

# Lab 3

## Preview

*2 February 2017*

This week's lab continues our work on class design, and also works a little more on our maze solver project by building a representation for the mazes. Before you come to lab, you should read the descriptions below and the code I've provided in `/home/shared/cmssc162-1/lab3/`, which just reads in a maze and writes it back out again (with a little extra info).

On paper (in your notebook is fine), make a list of places in `mazerw.cpp` that I've used C++ features that you've never seen or aren't really sure how they work. Include line numbers. Bring that paper with you to lab tomorrow.

### The file format

Maze files look like this:

```
7 4
#####
#...#o#
##*...#
#####
```

The first line contains two numbers (the width and height of the maze); subsequent lines contain a map of the maze itself, with each different type of maze content represented by a different character:

walls	#	(hash mark)
open spaces	.	(period)
start	o	(lowercase 'O')
finish	*	(asterisk)

Each maze will have exactly one start and exactly one finish; though note that not all open spaces need be reachable from the start, and the finish may also be unreachable.