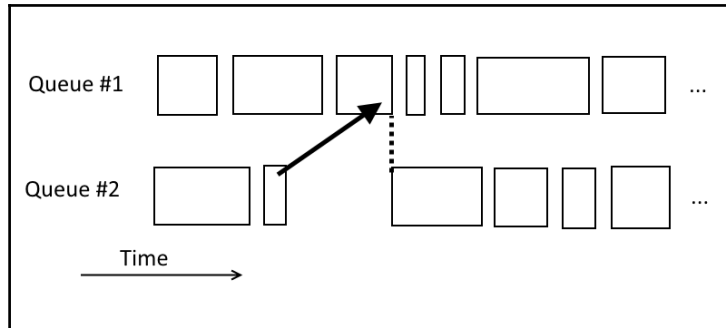
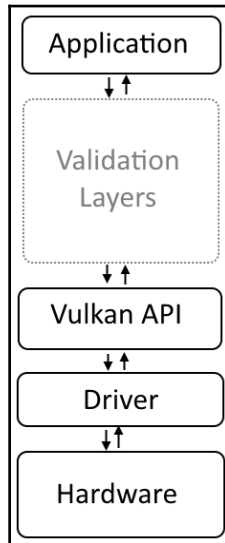
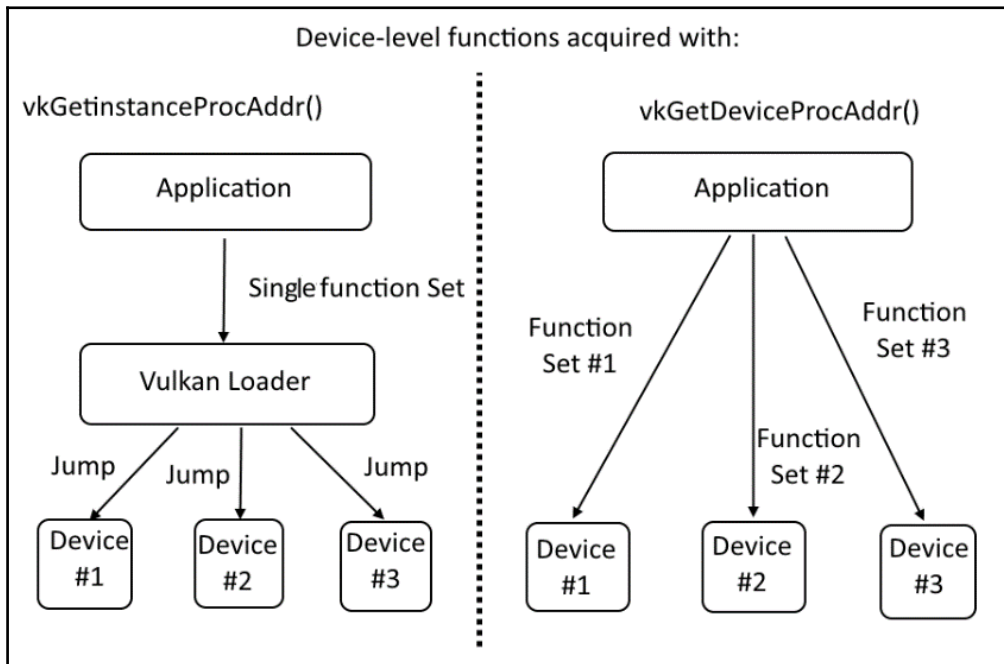
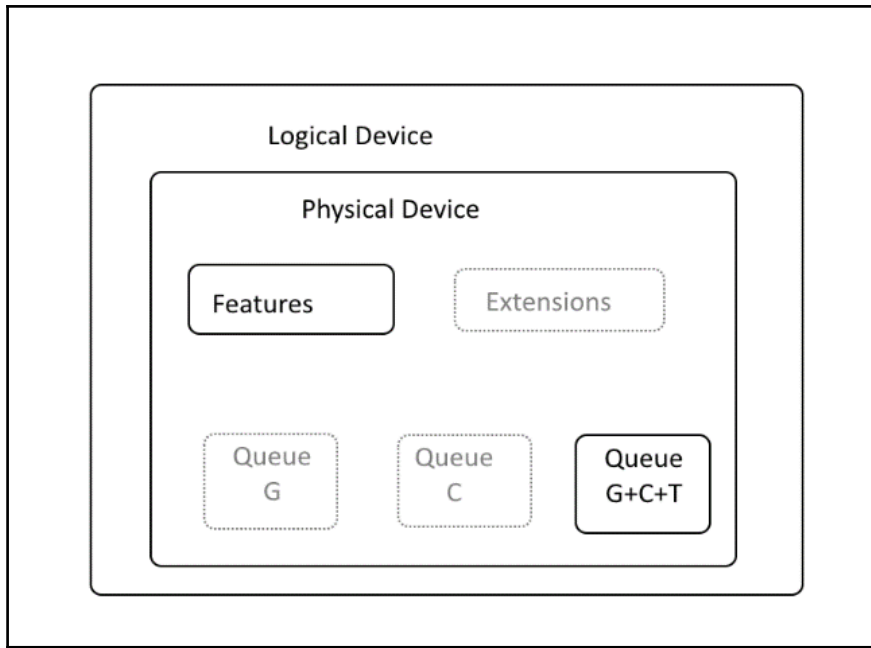
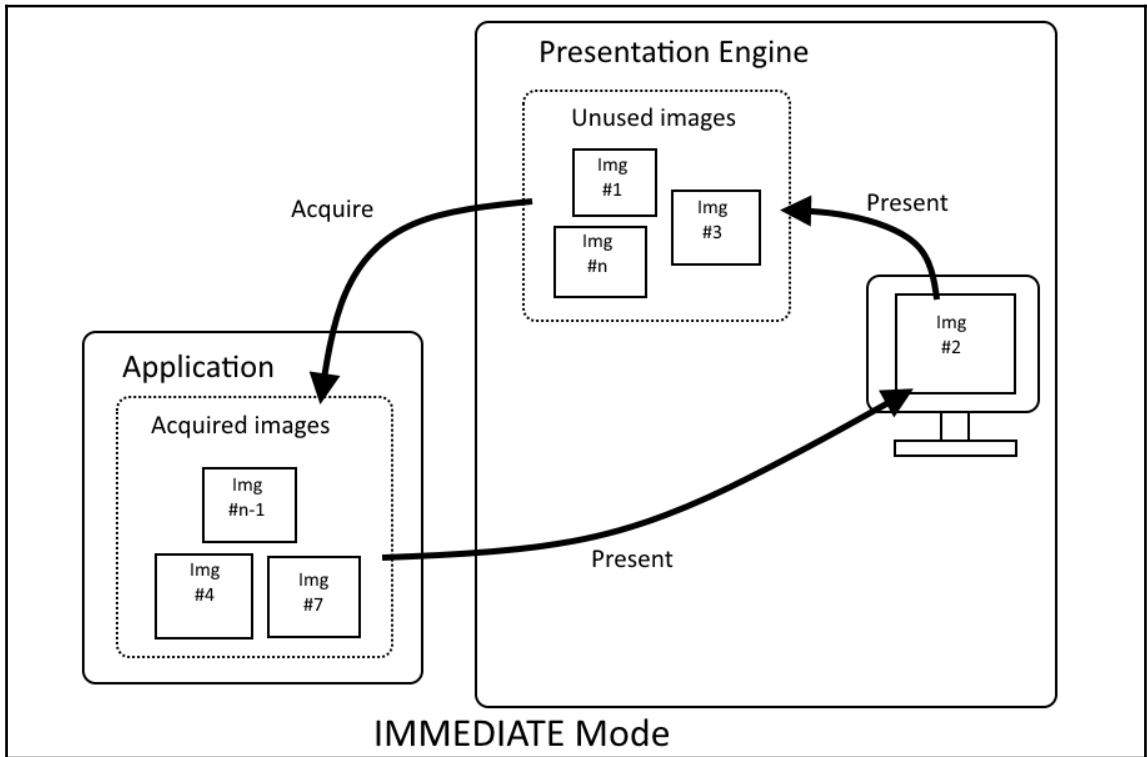


