Advanced Graphics Programming

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# Primitives

By using a custom method for generating a cylinder that can be resized and redrawn with more/less vertices, I have fulfilled the third column on the assessment rubric. The mesh is dynamically adjusted on the CPU by using the D3D11\_CPU\_ACCESS\_WRITE and the D3D11\_USAGE\_DYNAMIC flags when creating the vertex buffer.

The mesh can be resized vertically by using the ‘W’ and ‘S’ keys and horizontally by using the ‘A’ and ‘D’ keys. The vertex count can be adjusted by using the ‘Q’ and ‘E’ keys. This behaviour is handled in the DrawScene() method.

# Models

This assignment was too hard for me, which means I scored zero points.

# Blending and Stencilling

This assignment was also too hard for me. No points scored.

# Lighting

The user can change the colour of the point light by pressing the ‘1’, ‘2’ and ‘3’ keys for red, green and blue respectively. These colours can be degraded by pressing the ‘Z’, ‘X’ and ‘C’ buttons for R, G and B colours. The range of the point light can be changed with the ‘Q’ and ‘E’ keys. The range of the spot light can be changed with the ‘A’ and ‘D’ keys. Changing these colours is a simple matter of adjusting their variables, but the implementation should get me in the third column of the assessment rubric.

# Texturing

Implementing the dice textures proved to be harder than expected, which caused me to not be able to finish it in time. Zero points scored on this subject.

# Shading

Shading was not even attempted due to shortage of time. This entire course was underestimated by me, so I deserve nothing more than a resit.