

Reliability of Technical Systems
Tutorial #9
Due: November 30th, 2010

1. Give the Matrices E^+ , E^- and m_0 of the Petri Net below.
2. Draw the reachability graph of the Petri Net below.

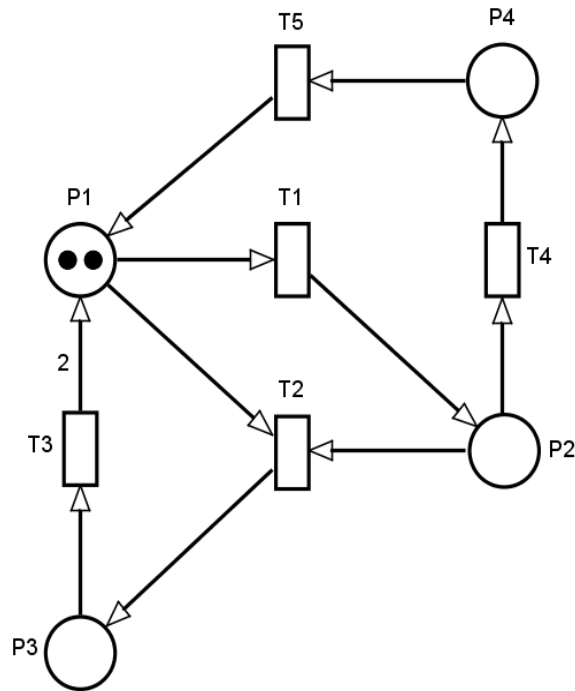


Figure 1 Petri Net for Exercise 1 and 2

3. Draw the Petri Net with following Matrices:

$$E^+ = \begin{pmatrix} 2 & 0 & 1 & 0 \\ 0 & 1 & 1 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 \end{pmatrix}$$

$$E^- = \begin{pmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 \end{pmatrix}$$

$$m_0 = \begin{pmatrix} 1 \\ 1 \\ 0 \\ 0 \\ 1 \end{pmatrix}$$

Draw the Petri Net after the first switch, concerning the final state with only one token remaining