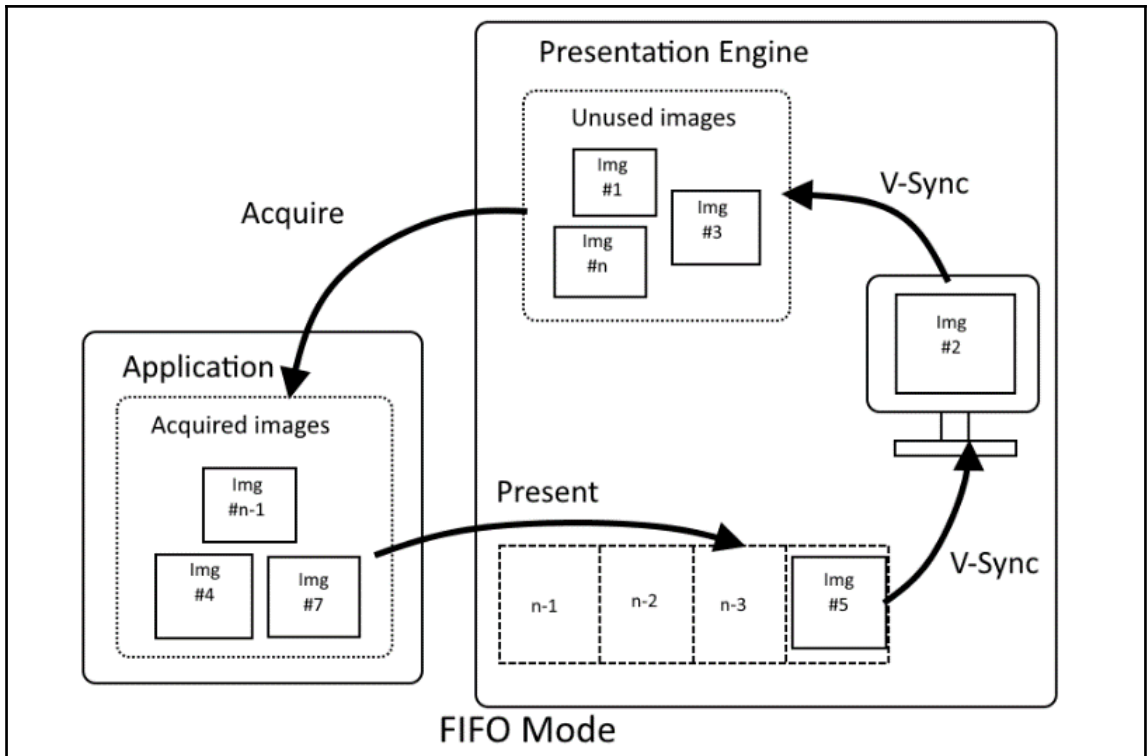
Chapter 1: Instance and Devices

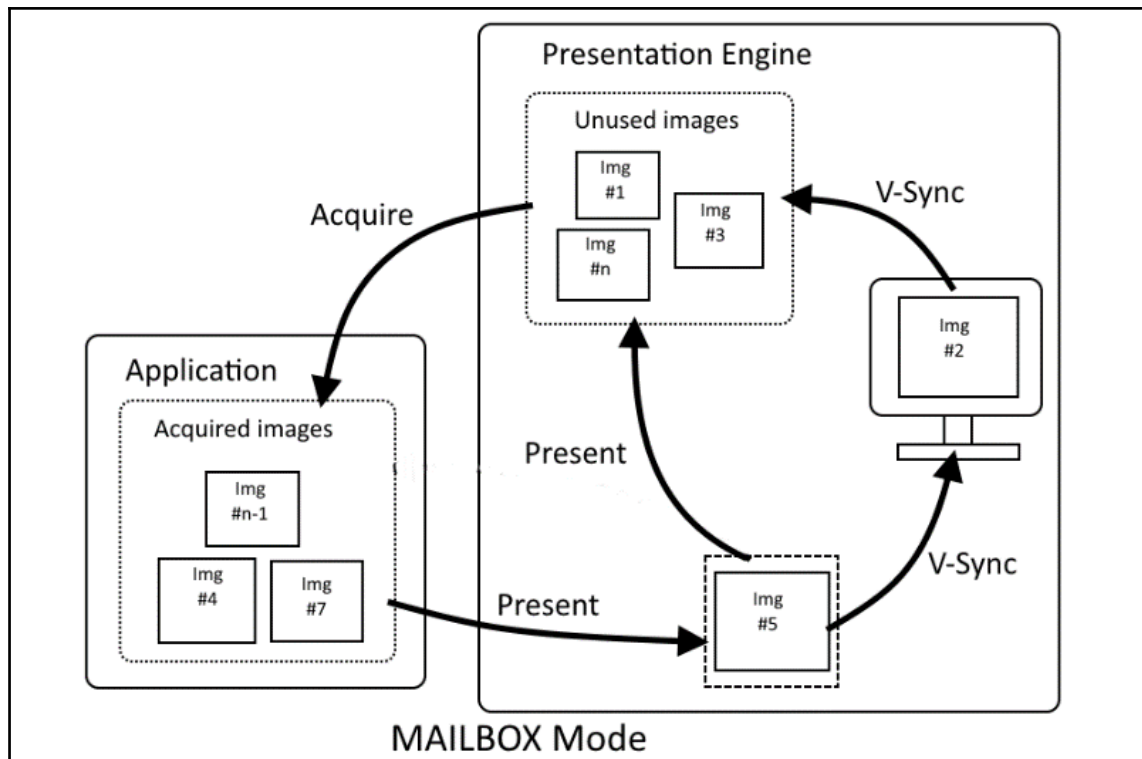




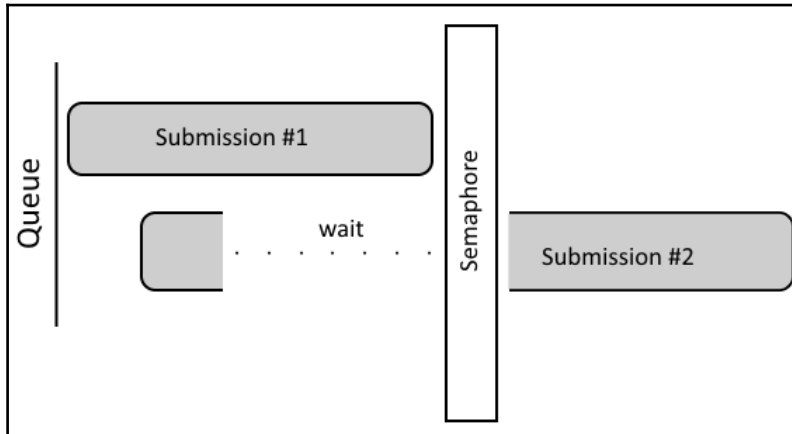
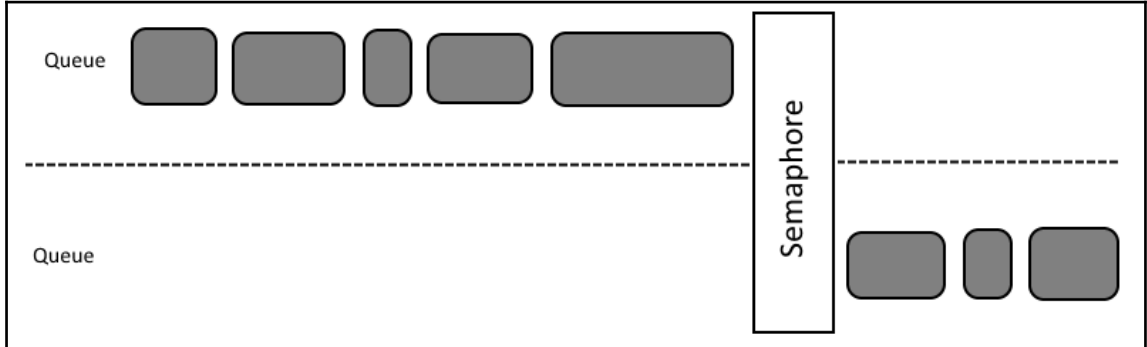
Chapter 2: Image Presentation



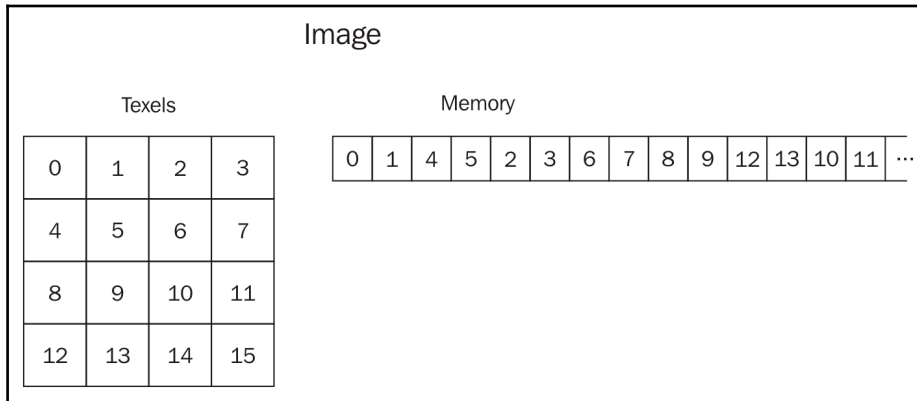
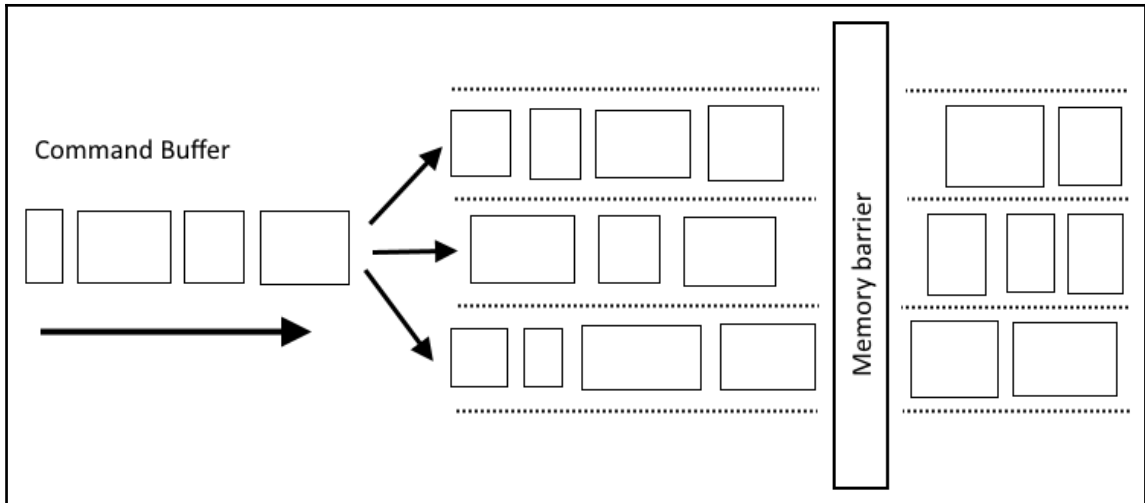
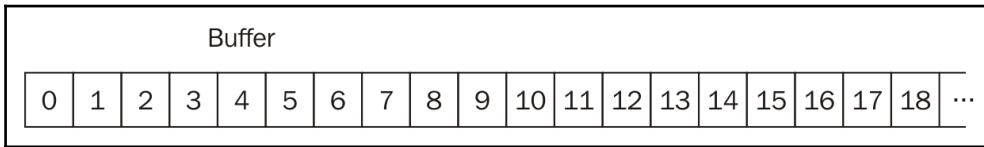


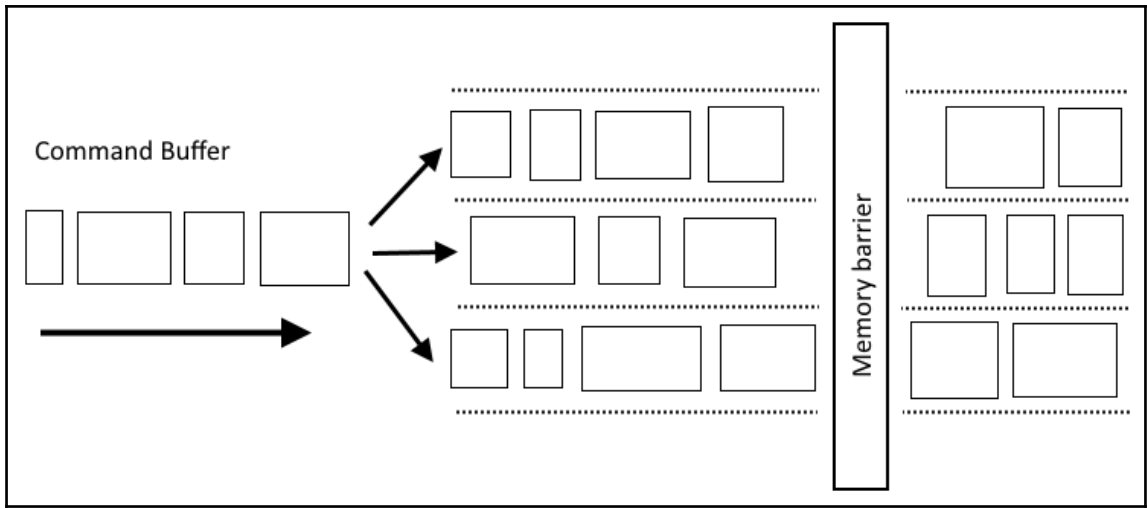


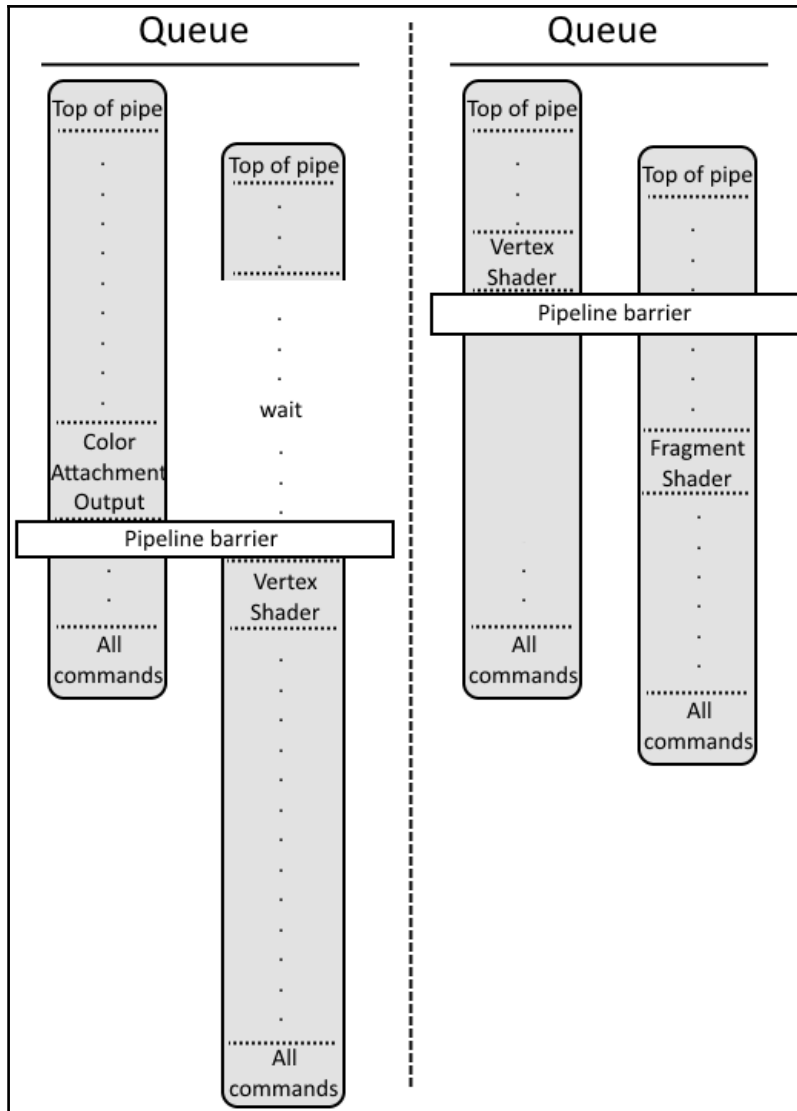
Chapter 3: Command Buffers and Synchronization



