CSCI3100 In-Class Practice

Petri Net

Date: _____

Students Names: IDs:

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Use a Petri Net to specify the Dining Philosophers Problem. In this problem, there are five silent philosophers sitting at a round table with bowls of spaghetti. Forks are placed between each pair of adjacent philosophers.

Between each philosopher is one fork, so there are a total of 5 forks. However, to eat the spaghetti, two forks are needed; hence each philosopher must pick up *both* the fork on the left and the fork on the right to eat. Once they get both forks, they can eat the bowl in front of them. When the philosopher is done with eating, the forks have to be put back to where they were originally picked up. Note the state whether a philosopher is either in thinking (meditating) state or in eating state should be clearly identified.

How many places are there? How many transitions are there? How many tokens are in the initial marking?
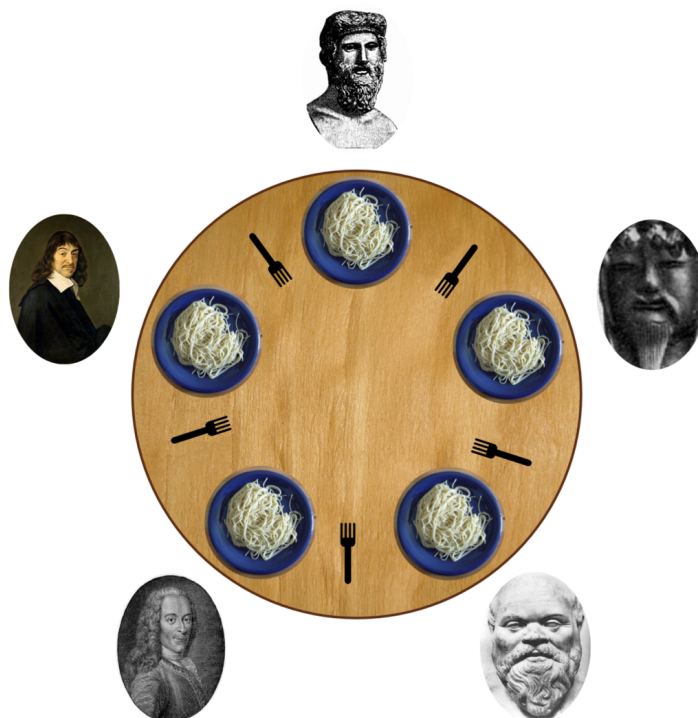
15 places
10 transitions
10 tokens in the initial marking
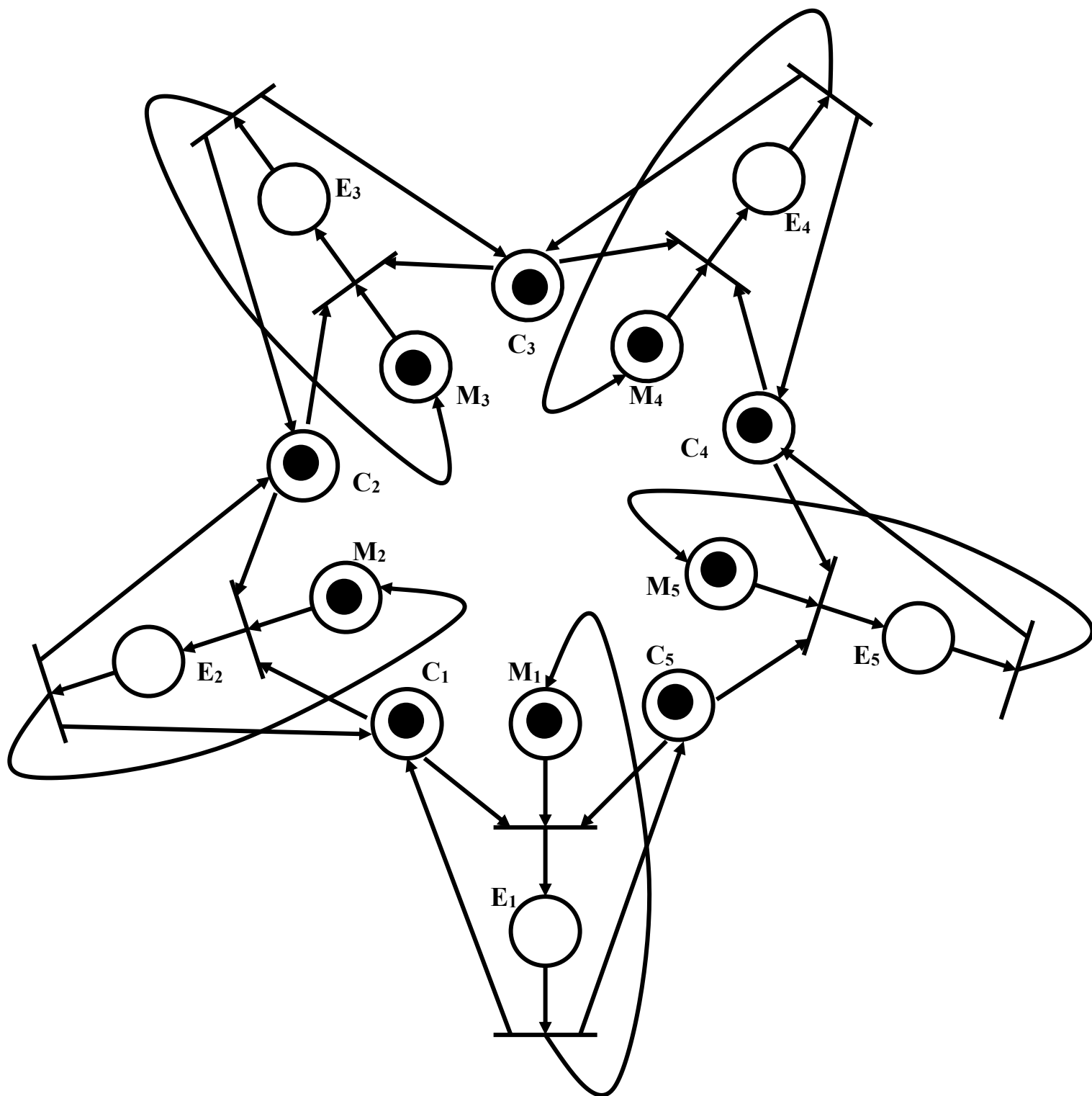
Another Drawing

15 places
10 transitions
10 tokens in initial markings