**Points:  200**

This is an individual assignment, it is NOT to be done in your teams.

Create a program using Test Driven Development, writing the tests FIRST and then writing the code to satisfy the test. You will submit 2 files, the program and the test program.

You must use the Test::Unit framework as shown in class to write and execute your tests.

The program will consist of a Class called PuzzleClass. This class will create a puzzle object that will respond to the following methods:

initialize (width, height)

set\_puzzle( ) # take an initial configuration setup for a puzzle

get\_puzzle() # return a puzzle's configuration

move\_up() # move the space up

move\_down() # move the space down

move\_right() #move the space right

move\_left() #move the space left

solve() # "solve" the puzzle – this can just be returning a solved puzzle, no need

to show the steps, etc.

scramble() #Scramble the puzzle configuration for the user to solve.

to\_s # return the puzzle in a string format suitable for printing

run\_puzzle() # show and utilize a menu system for controlling the puzzle

Your test methods should test all aspects of each of the above functions, with the exception of the run\_puzzle (which is optional).

You can store the puzzle in any format you wish, but I recommend a double array.