



BA Computer Games Design

Environment & Level Design
3D Diorama and Presentation

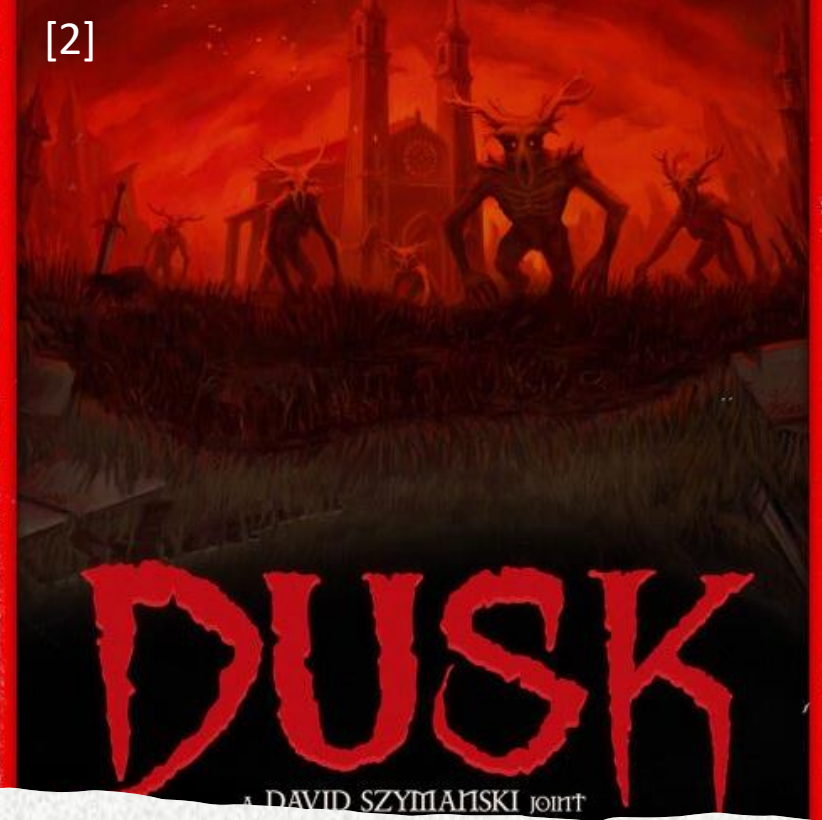
Alex Jones – 1901041
ACCA4032



[1]



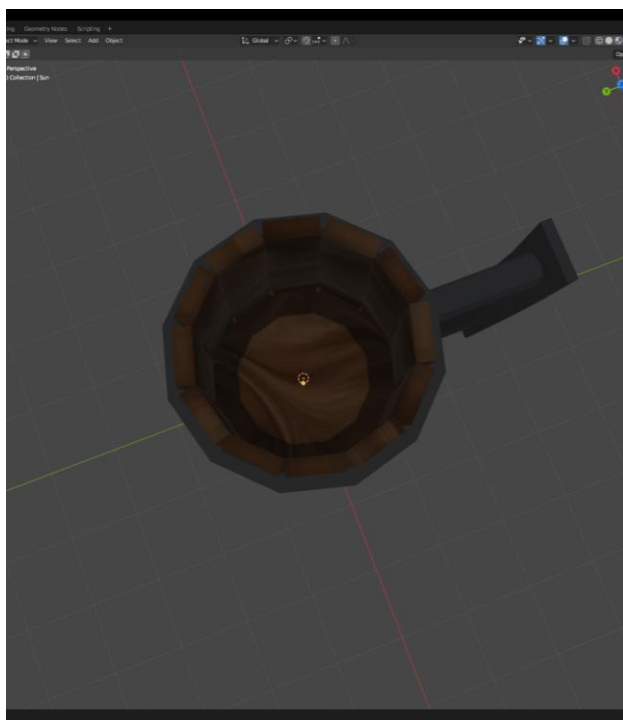
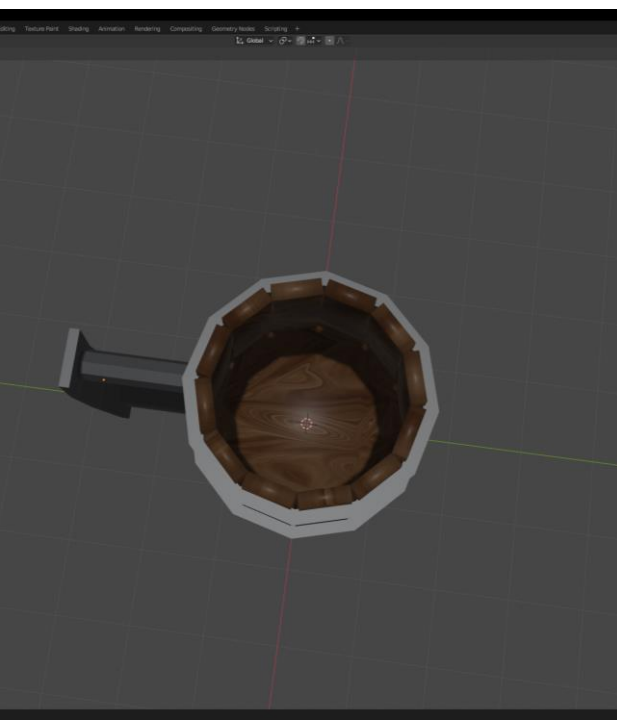
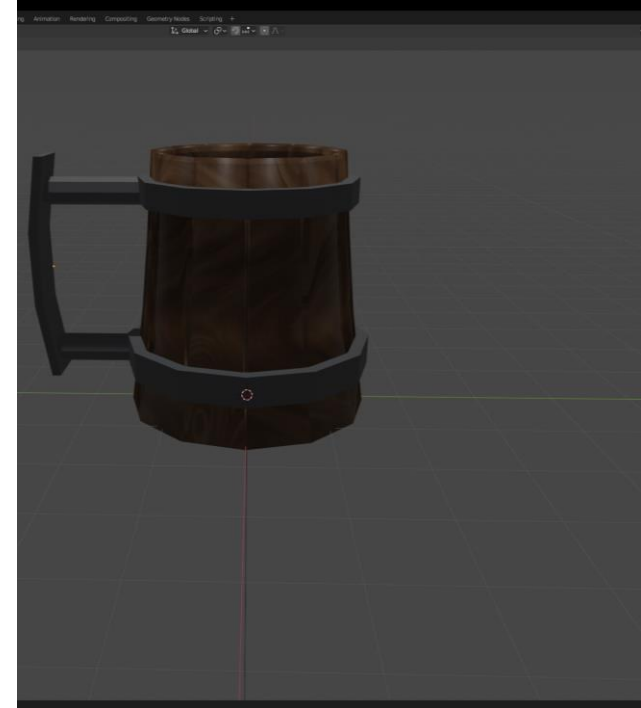
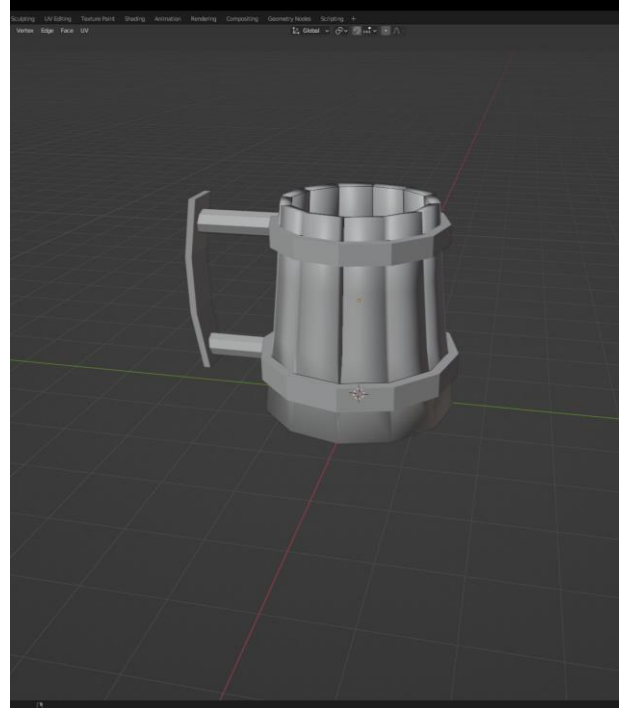
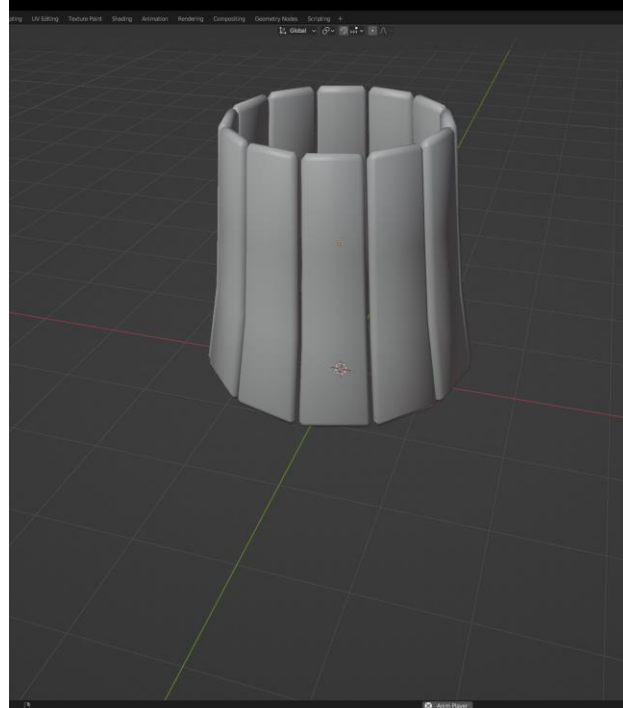
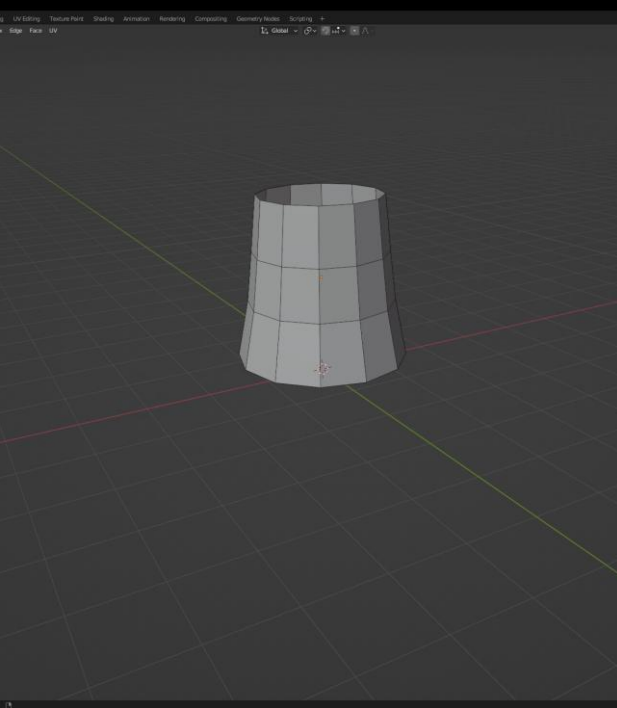
[2]



What theme?

What Location?





Model – Tankard

- Tutorial – [5]
<https://www.youtube.com/watch?v=O70AeD-PM3E>
- Solidify and Bevel modifier's
- I made the mistake of UV Unwrapping before I added the bottom.
- The last photo is after I unwrapped it again.

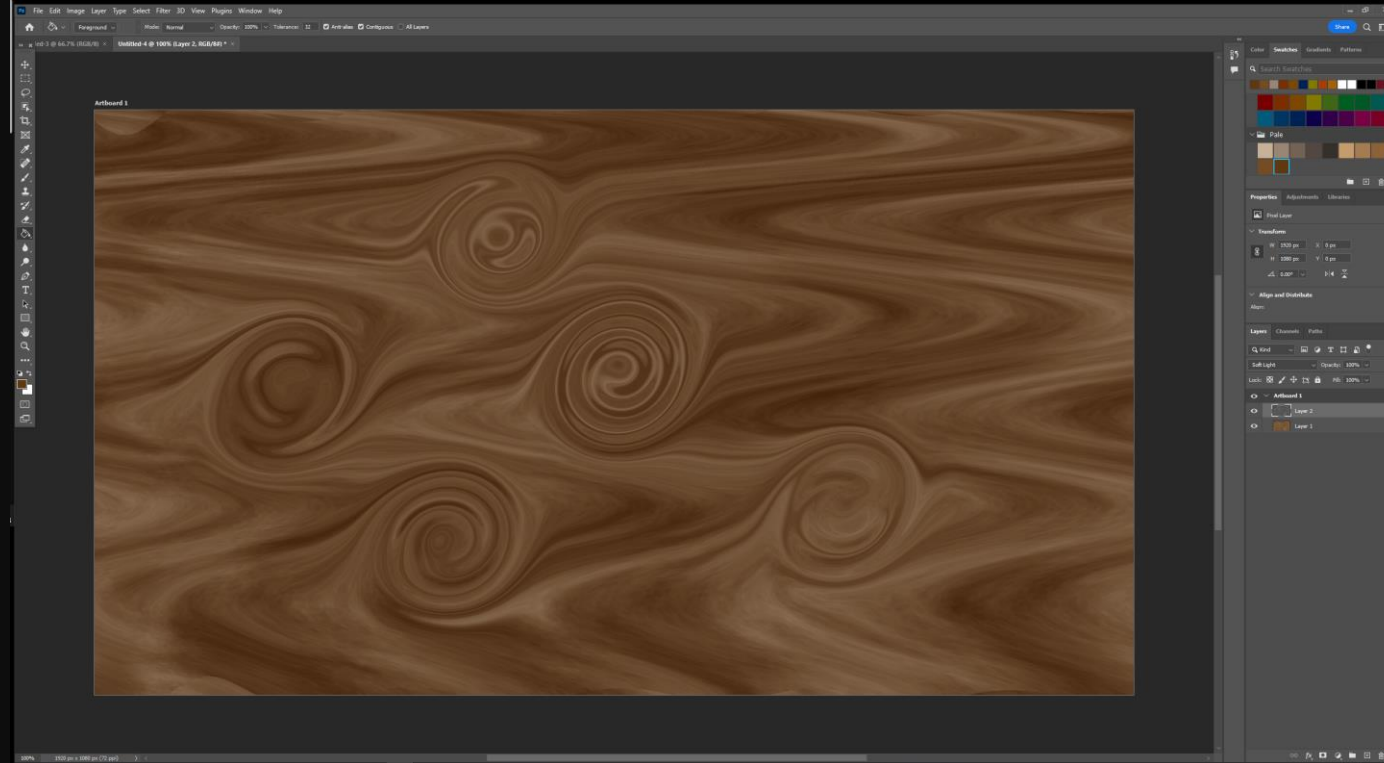
Wood Texture for Tankard

Filtering:

