Assignment 09 Notes

Recall on indexed primitives

Indexed primitives are defined by two arrays: the **vertex array**, contains the definitions (the positions) of the different vertices, and the **index array**, which is used to specify triangles in a indirect way.

Cylinder

Let's start off with the cylinder parametric equation:

$$\begin{cases} x(\theta, h) = x_0 + r\cos(\theta) \\ y(\theta, h) = y_0 + h \\ z(\theta, h) = z_0 + r\sin(\theta) \end{cases}$$

Where: * θ is the angle generated by the x axis and the cylinder base circumference radius. Note that $\theta \in [0, 2 * \pi)$. * r is the circumference radius. * h is the z-coordinate of the center of the base circumference of the cylinder.