CSE 310 Recitation 7

Objectives:

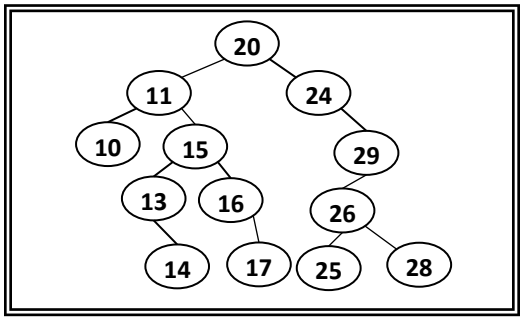
1. Insertion, deletion, and rotation on a BST.

Rules:

1. Except for diagrams, charts or tables, answers MUST be provided in typed form.
2. For grading purposes, do NOT just submit the answers, instead copy each question, and put your answer under it. Unreadable and unclear answers will be graded with 0 points.
3. Submit your recitation on Canvas as a single PDF file.
4. For each recitation, you have 2 attempts to submit, but we will ONLY grade your last submission! It's your own responsibility to make sure that you submit the correct file! We will not accept any submissions through email.
5. **Equipment defects and technological difficulties cannot become excuses for late submission. No late submissions will be accepted!**

Question

1. For the following Binary Search Tree, answer questions. [1 pt each, total 4 pts]



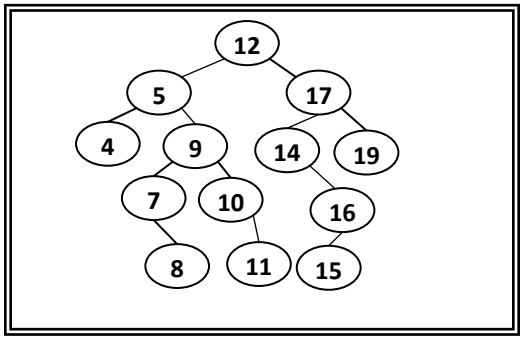
1.1) Draw the resulting BST if we insert a new node 12 inside above original tree.

1.2) Draw the resulting BST if we delete node 11 from above original tree.

1.3) Draw the resulting BST if we delete node 20 from above original tree.

1.4) Draw the resulting BST if we delete node 24 from the original tree.

2. Given the following binary search tree T, answer questions.[total 6 pts]



2.1) Draw the resulting BST if we perform LEFT-ROTATE(T, 5) on the original tree.

2.2) Draw the resulting BST if we perform LEFT-ROTATE(T, 12) on the original tree

2.3) Draw the resulting BST if we perform LEFT-ROTATE(T, 14) on the original tree

2.4) Draw the resulting BST if we perform RIGHT-ROTATE(T, 17) on the original tree.

2.5) Draw the resulting BST if we perform RIGHT-ROTATE(T, 12) on the original tree