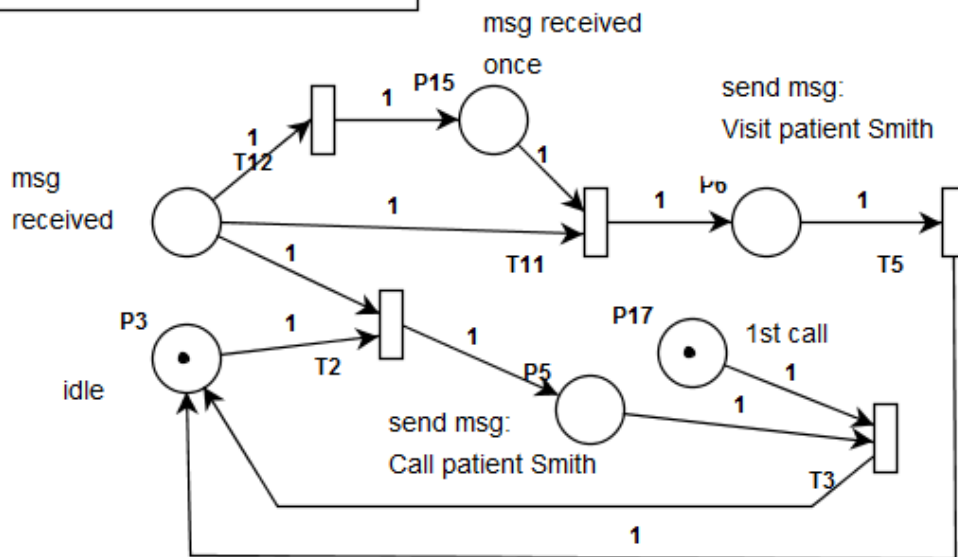
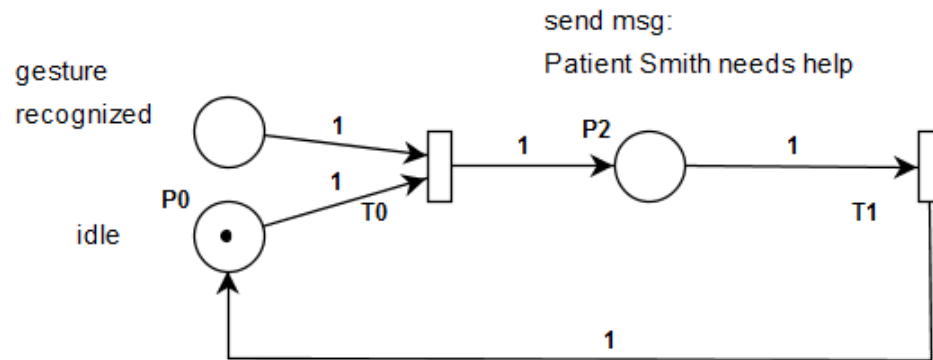
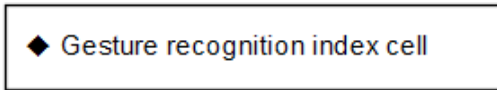


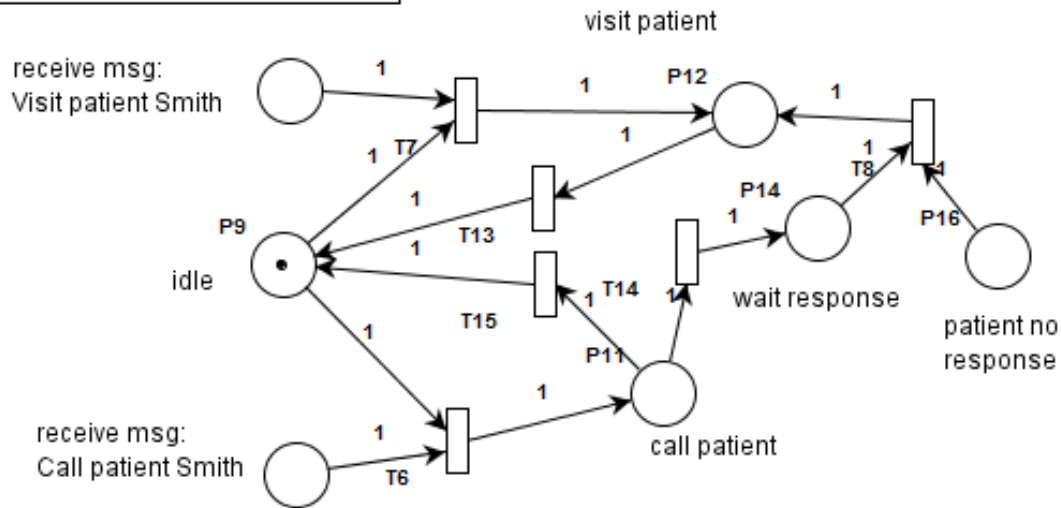
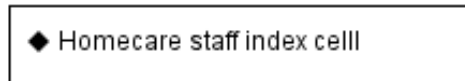
CS2310 Exercise 3