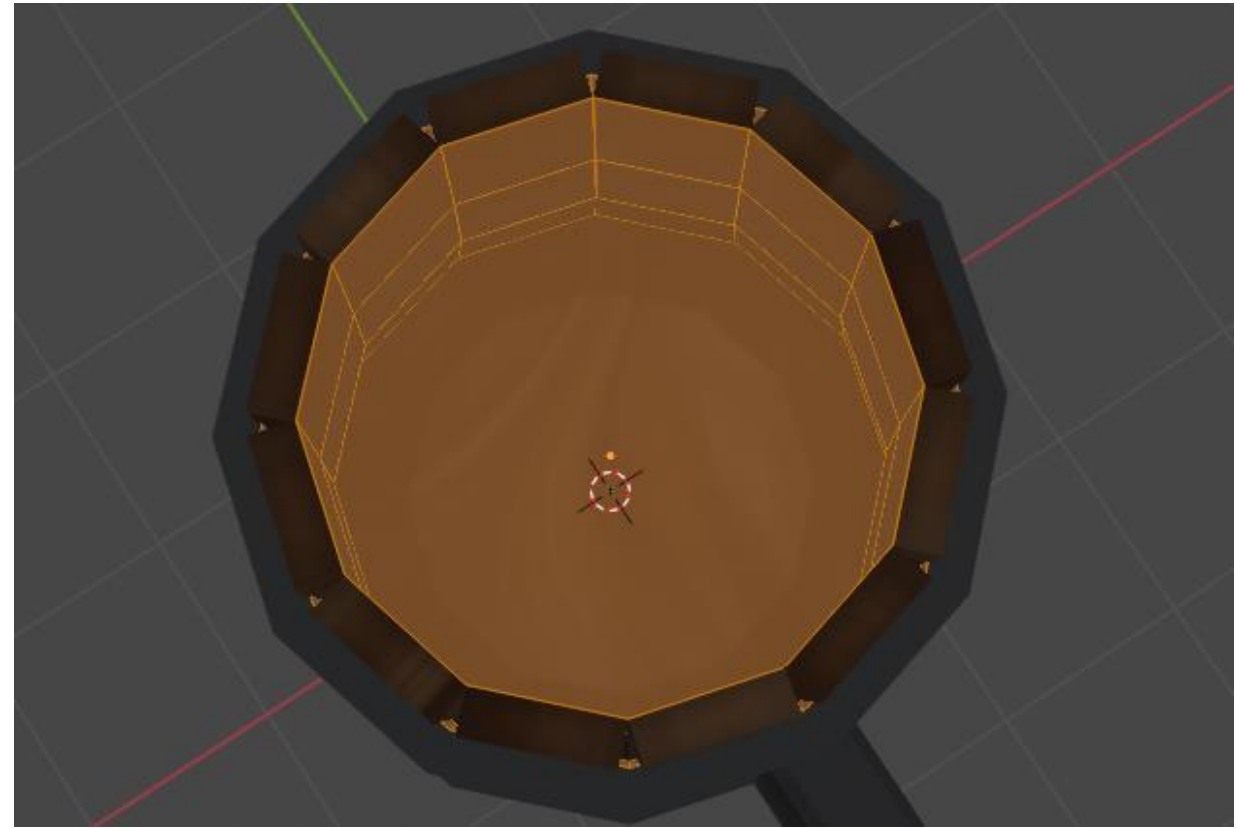
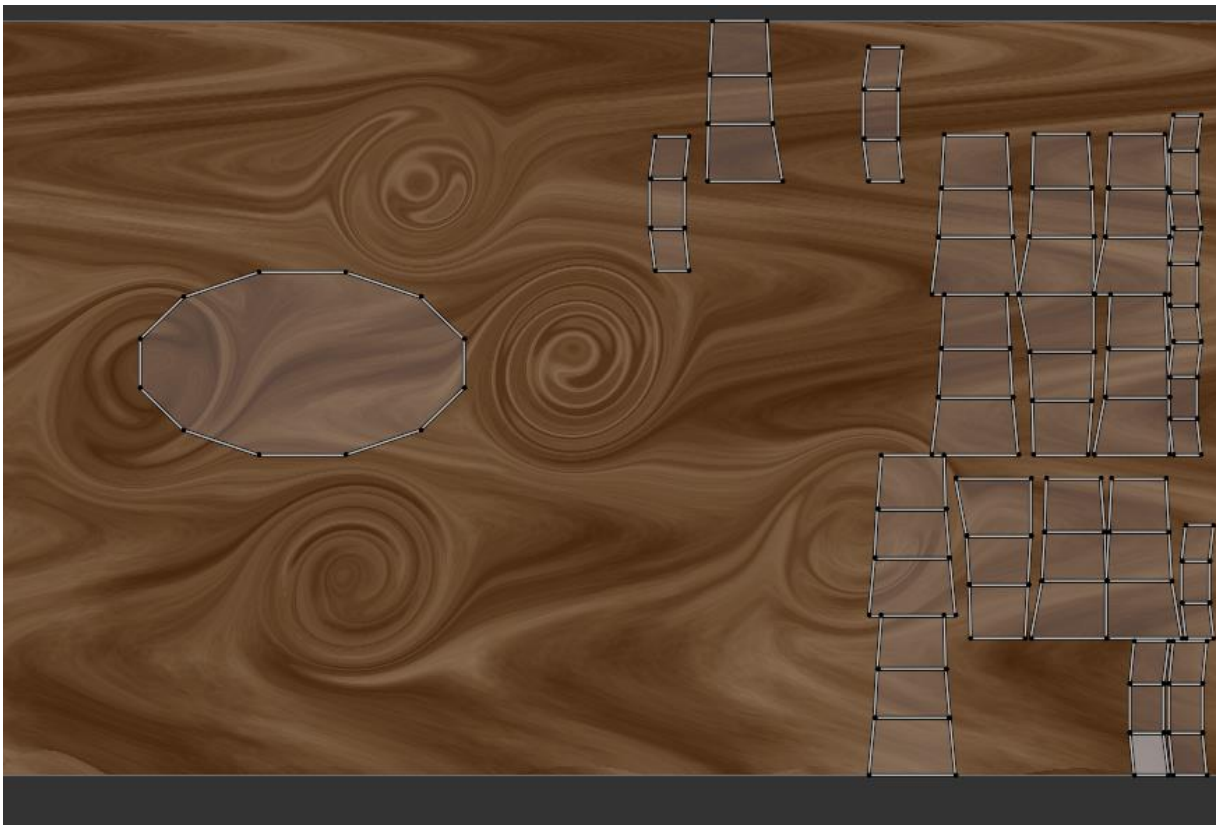
Liquify

Clouds

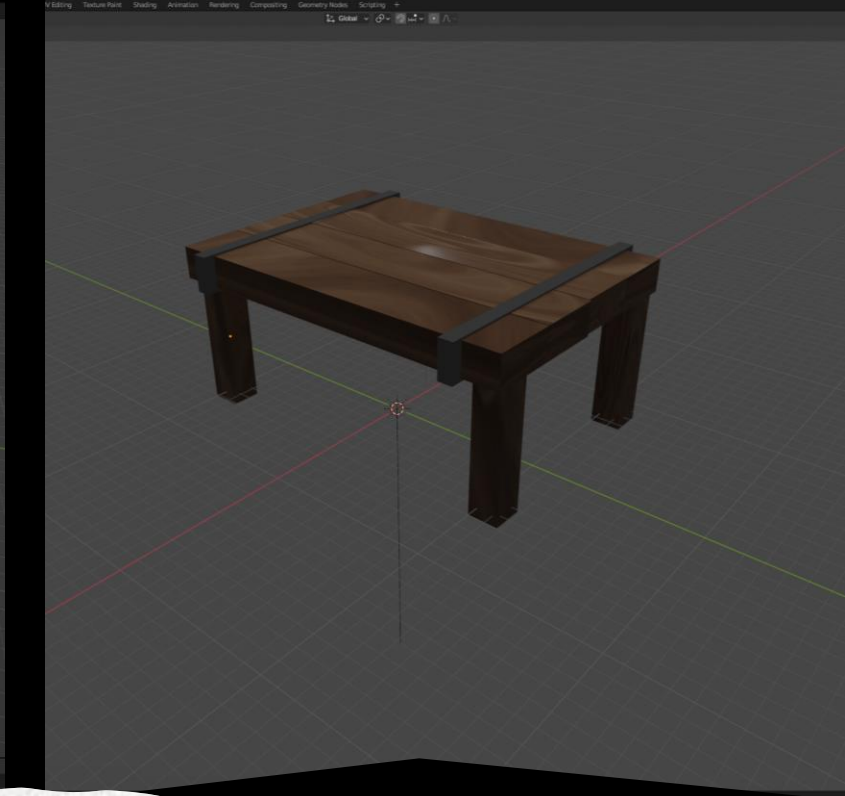
Wave Effect



[6] Tutorial: https://www.youtube.com/watch?v=o_86ZvhiFD0

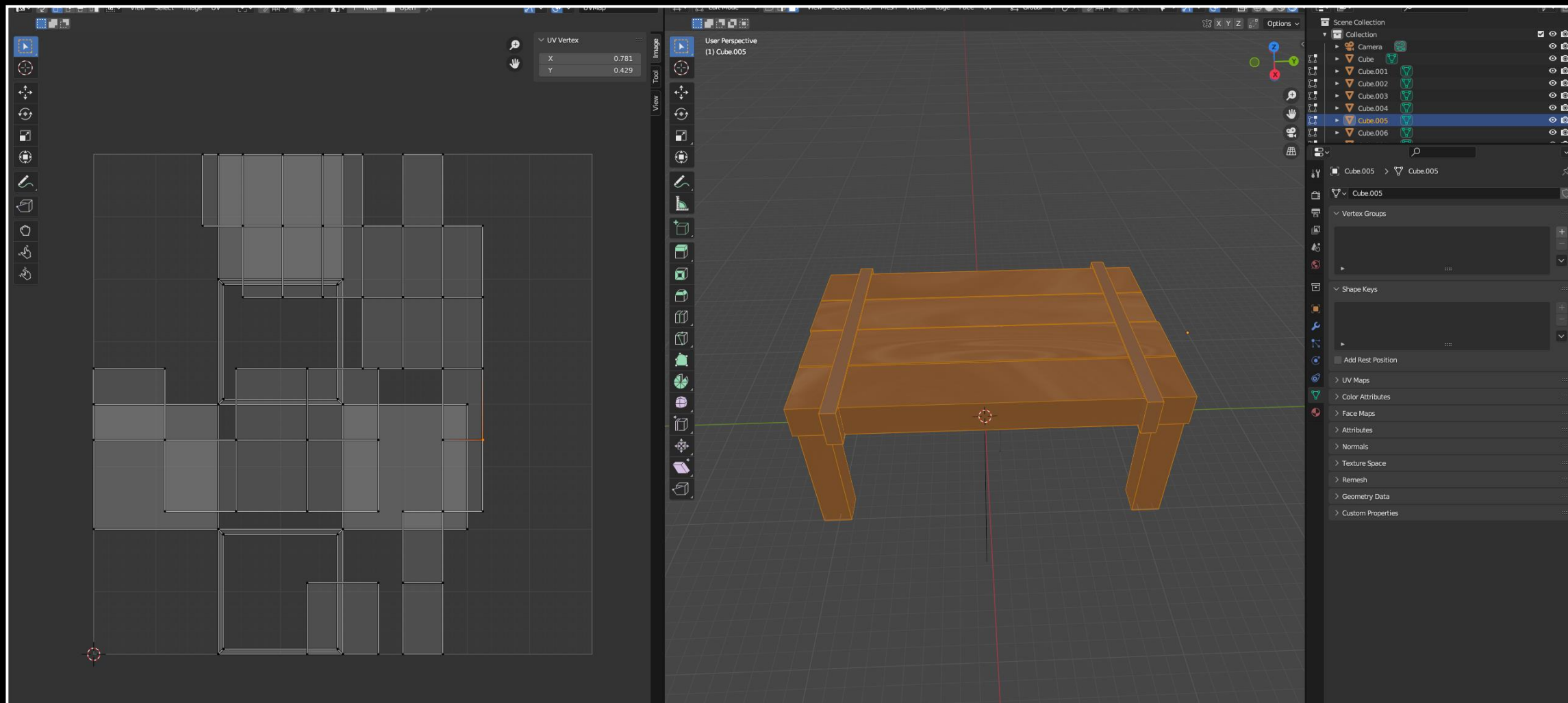


UV Unwrap - Tankard

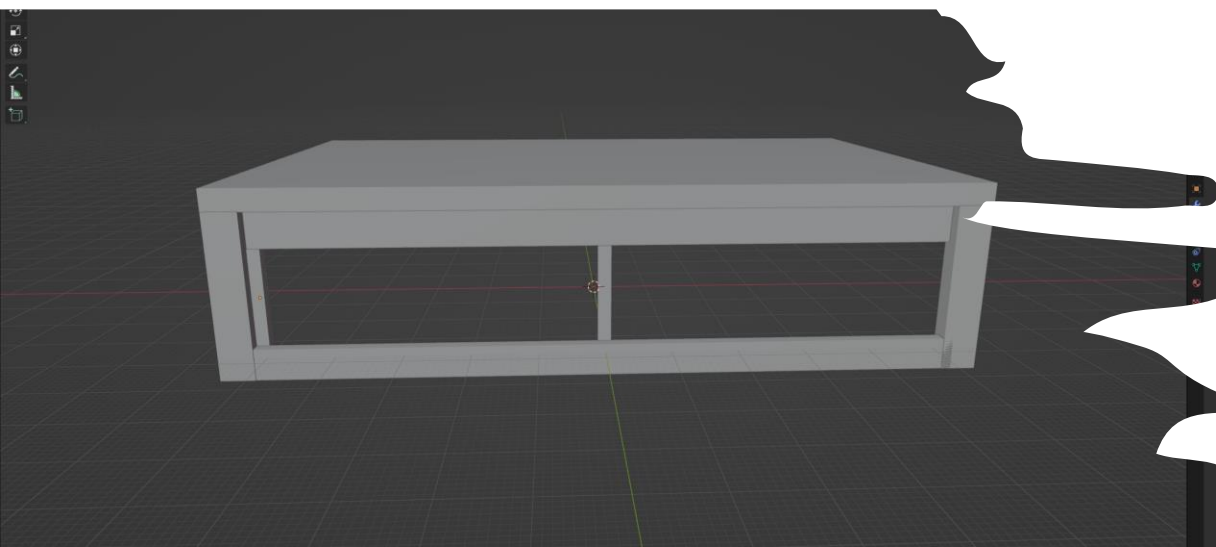
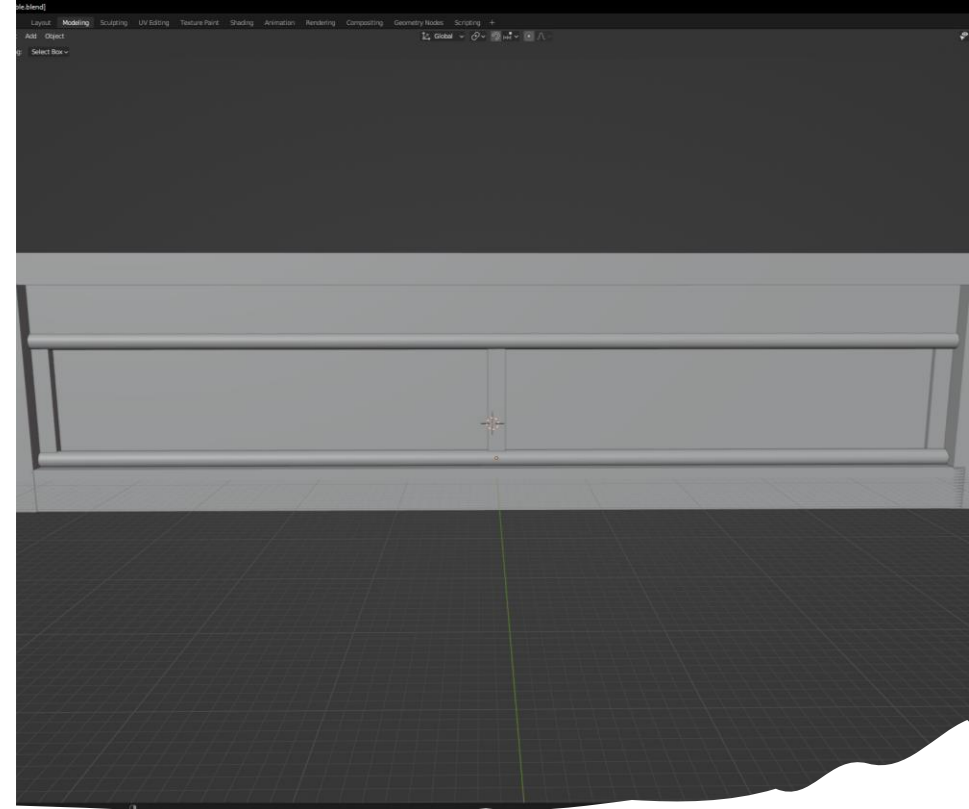
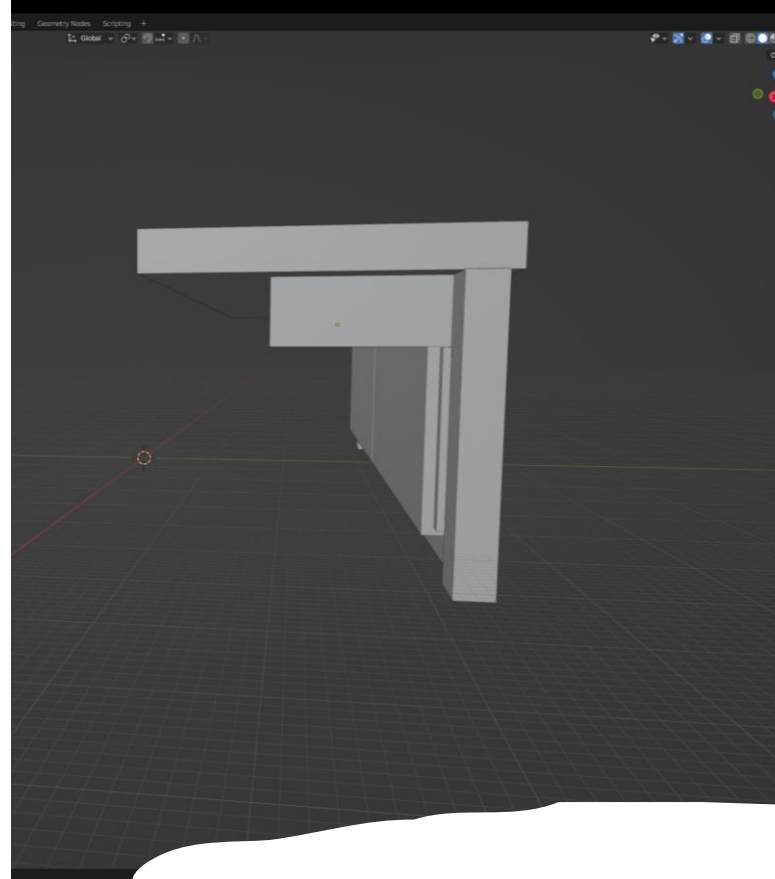


