```cpp
#include "cnPtrQueue.h"
#include <cassert>
using namespace std;

namespace CS3358_FA2021_A5P2
{
    // to be implemented (part of assignment)
    cnPtrQueue::cnPtrQueue():
        numItems(0) {}

    bool cnPtrQueue::empty()const
    {
      return outStack.empty() && inStack.empty();
    }

    cnPtrQueue::size_type cnPtrQueue::size()const
    {
       return numItems;
    }

    CNode* cnPtrQueue::front()
    {
      assert(!inStack.empty() || !outStack.empty());
      if (outStack.empty())
      {
        while (!inStack.empty())
        {
          outStack.push(inStack.top());
          inStack.pop();
        }
      }
      return outStack.top();
    }


    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--;
    }
```

}