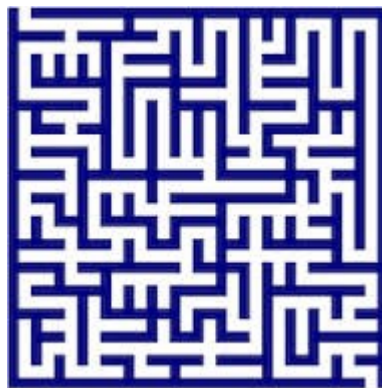


**CMP3005 Analysis of Algorithms
Programming Project**

MAZE GENERATION

Deadline: December 22, 2014

In this project you are required to develop a program which will generate random mazes using Depth First Search algorithm. An example maze is given below:



Specifications:

1. On the GUI (graphical user interface) there should be a button named “Generate Maze”. When this button is pressed the software should draw a random maze similar to the one shown above. You should animate the generation of the maze which will show how DFS works.
2. There should be one entry point and one exit on the outer walls of the maze.
3. On the GUI there should be a button named “Solve”. When this button is pressed the software should highlight the path from the entry point to the exit.
4. The GUI should let the user to find the solution using his/her mouse. The path on which the mouse pointer moves should be highlighted. There should be a button named “restart” which will clean the user drawn path and let the user to start again.
5. Before maze generation the user should be able to specify areas which will be excluded from the maze.

Project Groups

You can work in groups. There can be at most 2 people in a single group.

Demo

You will be required to make a demo of your project.

You must do your own work. You may discuss high level ideas with classmates, but you must write them **ALONE** in an isolated environment! If you get help, you must acknowledge that help in your writing. **IT’S NOT ALLOWED TO USE SOMEBODY ELSE’S CODE PARTLY or FULLY – THIS MAY BE A FRIEND, WEB PAGE OR A BOOK. WE HAVE ZERO TOLERANCE WHEN IT COMES TO CHEATING, UNIVERSITY’S RULES and REGULATIONS APPLY.**