Model - Table

• [7]



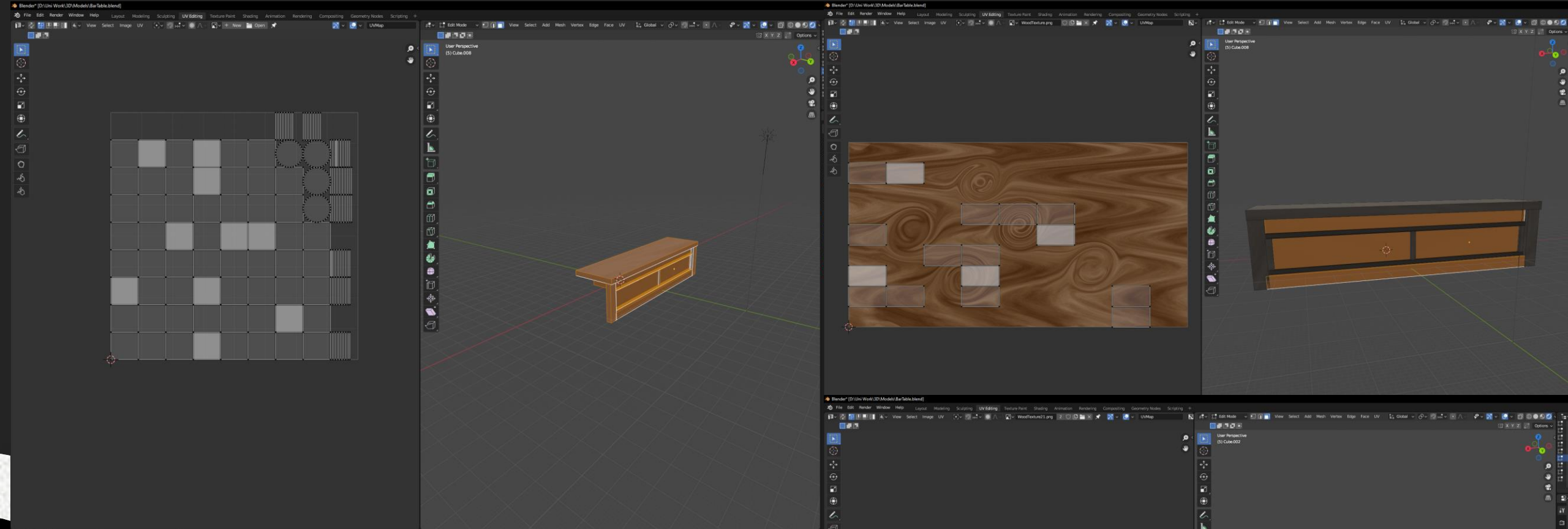
UV Unwrap - Table



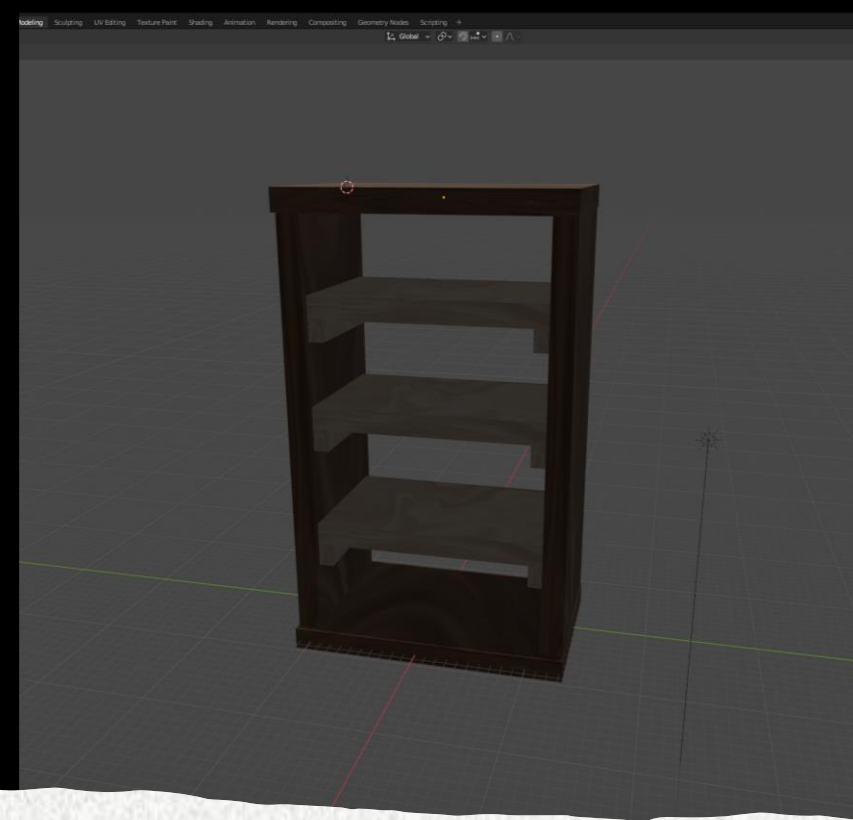
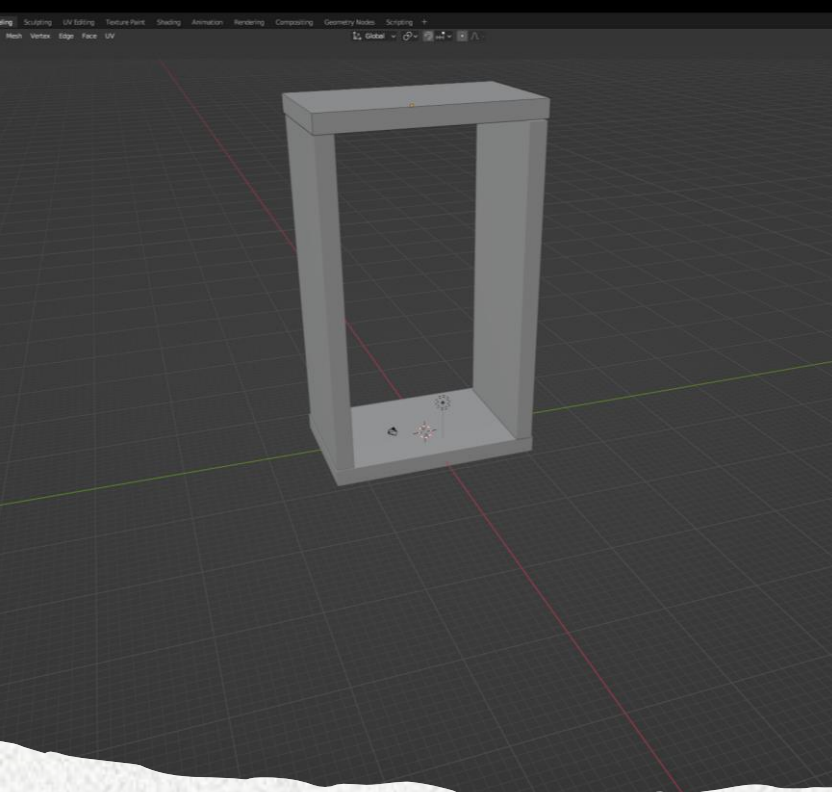
Model – Bar
[8]



