## $h^{(1)}(t)$

## Example 9-13: Delay-integrator Cascade

Consider the system whose impulse response is h(t) = u(t-1). Since this impulse response is just a delayed unit-step function, it can be represented by the convolution  $h(t) = \delta(t-1) * u(t)$ . Thus, the system can be implemented by the cascade of a delay of  $\frac{1}{h} (f_0)$  by an integrator as depicted in Fig. 9-22. Also note that the order of the delay and the



## integrator can be reversed in the cascade configuration without changing the overall impulse response.

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