Units 14, 15, 16 Data Abstractions

- (a) Starting from an empty tree, draw the BST if the following 15 keys are inserted in-order: 8, 3, 12, 7, 9, 6, 10, 15, 2, 14, 13, 4, 11, 5, 1. (One BST is enough).
  (b) Write down the post-order visiting sequence of the tree in (a)
  (c) Starting from (a), draw the BSTs if 13, 7, and 8 are deleted in-order. Draw BSTs after each deletion.
- 2. (a) Draw the binary min heap (tree) after 5, 4, 1, 2, and 3 are inserted to an empty heap in exactly that order. You need to show those trees after each insertion.

(b) Draw the array of the min heap after one extraction from (a).

Suppose you have two Circular Doubly Linked Lists, List A and List B. Each node consists of three parts: prev pointing to the previous node, next pointing to the next node, and data storing the value.
 List A:
 List B:





a) After concatenating List B at the end of List A, what will the new CircularDoubly Linked List look like? (Please explain each step of the operation in detail.)b) What is the time complexity of this operation?