Bar Texture

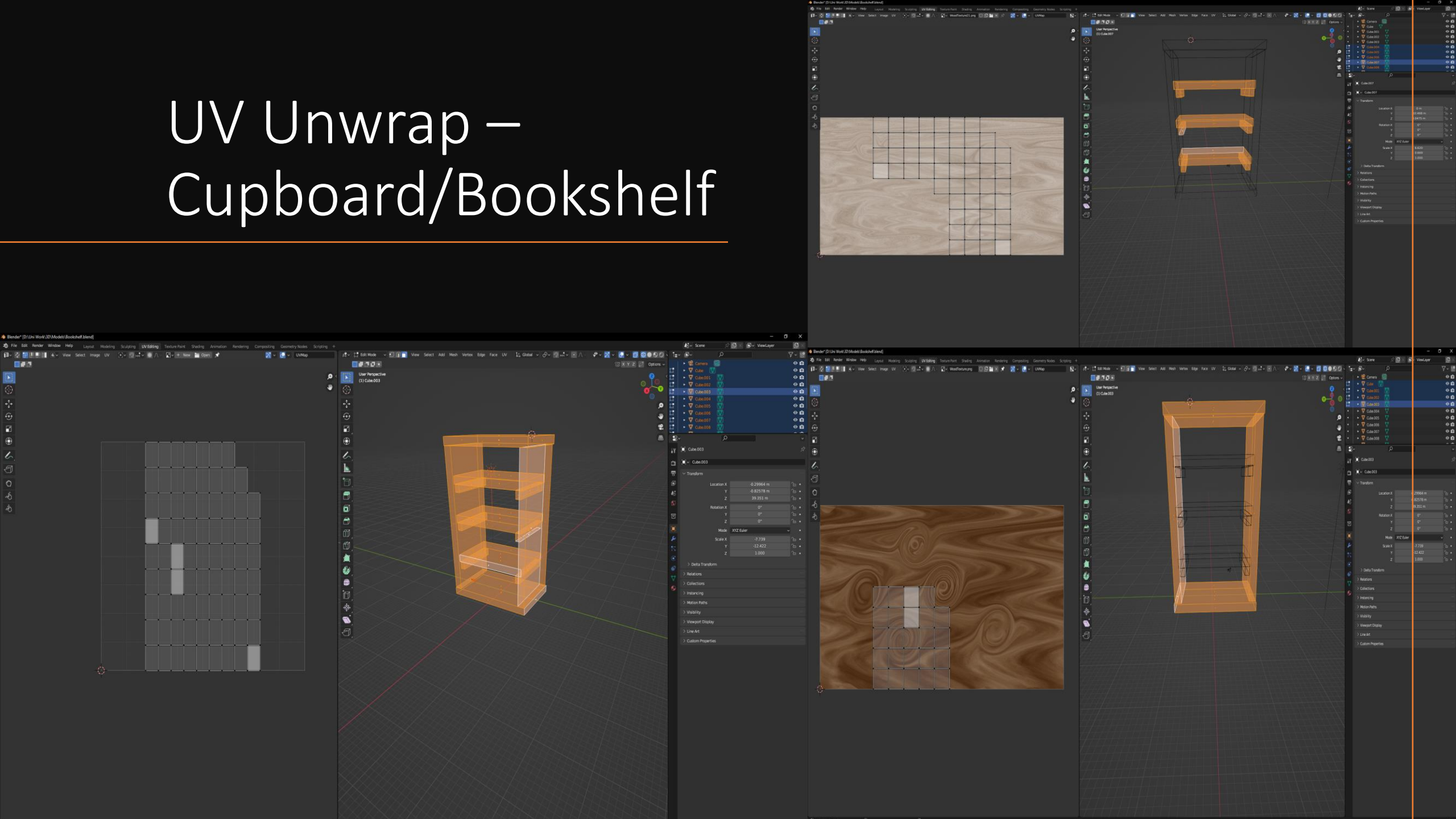


UV Unwrap - Bar

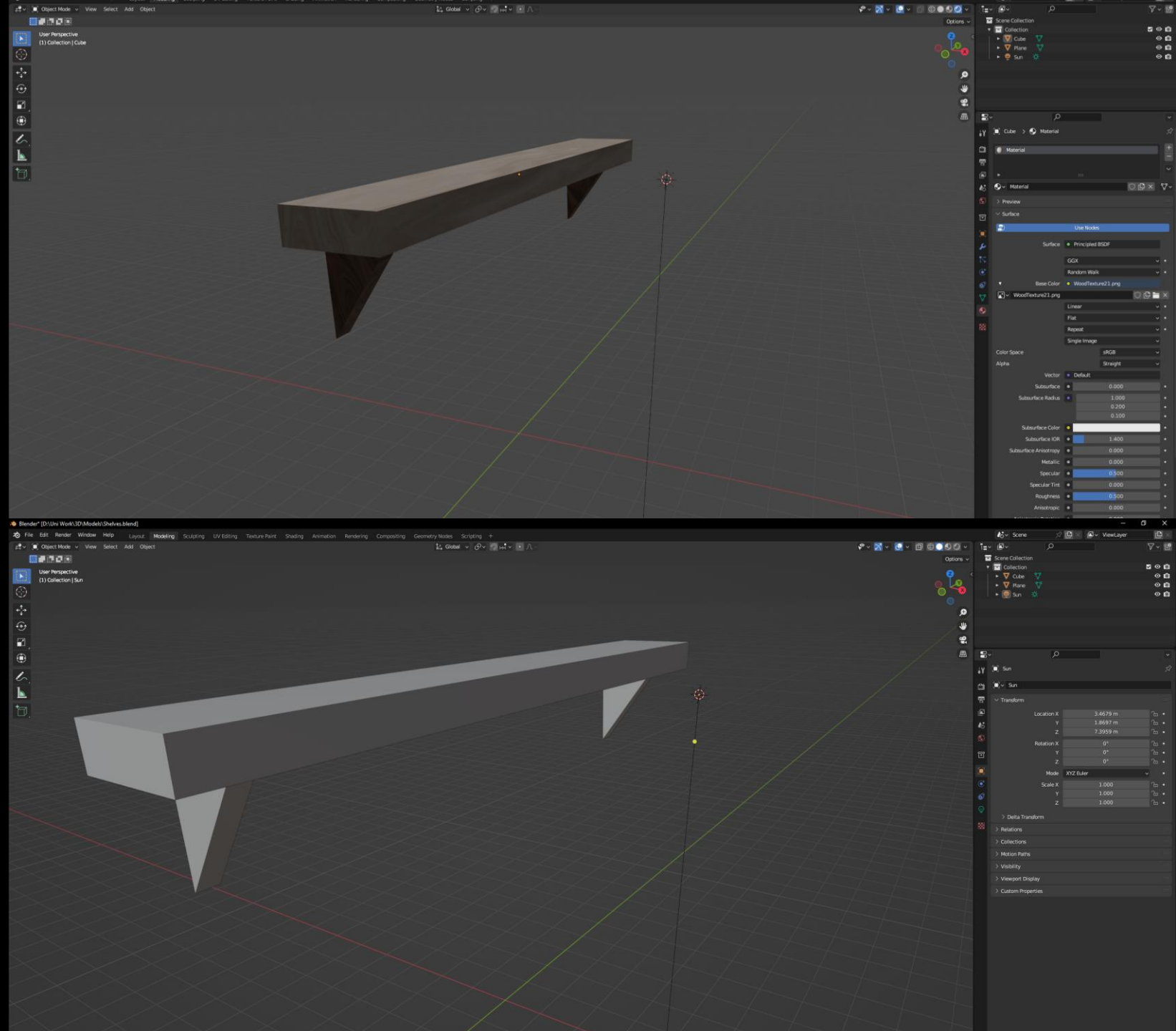


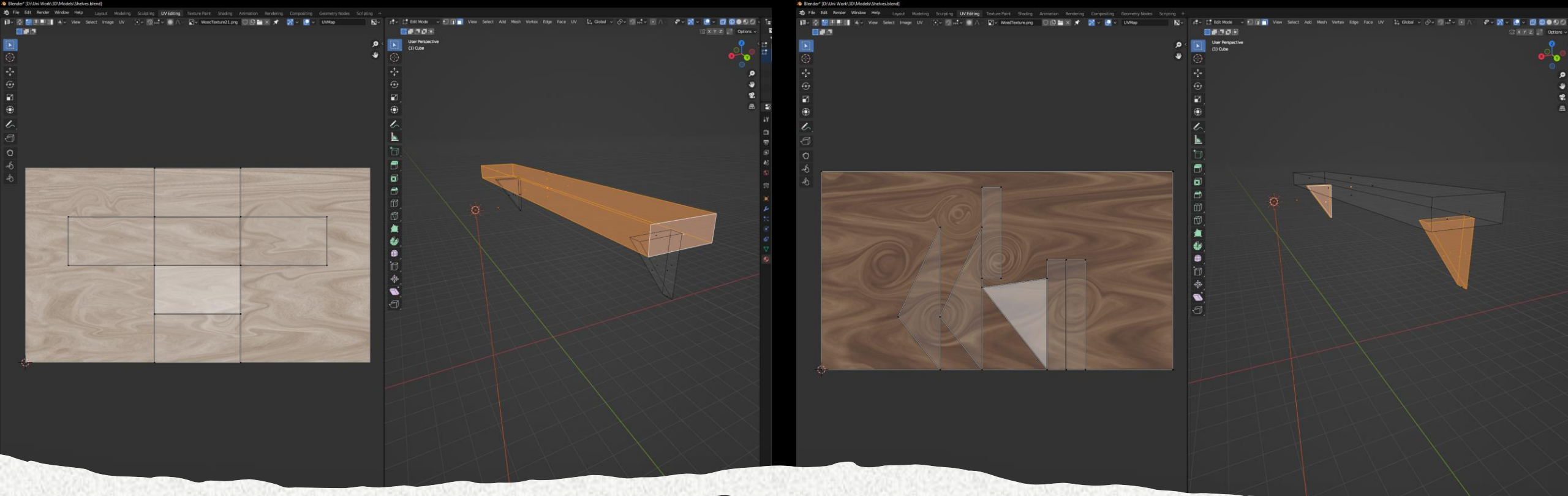
Model -
Cupboard/Bookshelf

UV Unwrap – Cupboard/Bookshelf

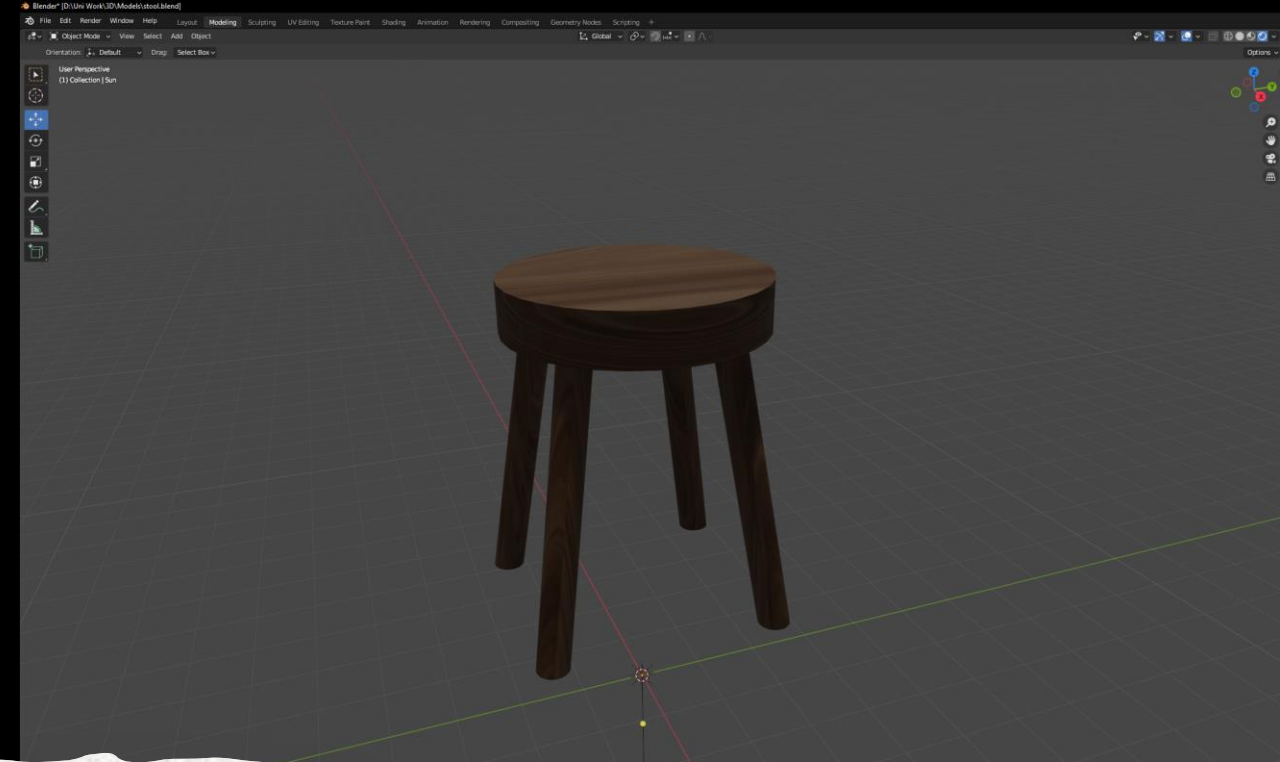


Model – Shelves

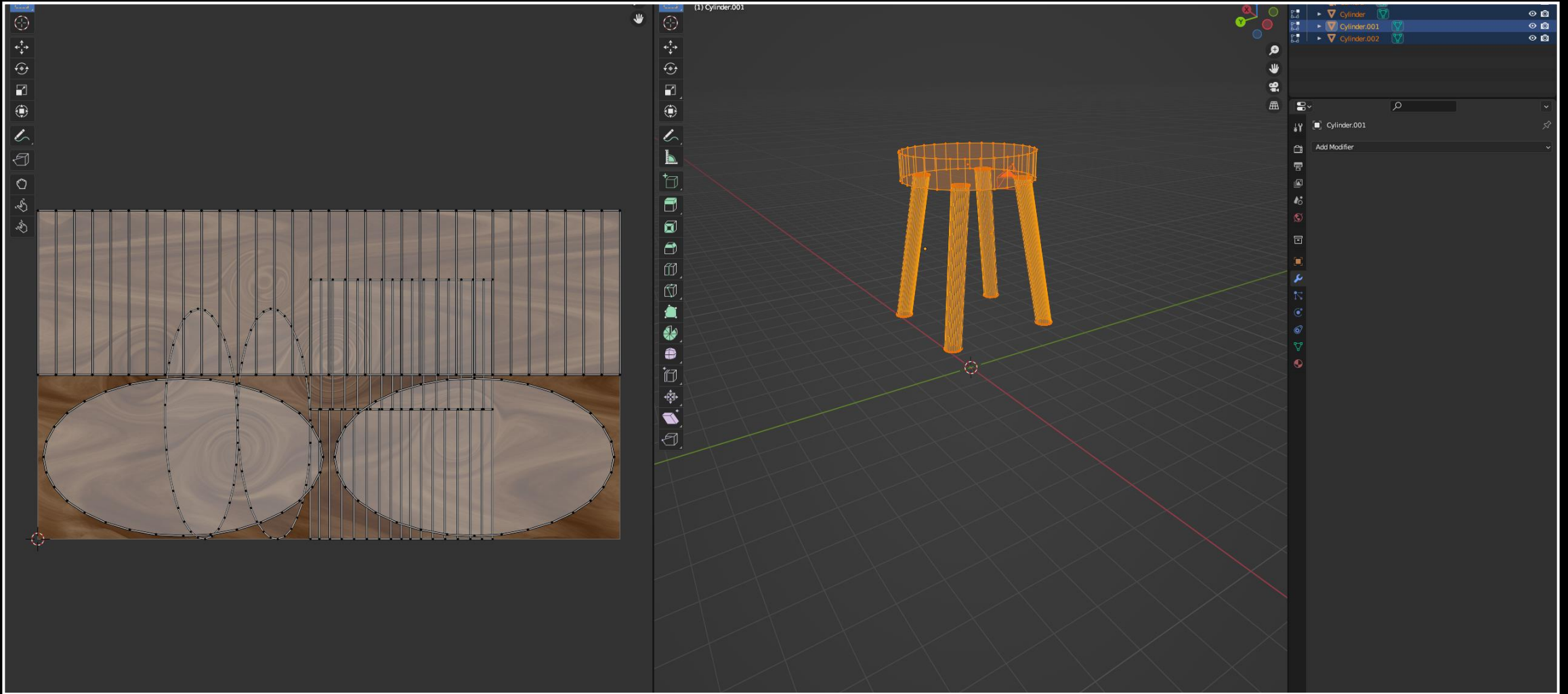




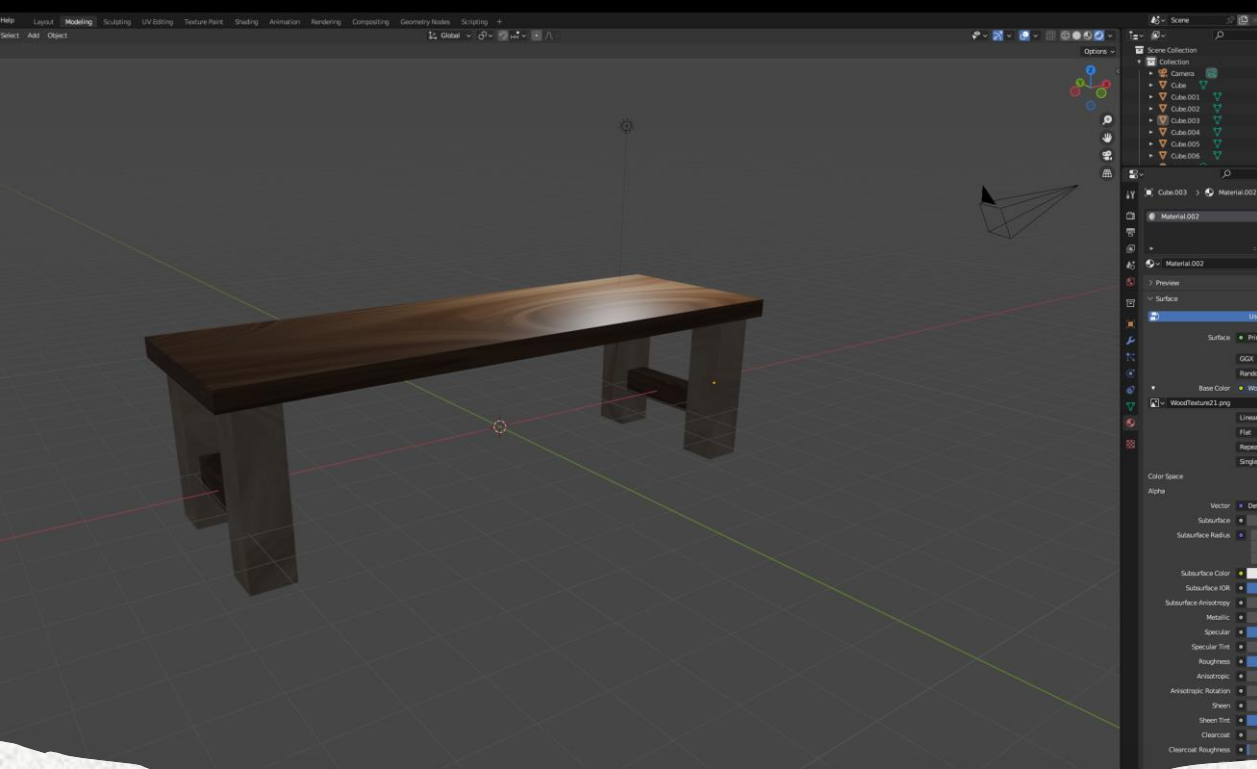
UV Unwrap - Shelves



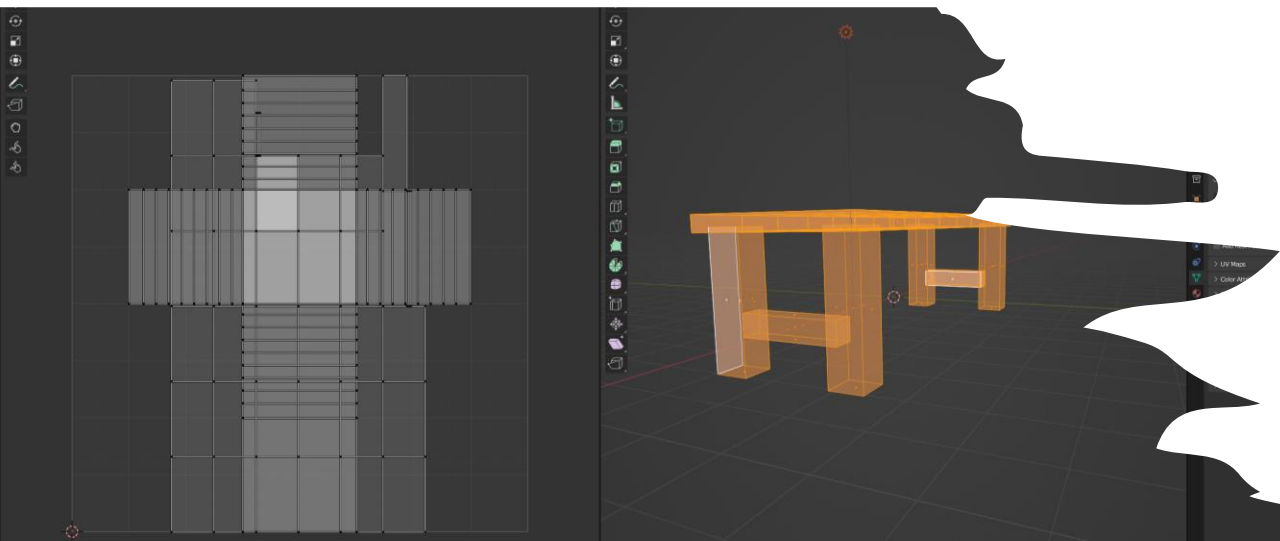
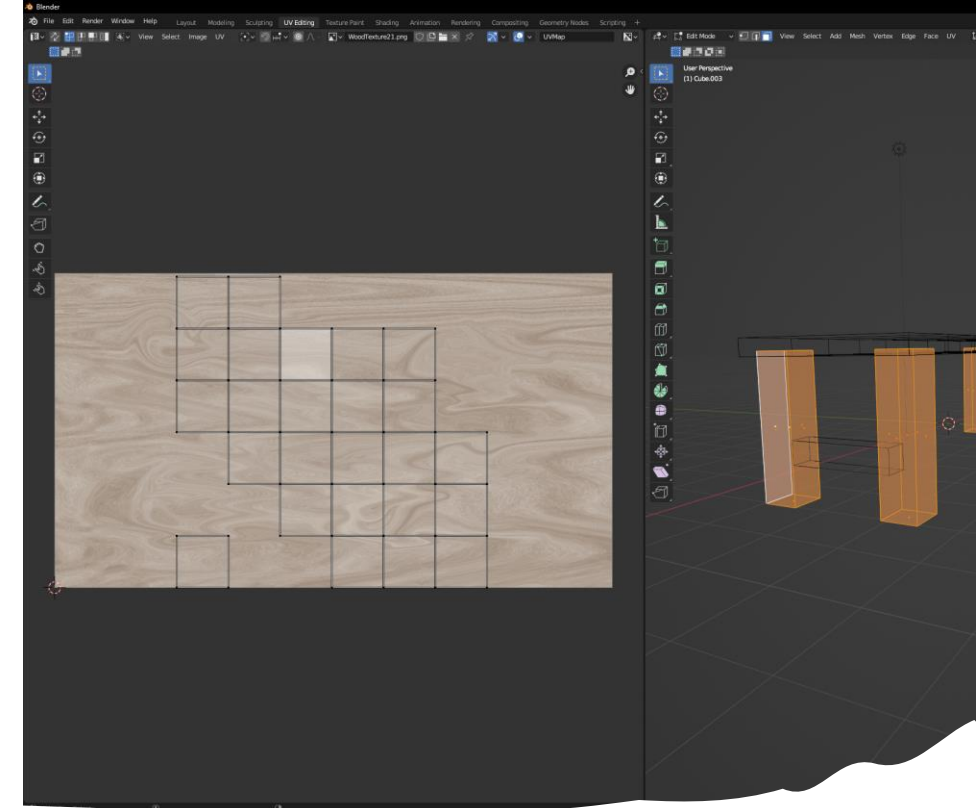
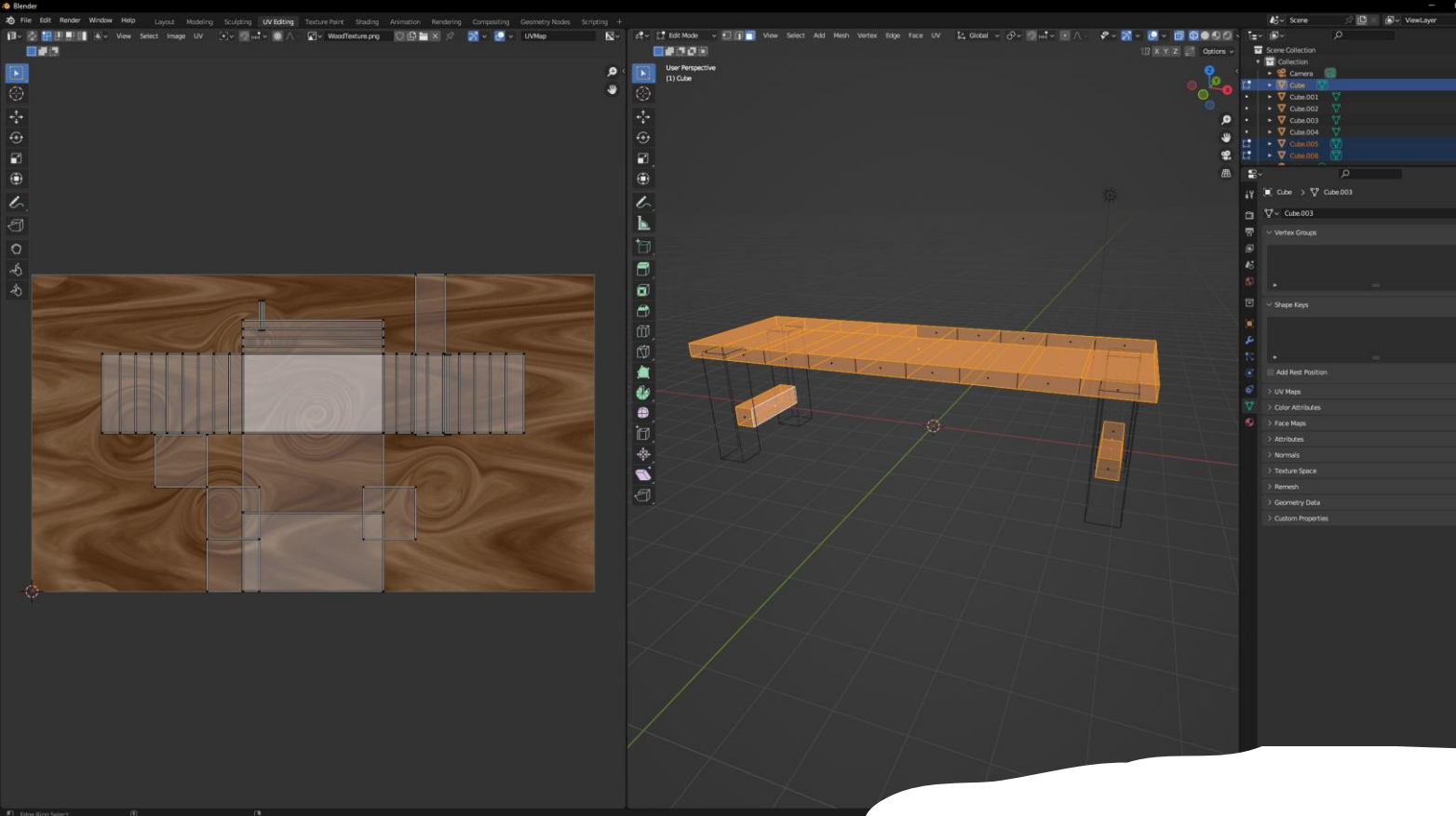
Model - Stool



