EnergyShield_URP

Asset Store Link

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Enjoy! 😃

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Contact

Questions, suggestions, help needed?
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Description Features

Displays an energy shield/force field effects when impacted by projectiles, or raycasts.

- Easily customizable effect. Size, Color, * Speed, etc.
- Renders on simple and complex meshes.
- Simultaneous impact points support.
- Support for culling and non-culling.
- Distortion and Color!
- Unity Free friendly.
- Fully commented C# code.
- Awesome demos!

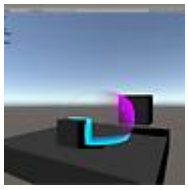
Terms of Use

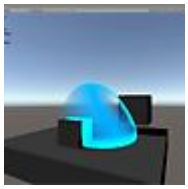
You are free to add this asset to any game you'd like
However:

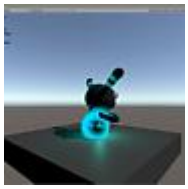
please put my name in the credits, or in the special thanks section. 😃
please do not re-distribute.

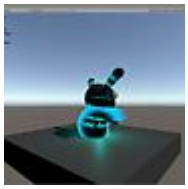
Overview/Setup

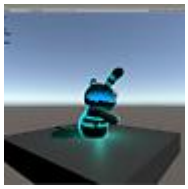
The Energy Shield is a Shader, with an optional C# Script.
The C# Script manages the collision effects that can be displayed on the shield.

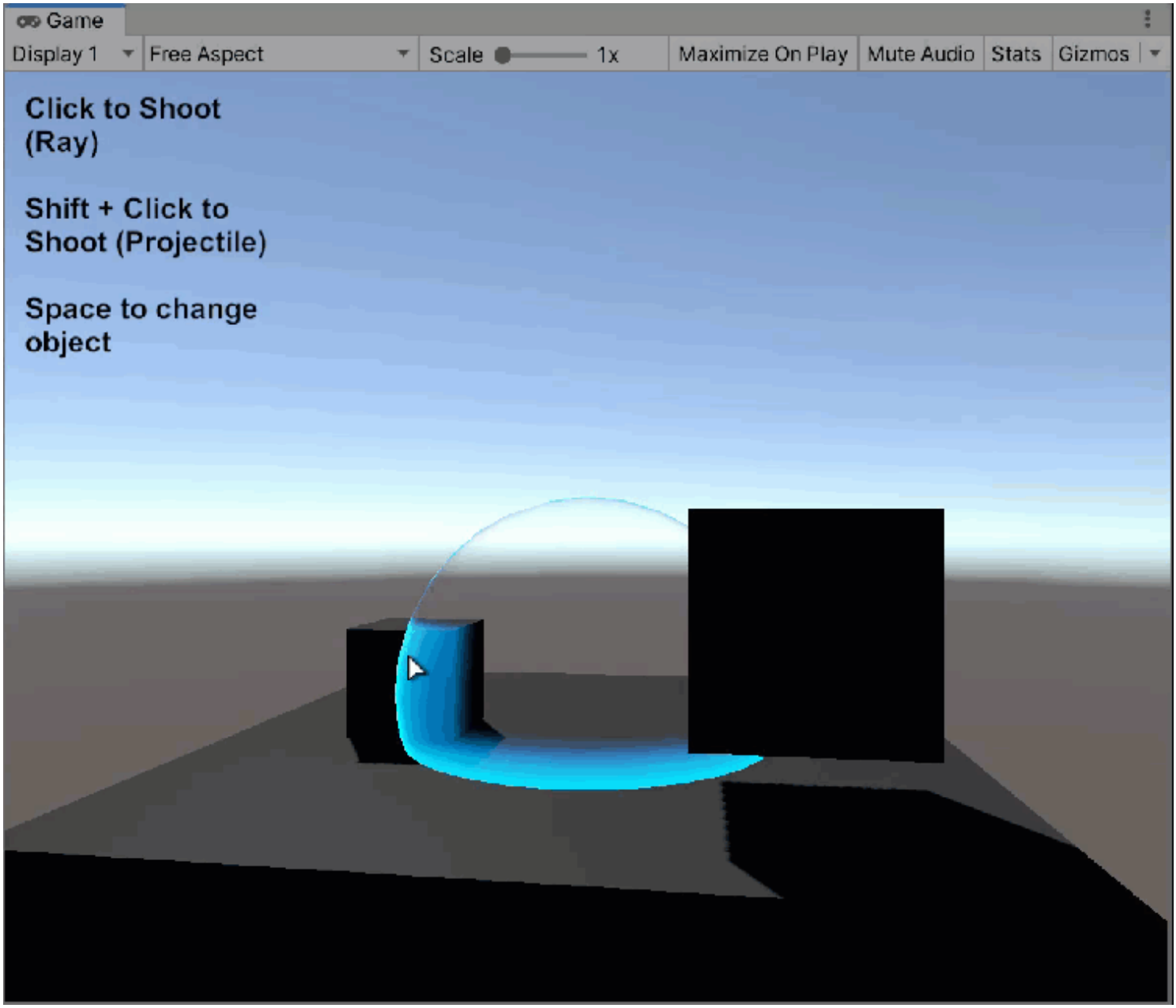












Scripts

EnergyShieldManager.cs

Description:

This Script Creates/Updates the shader to render the energy shield impacts.

CollisionTags:

Object Tags used to detect if a collision has occured.

Speed:

The speed at which the impacts update

Color:
The color of the impacts over time

Size:
The size of the impacts over time

Thickness:
The thickness of the impact over time

Impacts:
this stores the data for each impact

FlipZ:
some models need their Z axis flipped

EnergyShieldManagerExtension.cs

If the Collider and the Renderer is on different components this can transfer the point of the impact to the EnergyShieldManager.

Other Scripts

The Other scripts are basically just used for the Demos.

AlwaysFace.cs:
Turns the gameObject to face the Target.

DestroyAfter.cs:
Destroys an object after a set period of time.
Used in the projectiles.

Rotate.cs:
Used to rotate the camera.

ShootOnClick.cs:
Controls the shooting of rays and projectiles.

Shaders

EnergyShield_base.shadergraph

This is the EnergyShield shader.
I'll be adding and modifying this into different styles.

rim:
this is how much of the edge will glow

offset:
this is how much of the intersections will glow

normal_add:
this is good if you want an edge between the model and the shield

max_normal:
this is how much the normal will shift during the impact

...

FAQs

Why Are Collisions Not Being Detected?

One reason why a collision is not being detected is because the shield is a child of an object with a rigidbody component. I'm calling this the "Rigidbody_ShieldChild" Problem. The solution to this problem is to have a script on the parent object that will detect the collision (Aka use the OnCollisionEnter method) and trigger the shield effect to occur.