CS4242 Programming Assignment #2 (Fall 2019)

Due: October 18, 2019 (11:30PM)

To implement A* Algorithm to solve the following problems (i.e. find the goal): to solve either (1 and 3) or (2 and 3).

1) N-Queen (N should be greater than or equal to 8):

2) 8 Puzzle Problem:

The 8 puzzle consists of eight numbered, movable tiles set in a 3x3 frame. One cell of the frame is always empty thus making it possible to move an adjacent numbered tile into the empty cell. Start with a random state. The goal state is listed below.

1	2	3
8		4
7	6	5

The program is to change the initial configuration into the goal configuration. A solution to the problem is an appropriate sequence of moves.

3) Your choice: Real World Applications preferred.

You may write your code in a contemporary language of your choice; typical languages would include C/C++, Java, Ada, Pascal, Smalltalk, Lisp, and Prolog. A GUI interface is required.

1. Submit a PDF file of your well-commented source program, your design and your printed outputs (screen shots). Please include you codes in your PDF file. Please do not take codes from the website if possible. Try to understand the algorithm and implement the algorithm by your own.
2. Provide a video presentation of your programming assignment in MP3 or YouTube.
3. Please upload 1) and 2) separately to D2L. Restriction: No zipped files.

Note that adding the following lines at the beginning of your program when you turn the program in.

```
// Course:          CS4242
// Student name:    John Doe
// Student ID:      xxx-xx-xxxx
// Assignment #:    #2
// Due Date:        October 18, 2019
// Signature:       _____
// Score:           _____
```