

Classifying Filters:

Impulse Response:

Finite

Infinite

Causality:

Causal

Noncausal

Length:

FIR - N coefficients of $x(n)$

IIR - N coefficients of $x(n)$

+ M coefficients of $y(n)$

Domain:

Time Domain

Frequency Domain

Stability:

Stable (FIR always)

Unstable (IIR sometimes)

Type:

Low Pass, High Pass

Band Pass, Band Stop