Wen-Chyi Lin

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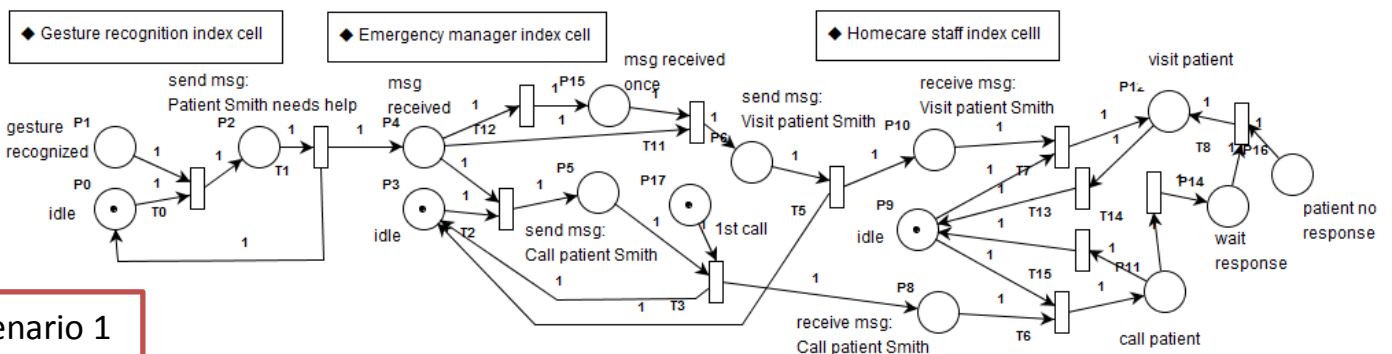
(a) Convert the active index you constructed in Exercise #2 into a Petri net (or an E-net)





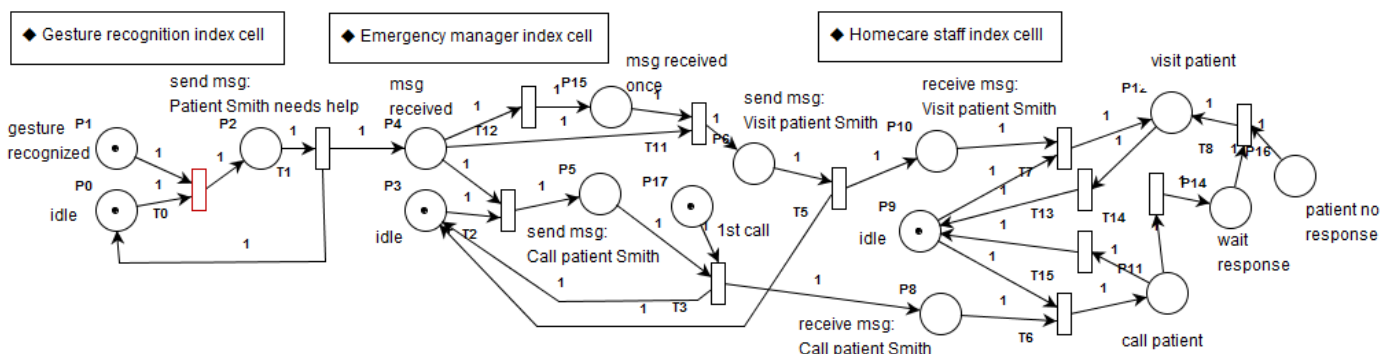
(b) Take the diagram you drew in part (c) of Exercise #2. Redraw it here (because you may want to make some changes), and now use the marked Petri net to illustrate the scenario. You can draw a sequence of marked Petri net to show how the system works.

