## Problem Set VI: Pac Man Project with MDP

**Aim** The purpose of this workshop is to help you get a better understanding of MDP and how to implement the value iteration using Berkely Pac Man.



http://ai.berkeley.edu/reinforcement.html

Your Task Your task is to complete the first question of Project 3 at http://ai.berkeley.edu/reinforcement.html#Q1. You can download all the necessary files to complete this task. (Those files will be used in the next week's workshop as well)

Hints In order to help you complete the task during the workshop, here are some useful hints:

- 1. The functions that you need to change:
  - (a) \_init\_
  - (b) computeQValueFromValue
  - (c) computeActionFromValue
- 2. The files you need to take a look:
  - (a) util.py (Counter())
  - (b) mdp.py (isTerminal(), getStates() ,getPossibleActions(), etc.)
  - (c) other files: (gridworld.py, learningAgent.py) not directly related
- 3. How to test your code:
  - (a) python autograder.py -q q1 (testing by autograde)
  - (b) python gridworld.py -a value -i 5 (result after 5 iteration)
  - (c) python gridworld.py -a value -i 100 -k 10 (how value iteration works)