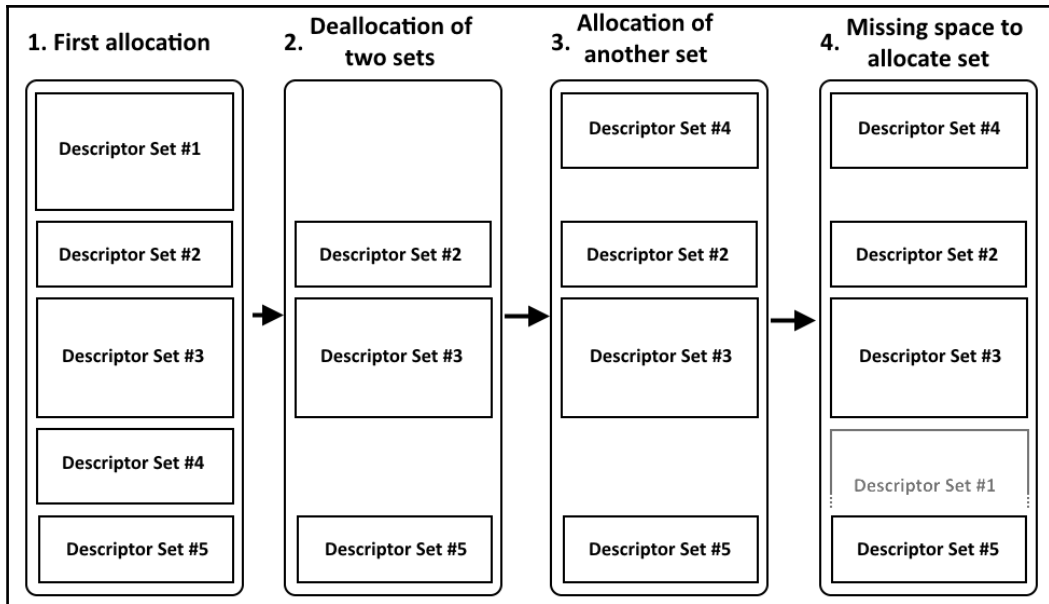
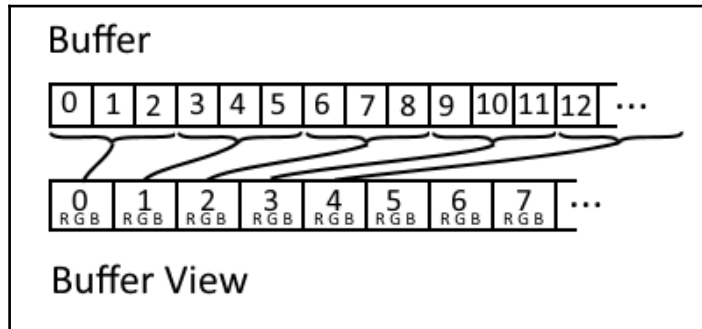
Chapter 4: Resources and Memory



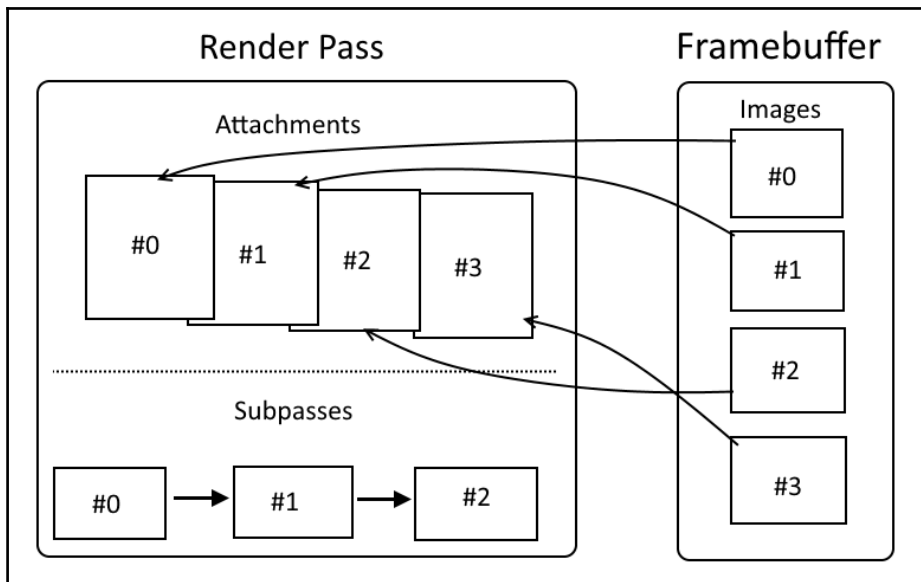
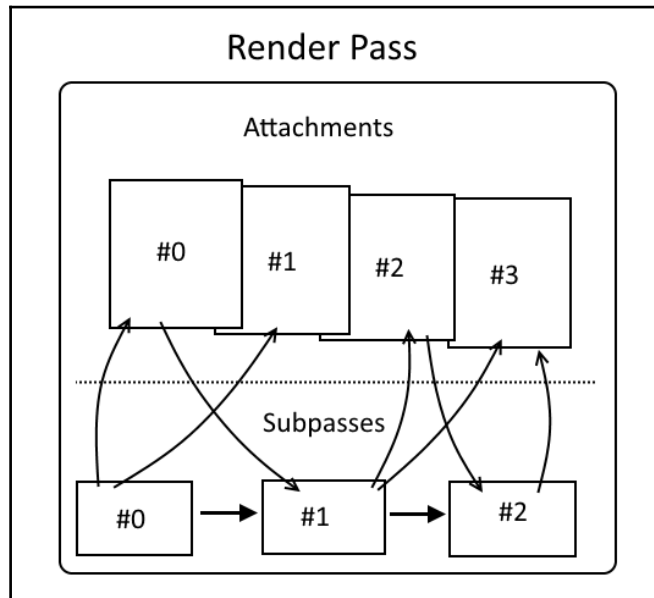




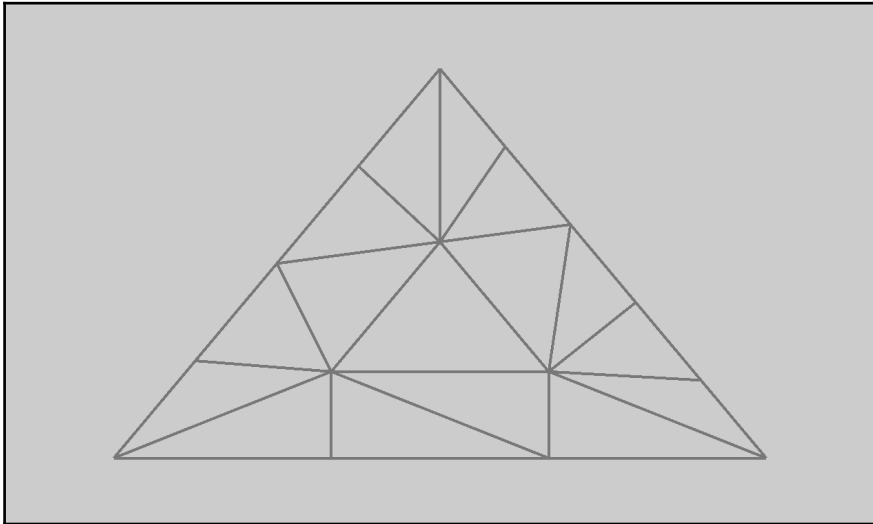
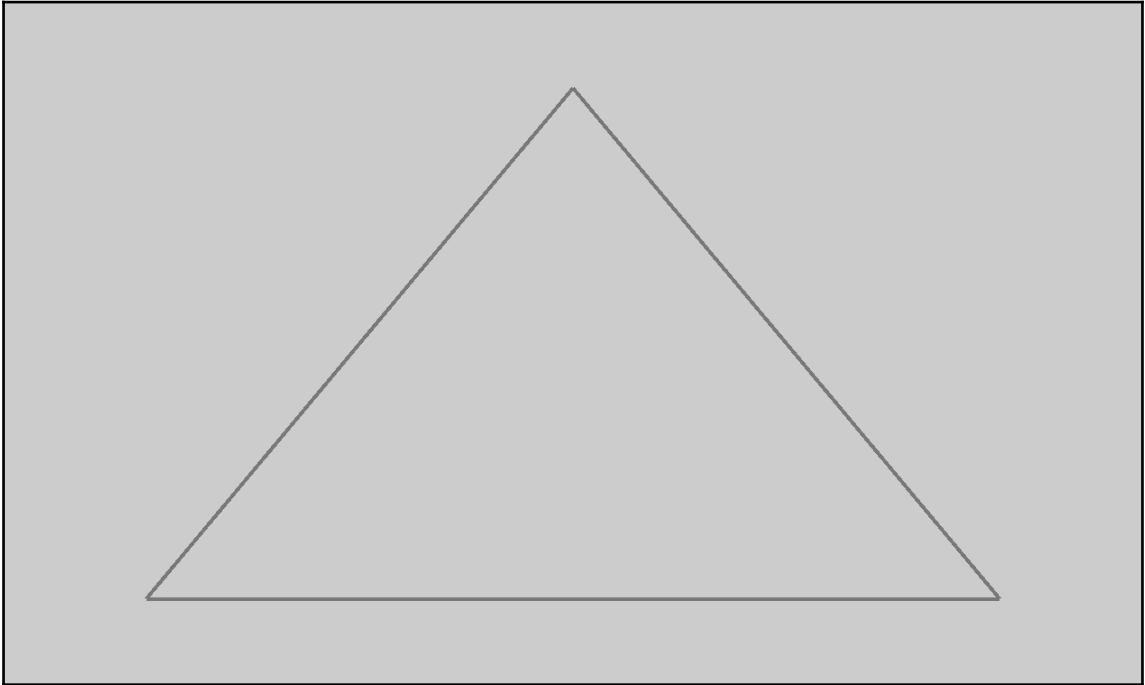
Chapter 5: Descriptor Sets

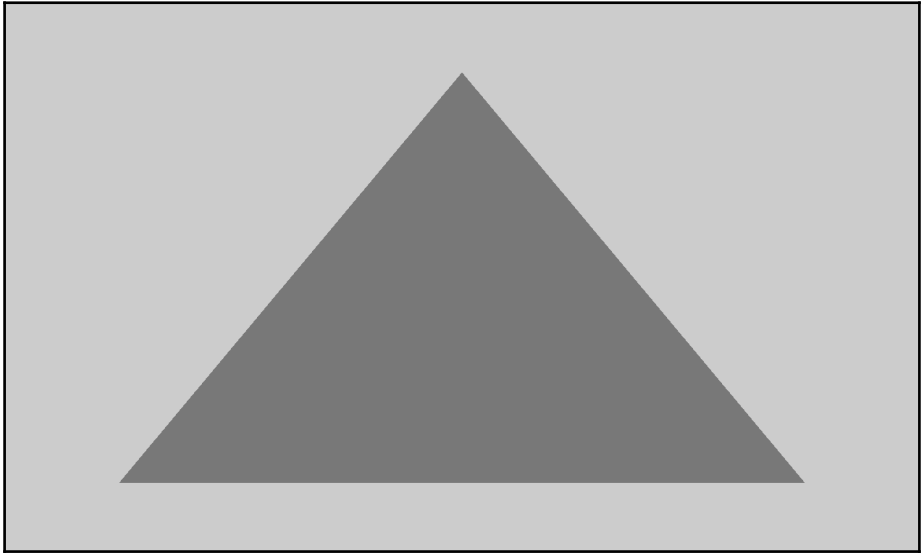
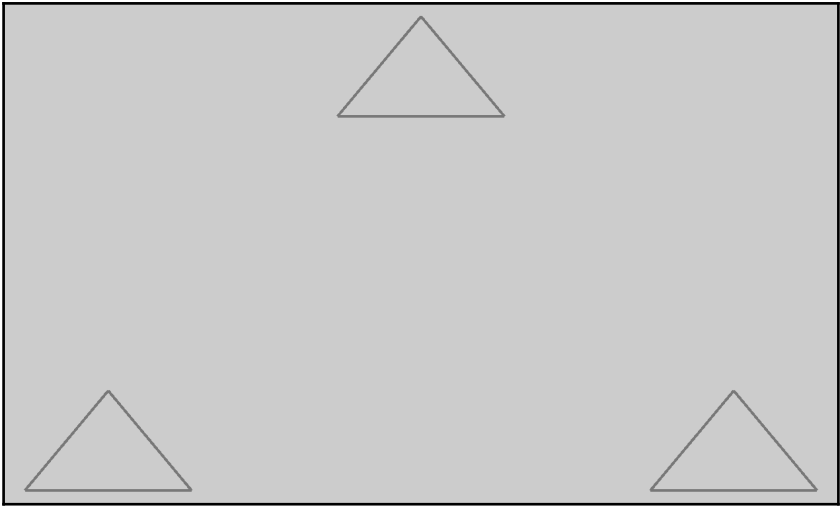


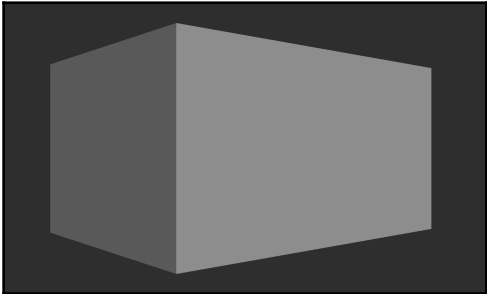
Chapter 6: Render Passes and Framebuffers



