

Programming Assignment 01

Assigned: Wed 27 Aug

Due: By start of class, Wed 3 Sep

Use MATLAB to create a diary that provides a solution to the following problem

The voltage drop across an electronic device can be calculated using the relation

$$v = 0.5e^{-0.2t} \sin(0.1t)$$

where v is the voltage (mV) and t is the time (s) after the actuating switch to the device is closed.

1. Determine the voltage drop at the instant the activating switch is closed.
2. Determine the voltage drop at 1 second intervals from 0 to 60 seconds.
3. Estimate the maximum voltage drop and when this occurs.
4. Determine the voltage drop after a very long time.

All answers must be 5 significant figures and appropriately labeled in SI units.

The opening lines in your diary file must be the following header lines

Diary purpose (i.e., what is being documented)

use as many lines as needed to clearly describe

(blank line)

Your Name

Class (e.g., Engr0012, Fall Term 2003, MW 2:00, Instructor: Patzer)

Date diary created

Your e-mail address

Turn in

1. A printout of your ANNOTATED diary (use comments to identify actions and results).

You will be evaluated on diary style as well as correctness of results. Your diary must contain

1. A header section as described
2. Appropriate comments/whitespace
3. Readably annotated results