- marked Petri net (initial state S_0)

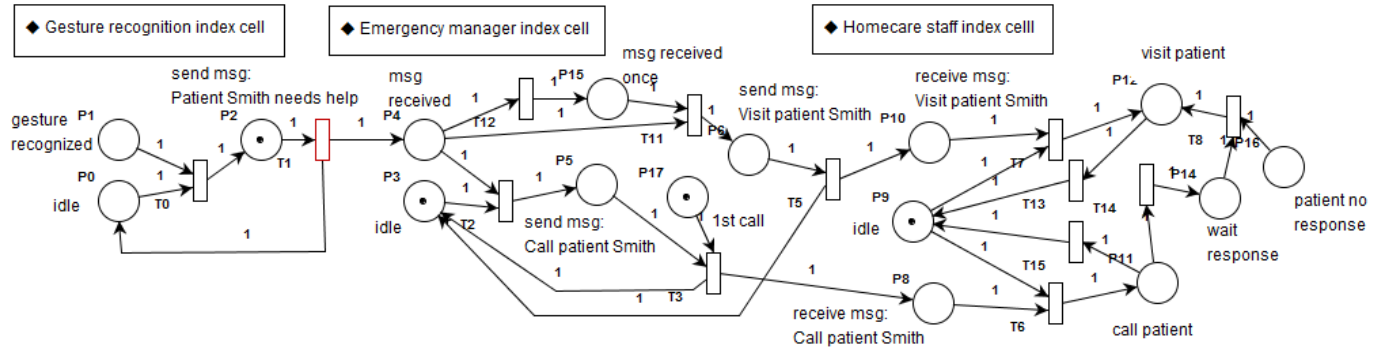


Scenario 1

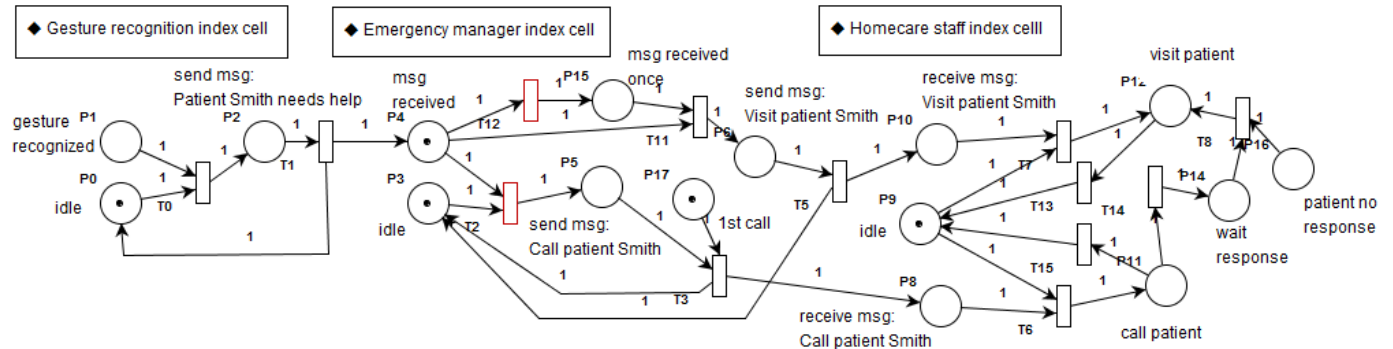
- Patient's hand gesture recognized by Gesture recognition IC: I need help



