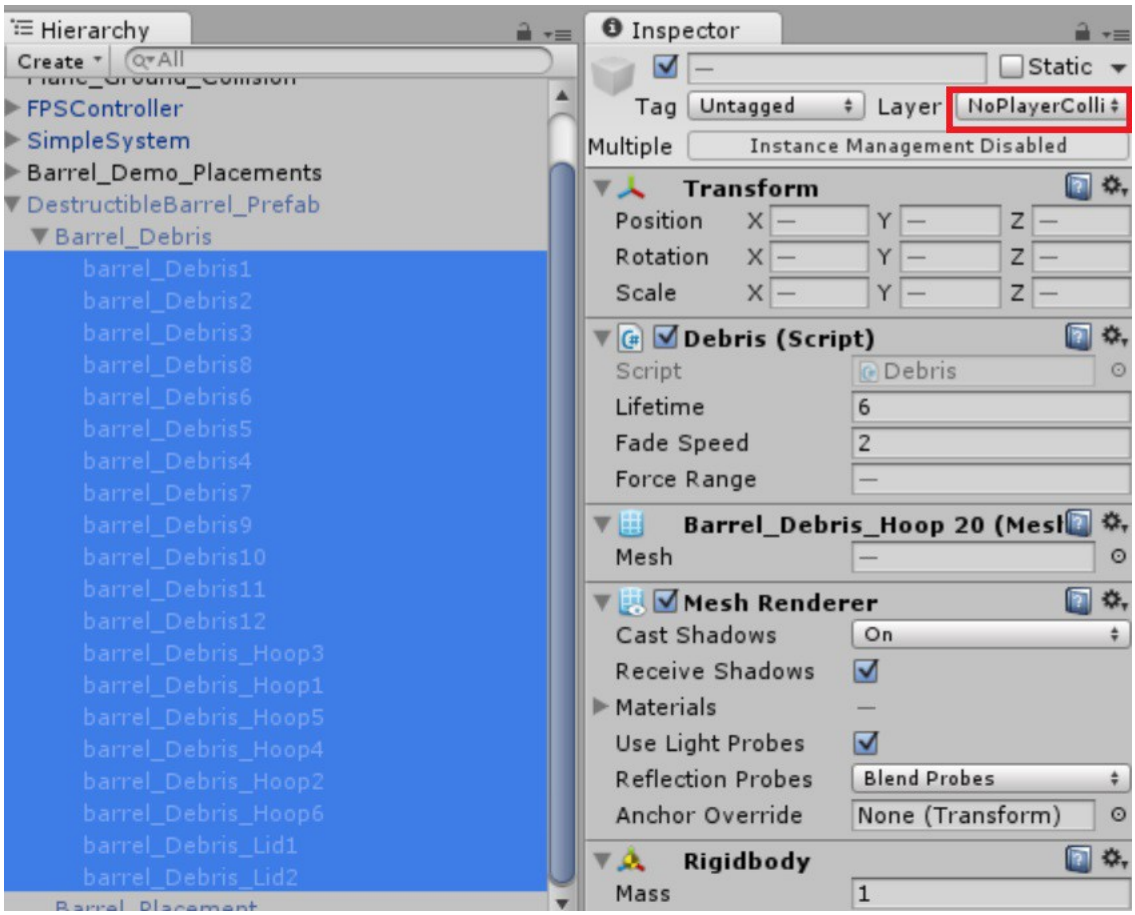
- If the FPSController is not in your project, go to **Assets>Import Package>Characters** and select Import
- Select WeaponRH and WeaponLH (located inside the FPSController drop down) and change their Tag to Weapon. Now they will interact with the Destructible. Anything you tag weapon will hurt the Destructible when it comes into contact with it.



- Select the Plane_Ground_Collision game object and set the Layer to Collision. This will allow it to interact with the NoPlayerCollide layer.

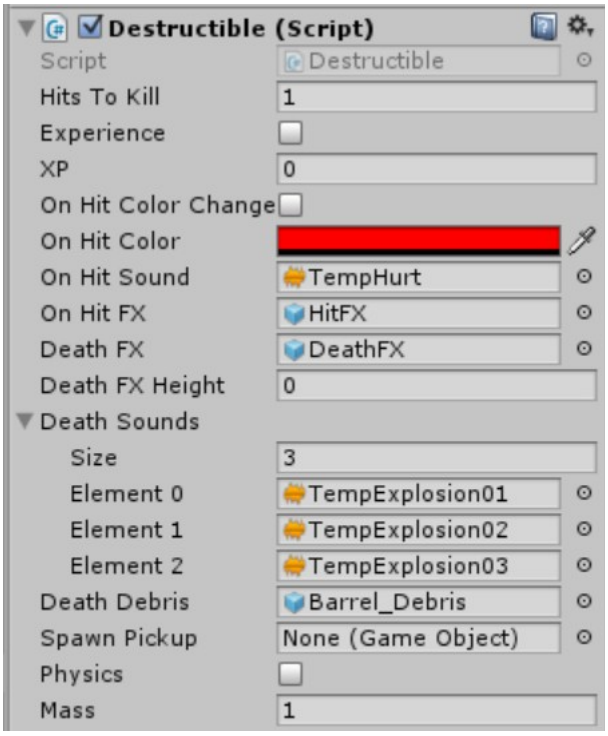


- Select all the debris inside Barrel_Debris game object and set Layer to NoPlayerCollide. This will not allow their physics to interact with the Default layer(the layer with the FirstPersonController/player), but still interact with the Collision layer(ground).

