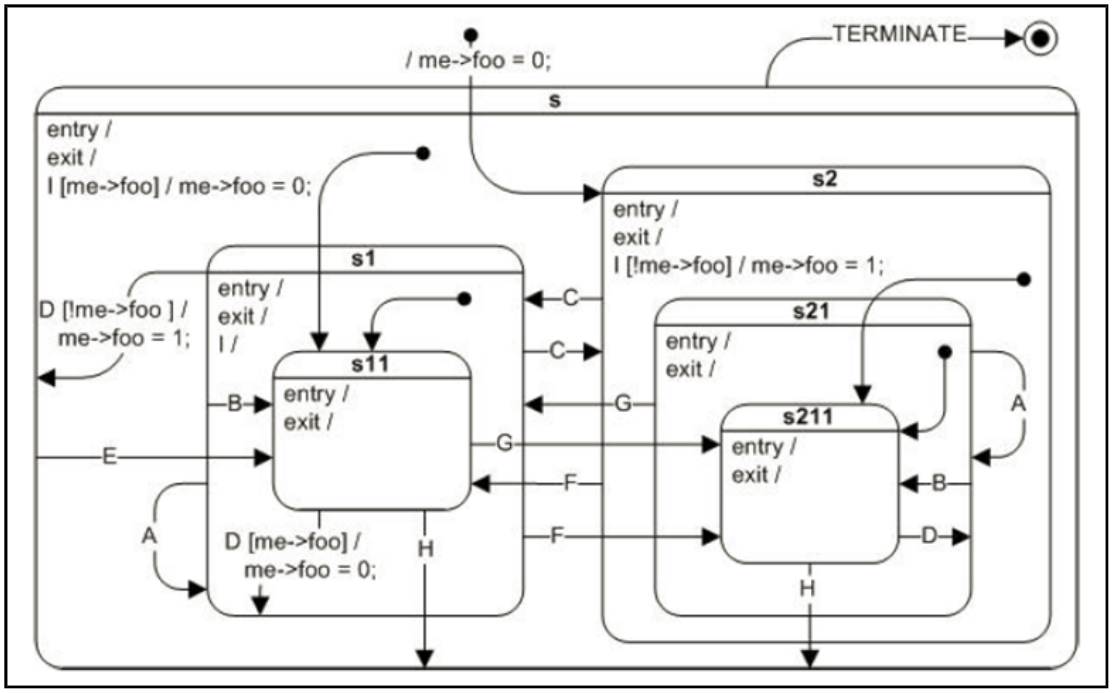
CISC 836 In-class Exercise: Can you get there from here?

[The UML-RT model for RSARTE used in this exercise can be found here]

Let *S* be a state machine. We define a *runtime state of S* to be a pair *(ssc, val)* where *ssc* is a *stable state configuration* of *S* and *val* is a mapping of all attributes of *S* to values. Consider the following state machine from Miro Samek in [Sam09] (part of Reading R4).



While viewing the state machine as a UML-RT state machine, answer the following questions.

1. What is an example of a sequence of inputs that result in an 'unexpected message' message?
2. What is the runtime state that the input sequence 'H, D, C, I' puts the machine into?
3. What is the shortest sequence of inputs that puts the machine into the runtime state (<s,s2,s21,s211>, [foo=1])?
4. What are examples of unreachable stable state configurations, i.e., stable state configurations for which there is no sequence of inputs that put the state machine into that configuration?
5. Are there any transitions in the machine that will never get taken, regardless of what inputs are fed into the machine?

Last modified: Mon Feb 01 2021 16:32:26