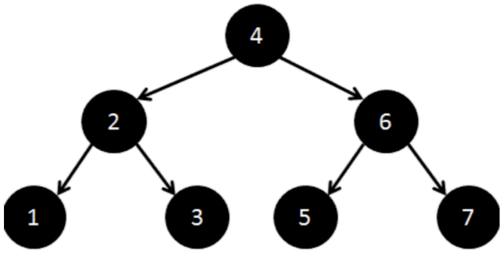
Practical 08 Specification – A Hand-on Exercise to solve BST and 2-3 Trees
credit/no-credit
Due (via your git repo) no later than 8 a.m., Monday, 24th April 2021.

Exercise to solve Sorting Algorithms:

The key focus is to understand how the BST and 2-3 Algorithms work by realization of the changes in the Array?



1. Examples of BST and 2-3 Trees are provided in the lecture slides. Please refer to slides from lesson-9.
2. First draw the Binary Search Tree for the input provided below. Next draw the 2-3 Trees for the same input provided below. Assume the input in the example provided below to be inserted sequential into the tree. Draw both the trees on a sheet of paper and upload a clear image of the trees using a file named `ascending.png`. Note, you can use any image format such as jpeg, png, gif, and so on.

   problem1:

1	2	3	4	5	6	7	8	9	10

   Hint: Is your BST left or right skewed? and how does the 2-3 tree looks like? in terms of the balanced state. What is the runtime for BST search and did the 2-3 tree version improve the search runtime?
3. First draw the Binary Search Tree for the input provided below. Next draw the 2-3 Trees for the same input provided below. Assume the input in the example provided below to be inserted sequentially into the tree. Draw both the trees on a sheet of paper and upload a clear image of the trees using a file named `descending.png`. Note, you can use any image format such as jpeg, png, gif, and so on.

   problem2:

10	9	8	7	6	5	4	3	2	1

   Hint: Is your BST left or right skewed? and how does the 2-3 tree looks like? in terms of the balanced state. What is the runtime for BST search and did the 2-3 tree version improve the search runtime?
4. Make edits to the honor-code.txt file. Here, read through the honor code statement and sign by replacing Student Name with your name. The honor-code is required to be signed for the work to be graded.

Submission Details

For this practical, please submit the following to your GitHub repository by using the link shared to you by the Professor:

1. `ascending.png` and `descending.png` files.
2. A document with the honor code pledge signed in a file named `honor-code.txt` document.
3. It is highly important, for you to meet the honor code standards provided by the college and to ensure that the submission is completed before the deadline. The honor code policy can be accessed through the course syllabus.