1. Enhance your P5 program to support the following features. The new program is called P6.
   (a) Use Composite pattern to store the elements of every places and transitions. [3 points]
   (b) Support two distinct states: (1) edit state, and (2) simulation state. You should provide GUI (e.g., toolbar buttons) to enable the switching between the edit state and simulation state. Note in simulation state, a mouse button press (or button down) also forces a transfer to edit state. However, the reverse is not true. [3 points]
   (c) In simulation state, your program should be able to simulate the Petri Net (display the progress of simulation) with selected firing policy. [3 points]
   (d) In edit state, your program should be able to use mouse to move a selected place or transition from one position to another (using drag and drop is preferred, but is not required). [3 points]
   (e) Draw the class diagram of your implementation. You do not need to draw the class diagram for unit tests. You may simplify the drawing of your class diagram by ignoring unimportant member variables or functions. [3 points]
   (f) Bonus: support the ability of selecting and moving more than one place or transition at a time (note: this is not a grouping operation; the selected places or transitions do not have to be grouped). [4 points]