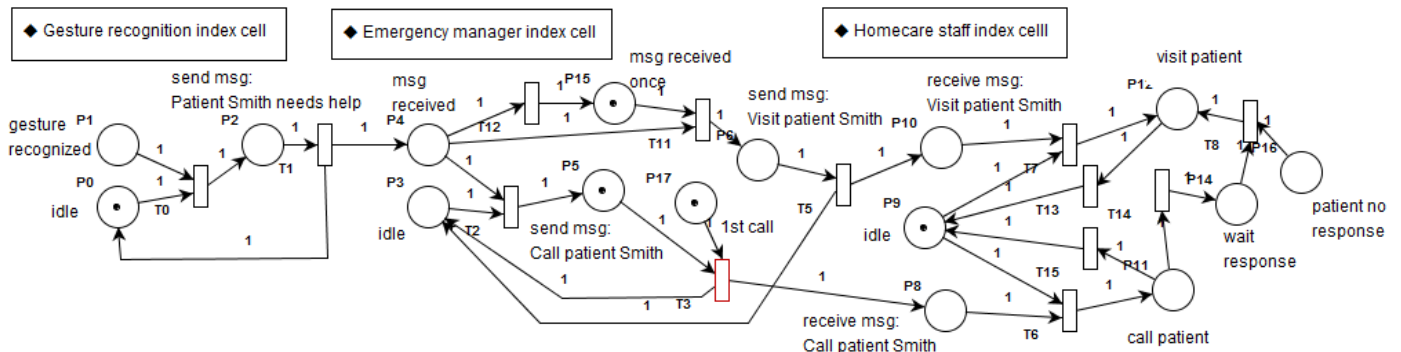
- send a message to Emergency manager IC: Patient Smith needs help



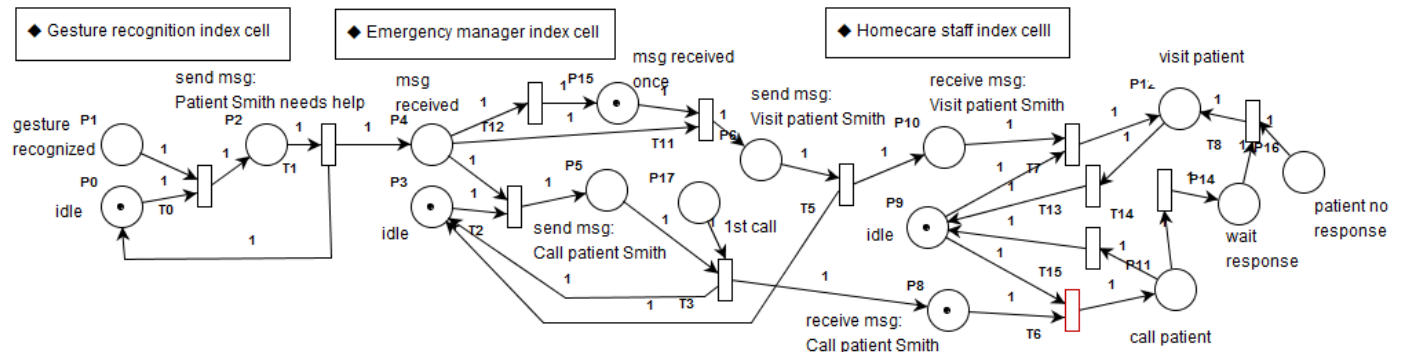
- The message is received by the Emergency manager IC



