Write a program to solve the following problem. You are given a maze, represented as a directed graph in standard adjacency lists format, a source node s and a target node t. You must report whether a path from s to t (that is, a path out of the maze) exists.

This assignment is marked out of 100 and is worth 8% of your course grade. You should submit, via the automarker at `www.cs.auckland.ac.nz/automated-marker`, the following.

- A single source file containing all necessary classes, etc. Check the automarker help for information on which compilers are supported.

Questions involving programming

- Your answer to each question should be a single file (containing all nonstandard classes you use). You can assume that input will come from standard input in a stream that represents one string per line. Output should be sent to standard out. You may assume that the marker has access to all standard libraries.
- A sample input and output file for each question will be available. The markers may check the output with a text comparison program, so it must be in EXACTLY the right format. Pay attention to line breaks and beware of nonstandard software such as anything made by Microsoft. For best results, use a Linux/Unix environment (the automarker does).
- You may take account of the feedback given by the automarker, and resubmit before the deadline without penalty. There is a limit of 10 submissions per person for each question.
- Your program(s) may be tested on randomly generated input files, some of which may be very large. Marks will be allocated for correctness and speed of the programs. Simply "passing" the largest input on the automarker may not always guarantee maximum marks. If full marks for correctness are not obtained, then the marks for speed are automatically set to zero.
- No marks will be awarded for comments, but you must at least include comments with the name of the author, UPI, and the purpose of the code.
- Pay attention to the university rules on plagiarism. If you use code snippets written by someone else, you must attribute these in your code comments.