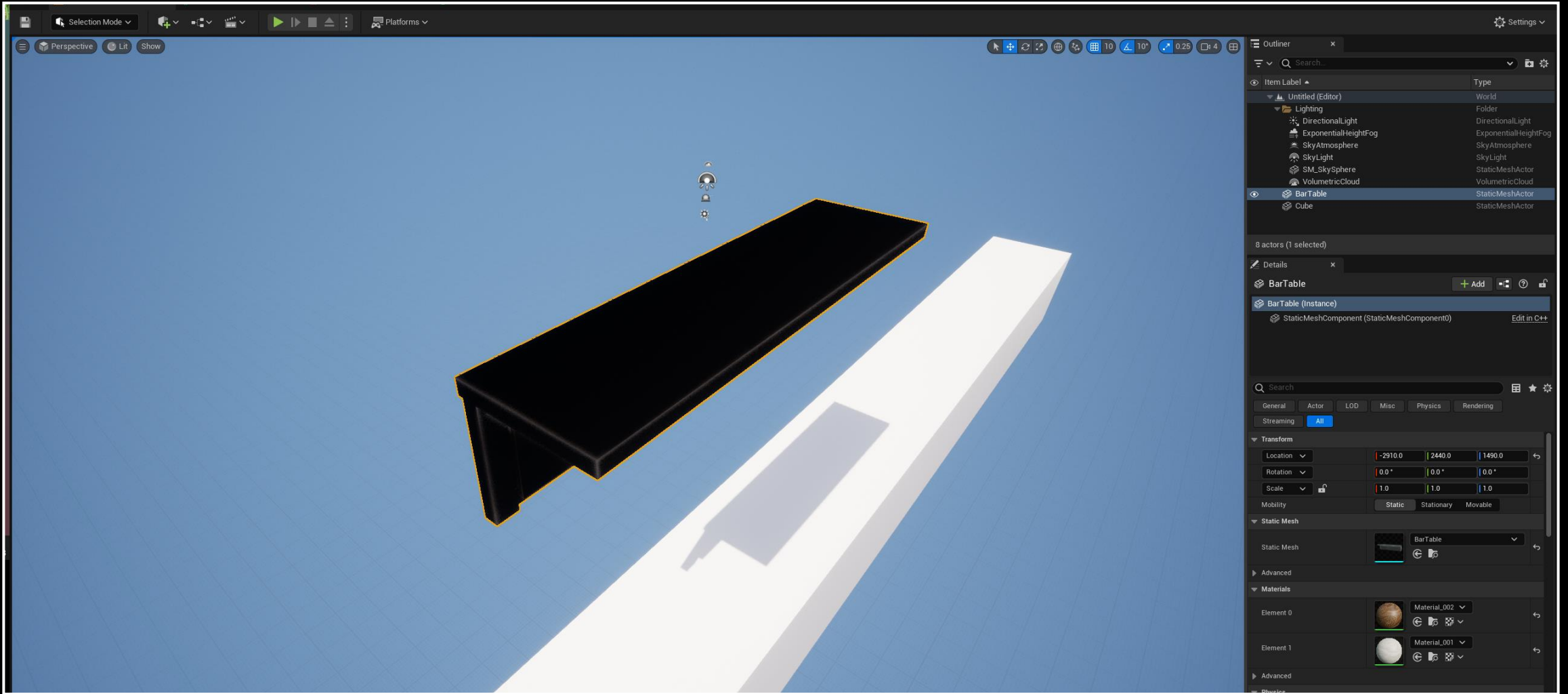
UV Unwrap - Stool



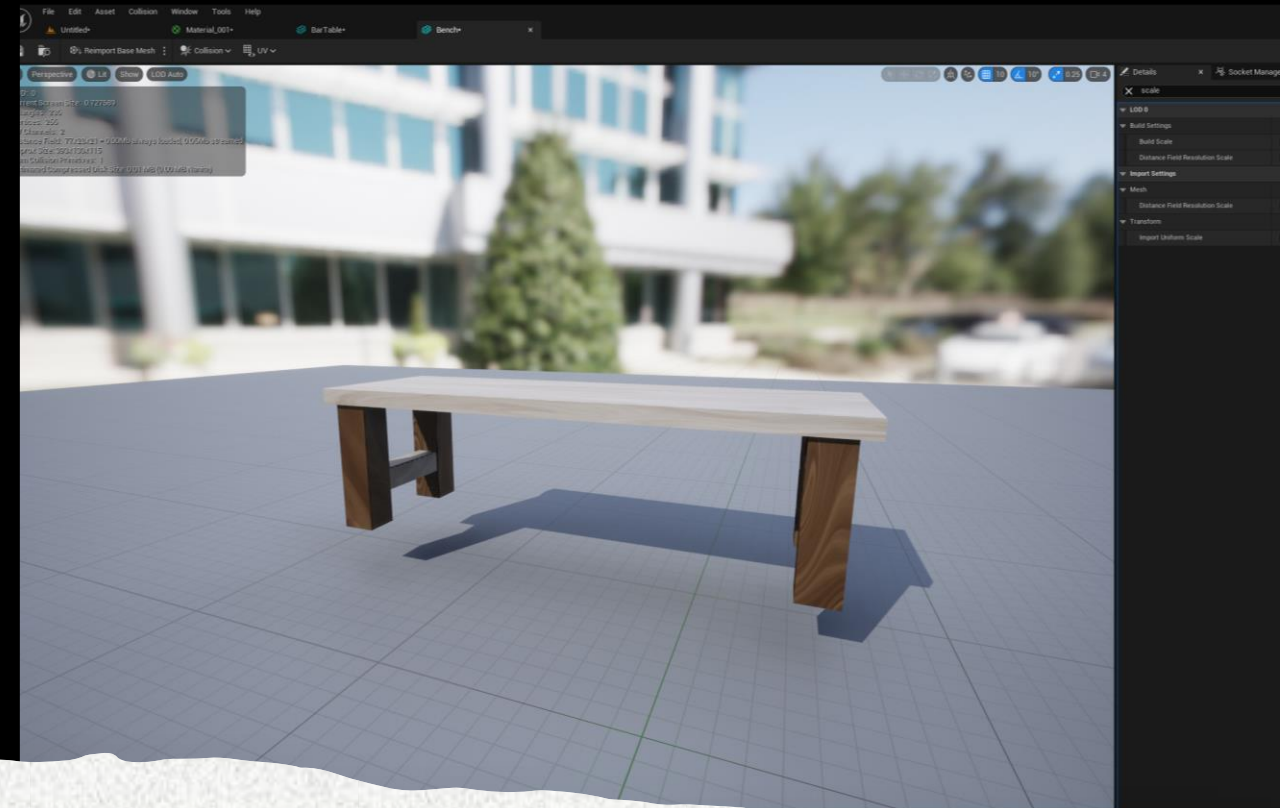
Model - Bench



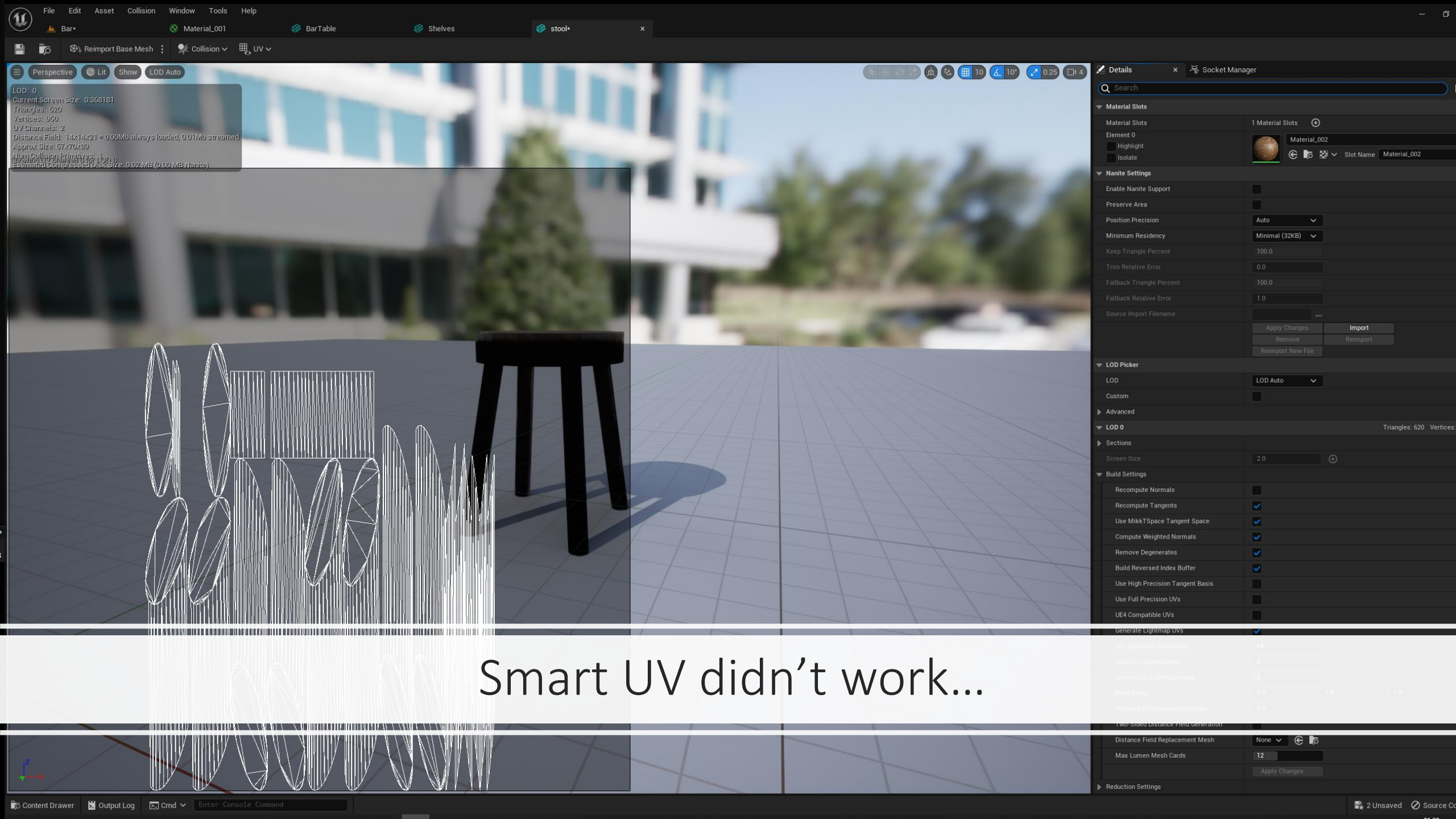
UV Unwrap - Bench

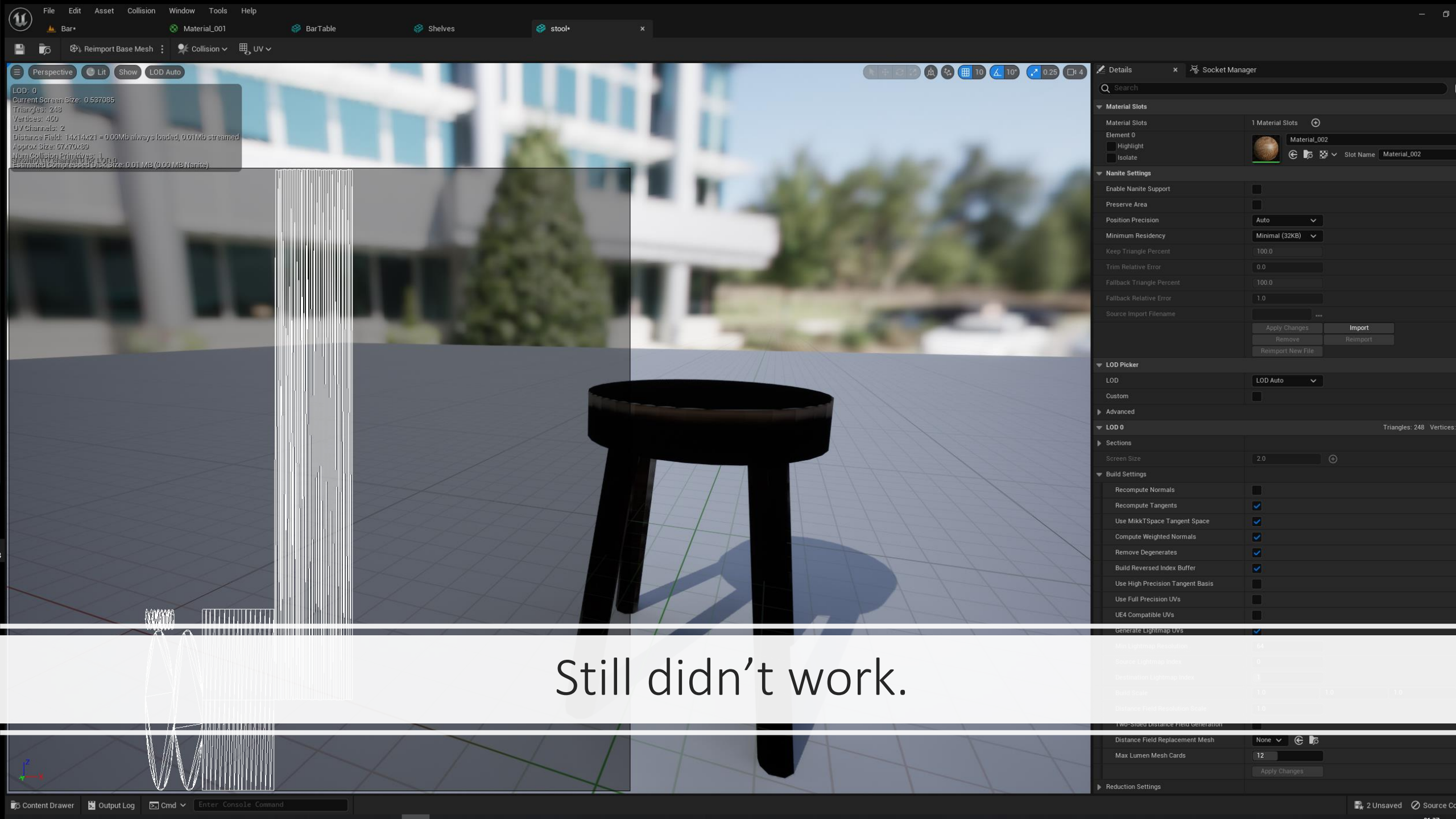


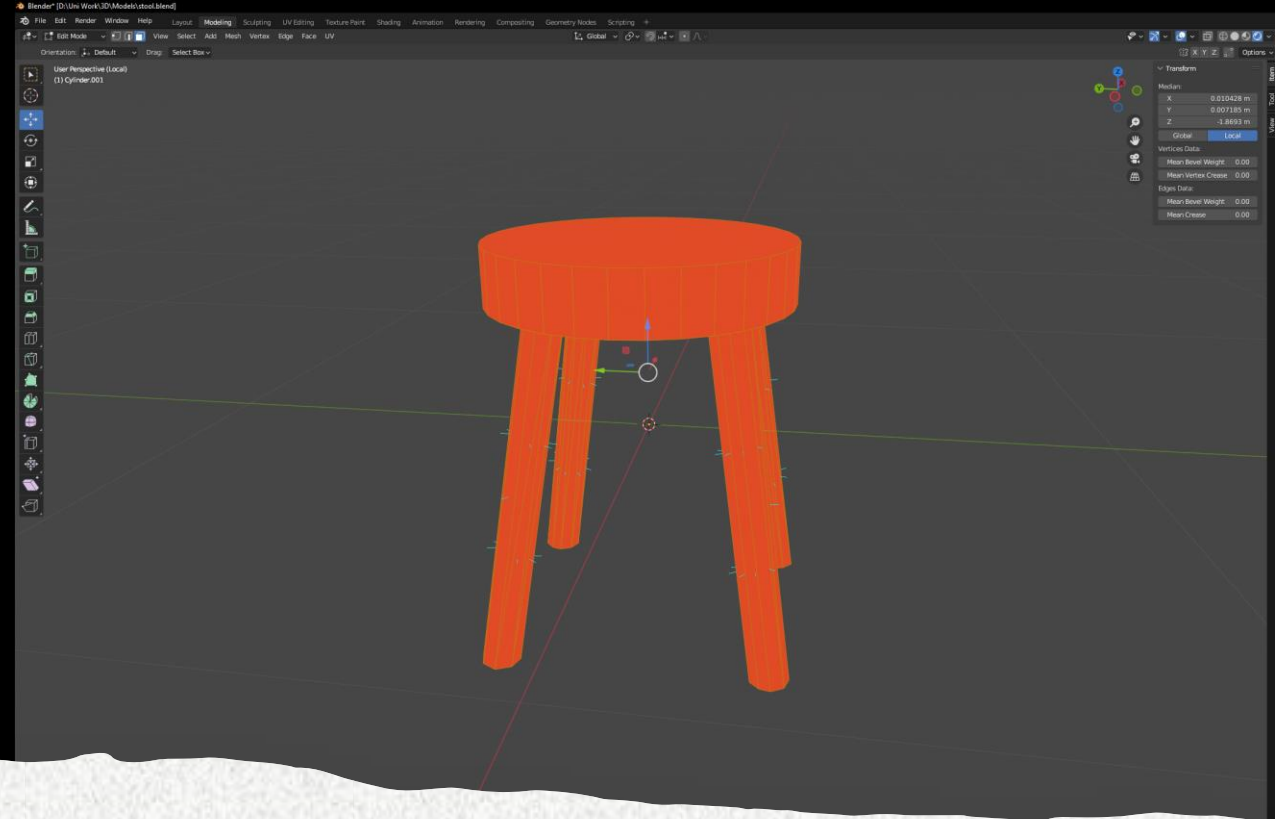
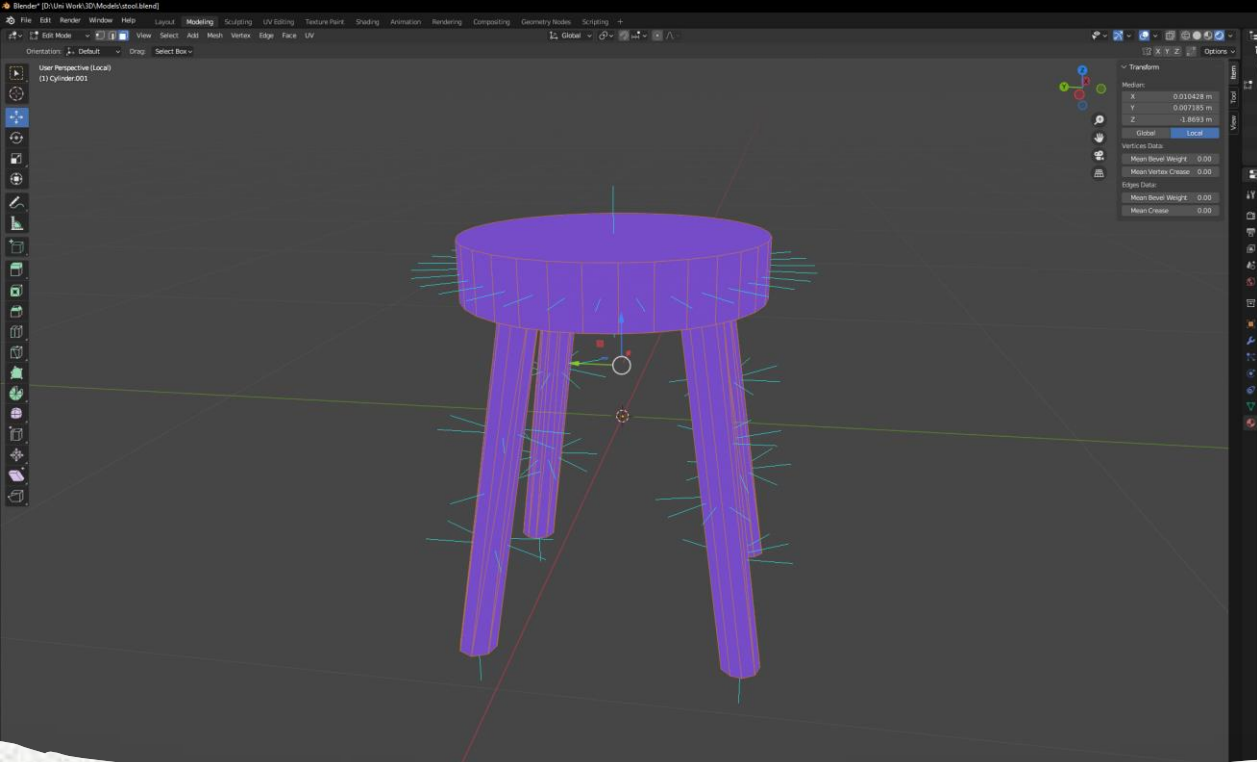
Importing Objects into Unreal Engine 5



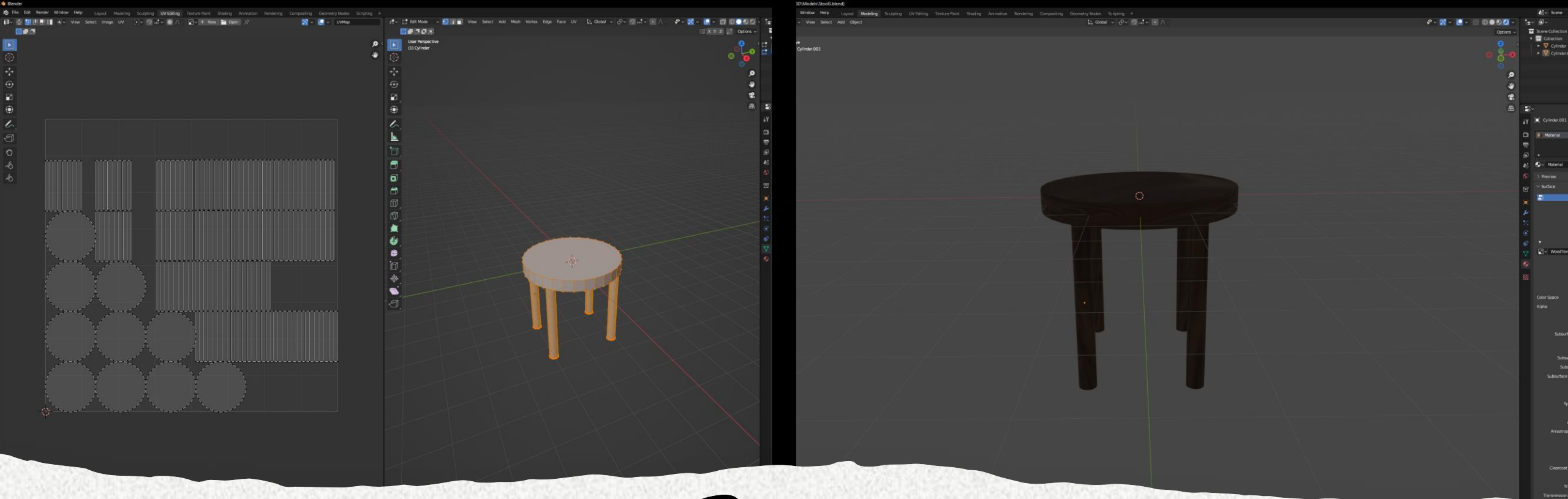
