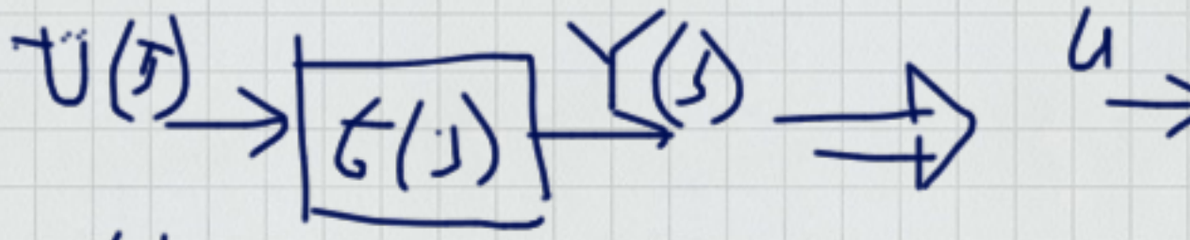
Bentuk Umum

$$G(s) = \frac{b_m s^m + b_{m-1} s^{m-1} + b_{m-2} s^{m-2} + \cdots + b_1 s + b_0}{a_n s^n + a_{n-1} s^{n-1} + a_{n-2} s^{n-2} + \cdots + a_1 s + a_0}$$

$m \leq n$, $a_0, \ldots, a_n, b_0, \ldots b_m \in \mathbb{R}eal$, $m, n \in$ Bulat+

Note: Kasus $m > n$ bisa diabaikan, karena hampir tidak bisa direalisasi secara fisik, berupa HPF yang menguatkan derau (noise) frekuensi tinggi

Kasus $m < n$



$$G(s) = \frac{Y(s)}{U(s)} = \frac{(b_m s^m + \cdots + b_1 s + b_0) X(s)}{(a_n s^n + \cdots + a_1 s + a_0) X(s)}$$

[A] Jordan Companion

$X(s) = \mathcal{L}\, x(t)$