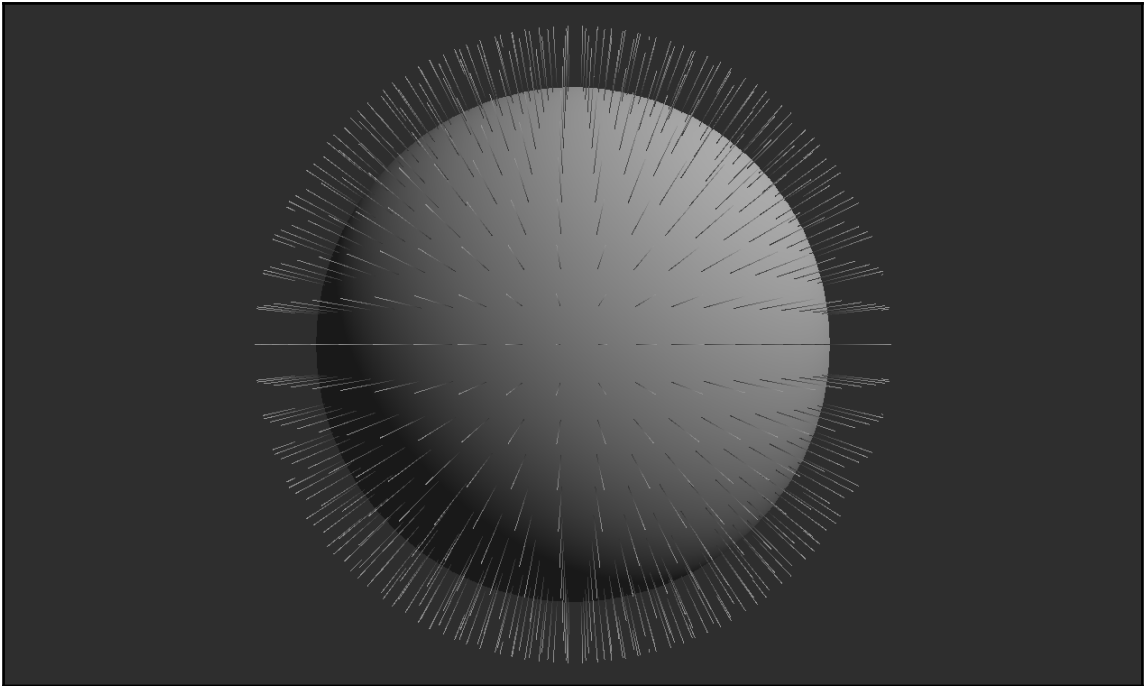
Chapter 7: Shaders



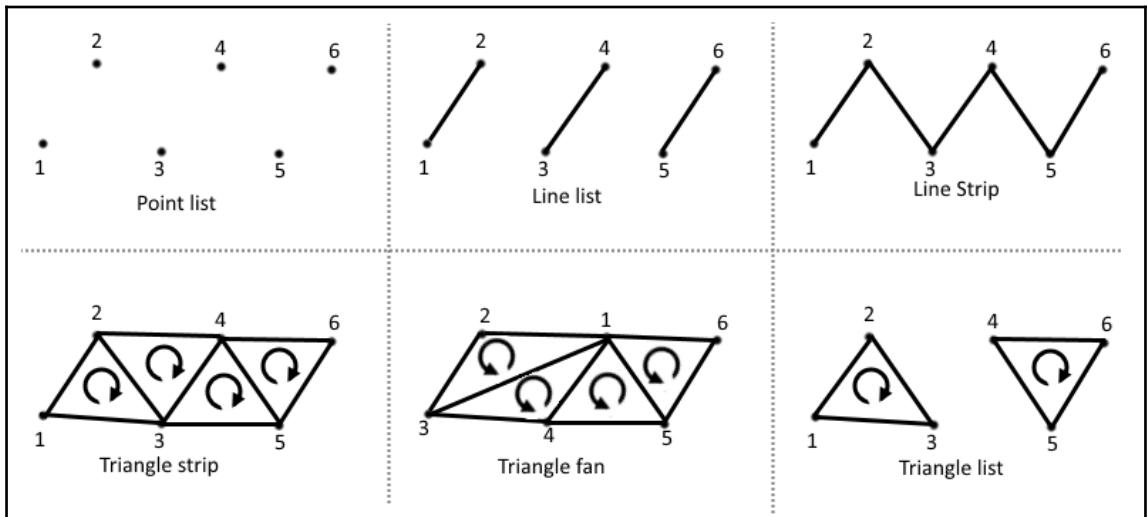
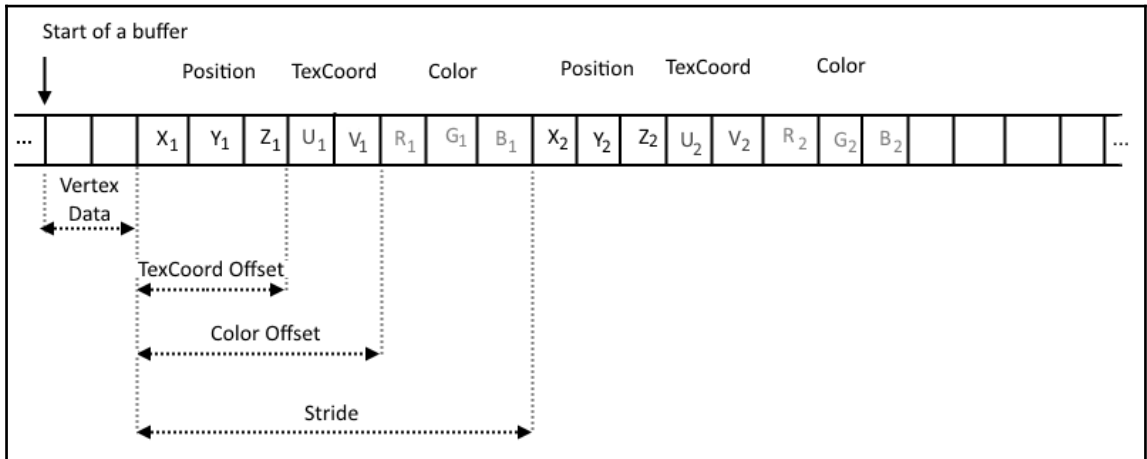


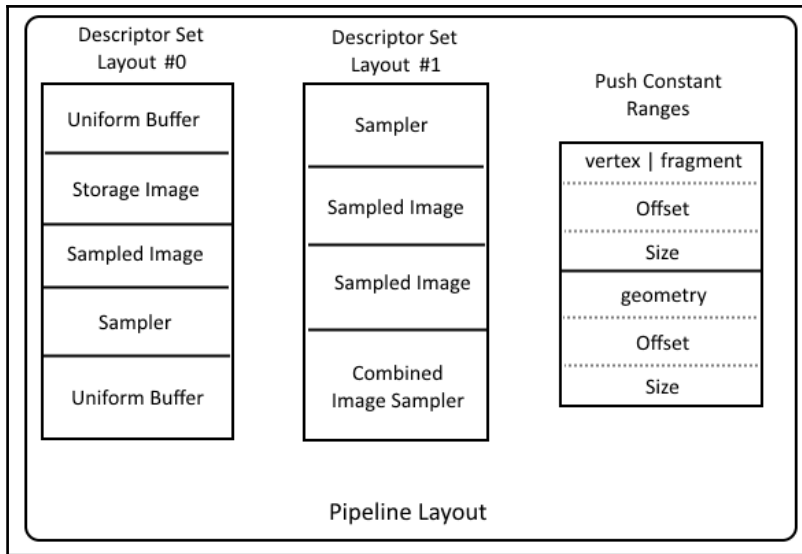


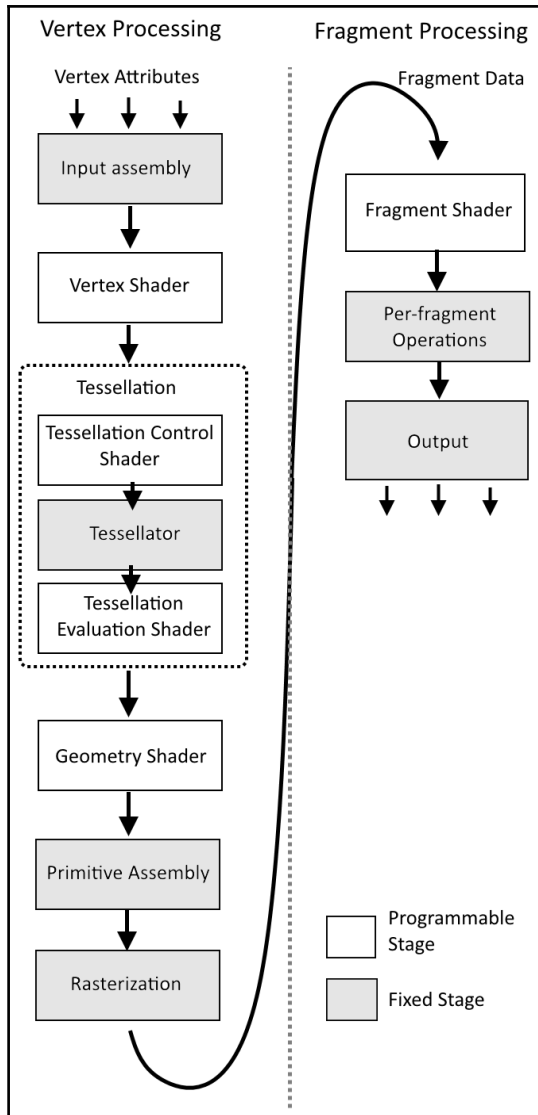




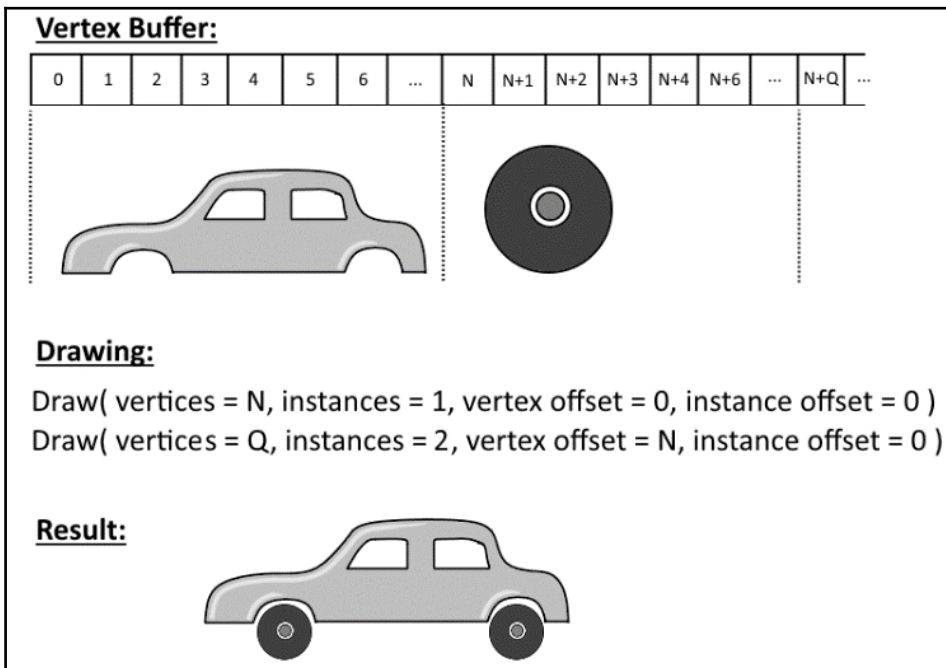
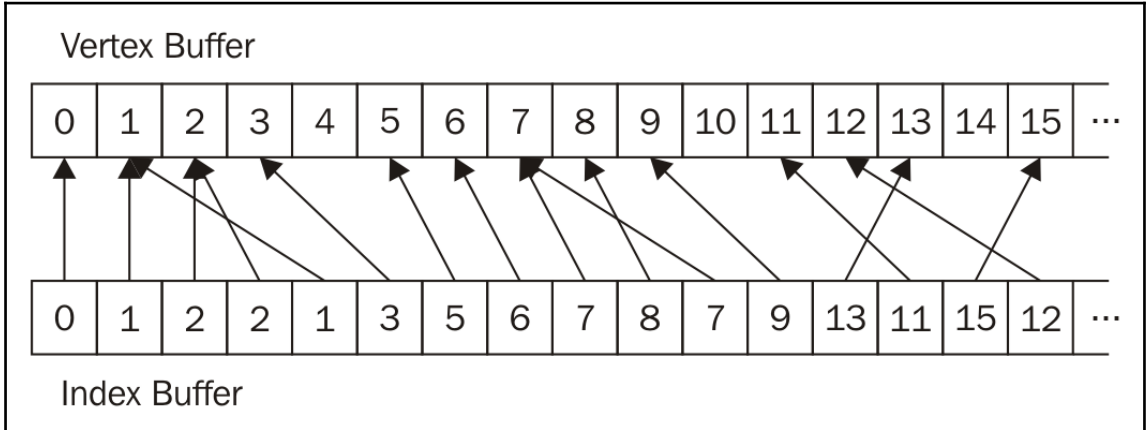
Chapter 8: Graphics and Compute Pipelines

