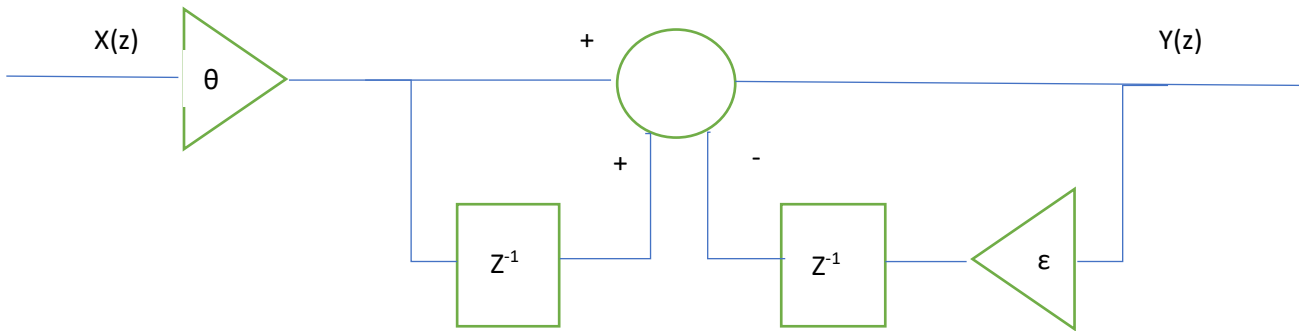


Bilinear Z transform for a low pass filter.
Simplified block diagram



Where: $\theta = \frac{\tau}{\tau + 2 * T}$

Where: $\epsilon = \frac{\tau - 2 * T}{\tau + 2 * T}$

Where: τ = Sampling period

Where: T = Filter's time constant

Where: Z^{-1} = previous cycle value

Where: Z = Current cycle value

$$Y(z) = (X(z) * \theta) + ((X(z-1) * \theta) - ((Y(z-1) * \epsilon)$$