**CSE 330 Lab Report # 8**

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

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| --- | --- | --- |
| **Function Name** | **Time Complexity** | **Storage Complexity** |
| Node() | O(1) | O(1) |
| Node(const T & x, Node \*, Node \* | O(1) | O(1) |
| Insert(Node \* newNode) | O(log n) | O(1) |
| Find(const T & x) | O(log n) | O(1) |
| Merge(Node \* left, Node \* right) | O(n) | O(1) |
| Set() | O(1) | O(1) |
| Empty() | O(1) | O(1) |
| Size() | O(1) | O(1) |
| Insert(const T & x) | O(log n) | O(1) |
| Erase(iterator & it) | O(log n) | O(1) |
| Erase(const T & x) | O(log n) | O(1) |
| Count(const T & x) | O(log n) | O(1) |
| Begin() | O(1) | O(1) |
| Remove(Node \*, const T &) | O(log n) | O(1) |
| Set\_iterator() | O(1) | O(1) |
| Set\_iterator(Node \*) | 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\* | O(1) | O(1) |
| Operator= | O(1) | O(1) |

3. See attached for source code