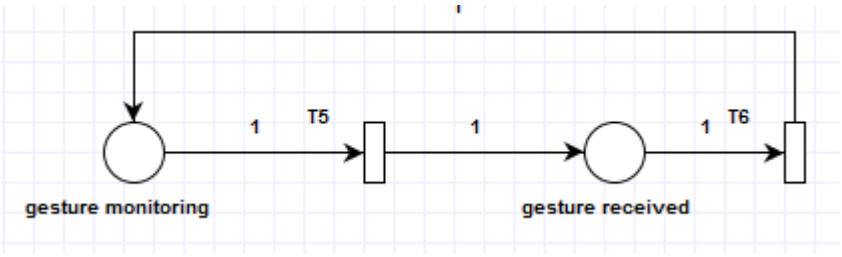
Multimedia Software Engineering – Exercise 3

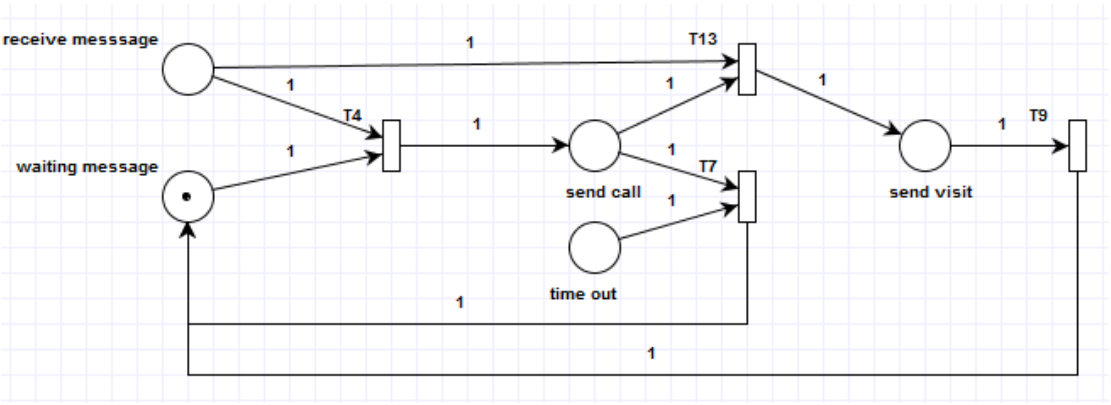
Jiannan Ouyang

(a) Convert the active index you constructed in Exercise #2 into a Petri net (or an E-net).