- Normal's were inverted.
- Scale and Origin point were way off. (Reoccurring for all models but managed to fix them relatively quickly.)
- Geometry to Origin, refixing location in Blender.







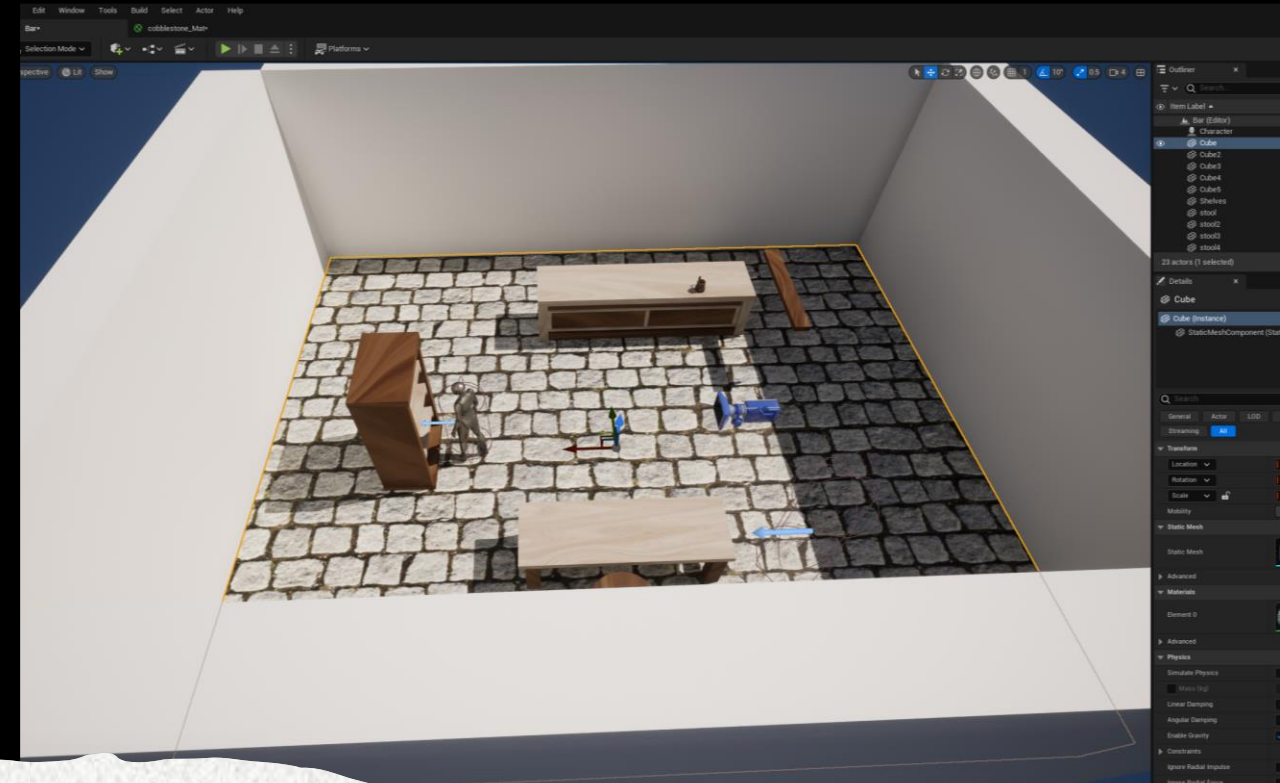
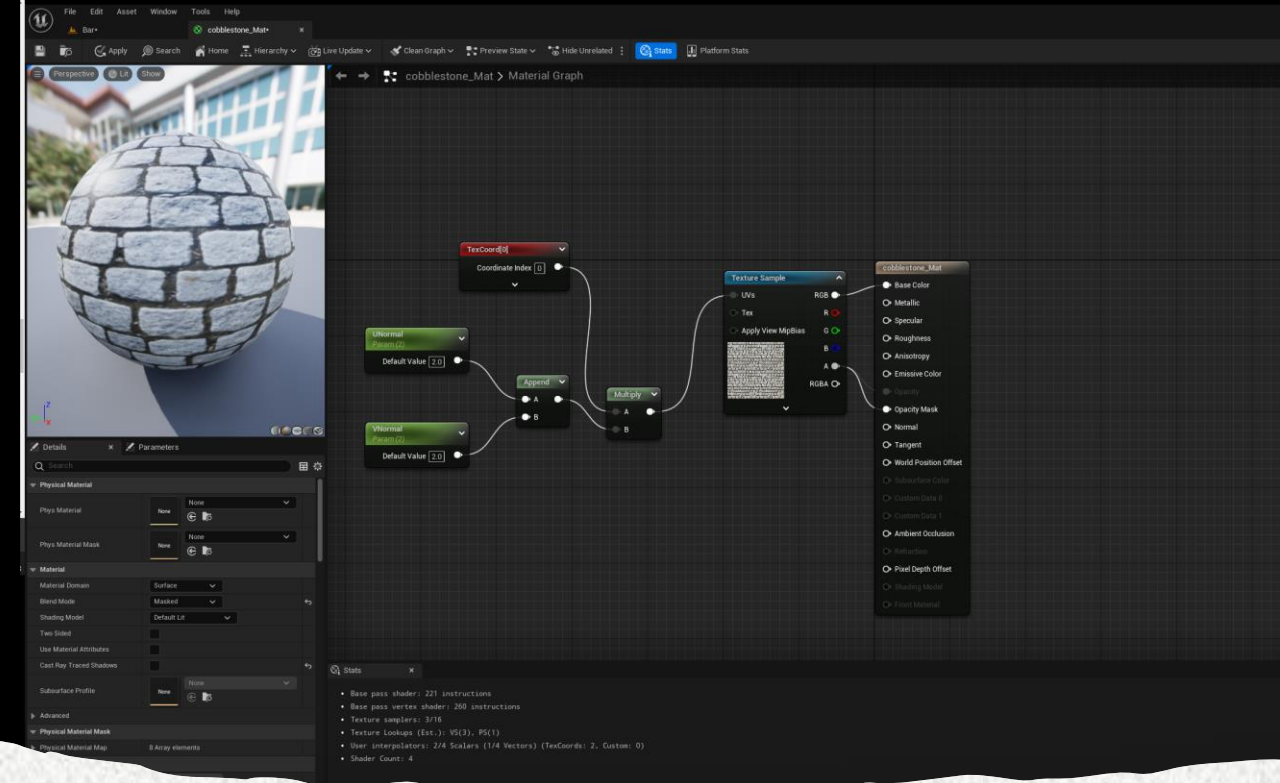
Inverted Faces didn't work
either.



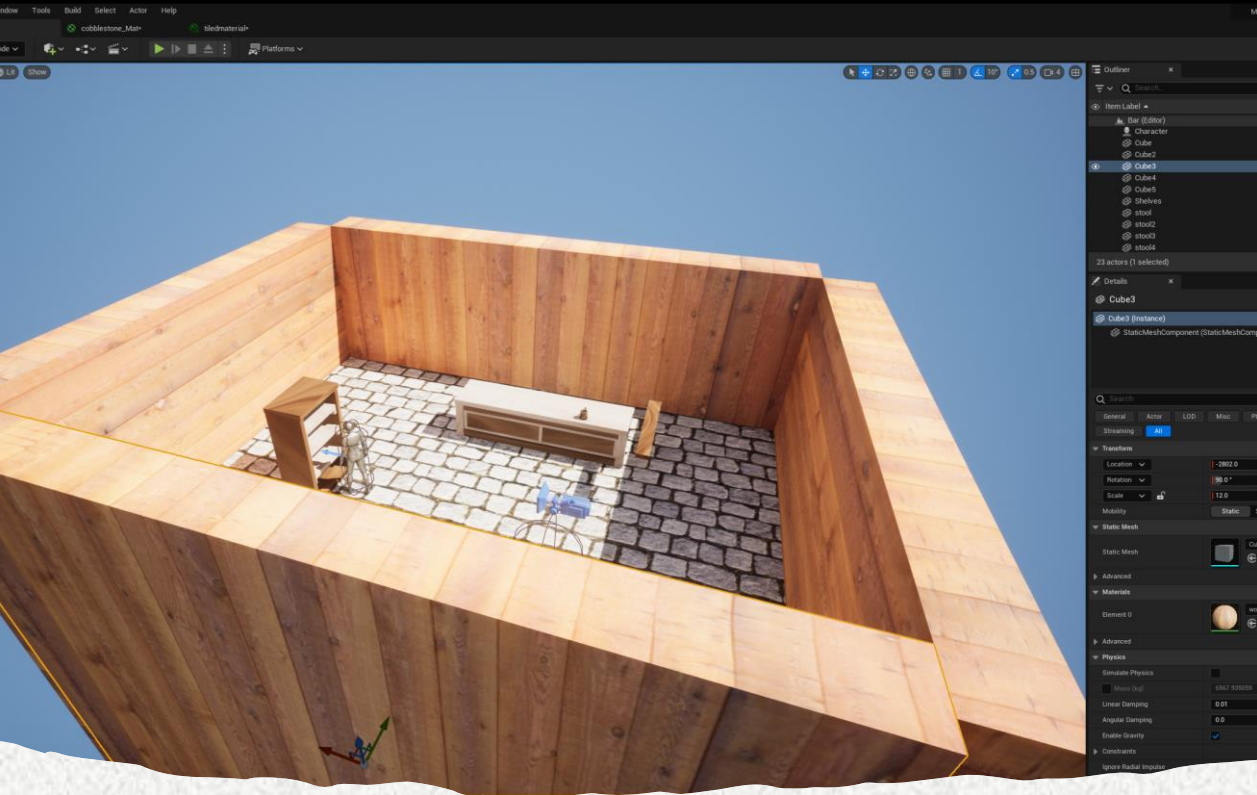
New Stool Model



Tileable Cobblestone [9]