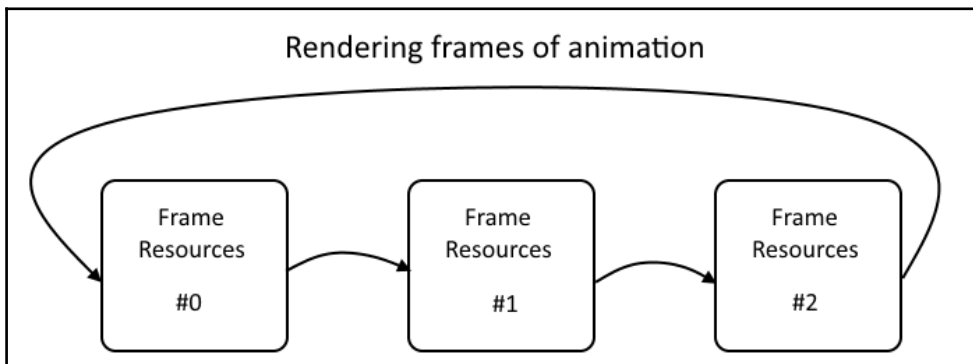
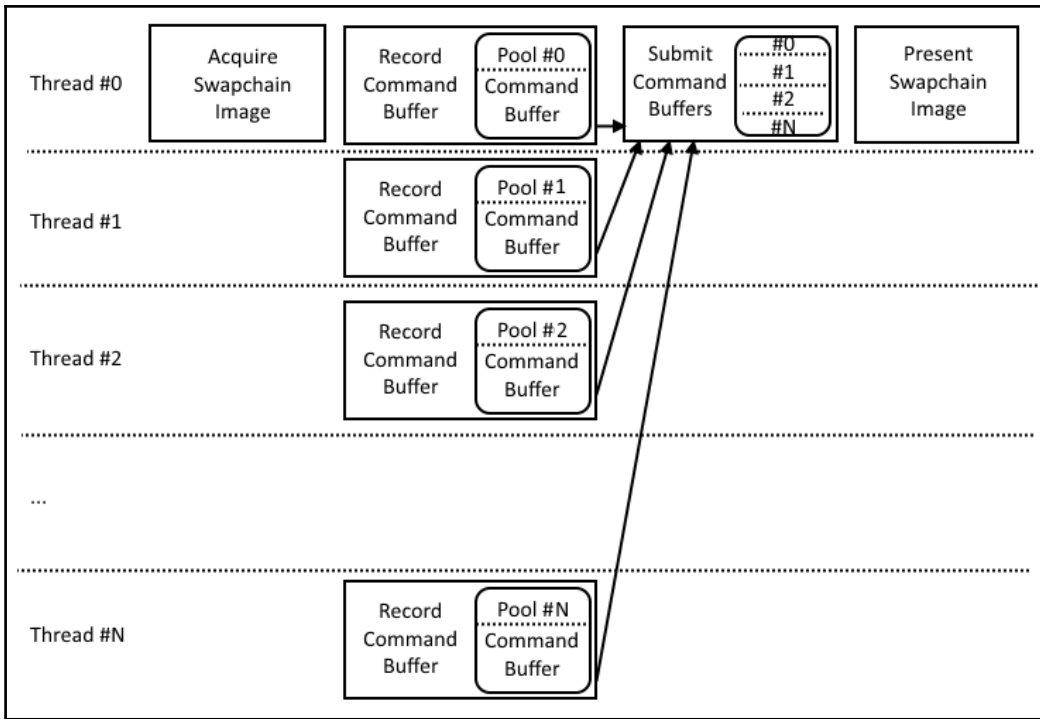


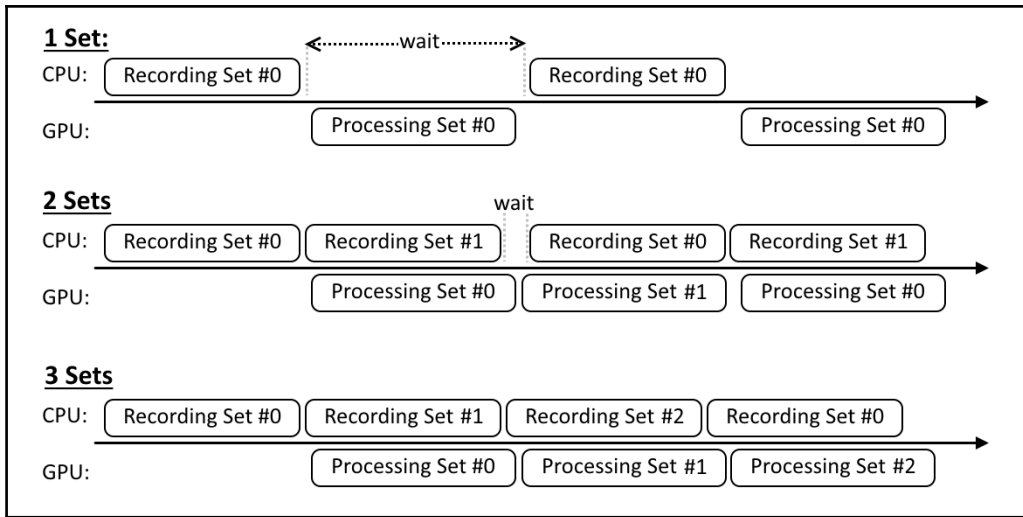




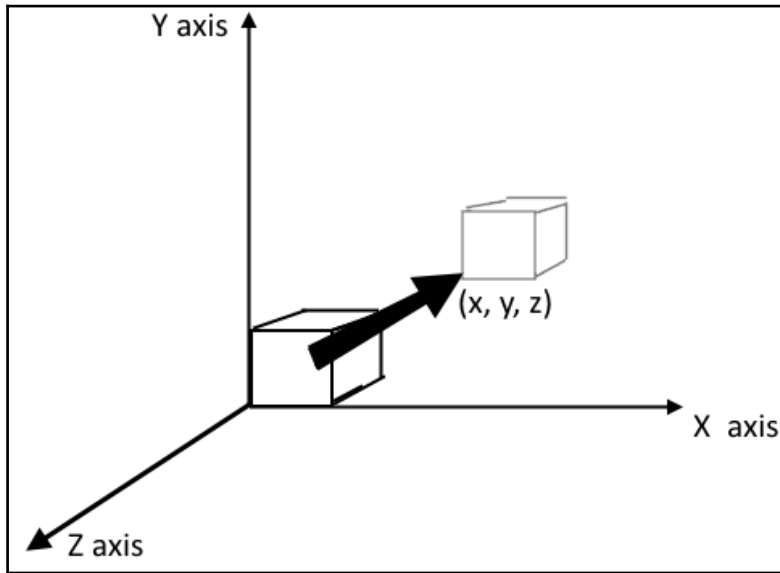
Chapter 9: Command Recording and Drawing





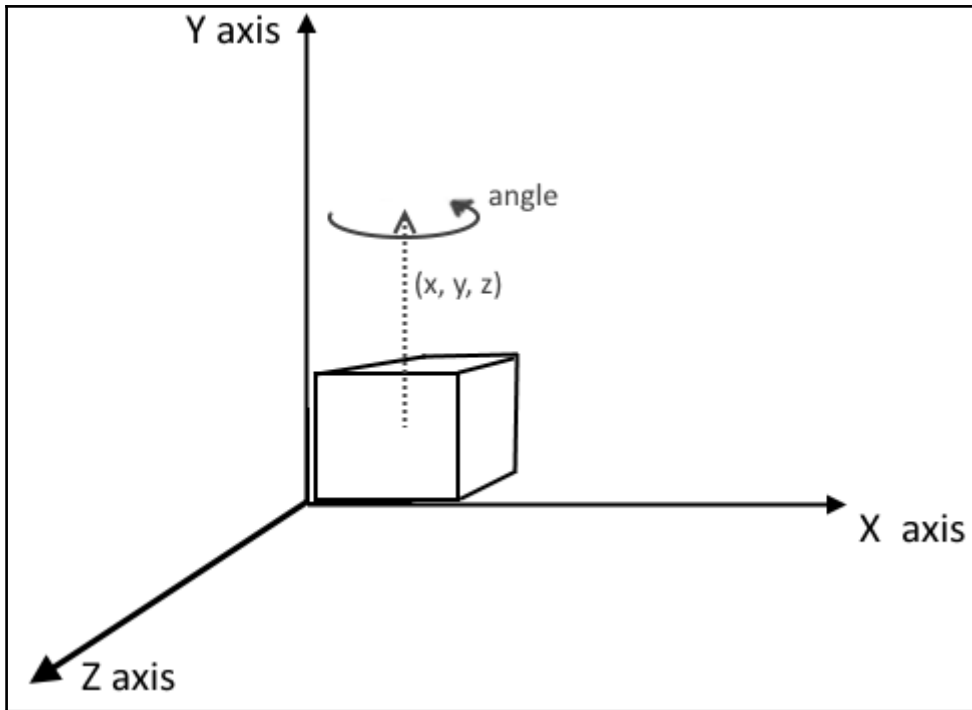


Chapter 10: Helper Recipes

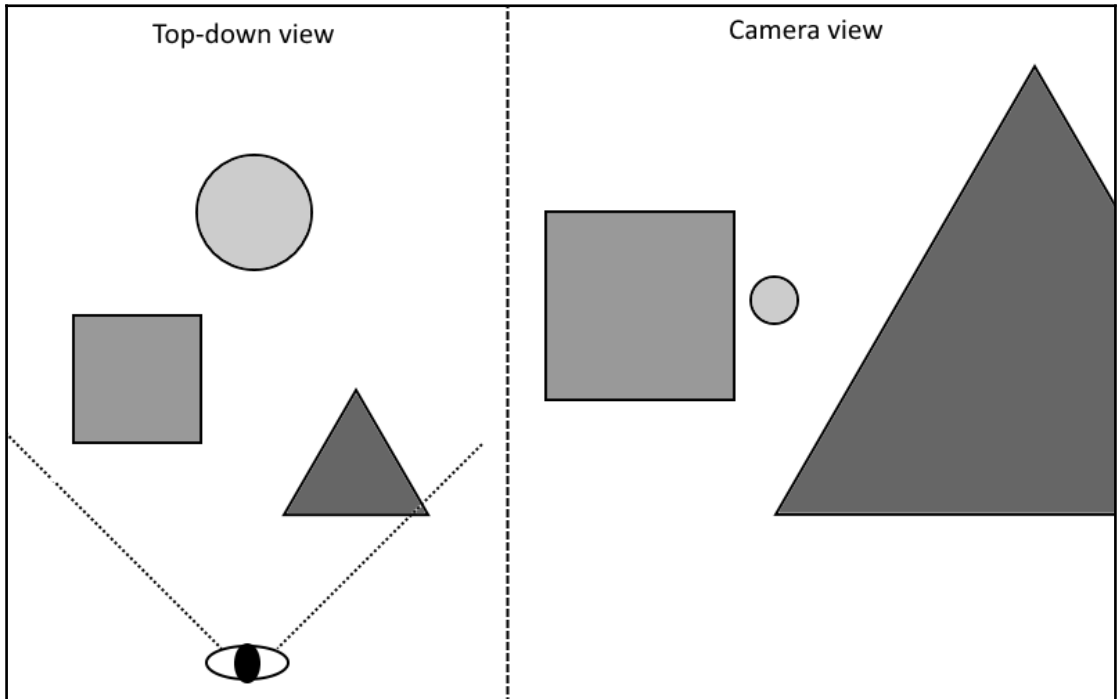
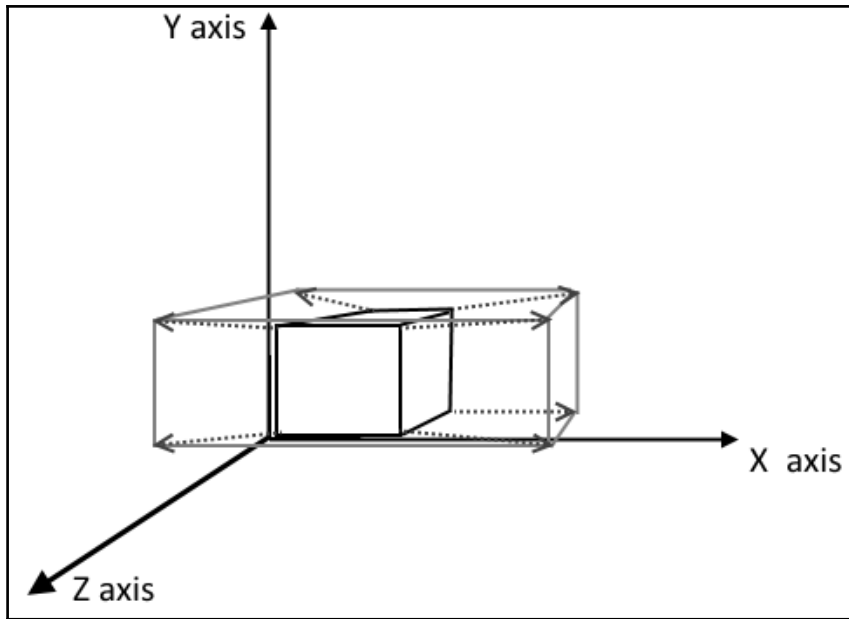