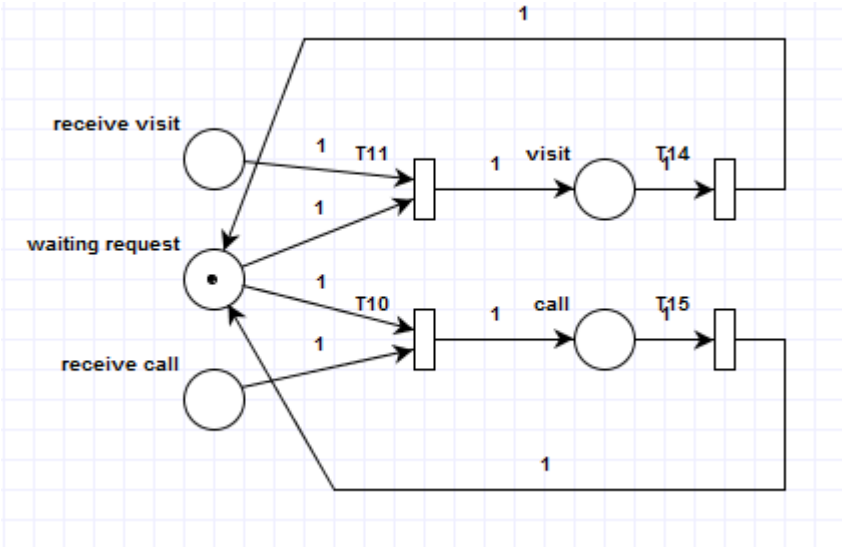
Gesture Recognition



Emergency Manager

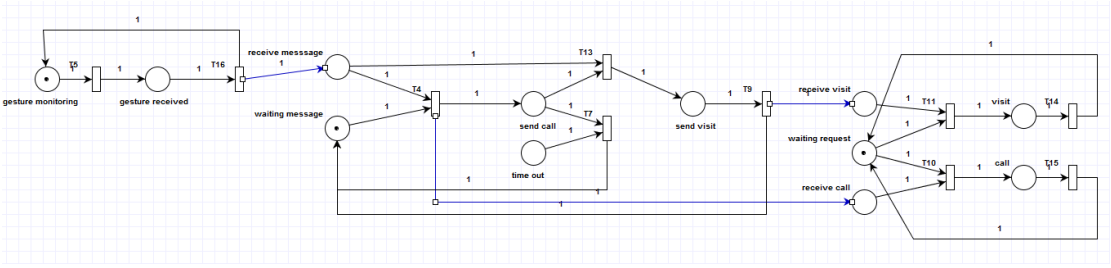


Homecare Staff

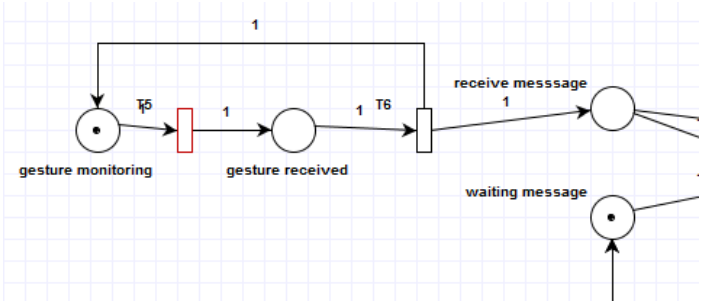


(b) Take the diagram you drew in part (c) of Exercise #2. Redraw it here (because you may want to make some changes), and now use the marked Petri net to illustrate the scenario. You can draw a sequence of marked Petri net to show how the system works.

