# CS 3630 : Assignment 2: Maze Solver

**Deadlines**:

- **Check point:** Tue, Jan 20th 11:55pm via T-Square.
- **Final Assignment Due**: Tue, Jan 27th 11:55pm via T-Square.
- Assignment has to be done in groups of **2**.
- Mention your **group member names** in the submission.

It is absolutely not allowed to share your source code with anyone in the class as well as to use code from the Internet. If you have any questions, ask on Piazza or in class. **Do not give out answers on Piazza!**

## 1 Problem Statement

- Given a 2D maze along with starting point and end goal, give an algorithm which returns a feasible path to go from start to end location. Algorithm will be graded based on its computational efficiency and the output path length.
- **Logistics**: Download and install pygame from `http://pygame.org`. Download `pymaze.py` from T-Square and replace get_path() function with your code.

## 2 Check point

Write a one page description of your current algorithm.

## 3 Final Assignment

1. Summarize your algorithm and write its pseudo-code.
2. Analyze the time and memory complexity of your algorithm. Run your code 100 times with random start and end location and report the average time taken by the algorithm.
3. Report the average CR of your algorithm over 100 runs with random start and end location. CR is defined as:

$$CR = \frac{\text{Actual distance traveled}}{\text{Euclidean distance between start and goal}}$$

4. Attach the source code along with the solution and zip the files as `GroupMember1_GroupMember2.zip`