**CSE 330 HW # 4**

1. I’ve completed 100% of the homework.
2. Complexity Analysis

|  |  |  |
| --- | --- | --- |
| **Function Name** | **Time Complexity** | **Storage Complexity** |
| Deque() | O(1) | O(1) |
| Deque(unsigned int size, T initial) | O(n) | O(1) |
| Deque(Deque<T> & d) | O(n) | O(1) |
| ~Deque() | O(1) | O(1) |
| Operator[] | O(1) | O(1) |
| Operator=(const Deque<T> & d) | O(n) | O(1) |
| Front() | O(1) | O(1) |
| Back() | O(1) | O(1) |
| Empty() | O(1) | O(1) |
| Begin() | O(1) | O(1) |
| End() | O(1) | O(1) |
| Erase(const iterator) | O(n) | O(1) |
| Erase(cons iterator, const iterator) | O(n) | O(1) |
| Insert(const iterator, const T &) | O(n) | O(1) |
| Size() | O(1) | O(1) |
| Push\_front(const T & value) | O(1) | O(1) |
| Push\_back(const T & Value) | O(1) | O(1) |
| Pop\_front() | O(1) | O(1) |
| Pop\_back() | O(1) | O(1) |
| Center\_it() | O(n) | O(n) |
|  |  |  |
| DequeIterator() | O(1) | O(1) |
| DequeIterator()Deque<T> \* d, int) | O(1) | O(1) |
| DequeIterator(iterator d) | O(1) | O(1) |
| Operator\*() | O(1) | O(1) |
| Operator++() | O(1) | O(1) |
| Operator++(int) | O(1) | O(1) |
| Operator—() | O(1) | O(1) |
| Operator—(int) | O(1) | O(1) |
| Operator==() | O(1) | O(1) |
| Operator!=() | O(1) | O(1) |
| Operator=() | O(1) | O(1) |
| Operator+(int) | O(1) | O(1) |
| Operator-(int) | O(1) | O(1) |

3. See attached for source code