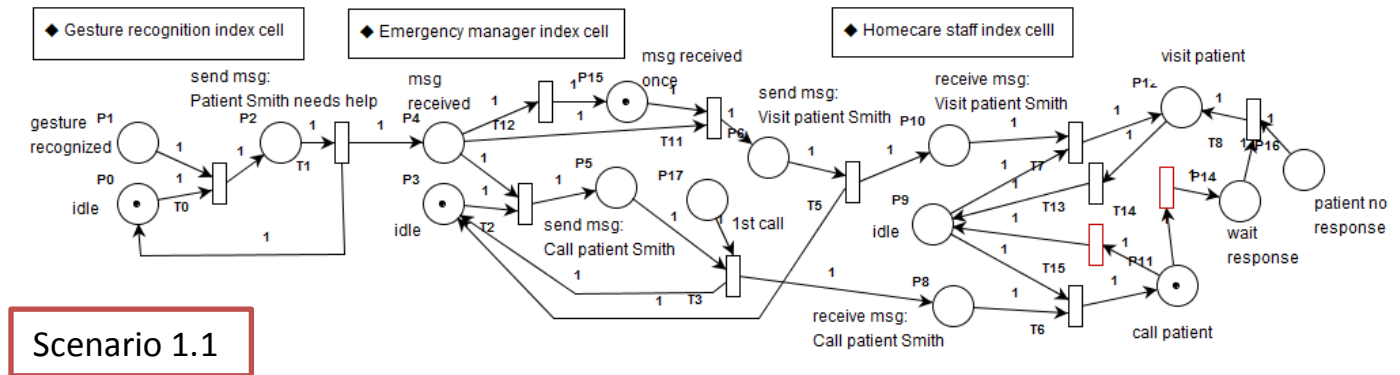
- Send a message to the Homecare staff IC



