C++ Deque

For practice with C++ programming, I have written a deque template container class (based off of the deque in the stl). This will document my development process and explain my implementation.

Interface

push\_front insertion of data at the front of the container

push\_back insertion of data at the back of the container

pop\_front removal of data at the front of the container

pop\_back removal of data at the back of the container

at random access lookup

operator[] random access lookup

size getter for number of elements in the container

empty returns true if the container is empty

Runtime goals

-push\_front : O(1) constant insertion of data at the front of the container

-push\_back : O(1) constant insertion of data at the back of the container

-pop\_front : O(1) constant removal of data at the front of the container

-pop\_back : O(1) constant removal of data at the back of the container

-at/[]operator : O(1) constant random access lookup

Initial internal state

