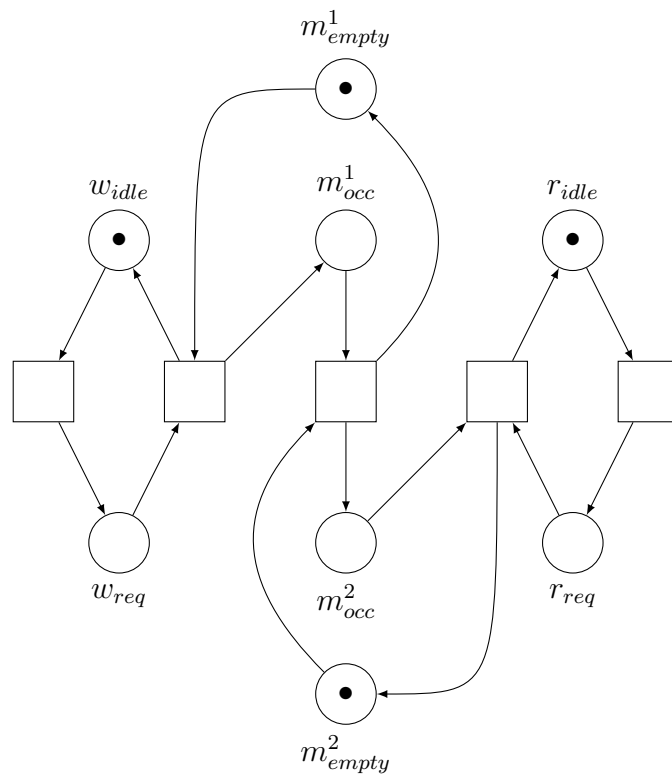


Networks and Processes

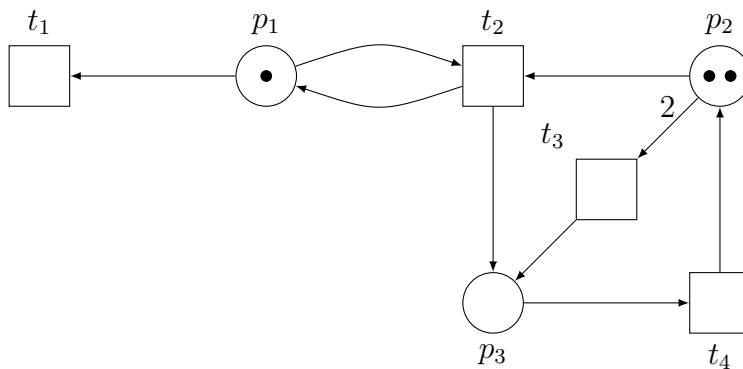
Sample Solutions to Exercise 1

Discussion on – 6.11.2008, 15h45 (submissions of solutions are highly recommended, either before or after the exercise session)

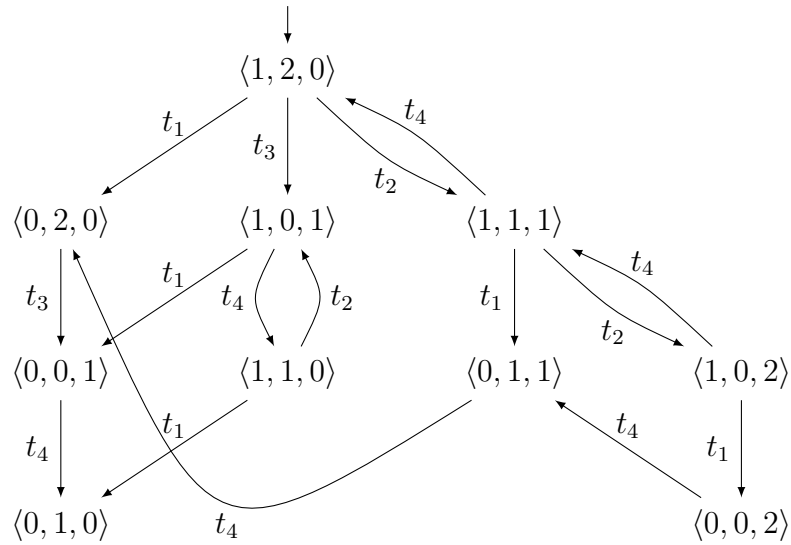
1.



2. a)



b)



c) $\langle 0, 1, 0 \rangle$ is the only deadlock. A possible sequence is: t_1, t_3, t_4 .

- d)
- At $\langle 1, 2, 0 \rangle$, $\{t_1, t_3\}$ are concurrent, t_2, t_3 and t_1, t_2 are in conflict.
 - At $\langle 1, 0, 1 \rangle$, $\{t_1, t_4\}$ are concurrent.
 - At $\langle 1, 1, 1 \rangle$, $\{t_1, t_4\}$ and $\{t_2, t_4\}$ are concurrent, t_1, t_2 are in conflict.
 - At $\langle 1, 1, 0 \rangle$, t_1, t_2 are in conflict.
 - At $\langle 1, 0, 2 \rangle$, $\{t_1, t_4\}$ are concurrent.

e) The following pairs are independent: $\{t_1, t_4\}$, $\{t_1, t_3\}$, $\{t_2, t_4\}$, and $\{t_3, t_4\}$.

3.

