

Group ForgottenName   
Demo Report

CS427 – Mini project 2

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# Why I decided to make this box slashing game

Being a fan of the mechanic of slashing enemies/objects into multiple pieces in Metal Gear Rising, I’ve decided to try and remake that mechanic in Unity.

# Making an object “slashable”

# Cutting an object:

* By using EzySlice(<https://github.com/DavidArayan/ezy-slice>), most of the hard work is already solved easily. EzySlice allows us to quickly cut a 3D object in half and get access to the 2 halves where we can put a mesh collider in and give it a rigidbody, then add a small explosion force so the pieces move away from each other.

# Slowing down time:

* Setting the timescale to 0.02f when the player is holding right click. Also stop the player movement and switch the input to changing the cut plane horizontal and vertical axis, while the mouse controls its rotation. Also add in some post processing like vignette, depth of field and chromatic aberration to sell the feeling of time slow down when the character is focusing.

# Animations

* For slashing, there’s none! It’s all smoke and mirrors. There are just 6 slash pose put in a blend tree and linked to a reference gameobject transform on the slashplane. When the playerleft click to slash, we flip the local X position of the reference and the illusion of a really fast slash is done.
* Running animation is made with mixamo, simple stuffs.

# Other Unity things:

* Once again, Object pooling definitely helps regarding optimization.
* Finding a good sweet spot between despawning the pieces too fast and makes the slashing feels underwhelming, and despawning it too late, meaning the player can create so many pieces it ruins performance completely.
* Shader Graph is really easy to use. All hail Shader Graphs.

# References:

1 . <https://www.youtube.com/watch?v=YGDzRVwmTgM>