

```
#ifndef INTQUEUE_H
#define INTQUEUE_H

#include <iostream>
#include <string>
#include <sstream>

class IntQueue
{
public:
    IntQueue ();
    bool isEmpty () const;
    bool isFull () const;
    bool dequeue (int& x);
    bool enqueue (const int& x);
    int length () const;
    std::string display ();

private:
    int size;

    struct Node {
        int elem;
        Node * next;

        Node (const int& x)
        {
            elem = x;
            next = NULL;
        }
    };

    Node * front, * back;
};

#endif
```