Lab 07 - Queues Problems

Direction: Submit typed work in the Labs directory of your github repositor or dropbox, or upload to the google classroom assignment. The file name should be `lab7.cpp`.

Part A: In class

Your objective is to write the definition of the function `RookMove()` whose header is

```
bool RookMove(Vector<char>& bd,int s,int e)
```

Given that bd represents a chess board (8×8) that consists only of characters `'o'` for free space and `'x'` for occupied space, the function returns true if a rook whose start position is s can make it to the end position e in any number of steps if s and e are both between 0 and 63 inclusively; otherwise, it returns false. It does not matter if the start and end positions characters are `'o'` or `'x'`. However, movement to occupied spaces are prohibited. Since bd is in one-dimensional array and s and e are coordinates represented in one-dimension, use the formulas

```
p(r,c)= r * 8 + c
  r(p)= p / 8
  c(p)= p % 8
```

where `p(r,c)` converts indices of a two-dimensional (8×8) array to an index of an equivalent one-dimensional array, `r(p)` gets the row index for a two-dimensional (8×8) array from the index of an equivalent one-dimensional array, and `c(p)` gets the column index for a two-dimensional (8×8) array from the index of an equivalent one-dimensional array. Recall that a rook in chess can only move horizontally or vertically.

Hint: Keep track of positions visited.