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CS 457

2/9/2021

Project4: Cube Mapping Reflective and Refractive Bump-mapped Surfaces

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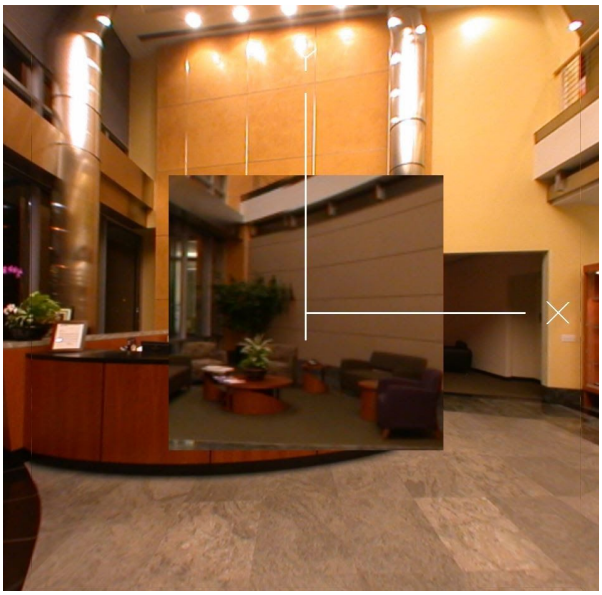
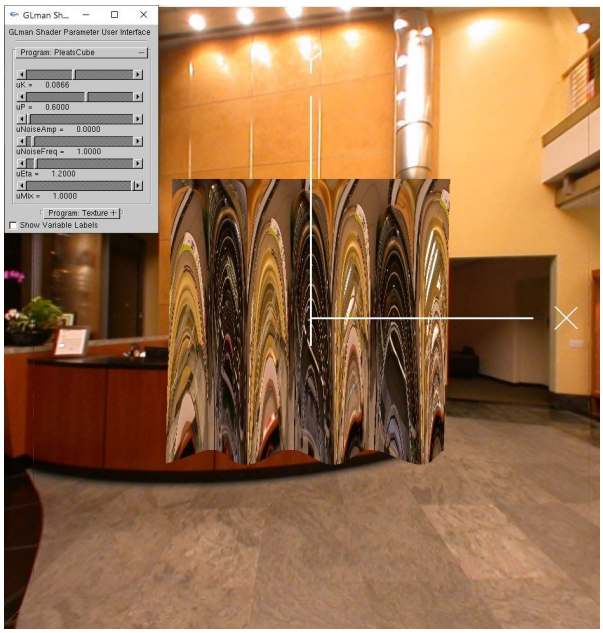
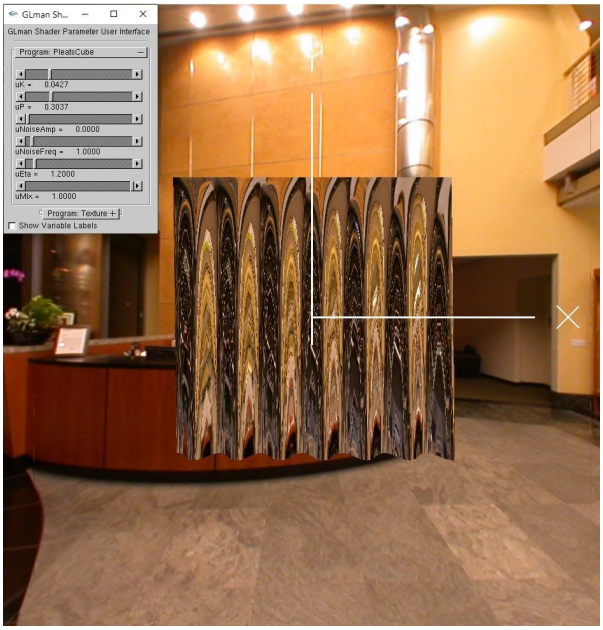
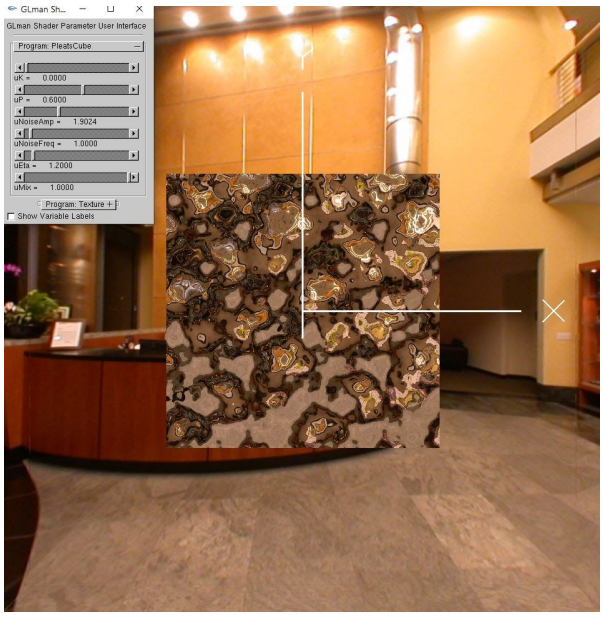
Link to Demonstration Video(Youtube): https://youtu.be/CUjVpmjH5qA

What I Did/Explanation:

- In the vertex shader, I used some code from my previous assignment to calculate the z displacement for creating the pleats for the quad and to calculate the normal using the x and y tangent vectors. In the fragment shader, I normalized the inputted normal and eye vector from the vertex shader, used noise textures to rotate the normals on the pleat, and calculated the reflect and refract vectors using the built in reflect and refract functions. Then, I mixed the refractColor and reflectColor based on the uniform variable uMix and set the result to the frag color.

Images:

Regular	Changing uK
	

Changing uP	Changing uNoiseAmp
	
Changing uNoiseFreq	**Changing uMix**