# Data Structure: Assignment #4

1. Implement a **Deque** data structure using a linked list (the **Deque** should be able to work as a Stack or as a Queue) for simplicity, implement it using a double linked list. You need to implement four methods:
   - void **pushBack**( *SomeType* data)
   - void **pushFront**(*SomeType* data)
   - *SomeType* **popBack**()
   - *SomeType* **popFront**().

2. Write a method *Queue* **reverse** (*Queue* q) for reversing the order of a queue.

**Hint:** You are freely to use another data structure (if you need) to do your task.

3. Implement stack data structure using two Queues, use Dequeue() and Enqueue() methods to implement Push() and POP() methods.
4. Implement Queue data structure using two Stacks, use Push() and POP() methods to implement Dequeue() and Enqueue() methods.