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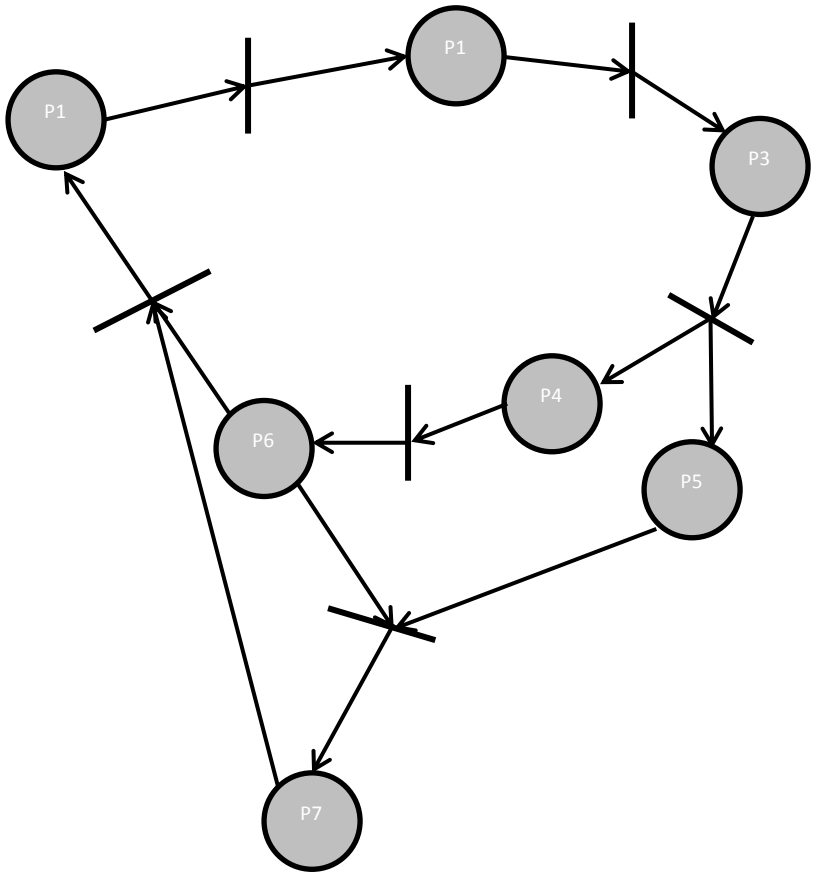
10/6/11

CS 2310 – Multimedia Software Engineering

Exercise 3

(a) The following is a Petri Net representation of the system. The user sends a message to the Kinect interface, which sends a message to the gesture recognition software. This sends a message to the emergency notification system, which sends the appropriate message to the web interface that the emergency responder sees. When the emergency responder gets that message, he communicates with the user.



P1- Start

P2- Gesture Recognition has picked up a help signal

P3-Emergency notification system has received a help signal

P4-Emergency responder has received a direction to call the patient

P5-Emergency responder has received a message to visit the patient

P6-Emergency responder calls patient

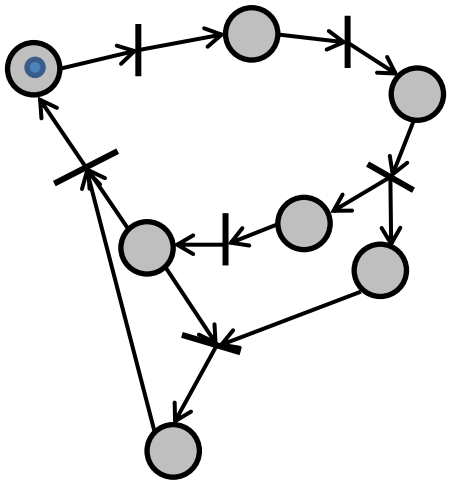
P7-Emergency responder visits patient

(b) Here is my drawing from part C of exercise 2:

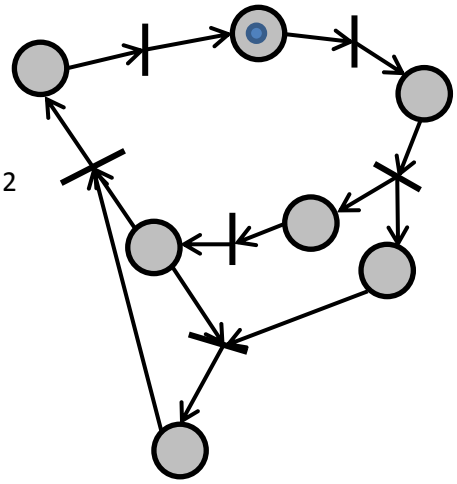
The following is the equivalent marked Petri Net:

If help signal is passed:

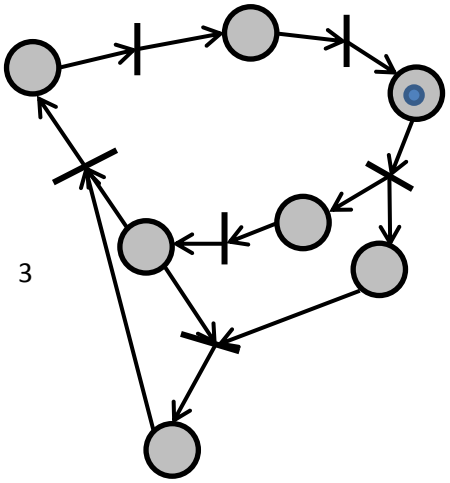
1



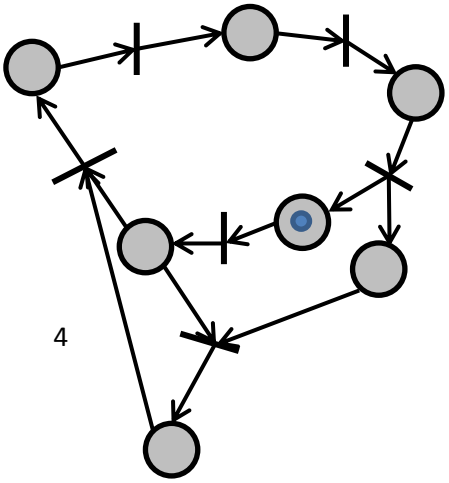
2



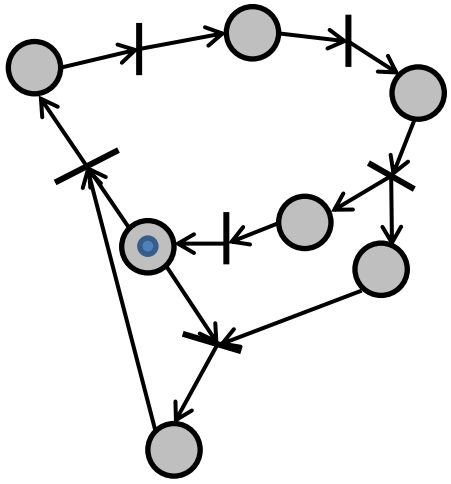
3



4



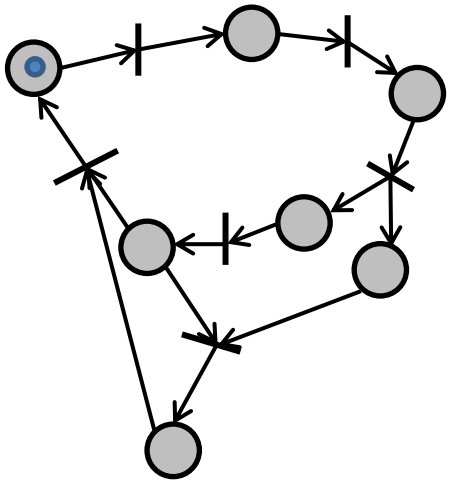
5



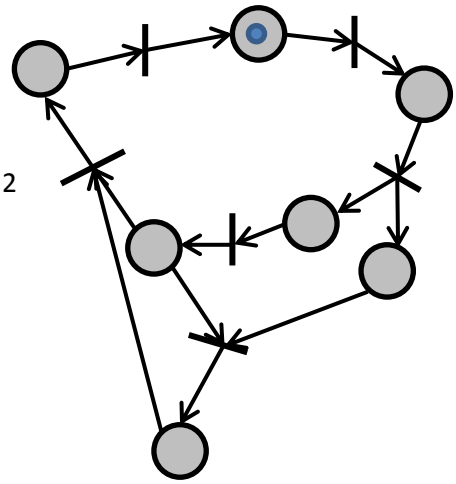
*In this stage, if the patient doesn't answer, the responder will visit them

If second help signal is passed:

