

Review Activity 10

Stacks and Queues Practice 2

Implement a class called **SpecialQueue** that implements a **queue** using two stacks. Implement the following methods: `int size()`, `void enqueue(int)`, `void dequeue()`, and `int top()`. If the **SpecialQueue** is empty, then return -999. In your code, you may only call the `<stack>` methods, such as `bool empty()`, `int size()`, `void push (int value)`, `void pop()`, and `int top()`. You may use helper functions if needed, but those need to be non-recursive too.

```
class SpecialQueue{
private:
    const int empty = -999;
    stack<int> main, side;
public:
    void enqueue(int value){
        main.push(value);
    }
    int size(){
        if(main.empty())
            return empty;
        return main.size();
    }
    void dequeue(){
        while(!main.empty()){
            int temp = main.top(); main.pop();
            side.push(temp);
        }
        cout << side.top() << endl;
        side.pop();

        while(!side.empty()){
            int temp = side.top(); side.pop();
            main.push(temp);
        }
    }
};
```

