Management Information Systems (Spring 2012-2013): Petri nets

Due on Week starting on 13.04.2013

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, TA. Nesma Mostafa, TA. Ahmed Emad, TA. Fatma Abdel-Dayem
Sunday: 09:30-11:00 am, 12:34-02:30 pm
Thursday: 08:00-09:30 am

Dr. Ahmed Hany Awad

Petri nets, soundness

Problem 1

5 points

Mark the following statements as true or false

1. In a Place/Transition Petri net a place has a ceiling on the number of tokens it can hold.   ( )

2. In a Petri net, two or more transitions can fire simultaneously when enabled in the same state.   ( )

3. Soundness allows a marking on the form $(0, 0, \ldots, 1, 0, \ldots, 1)$ where the leftmost element represents the input place to the net and the rightmost element represents the output place of the net with arbitrary number of places in between.   ( )

4. Reachability graph helps find possible firing sequences of the respective net.   ( )

5. Condition/Event nets is a subclass of Place/Transition nets.   ( )

Soundness Checking

Problem 2

10 points

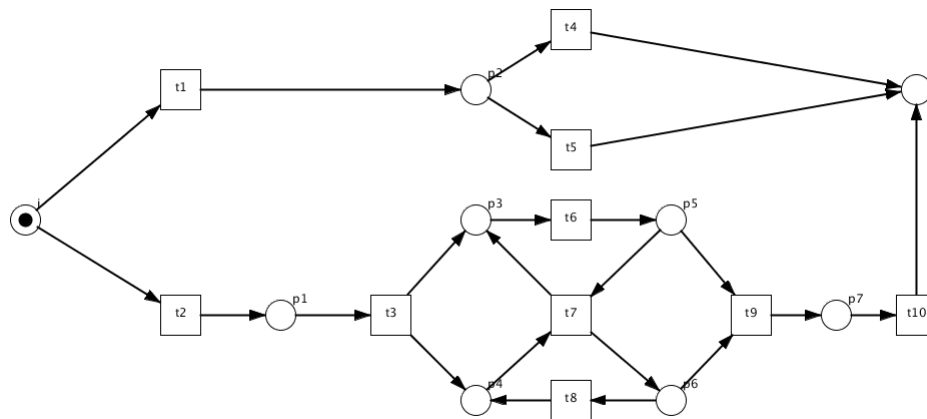Check the Petri net in Figure 1 for soundness based on studying the reachability graph.

Figure 1: A workflow net