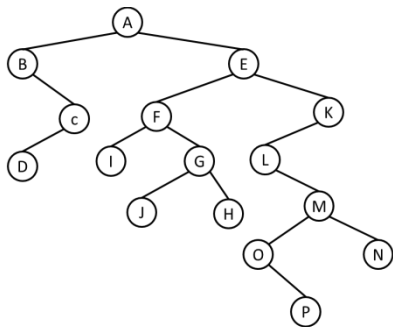


Homework 6

This homework is **NOT** a programming homework. The submission **MUST** be in PDF format. You are recommended to use [Google Docs](https://docs.google.com) to plot the figures online. Do NOT plot it by handwriting and scan it. It is also OK if you choose to use PowerPoint, Visio, or similar tools to plot figures. But your submission must be in **PDF**.

Question 1:

Use print this tree using preorder, inorder, and postorder Traversal on this tree, give all three traversals



Question 2:

[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
87	78	53	45	65	09	31	17	23

A heap is stored in an array.

- 1) Draw the heap based on the given array. Suppose this heap represents a queue.
- 2) Then dequeue elements one by one from this queue until the queue is empty. Draw the status after every dequeue operation (totally 9 figures, you just need to give the status after dequeue operation and reheardown operation)

Question 3:

AVL Tree

Initial status is empty. Insert 50, 20, 60, 10, 8, 15 into this AVL tree in order. Draw every status of the tree

Usage of Google Docs

1. Go to docs.google.com and log in with your csueastbay email account.
2. Start a new document
3. In the started document, File-> New->Drawing
4. Then you can draw the tree. The nodes of the tree should be a rectangle or circle shape. The nodes must be linked by using lines
5. When you are done, you need to File->Download->PDF to download it as a PDF file.
6. Finally, submit the PDF file to BlackBoard.

Some students suggested draw.io which is also a good choice for doing this homework.

Requirements:

1. [5%] The Following identification information must be included at the beginning of your pdf file.
//Name: XXXXXXXX
//Email: XXXX@csueastbay.edu
2. [5%] Must be plotted on computers not handwritten.
3. [30%] Question 1
4. [30%] Question 2
5. [30%] Question 3