- The message is received by the Homecare staff IC

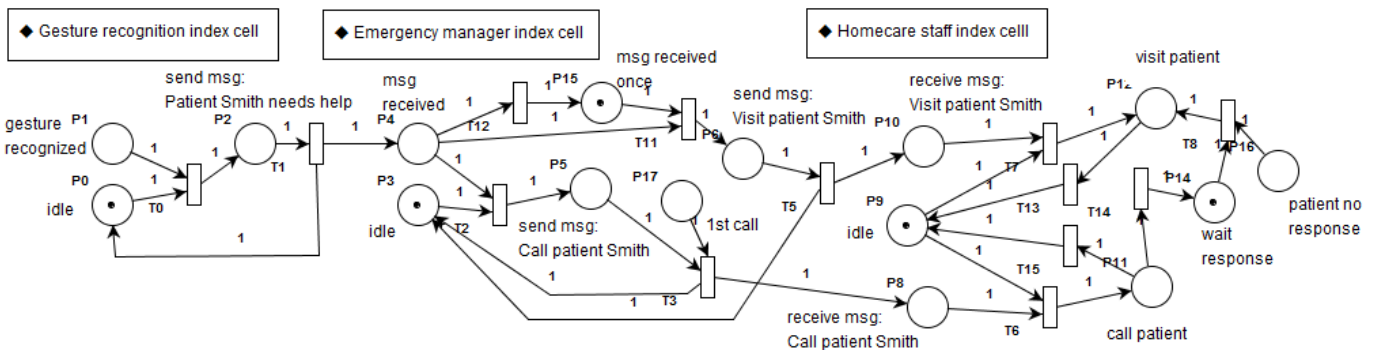


- Homecare staff call the patient right away

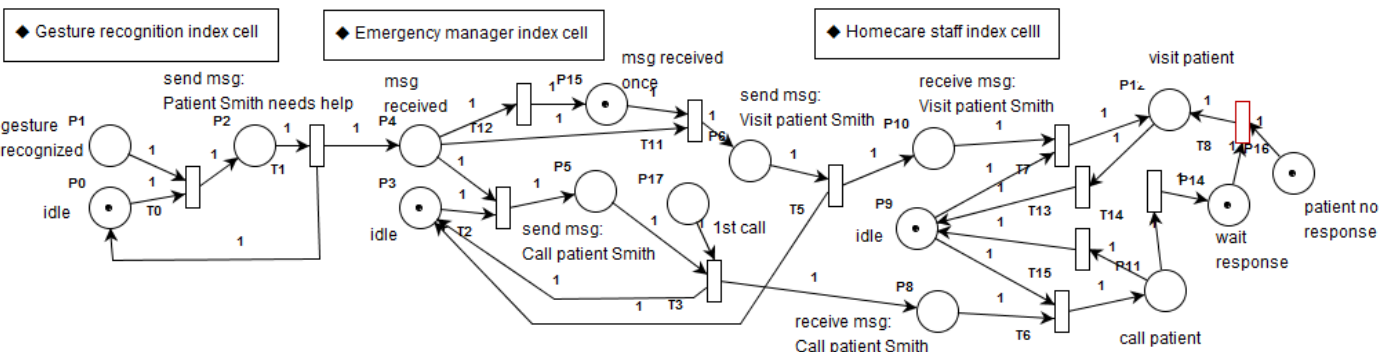


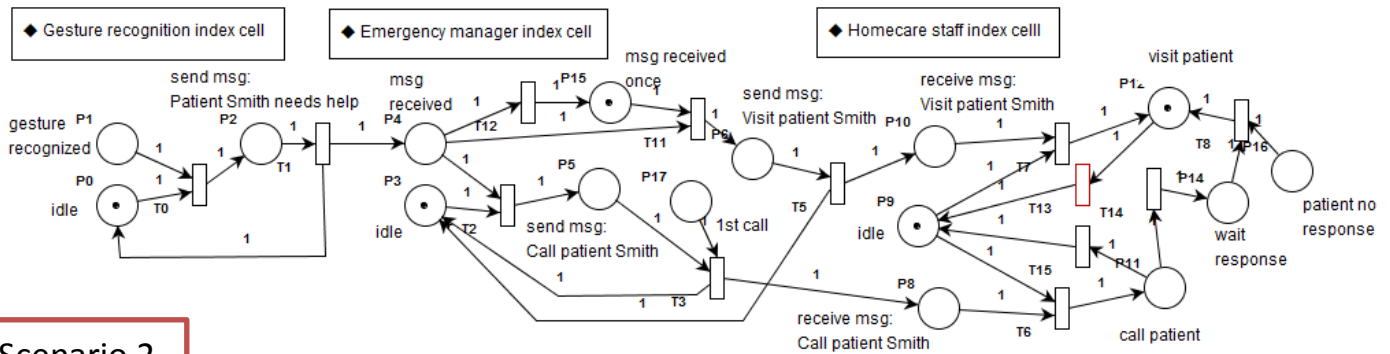
Scenario 1.1

- See if the patient picks up the phone or not