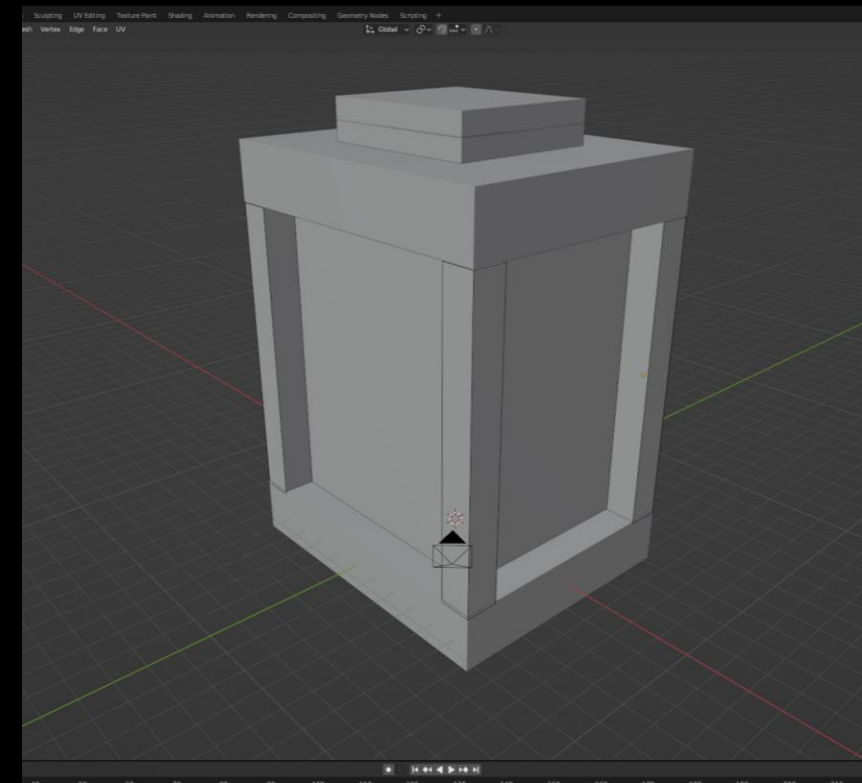
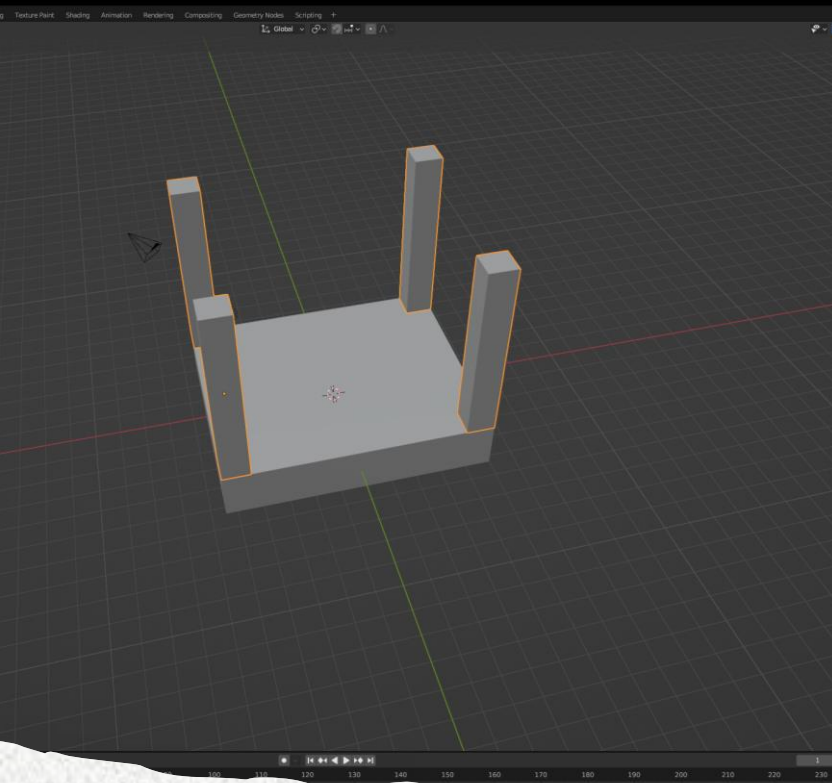


Tileable Cobblestone [10]

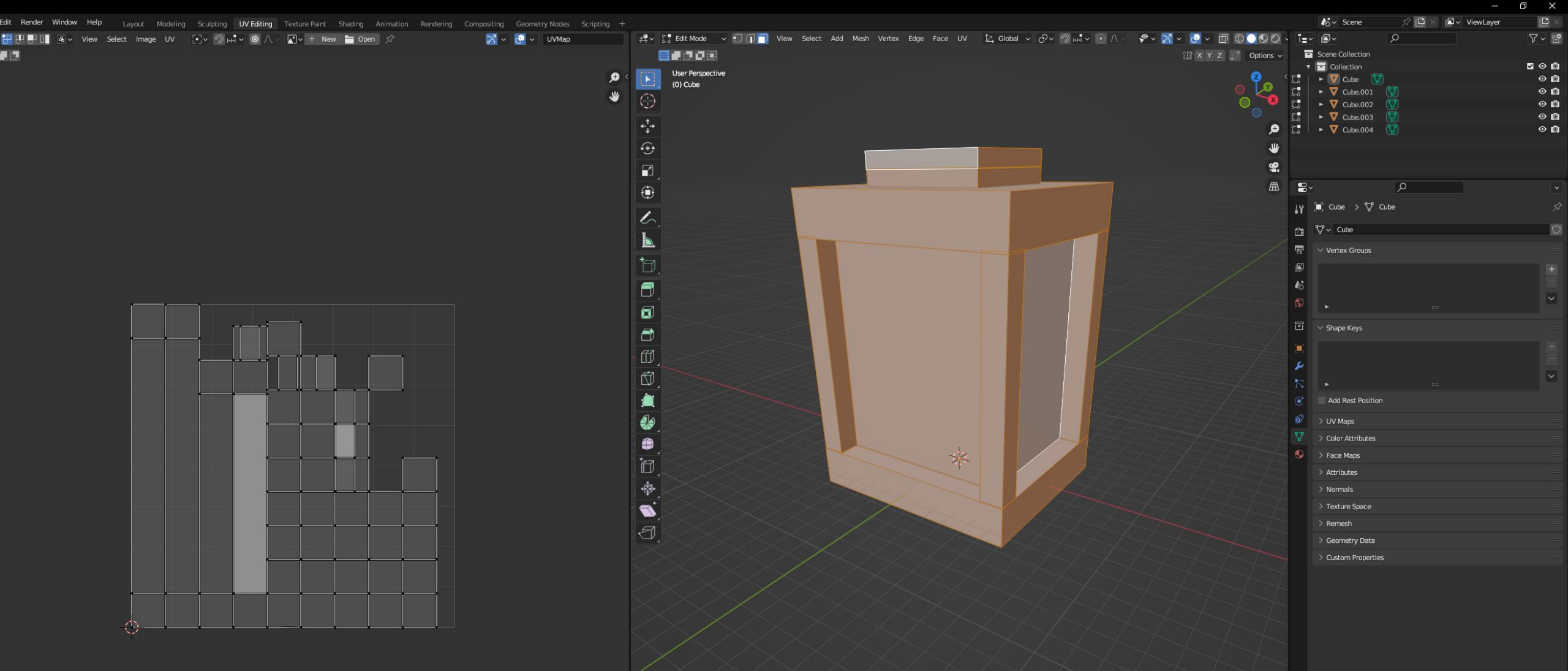


[11]

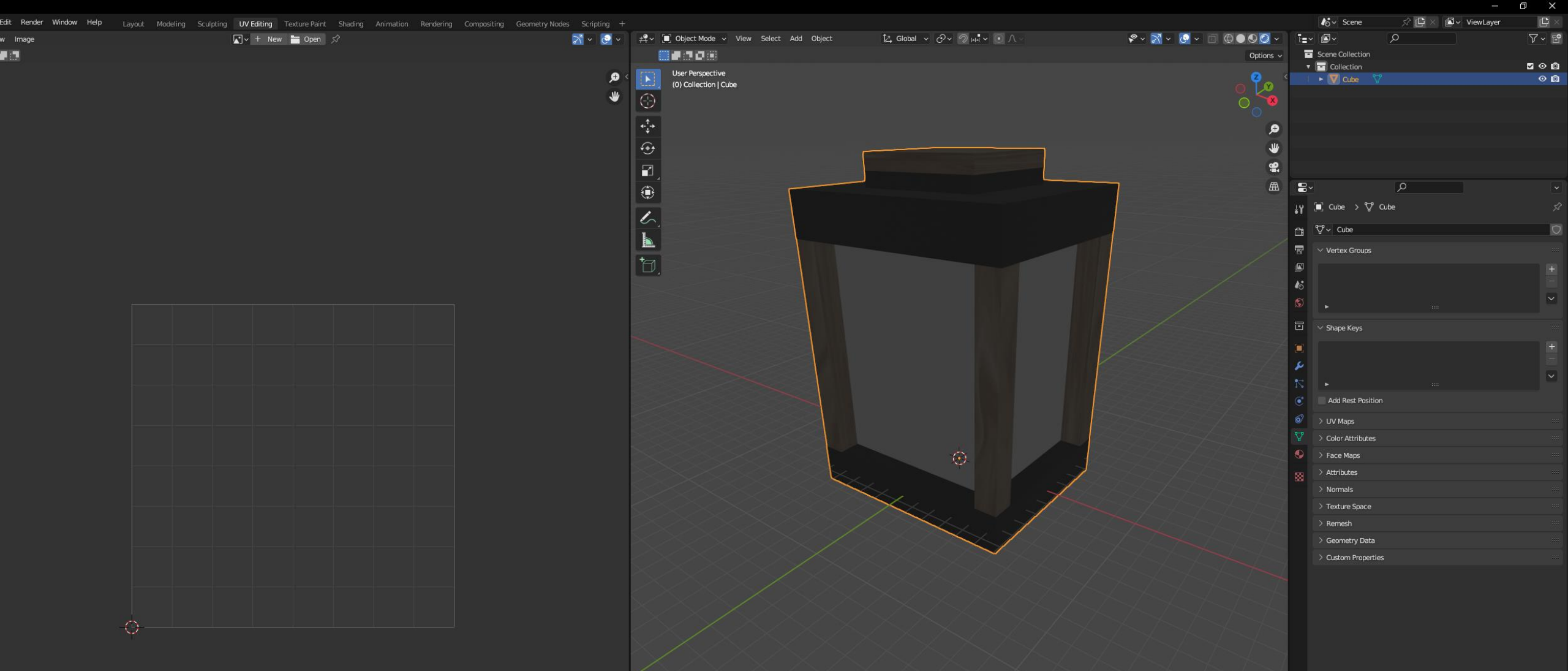
Tileable Wood [11]



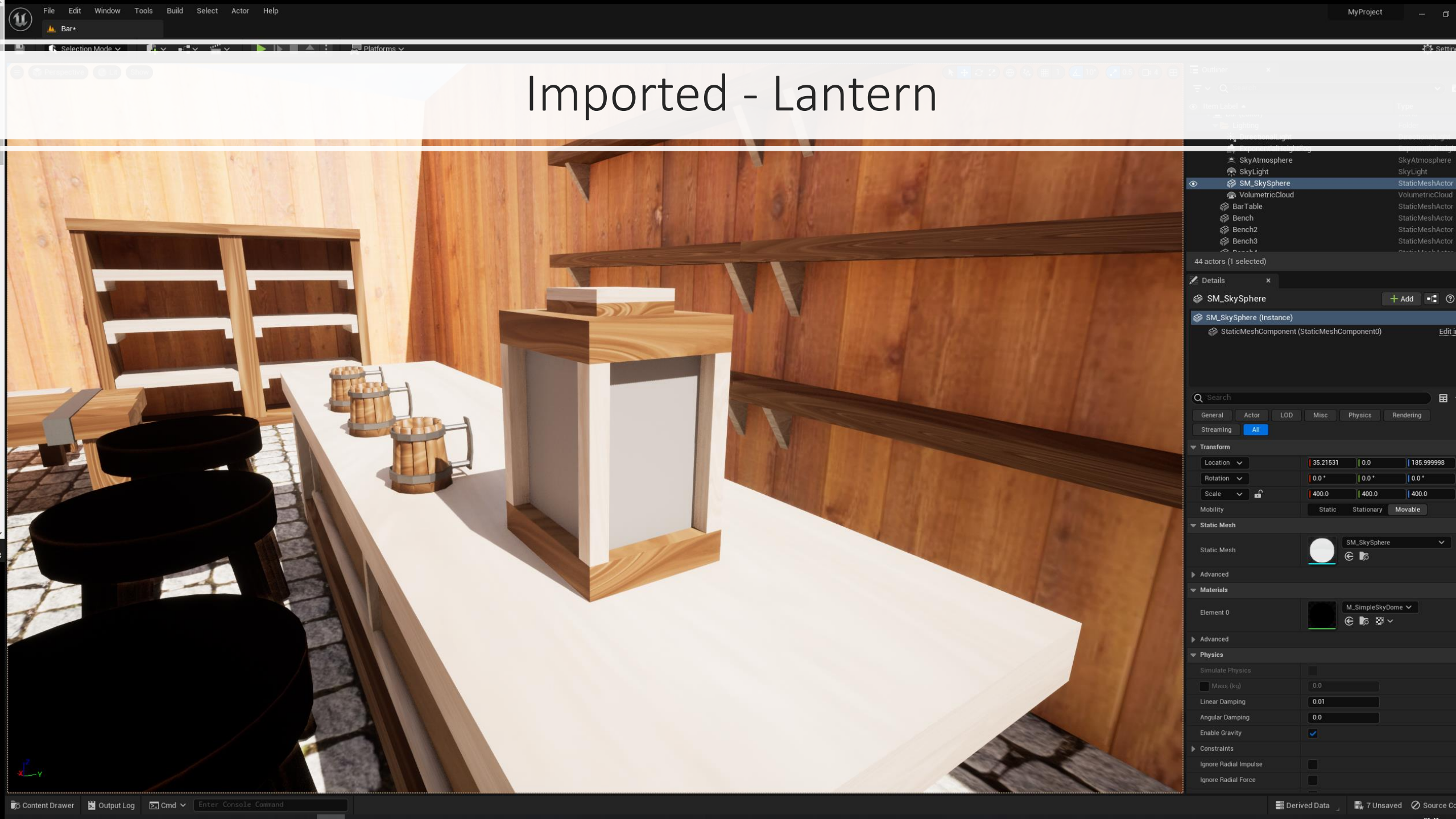
Model – Lantern
[12]



UV Unwrap – Lantern



Textured - Lantern



Imported - Lantern

Outliner

Item Label	Type
Lighting	Lighting
Directional Light	Directional Light
Exponential Radiance	Exponential Radiance
SkyAtmosphere	SkyAtmosphere
SkyLight	SkyLight
SM_SkySphere	StaticMeshActor
VolumetricCloud	VolumetricCloud
BarTable	StaticMeshActor
Bench	StaticMeshActor
Bench2	StaticMeshActor
Bench3	StaticMeshActor
Bench4	StaticMeshActor

44 actors (1 selected)

Details

SM_SkySphere

SM_SkySphere (Instance)

StaticMeshComponent (StaticMeshComponent0)

