**Exercise 3**

**Leftist Heap Manual**

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**FILES ENCLOSED:**

1. **node.m**
2. **mesh.m**
3. **meld.m**
4. **insert.m**
5. **heapify.m**
6. **insertHeapify.m**
7. **setRank.m**
8. **read\_tree.m**
9. **time\_calc.m**

**10.queue.m**

**HOW TO USE:**

To use *heapify()* function:

Example:

>> a= heapify([1 6 2 -1 9 3]);

To use *insertHeapify()* function:

Example:

First create an empty heap h[]

>> h=[];

>> b=insertHeapify(h,[3 9 1 2 5 10]);

To use *read\_tree()* function:

Example:

>> read\_tree(b)

Nodes in order: 1, 2, 3, 5, 10, 9,

Parent nodes in order: NaN, 1, 1, 2, 2, 3,

Ranks in order: 2, 2, 1, 1, 1, 1,

Edge directions in order:, L, R, L, R, L

Which translates to this tree:

(1)2

/ \

/ \

(2)2 (3)1

/ \ /

/ \ (9)1

(5)1 (10)1

To use *time\_calc()* function:

Example: >> time\_calc(1000);