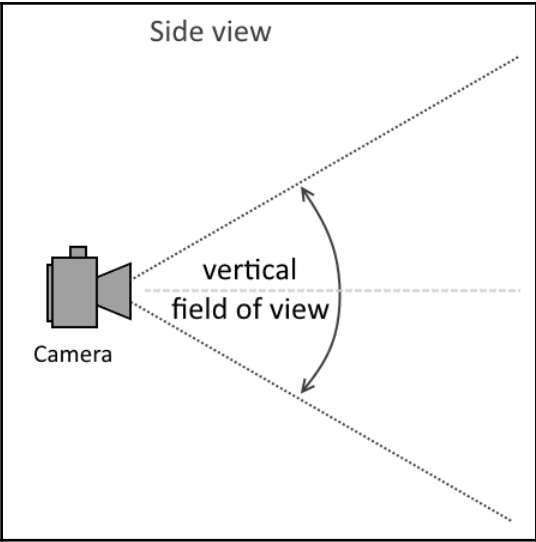
$$\begin{bmatrix} 1 & 0 & 0 & x \\ 0 & 1 & 0 & y \\ 0 & 0 & 1 & z \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

$$\begin{bmatrix} R_{xx} & R_{yx} & R_{zx} & 0 \\ R_{xy} & R_{yy} & R_{zy} & 0 \\ R_{xz} & R_{yz} & R_{zz} & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

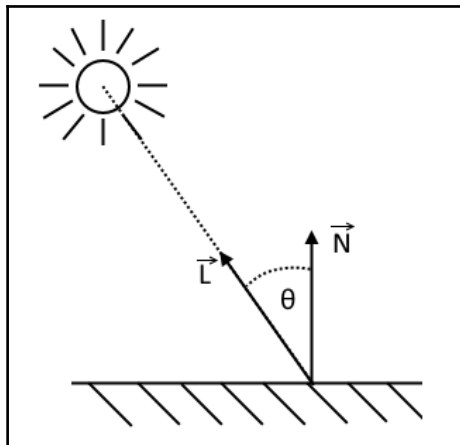
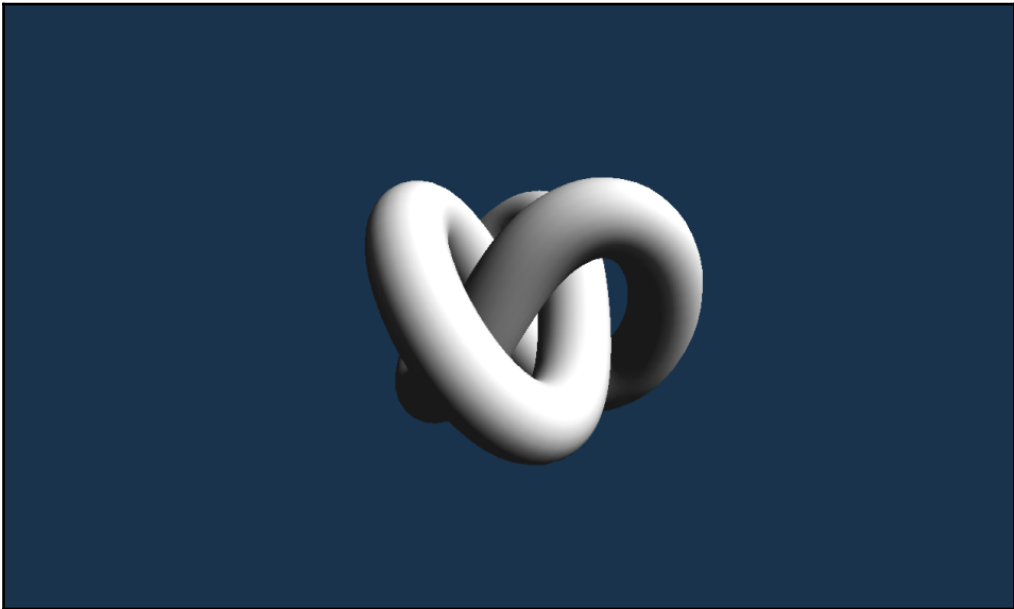


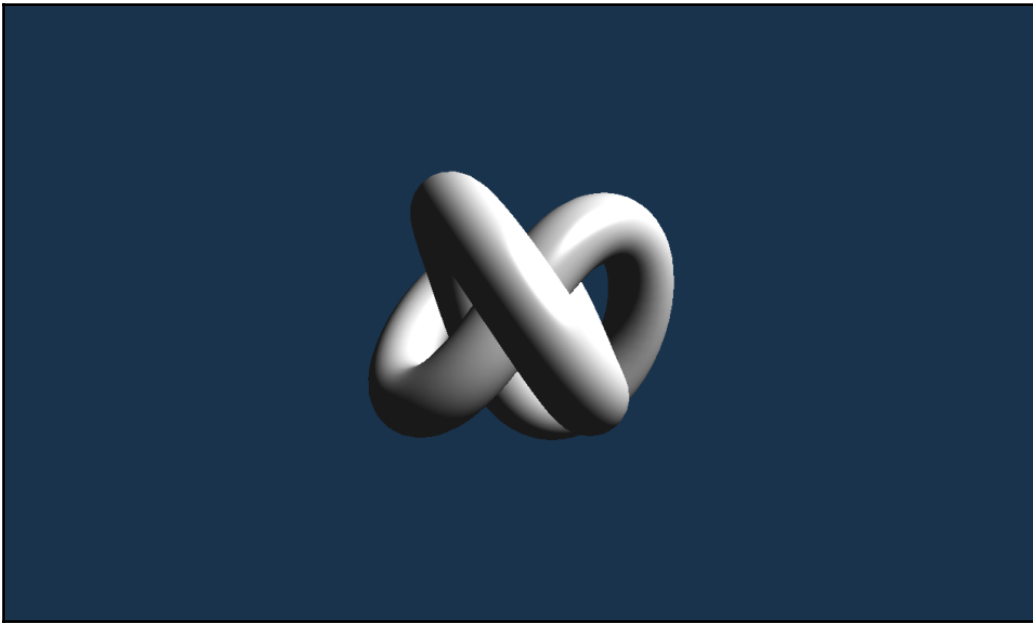
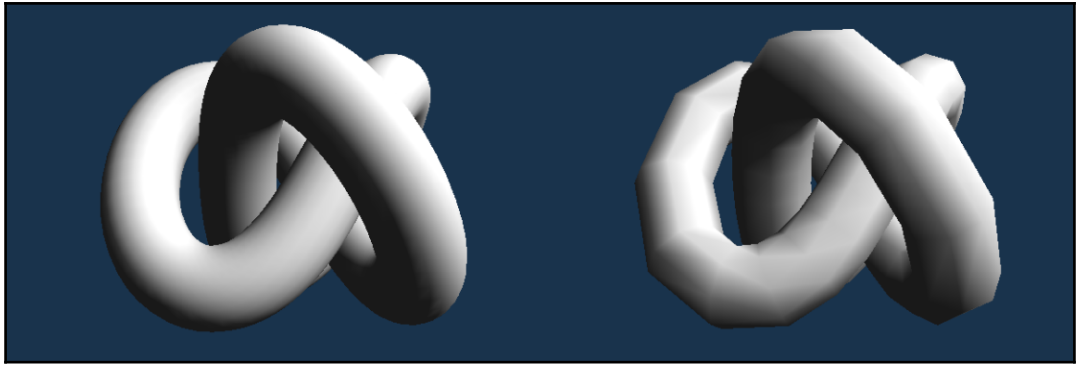
$$\begin{bmatrix} x & 0 & 0 & 0 \\ 0 & y & 0 & 0 \\ 0 & 0 & z & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

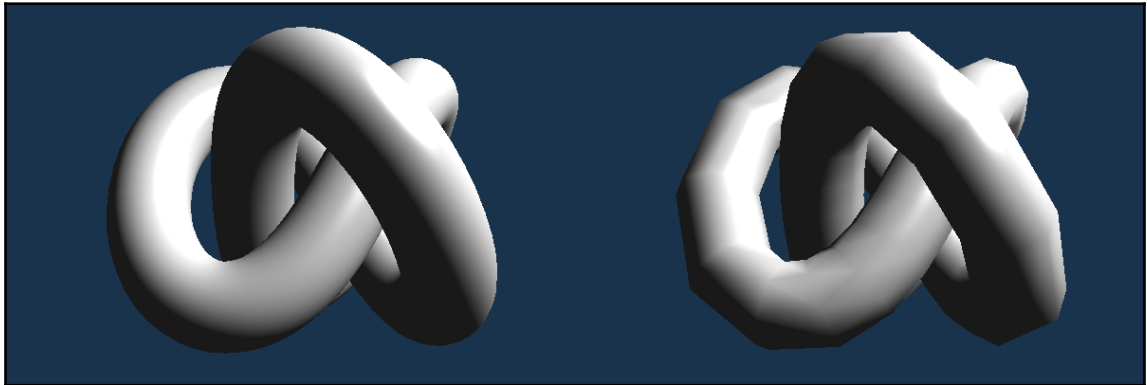
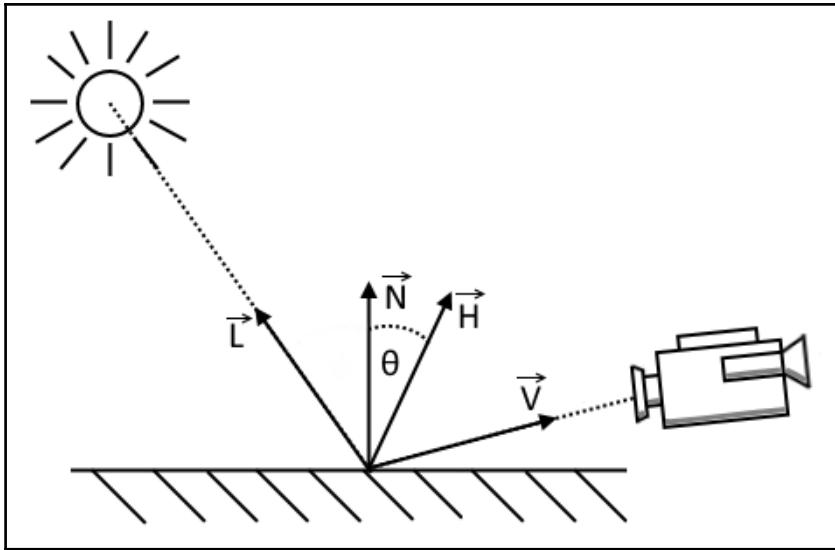