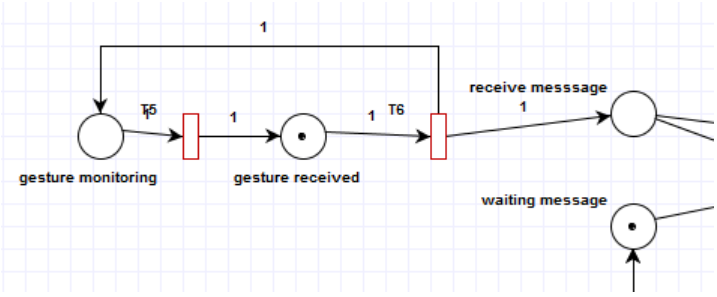
Marked Petri net



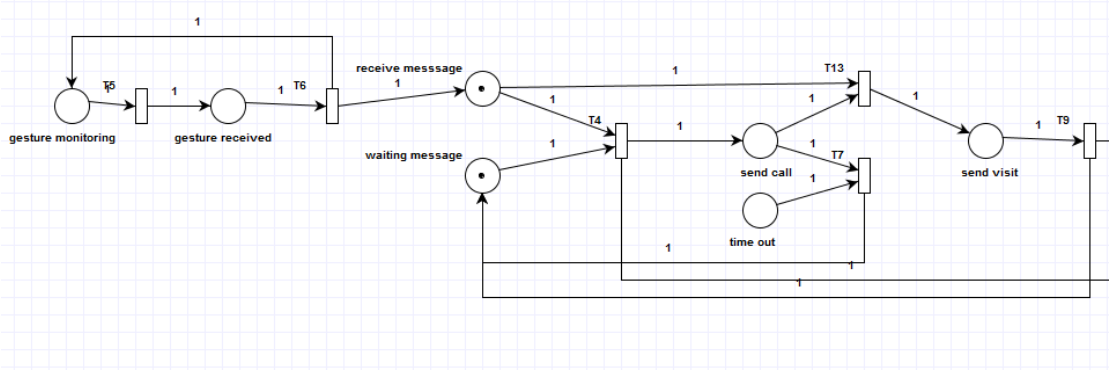
Initial State: gesture monitoring



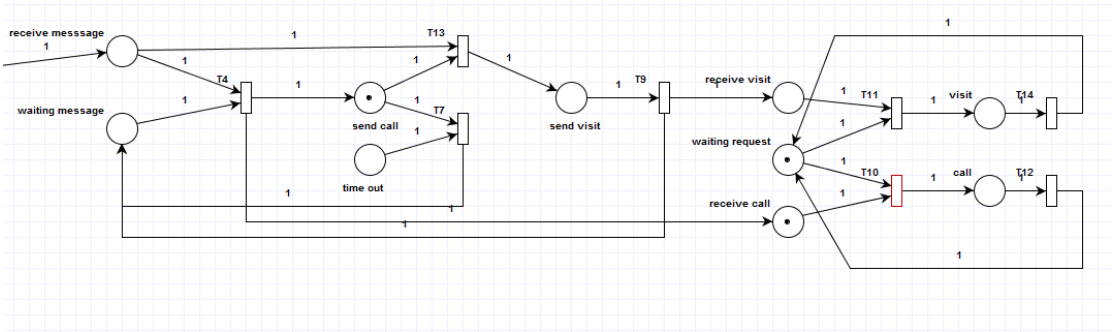
Gesture recognized



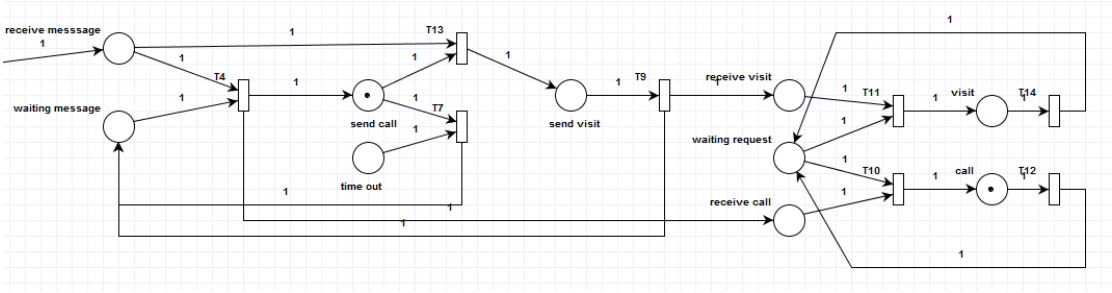
Send message



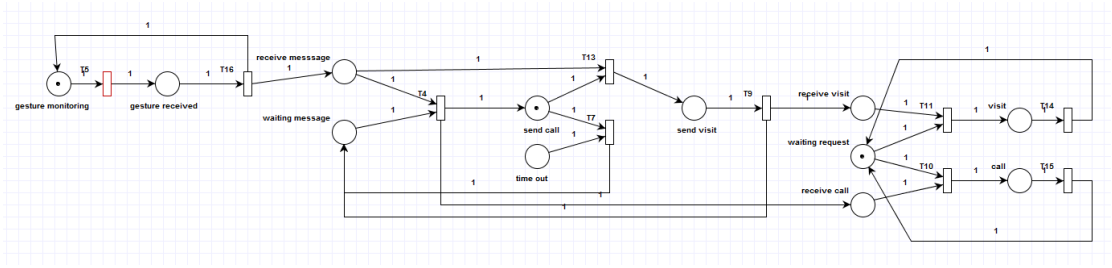
Send call



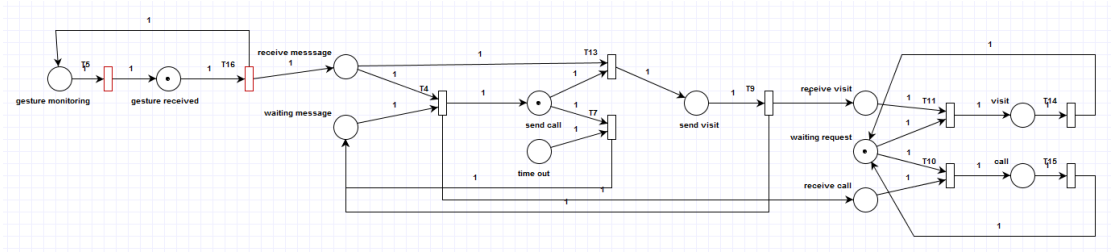
Call



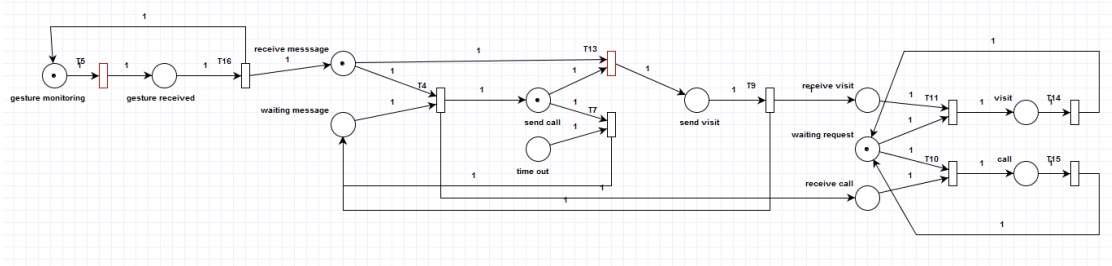
Call finished and previous message has not time out at Emergency Manager