Search

General Actor LOD Misc Physics Rendering

Streaming All

Transform

Location 35.21531 0.0 185.999998

Rotation 0.0° 0.0° 0.0°

Scale 400.0 400.0 400.0

Mobility Static Stationary Movable

Static Mesh

Static Mesh SM_SkySphere

Advanced

Materials

Element 0 M_SimpleSkyDome

Advanced

Physics

Simulate Physics

Mass (kg) 0.0

Linear Damping 0.01

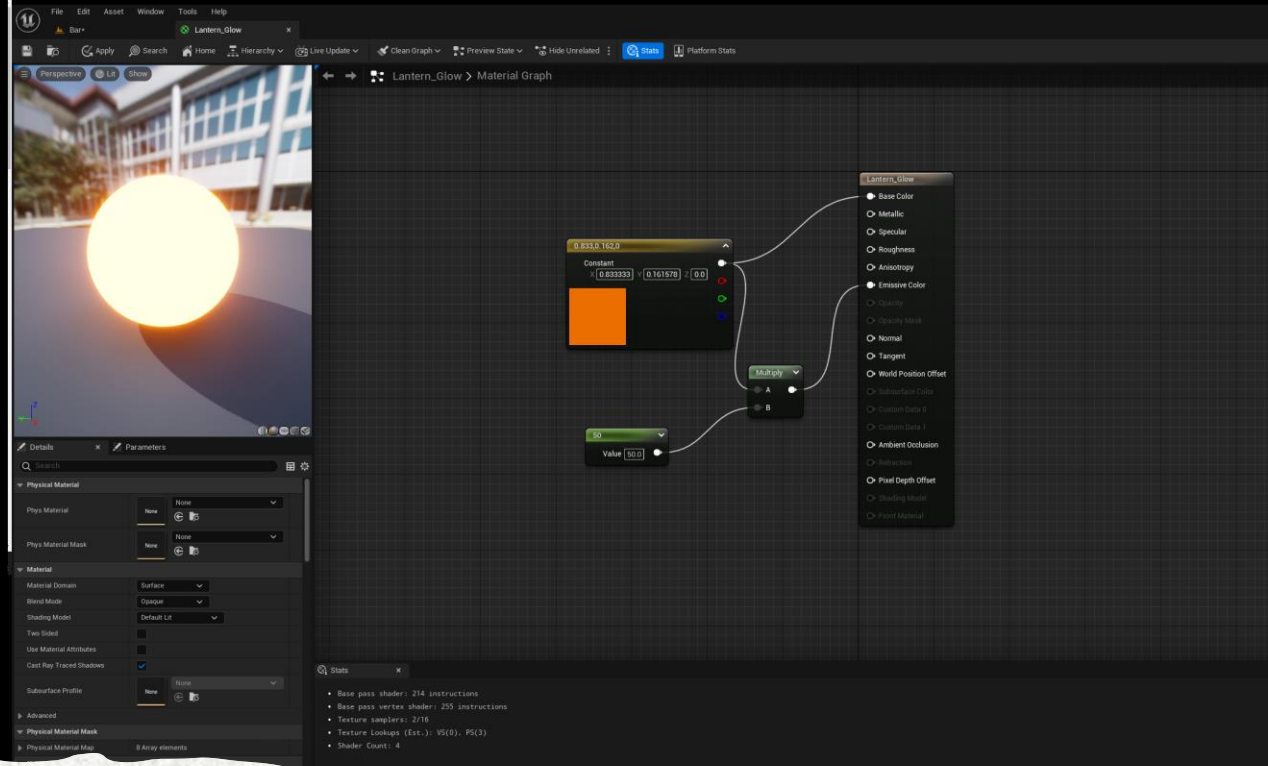
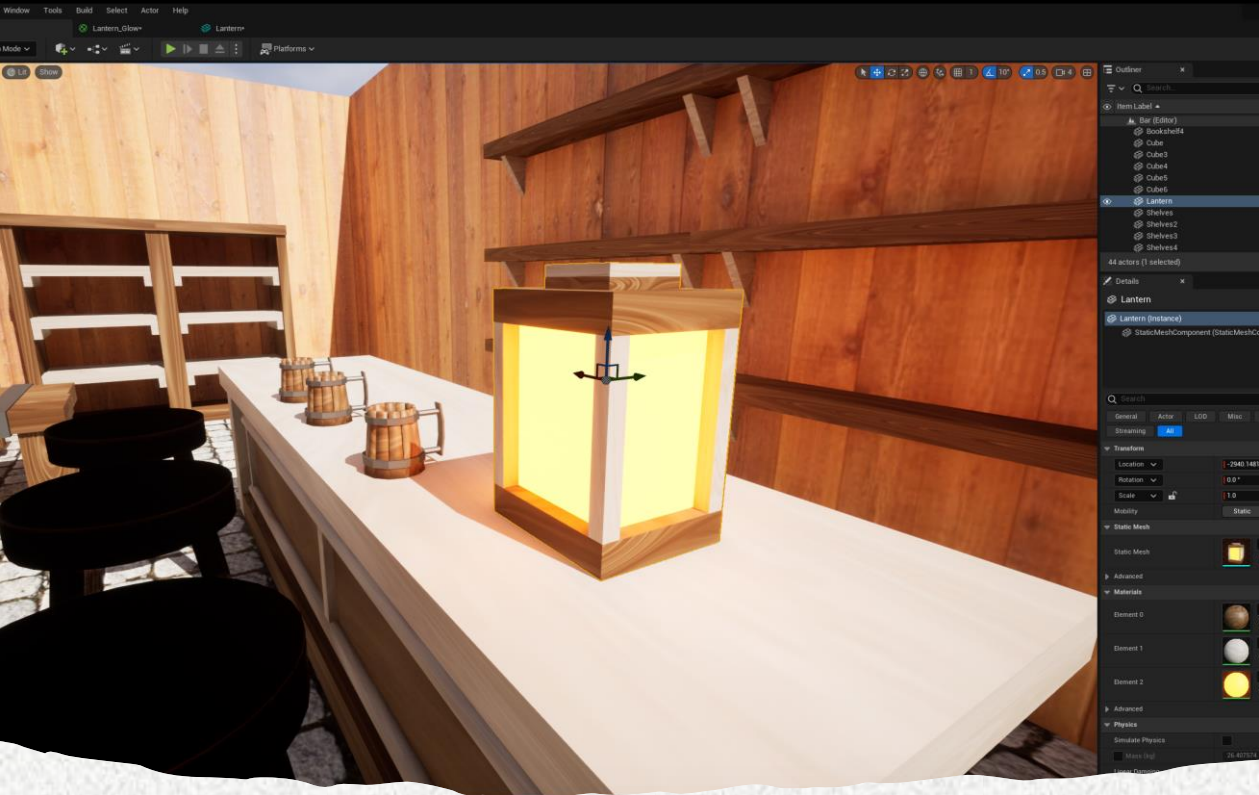
Angular Damping 0.0

Enable Gravity

Constraints

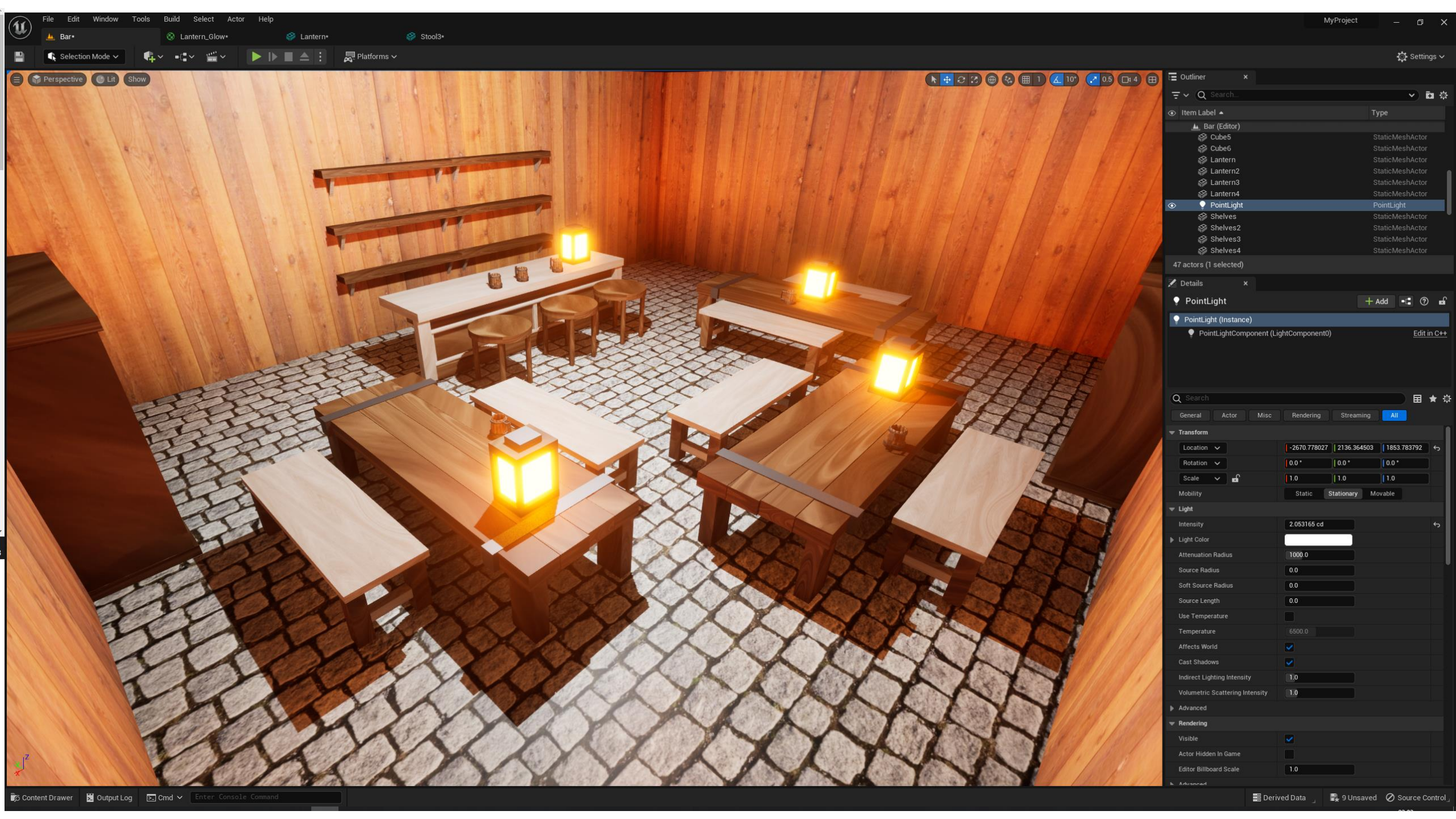
Ignore Radial Impulse

Ignore Radial Force



Emissive Material

[13]



Outliner

Item Label	Type
Bar (Editor)	
Cube5	StaticMeshActor
Cube6	StaticMeshActor
Lantern	StaticMeshActor
Lantern2	StaticMeshActor
Lantern3	StaticMeshActor
Lantern4	StaticMeshActor
PointLight	PointLight
Shelves	StaticMeshActor
Shelves2	StaticMeshActor
Shelves3	StaticMeshActor
Shelves4	StaticMeshActor

47 actors (1 selected)

Details

PointLight	+ Add			
PointLight (Instance)				
PointLightComponent (LightComponent0)				Edit in C++

Search

General Actor Misc Rendering Streaming All

Transform	
Location	-2670.778027 2136.364503 1853.783792
Rotation	0.0° 0.0° 0.0°
Scale	1.0 1.0 1.0
Mobility	Static Stationary Movable
Light	
Intensity	2.053165 cd
Light Color	
Attenuation Radius	1000.0
Source Radius	0.0
Soft Source Radius	0.0
Source Length	0.0
Use Temperature	
Temperature	6500.0
Affects World	☒
Cast Shadows	☒
Indirect Lighting Intensity	1.0
Volumetric Scattering Intensity	1.0
Advanced	
Rendering	
Visible	☒
Actor Hidden In Game	☐
Editor Billboard Scale	1.0
Advanced	



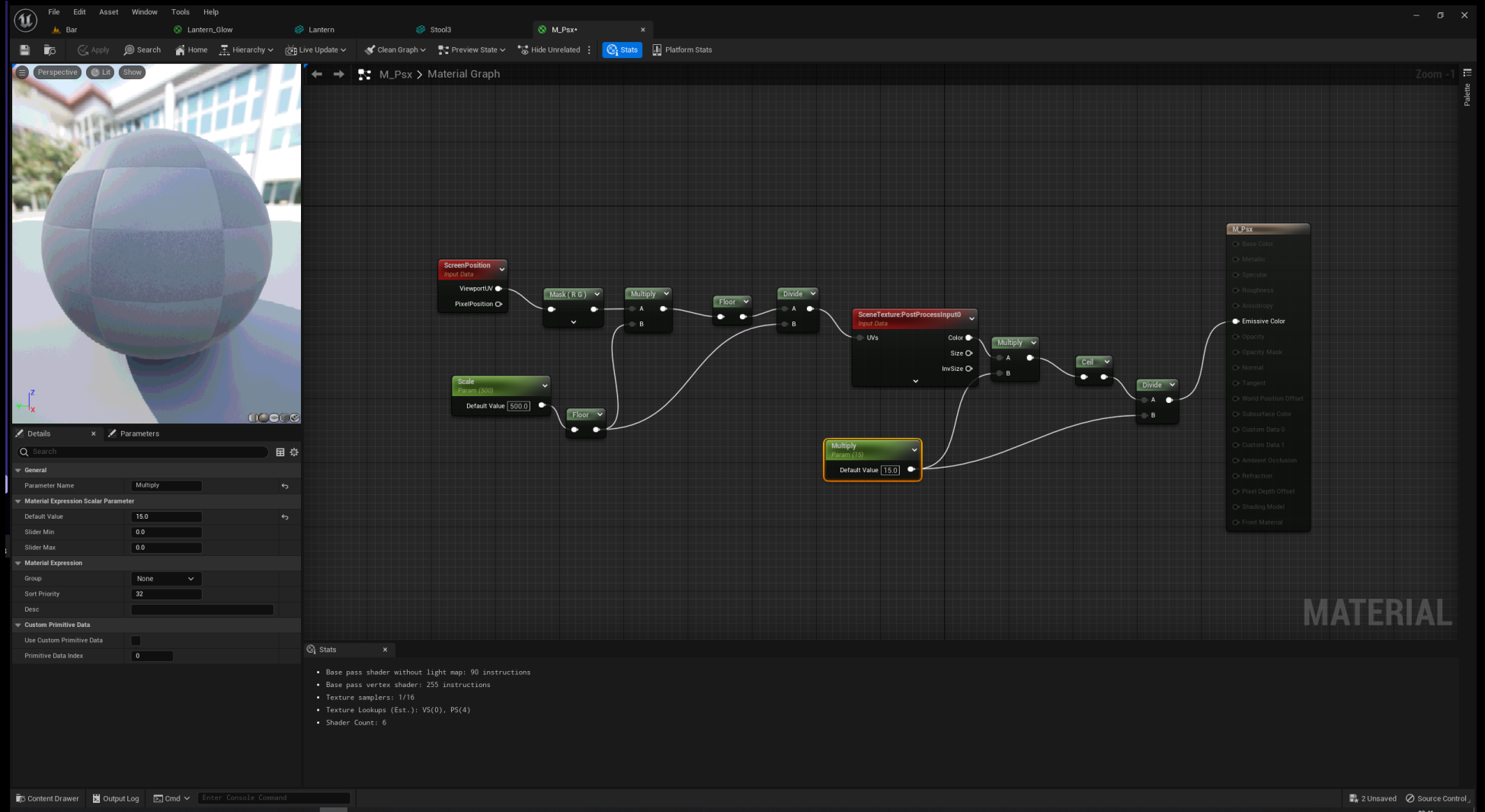




In Addition

Following this tutorial: https://www.youtube.com/watch?v=ST_JTXuGmv0 [14]

I'm not going to pretend I know how the Blueprint works and I wouldn't use it in a real application unless I knew what it did properly.





It does look cool...





Improvements I'd make:

- Introduce more 'set dressing.' A dagger in the table, books for the bookshelf, a variety of different tankards and bottles to put on the shelves.
- The walls look too barren. Maybe sconces or arches? Foundation beams?
- Improved textures. Attempt to make more of my own.
- Experiment with more detailed models, such as a dagger.
- A model to put in the scene as well.
- Make the models and textures more inline with the original theme that I had to help it maintain the 'PSX' style.



Any
Questions?



References:

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- [2] *Dusk*; David S, New Blood Interactive, 2020
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- [12] Mojang, "Lantern," Mojang, N.D. [Online]. Available: <https://minecraft.fandom.com/wiki/Lantern>. [Accessed 5 May 2023]
- [13] MammothInteractive, "Make Objects Glow With Emissive Materials - Unreal Engine 5 UE5 Free Tutorial," Youtube, 9 August 2018. [Online]. Available: <https://www.youtube.com/watch?v=rkVOkFFYvls>. [Accessed 6 May 2023]
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- Environment Design Lecture Notes 04 Scaling and Tips for Good Workflow: [PowerPoint slides]. Available: https://moodle.uwtsd.ac.uk/pluginfile.php/345318/mod_resource/content/5/ELD%20-%20Scaling%20and%20Workflow%202020.pdf
- Environment Design Lecture Notes 06 Creating Maya Materials and Applying Textures to ModelsFile: [PowerPoint slides]. Available: https://moodle.uwtsd.ac.uk/pluginfile.php/485184/mod_resource/content/3/ELD_UV_importing_textures_maya.pdf
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- ELD - Notes 06c - Creating and Assigning Materials in UE4File: [PowerPoint Slides]. Available: https://moodle.uwtsd.ac.uk/pluginfile.php/488626/mod_resource/content/1/ELD_06c_create_assign_material%20UE4.pdf
- Environment Design (OLD NOTES) - Tileable Textures in PhotoshopFile: [PowerPoint Slides.] Available: https://moodle.uwtsd.ac.uk/pluginfile.php/248124/mod_resource/content/2/DCC%20Week%2011%20-%20Tiled%20Textures.pdf