Contoh ELEKTRIK

Rangkaian Pemuatan Kapasitor melalui RL seri

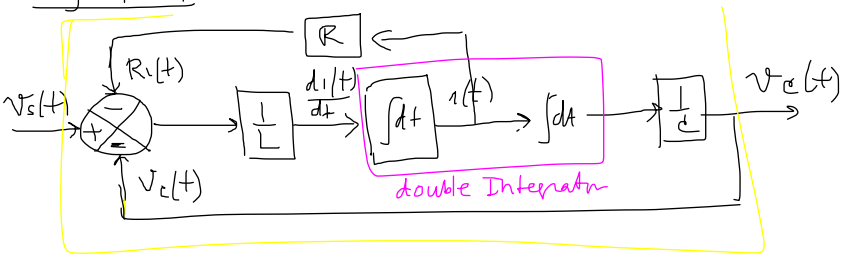
Hukum Ohm

$$v_s(t) - v_c(t) = Ri(t) + L\frac{di(t)}{dt} \quad (1)$$

$$v_c(t) = \frac{1}{C}\int i(t)\,dt \quad (2)$$

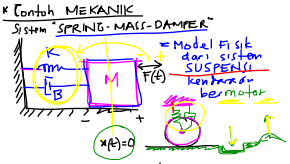
$$(1) \Rightarrow \frac{di(t)}{dt} = \frac{1}{L}\left[v_s(t) - v_c(t) - Ri(t)\right]$$

Bagan Kotak :



* Contoh MEKANIK

Sistem "SPRING - MASS - DAMPER"



Hukum NEWTON

Pers. Diff

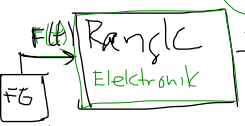
$$F(t) = M\frac{d^2x(t)}{dt^2} + B\frac{dx(t)}{dt} + Kx(t)$$

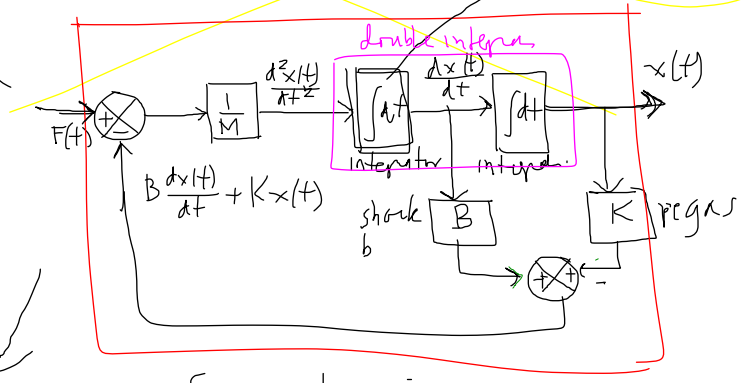
percepatan sesaat · kecepatan sesaat · posisi sesaat

$$\frac{d^2x(t)}{dt^2} = \frac{1}{M}\left[F(t) - \left(B\frac{dx(t)}{dt} + Kx(t)\right)\right]$$

Bagan Kotak :

elektronik





Next : Paket 2

* Model Matematis dan Transf Laplace

Program Simulasi

Animasi :