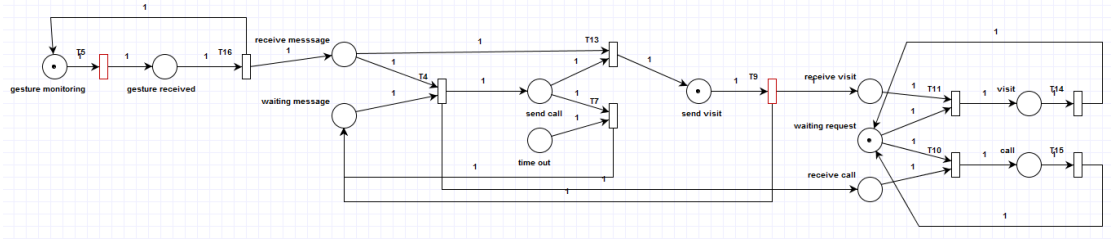
Another gesture is coming



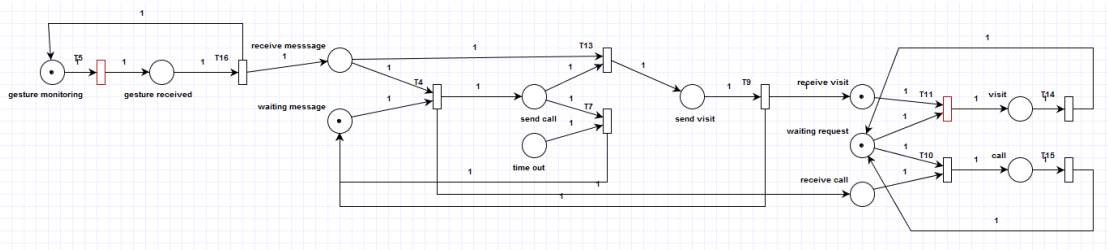
Message received



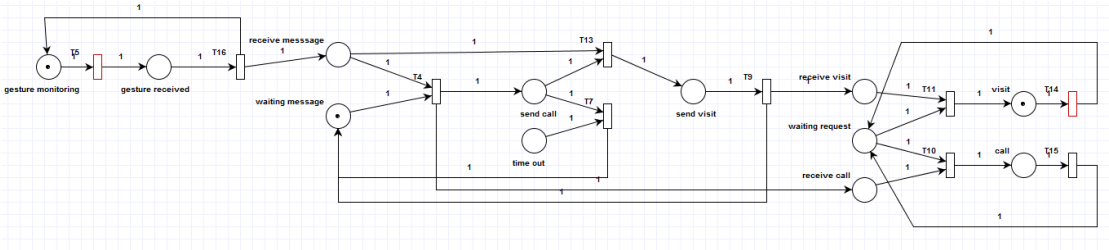
Send visit



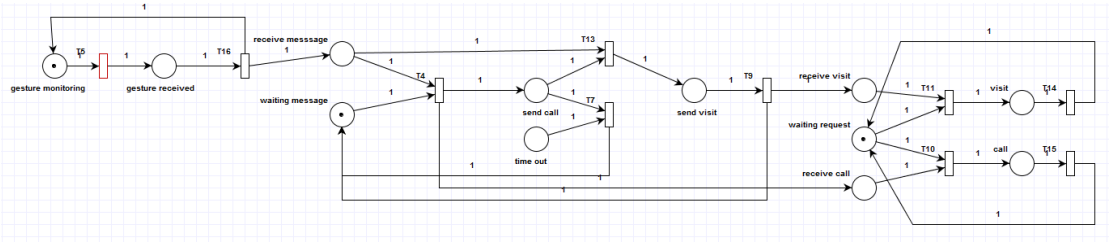
Received visit



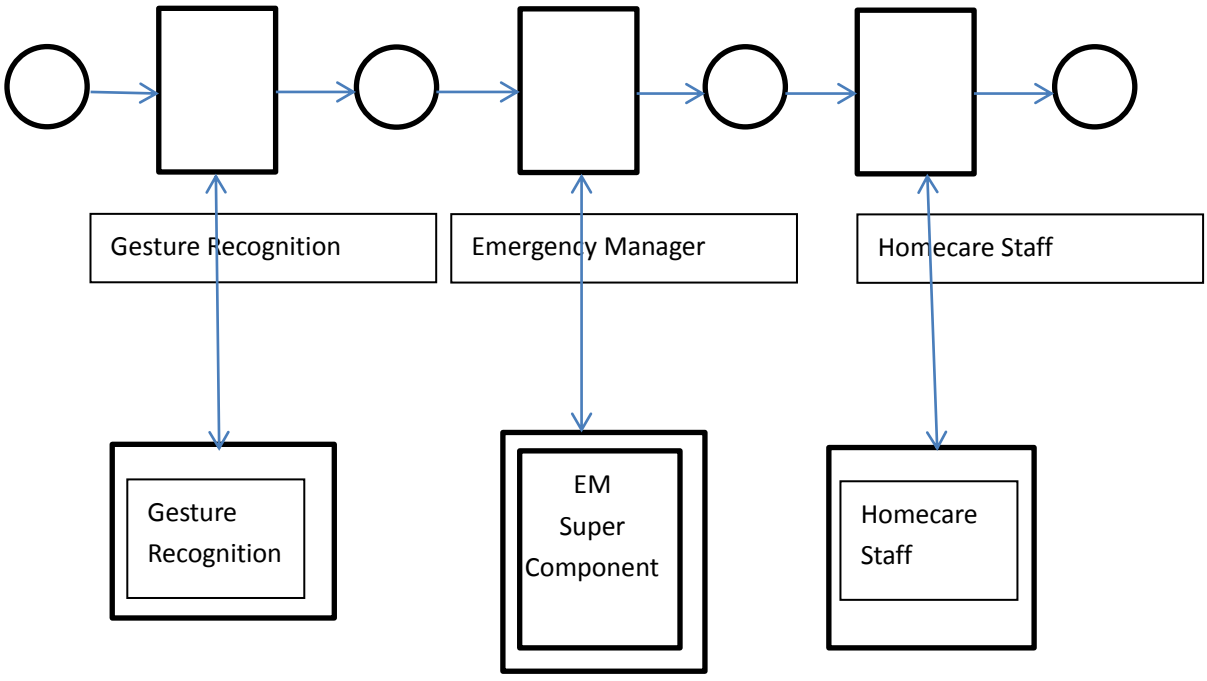
Visit

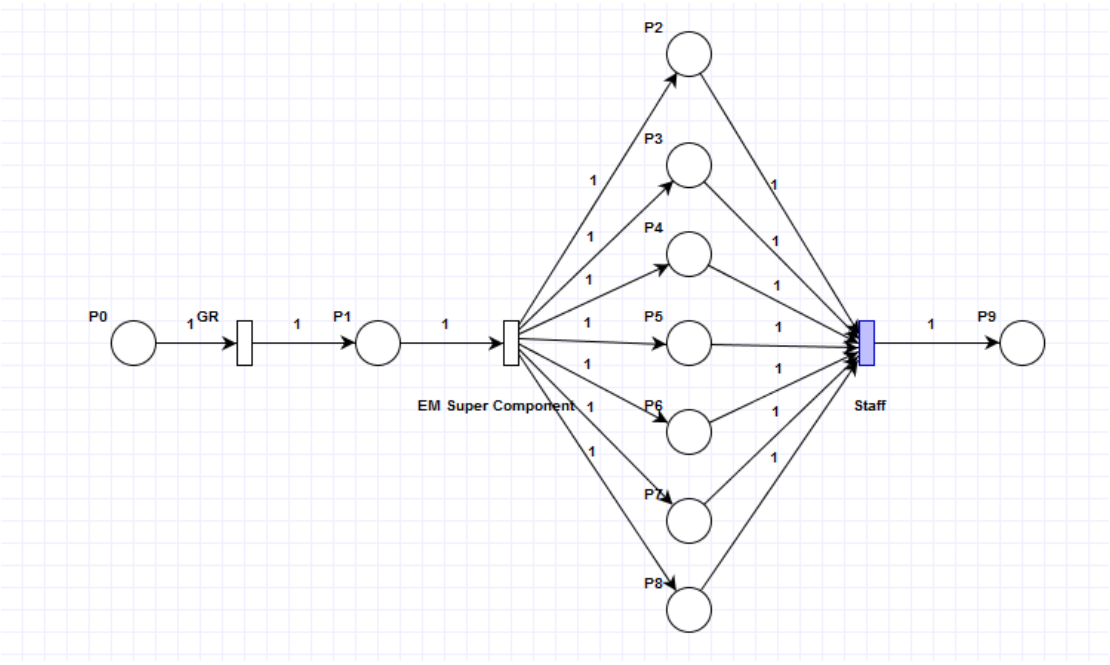


Start state



(c) Suppose the emergency manager index cell corresponds to a super-component, i.e., the emergency manager can enumerate a number of feasible solutions and select the most appropriate one. Draw the personal health care system as a pair of (I-card, C-card), and convert it into an ordinary Petri net. (To do that, you need to assume a specific number of feasible solutions for the emergency manager to evaluate. Let us say three.)




P2
P3
P4
P5
P6
P7
P8
P0
GR
P1
P9
EM Super Component
Staff
1