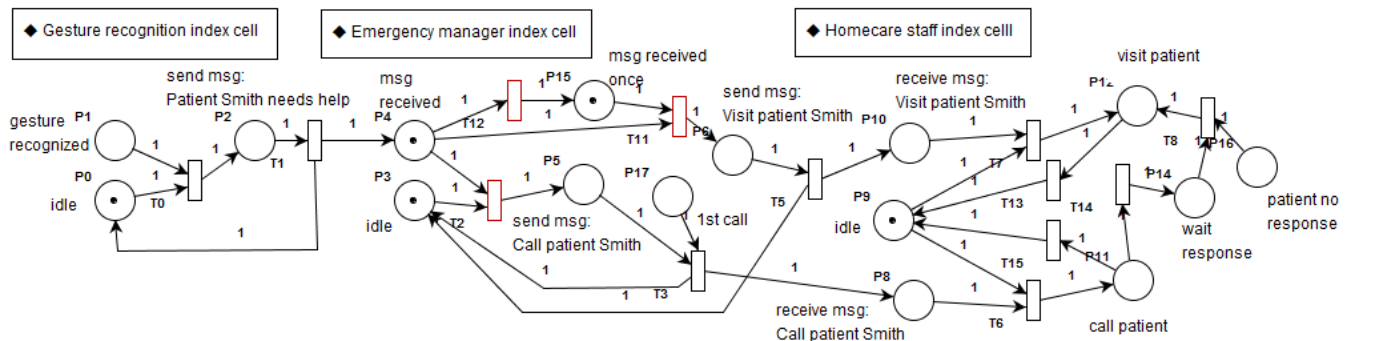
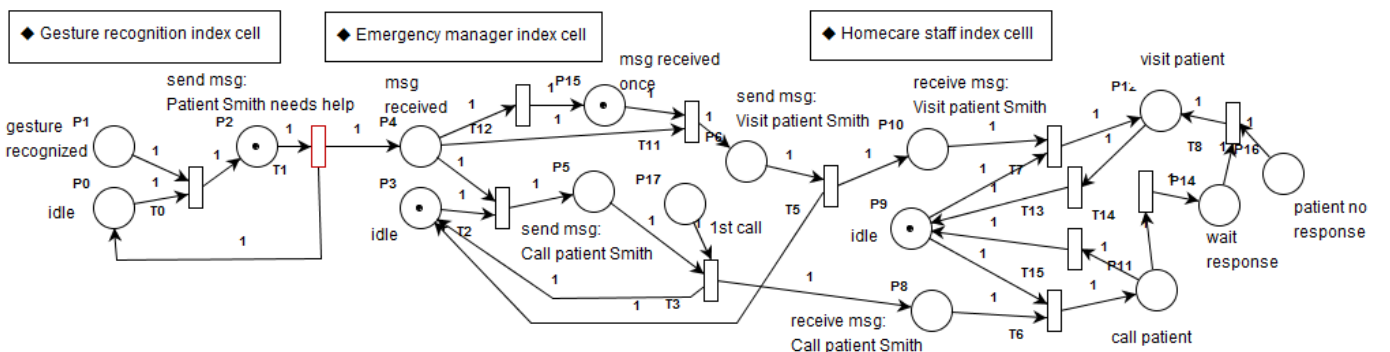
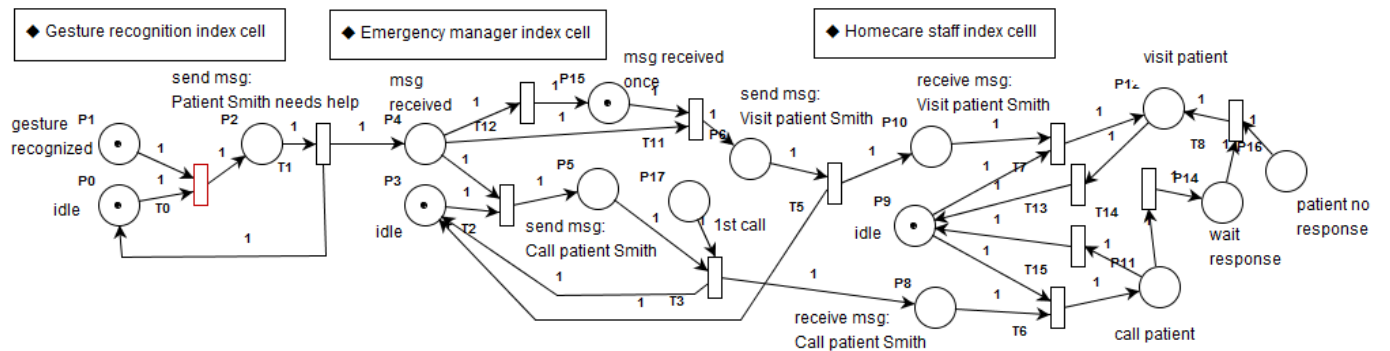


- When the patient doesn't answer the phone, the homecare staff will jump into the ambulance and visit the patient