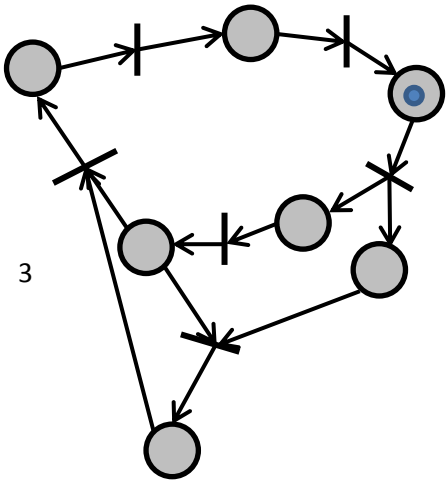
1



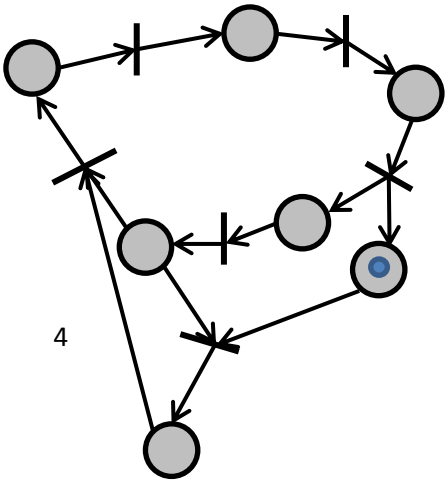
2



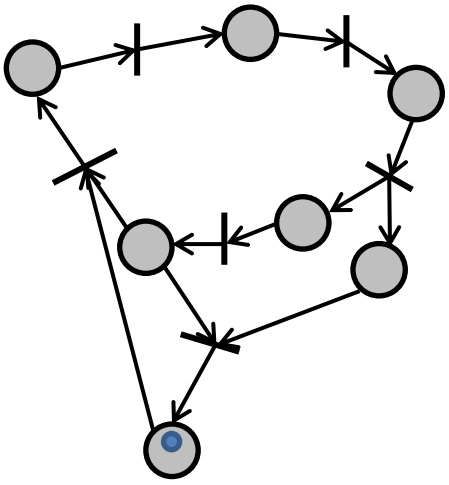
3



4

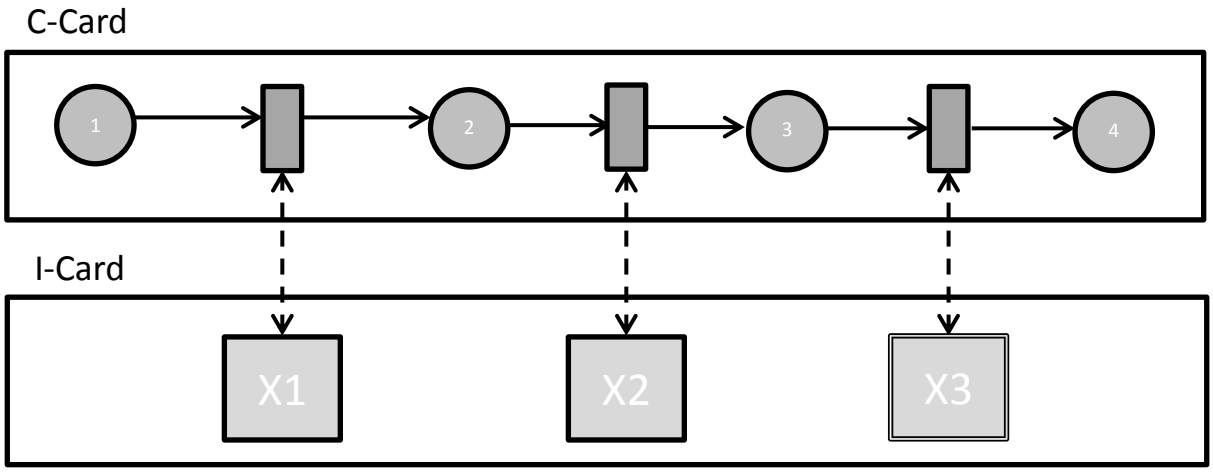


5



*Eventually will move back to start state, assuming everything is ok and system is still in use

(c) If the emergency notification system / manger index cell was a super component, then the following is a pair of (I-card, C-card) that represents this system.



P1 – The user

P2 – The gesture recognition

P3 – The emergency manager

P4 – The emergency responder

X1 – “I need help” gesture

X2 – Patient needs help message

X3 – Appropriate message is sent, based on what the super component decided is the best option

This system as an ordinary petri net: