#include "cnPtrQueue.h"

#include <cassert>

using namespace std;

namespace CS3358\_FA2019\_A5P2

{

// CONSTRUCTOR

cnPtrQueue::cnPtrQueue() : numItems(0) { }

// MODIFICATION MEMBER FUNCTIONS

void cnPtrQueue::push(CNode\* cnPtr)

{

inStack.push(cnPtr);

++numItems;

}

void cnPtrQueue::pop()

{

assert( !inStack.empty() || !outStack.empty() );

if (outStack.empty())

{

while(!inStack.empty())

{

outStack.push(inStack.top());

inStack.pop();

}

}

outStack.pop();

--numItems;

}

CNode\* cnPtrQueue::front()

{

assert( !inStack.empty() || !outStack.empty() );

if (outStack.empty())

{

while(!inStack.empty())

{

outStack.push(inStack.top());

inStack.pop();

}

}

return outStack.top();

}

// CONSTANT MEMBER FUNCTIONS

bool cnPtrQueue::empty() const

{ return outStack.empty() && inStack.empty(); }

// returns # of items in queue

cnPtrQueue::size\_type cnPtrQueue::size() const

{ return numItems; }

}