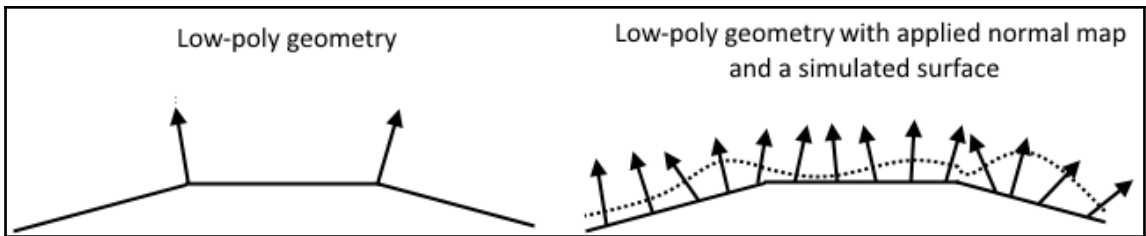
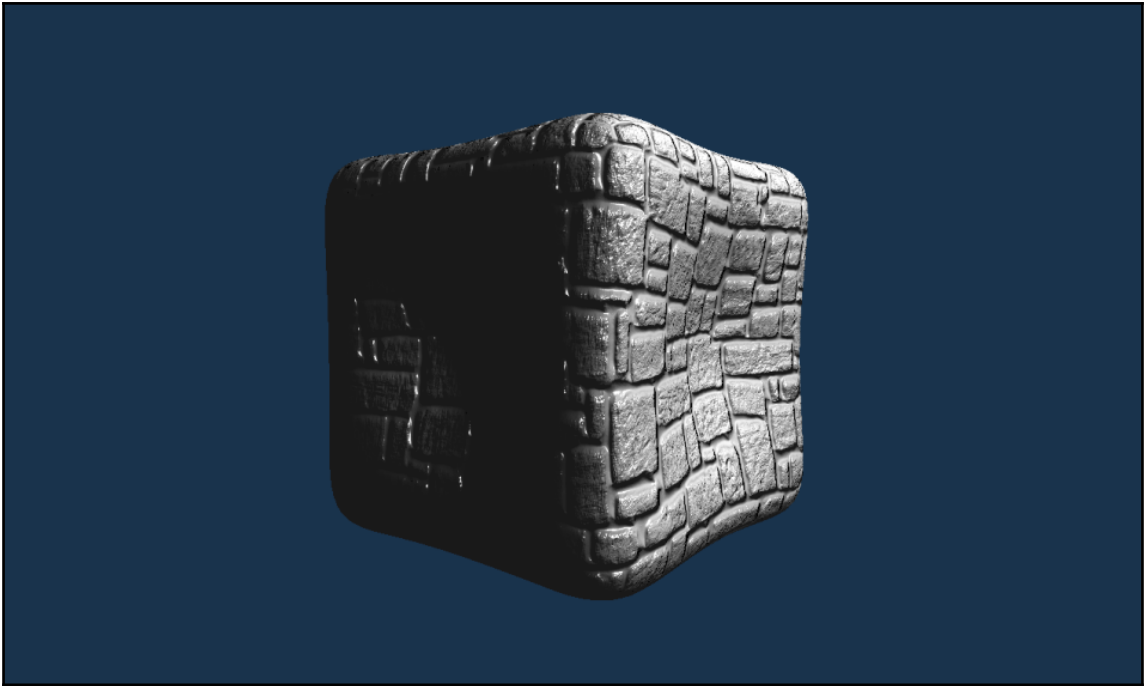


Chapter 11: Lighting



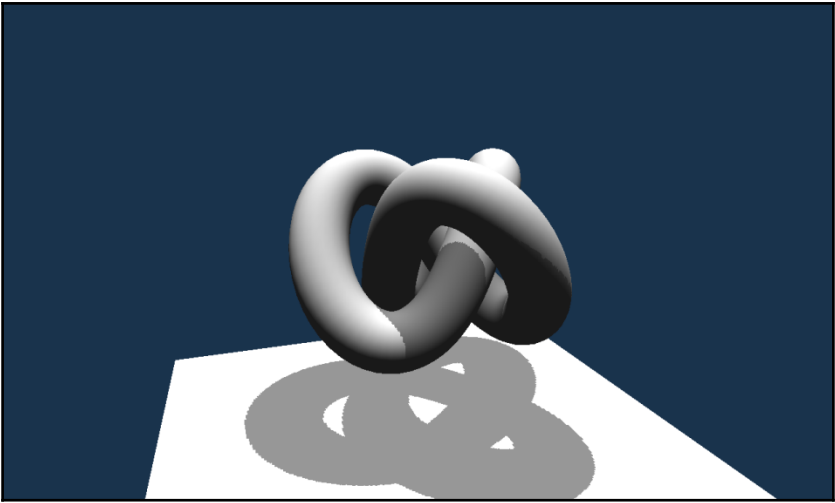






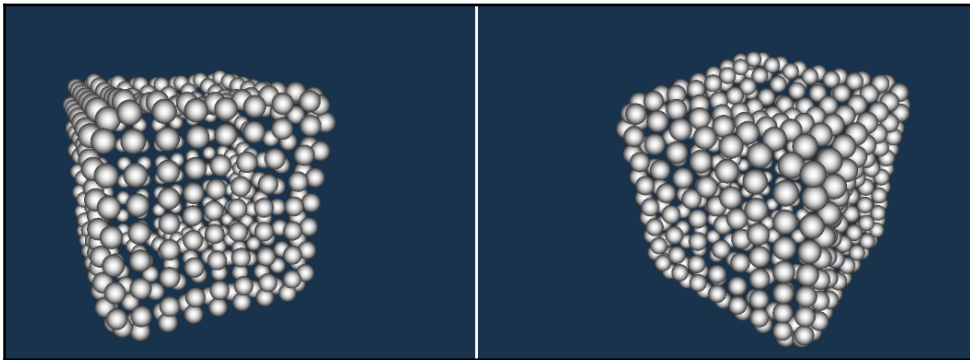
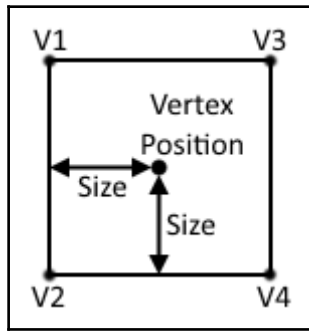
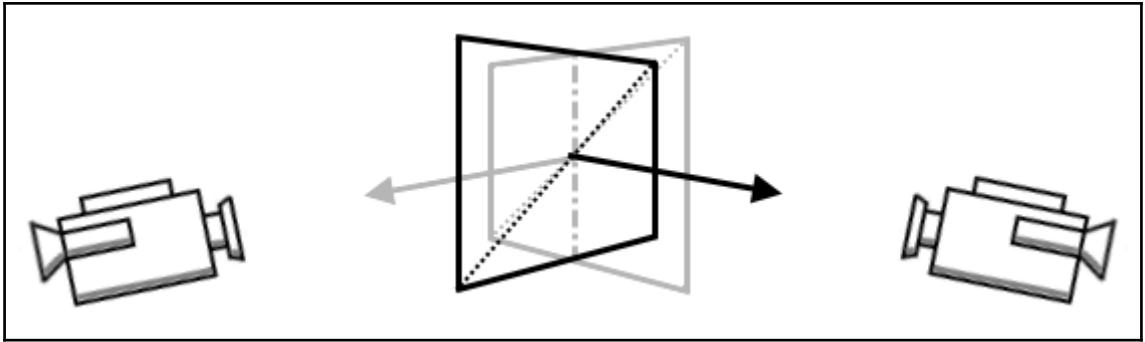


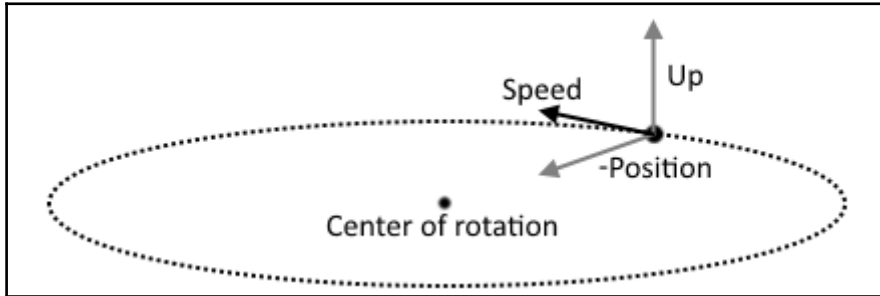
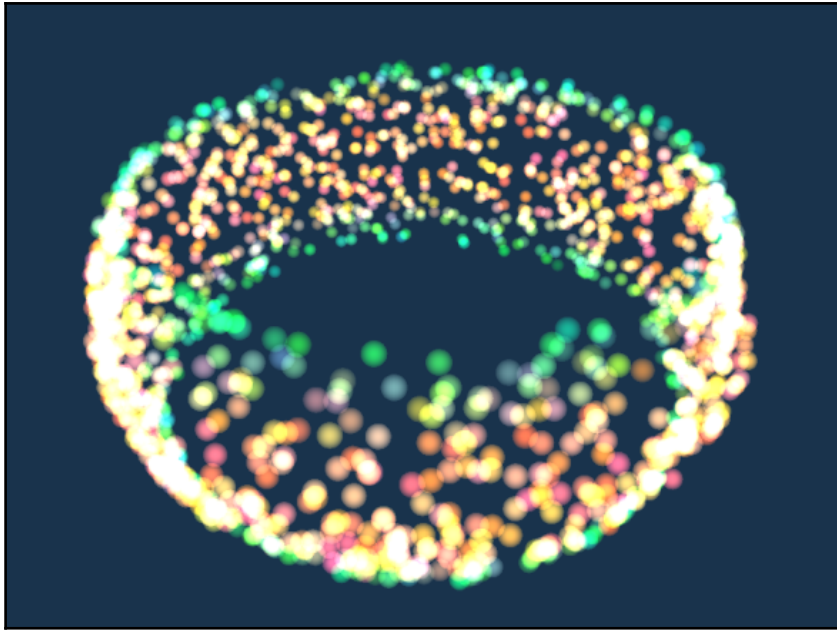


