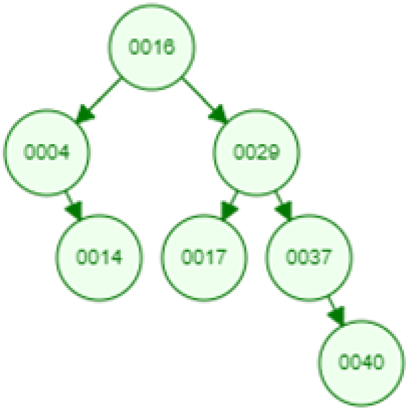
[Name / ID]: ______________________________

Section: ______________________________

Do not turn this page unless asked.

1. [7 points] Insert the following numbers into an empty AVL Tree in the order they appear.
   10, 51, 21, 15, 17

2. [8 points] Delete ‘004’ from the following AVL Tree:



3. [5 points] We can sort n integers by inserting in an AVL tree and then performing in-order traversal. This will take O(n log(n)) as we have to insert n items where the cost of inserting an item is O(log(n)). This cost is similar to Quick Sort or Merge Sort - can you identify at least one use-case where sorting the data using AVL tree is a better choice than using Quick Sort or Merge Sort (or any sorting) algorithm?

CS201 L5 Quiz 4

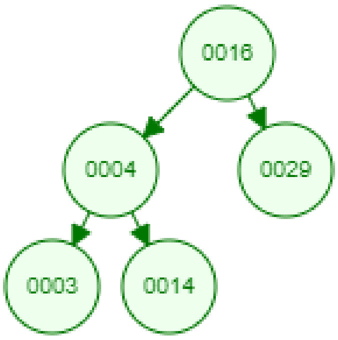
[Name / ID]: ______________________________

Section: ______________________________

Do not turn this page unless asked.

1. [7 points] Insert the following numbers into an empty AVL Tree in the order they appear.
   110, 115, 120, 117

2. [8 points] Delete ‘0029’ from the following AVL Tree:



3. [5 points] We can sort n integers by inserting in an AVL tree and then performing in-order traversal. This will take O(n log(n)) as we have to insert n items where the cost of inserting an item is O(log(n)). This cost is similar to Quick Sort or Merge Sort - can you identify at least one use-case where sorting the data using AVL tree is a better choice than using Quick Sort or Merge Sort (or any sorting) algorithm?