Assignment 5 - Queues

Problem 1. Write a program to implement a queue consisting intergers by array.

Problem 2. Write a program to implement a queue consisting a list of names by linked list.

Problem 3. Write a program to reverse a queue consisting intergers by array.

Problem 4. (Topological sort) You have to sequence the order of n jobs that are numbered 0 to n-1 on a server. Some of the jobs must complete before others can begin. Write a program in C/C++ that takes a command-line argument n and a sequence on standard input of ordered pairs of jobs (i, j), and then prints a sequence of integers such that for each pair (i, j) in the input, job i appears before job j. First, from the input, build, for each job (1) a queue of jobs that must follow it and (2) its indegree (the number of jobs that must come before it). Then, build a queue of all nodes whose indegree is 0 and repeatedly delete any job with a 0 indegree, maintaining all the data.