

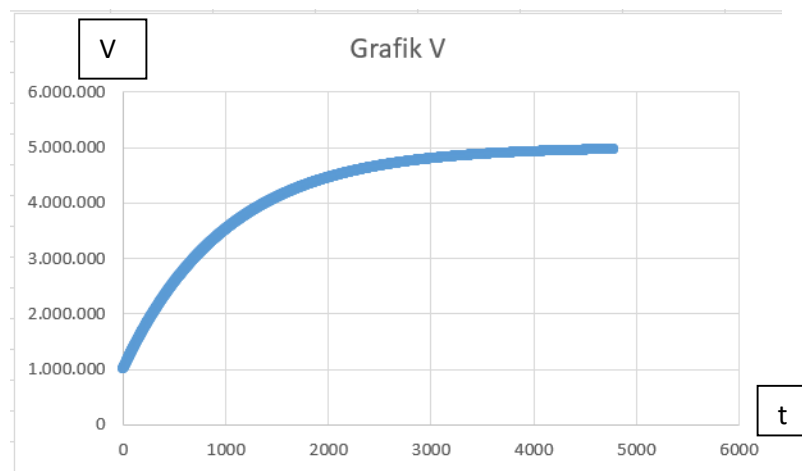
Laporan Hasil Flowchart, Grafik, serta penurunan rumus

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Pemecahan Masalah dengan Bahasa C

Kuis 4

Grafik dari hasil txt output dari program, yang sudah di export ke Excel



Penurunan Rumus

$$\frac{dV}{dt} + \frac{V(t)}{RC} - \frac{V_s}{RC} = 0 \quad \dots (1)$$

$$\lim_{\Delta t \rightarrow 0} \frac{\Delta V}{\Delta t} = \frac{V(t) - V(t-\Delta t)}{\Delta t} \quad (2)$$

Substitusi ke (1)

$$\frac{V(t) - V(t-\Delta t)}{\Delta t} + \frac{V(t)}{RC} - \frac{V_s}{RC} = 0$$

Multiplying by Δt :

$$V(t) - V(t-\Delta t) + b V(t) \Delta t - c \Delta t = 0$$
$$V(t) (a + b \Delta t) = c \Delta t + a V(t-\Delta t)$$
$$\therefore \text{fungsi } V(t) = \frac{c \cdot \Delta t + a V(t-\Delta t)}{a + b \Delta t}$$

dengan

$$a = 1 \quad b = \frac{1}{RC} \quad c = \frac{V_s}{RC}$$

Diagram: A circuit diagram showing a voltage source V_s in series with a resistor R and a capacitor C . The voltage across the capacitor is labeled V . The text "dengan KCL" points to the node between the resistor and the capacitor.

Flowchart Source Code