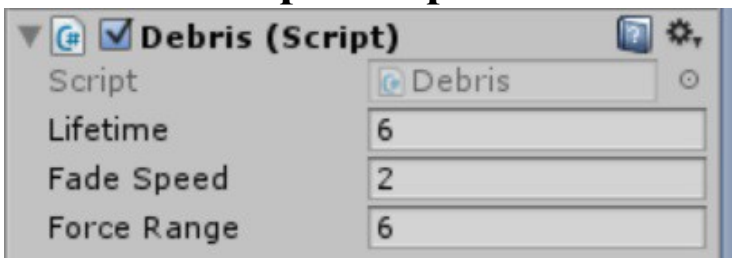


Destructible Script – Explained:

- **Hits To Kill** - Set amount of hits to destroy the destructible.
- **Experience** - if checked, it will allow the destructible to create a value called XP on destruction.
- **XP**- Set the amount of experience the destructible gives to the player (see script experience.cs)
- **On Hit Color Change** – if checked, it will allow the destructible to change color for a small amount of time when hit with a weapon.
- **On Hit Color** – Use the color picker to select the color of the destructible when hit.
- **On Hit Sound** – Attach a sound to play when the destructible is hit by a weapon.
- **On Hit FX** – Attach a particle effect to appear at the point of contact with the destructible and the weapon.
- **On Hit FX Height –** Set the height if it needs to be offset from axis
- **Death FX** – Attach Particle effect to appear when destroyed(particle smoke).
- **Death FX Height –** Set the height if it needs to be offset from axis(will not give great results when using physics)
- **Death Sounds** – Attach sounds to be played on destruction. If more than one sound is attached then one sound from the list will be picked at random to play on destruction.
    - **Size** - Set the size to match the amount of sounds you would like.
    - **Element 0**,1,2 etc. - Attach the sound files you would like to play on destruction.
- **Death Debris** - Attach a Game Object with all of the debris models for your destructible.(The axis of the set must be placed in to match that of the destructible)
- **Spawn Pickup** – Attach a Game Object if you want to spawn one when destroyed.
- **Physics** – If checked, the destructible will use Unity's physics on the destructible.
- **Mass** – if Physics is checked, the mass of the destructible can be adjusted locally.

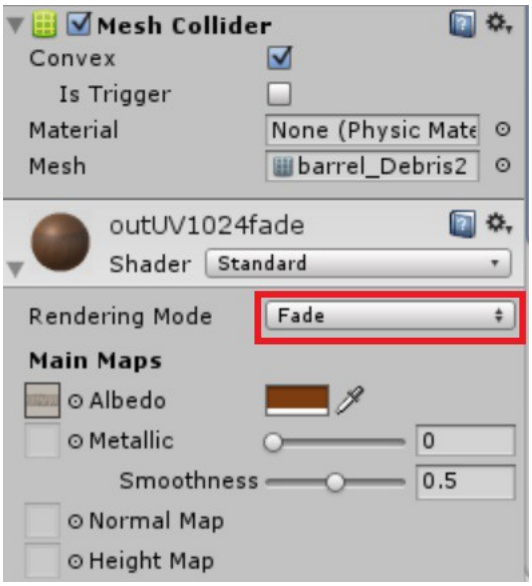

Destructible (Script)
Script
Destructible
Hits To Kill
1
Experience
XP
0
On Hit Color Change
On Hit Color
On Hit Sound
TempHurt
On Hit FX
HitFX
Death FX
DeathFX
Death FX Height
0
Death Sounds
Size
3
Element 0
TempExplosion01
Element 1
TempExplosion02
Element 2
TempExplosion03
Death Debris
Barrel_Debris
Spawn Pickup
None (Game Object)
Physics
Mass
1

Debris Script – Explained:



Lifetime – Set how long(in seconds) it will take before the debris begin fading out
Fade Speed – Set how fast the fade out happens
Force Range – Set how far this game object will fly in the direction it's hit

Make sure the game objects Rendering Mode is set to Fade. Otherwise, the game object will pop out of existence instead.



Moneybag Script – Explained:

Pick Up Range – Set the players max distance to collect this game object
Spin Speed – Set how fast this game object will spin
Player – Set the game object that will have the ability to pick up this game object. In most cases you would want this to be the player. If you are using the built in FPSController set it to the FirstPersonCharacter in the scene
Coins – Set the value of coins collected by picking up this game object
Pickup Sound – Set the sound to play when it is picked up

Performance Script – Explained:

Max Debris – Set how many debris can be active at once, use this to help overall performance/memory usage.

THE FUTURE:

Here are some plans for future updates when time allows...

- Custom Inspector UI
- pick between hit points or hits to kill
- Set Fire Mode – sets fire when hit certain amount of times
- Explosion Range – sets range outwards from destructible that can be hit by Explosion
- Destruction Stages 1,2,3. - input art change based on % to kill
- Art for Pickup item
- 2d and explosion orientation for debris force
- Debris play sound on contact with ground (low priority sound)

Extras Features:

Set max debris for performance control
Destruction temp audio clips(3 included)
Barrel model with debris models
Multi-material object support for on hit color change
C# files for viewing pleasure
C# comments to help you learn

Thank you for your support!

If you have any questions or comments please contact ivymoongames@gmail.com