CS-E4800 Artificial Intelligence
Assignment 3: Planning February 19, 2017

Return the assignment as a PDF file **599854.pdf** (or a text file 599854.txt) with the following content, as well as **your NDL file as attachments**.

1. Name and student number clearly visible: Khandelwal Mayank, 599854
2. The solution to the problem (NDL definitions)
3. Output from Celebes planner (and if the action names are not self-explanatory, a description of the plan in English, step by step.)

Deadline: Thursday March 9 at 23:59
Return to: MyCourses assignment page

Double-Decker Elevators

Some tall buildings, including world's tallest sky-scraper *Burj Khalifa* in Dubai, use elevators with two cabins on top of each other.

http://en.wikipedia.org/wiki/Double-deck_elevator

Model the control of double-deck elevators in NDL. As a basis of your solution use the NDL model of elevators on the assignment web page. Find a plan to transport passengers with your NDL model as follows.

- There are 9 floors numbered from 1 to 9.
- The elevator is initially on the 1st floor (with the upper car on the 2nd floor).
- Passengers' initial and goal floors are as follows.

passenger	init	goal
p1	9	2
p2	3	8
p3	4	9
p4	5	1

Make sure that you keep track which cabin each passenger boards, as the passenger must exit the lift from the same cabin.It is OK that the lower cabin can stop only at floors 1 to 8 and not at floor 9, and the upper cabin does not need to be able to stop at floor 1. Also, unlike some real-world double-decker lifts, there is no need to limit to only odd or even floors for the two cabins.You can move the lift one floor at a time, or several floors (as in the sample single-cabin elevator.)It is best to think of the lift location as the location of the *lower cabin*. Boarding and exiting the upper cabin simply uses floor number that is one higher than the location of the lift.