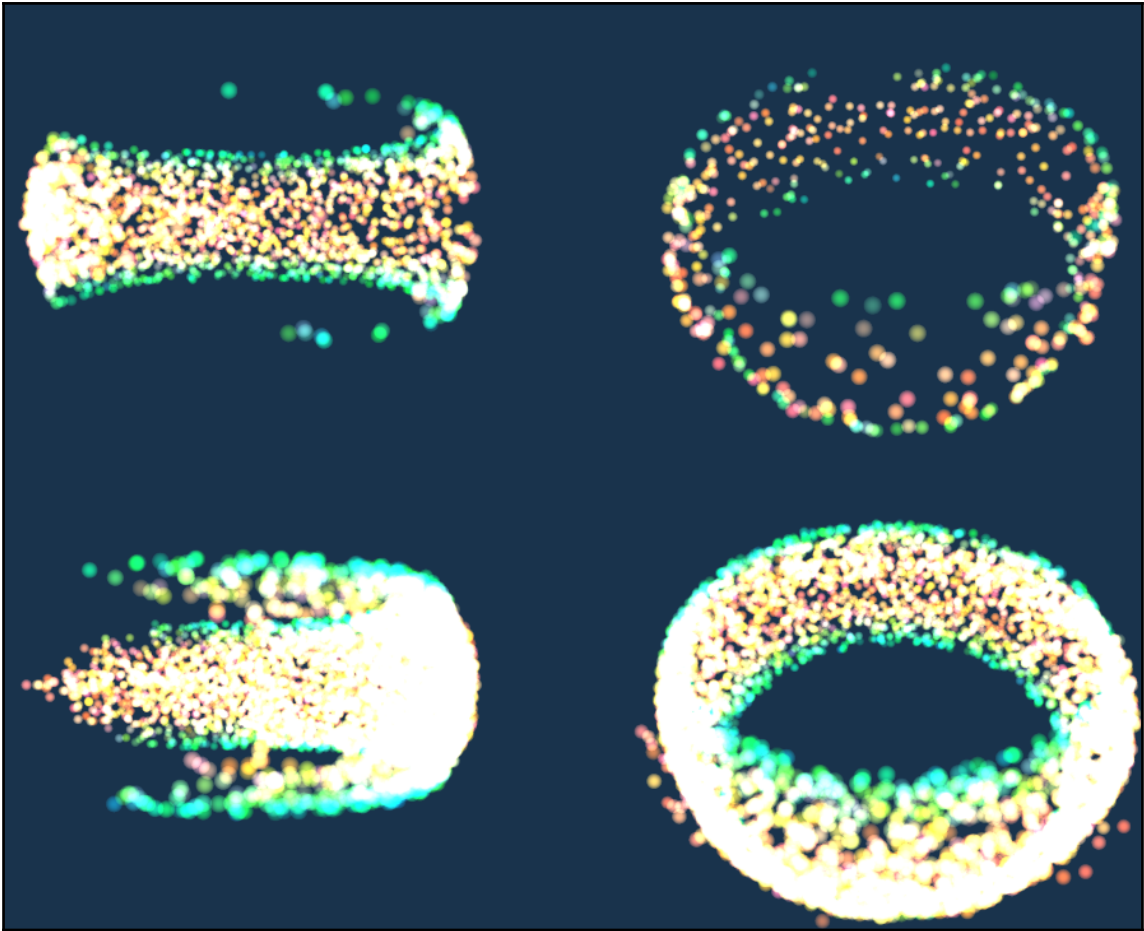


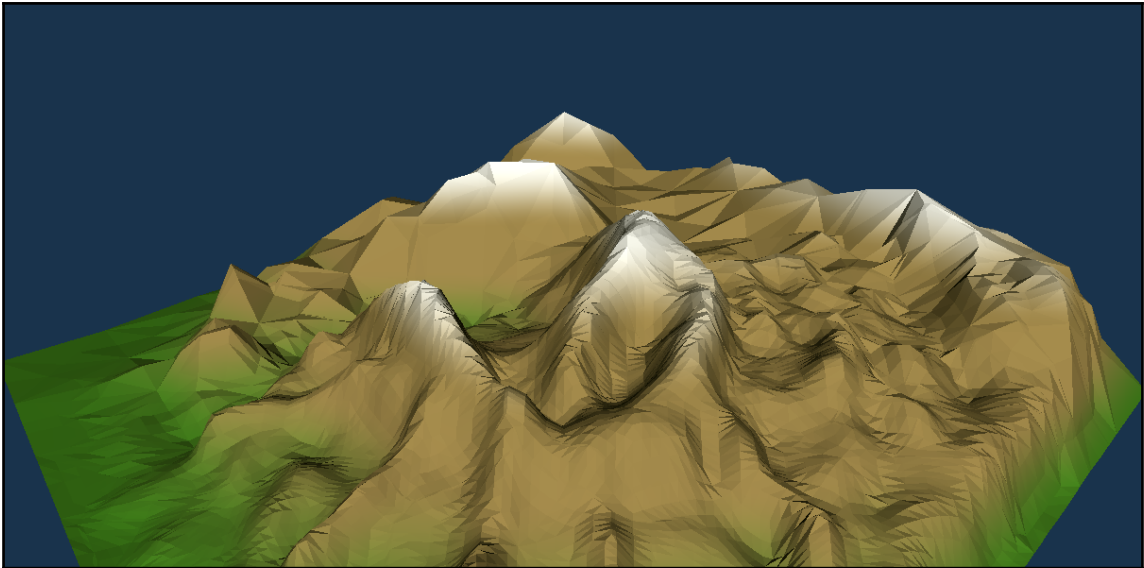
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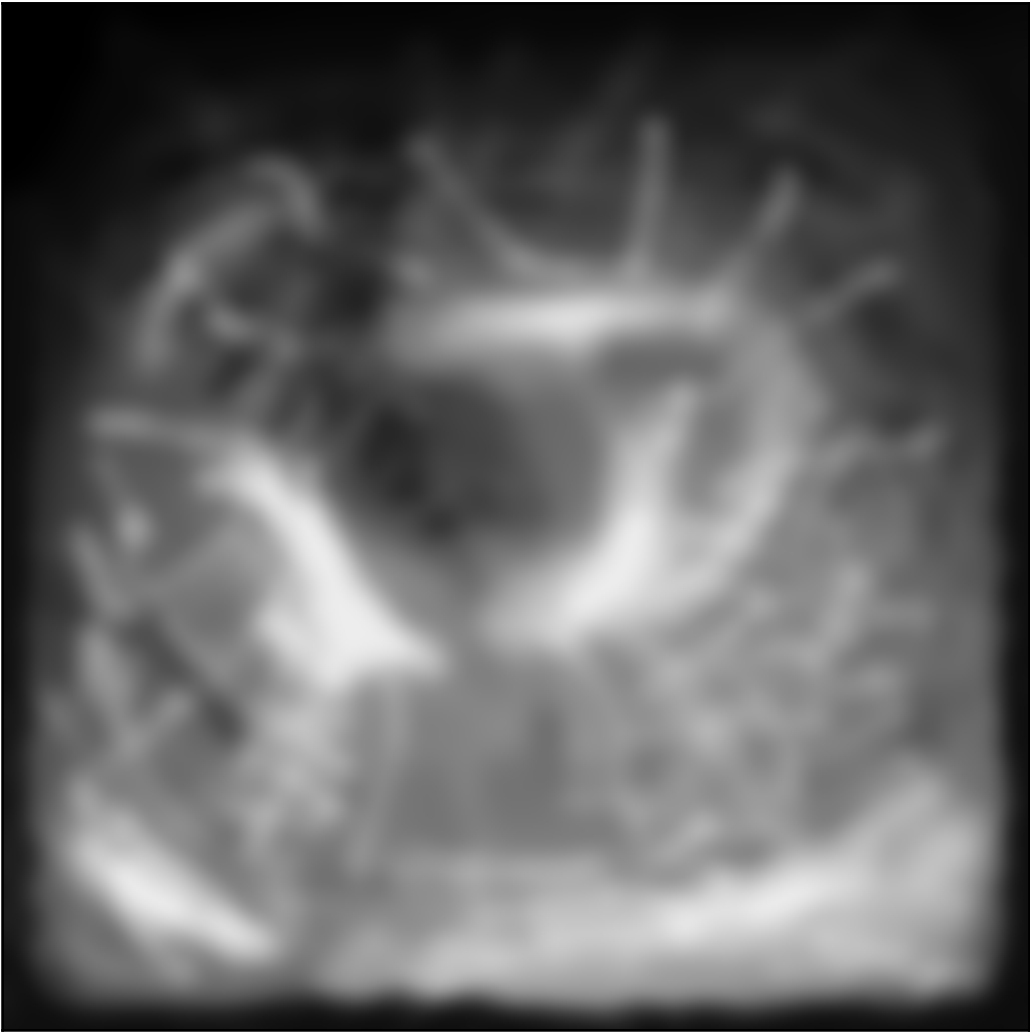


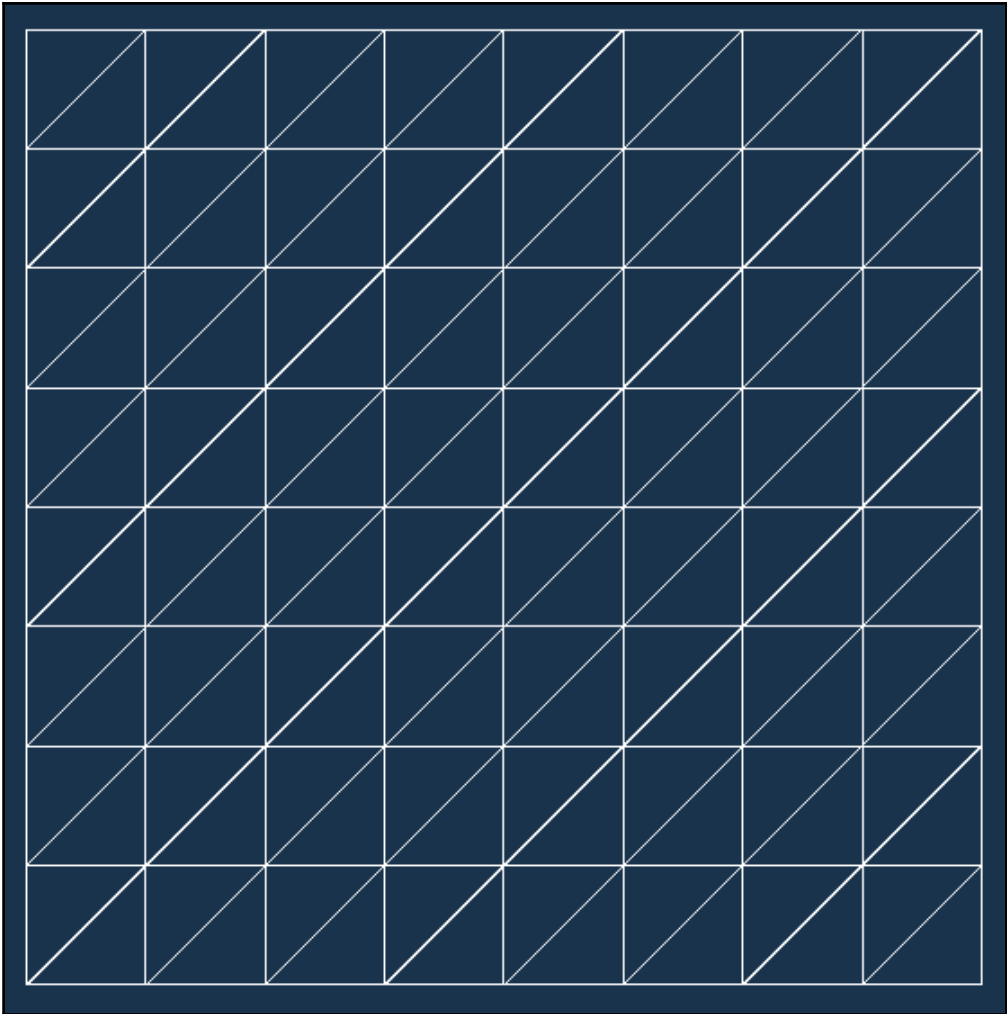


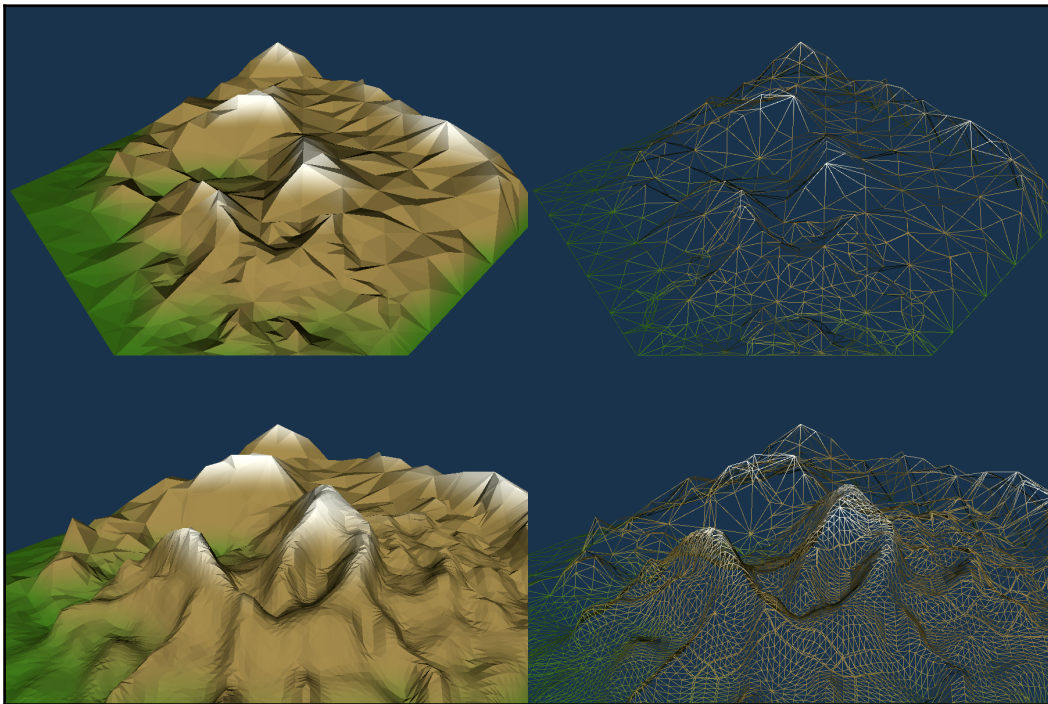
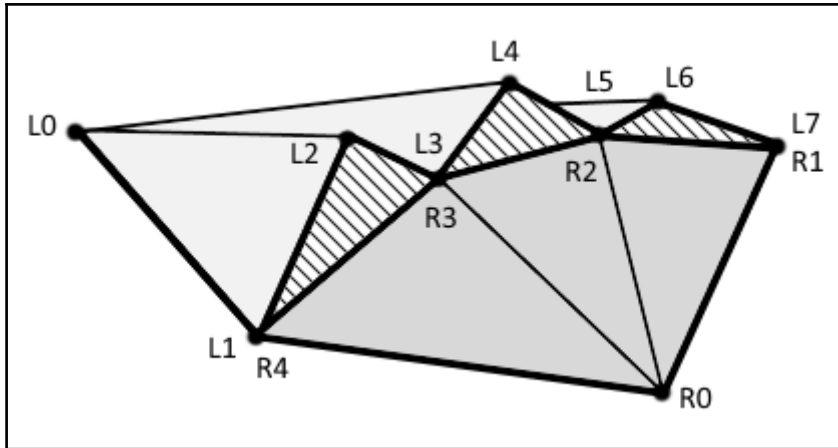
















Chapter 12: Advanced Rendering Techniques



