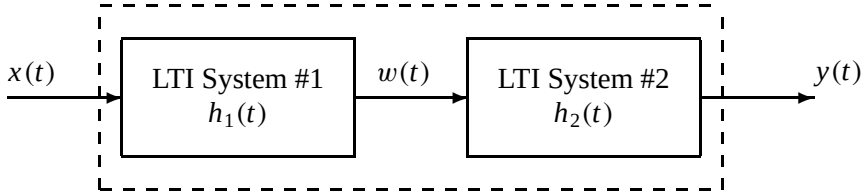
PROBLEM:



The first system is described by the input/output relation

$$w(t) = \frac{dx(t)}{dt}$$

and the second system has impulse response

$$h_2(t) = u(t-5) - u(t-10)$$

(a) Find the impulse response of the overall system; i.e., find the output $y(t) = h(t)$ when the input is $x(t) = \delta(t)$.

(b) Give a general expression for $y(t)$ in terms of $x(t)$ that holds for any input signal.

McClellan, Schafer and Yoder, *Signal Processing First*, ISBN 0-13-065562-7.
Prentice Hall, Upper Saddle River, NJ 07458.