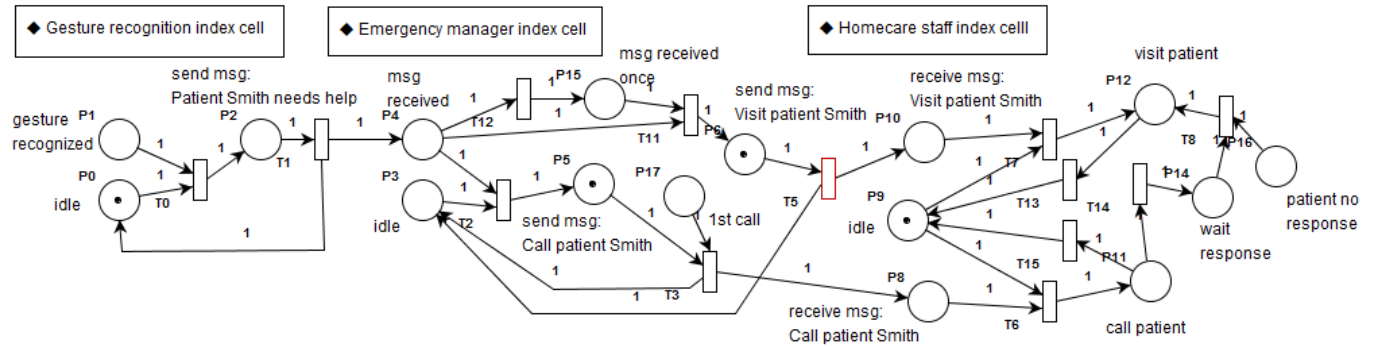




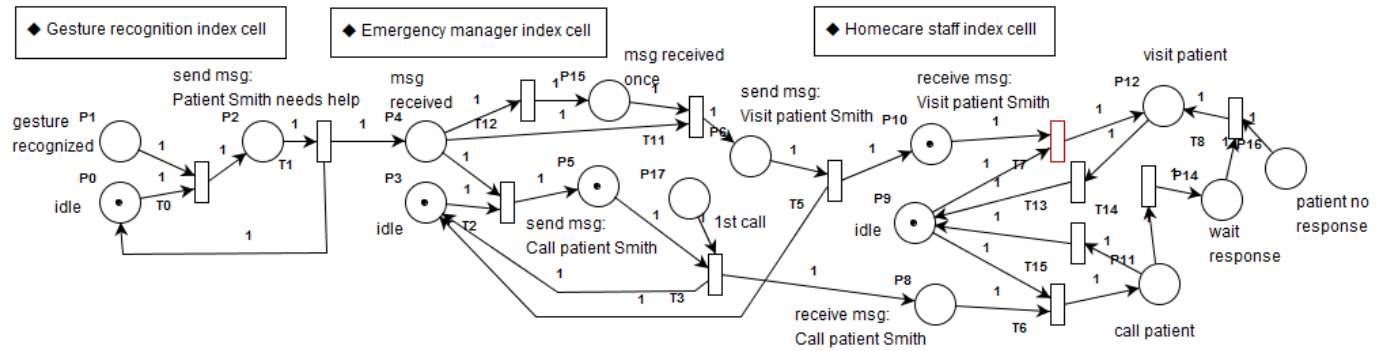
Scenario 2



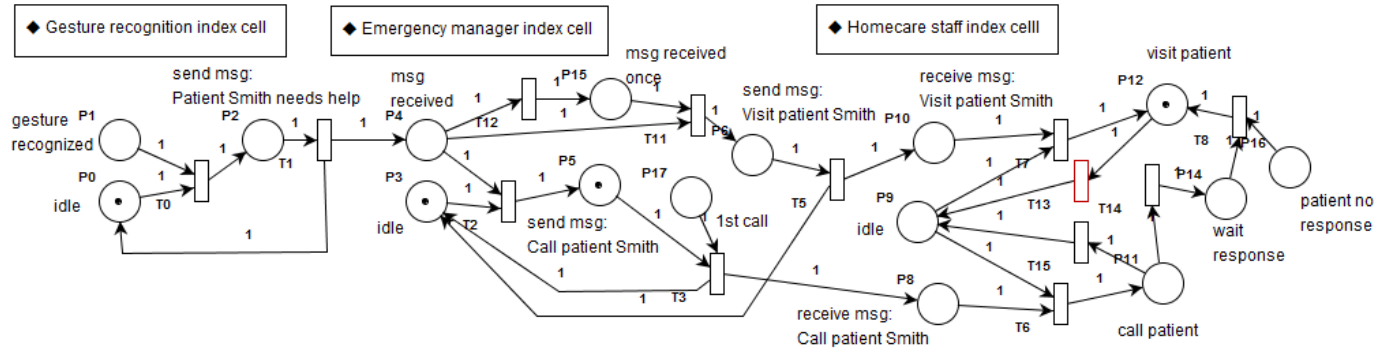
- Send a message to Homecare staff IC: Visit patient Smith



- Homecare staff IC receives the message: Visit patient Smith



- Homecare staff jump into an ambulance and visit the patient



- (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.)

