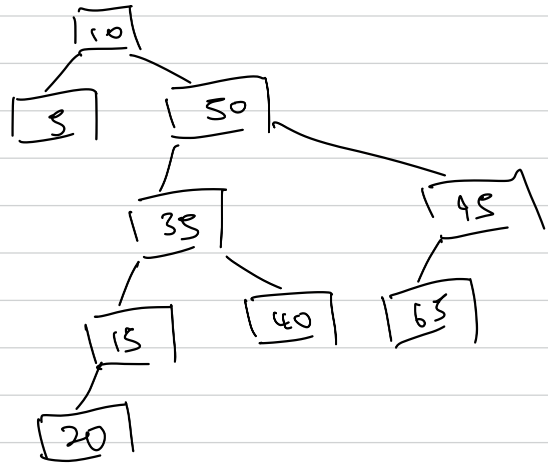
First set of BST.

$\{10, 5, 50, 35, 40, 15, 95, 65, 20\}$



min
- The max height for b Trees are $\log_5 n$, while the

min
max height for 2-3-4 trees are $\log_4 n$. The RB Tree always has a height of $(\log_2 n)+1$.

- BST with the same input

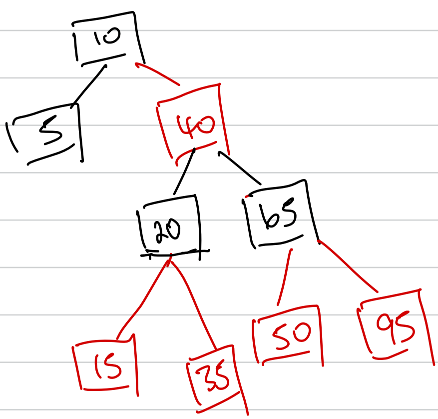
  - Set 1: Gave an almost complete tree with a max height of 4, worse out of the 4.

Set 2: Gave a complete degenerate tree with a height of $O(n)$.
and
3 More worse than the other types of trees.

- The time complexities of all advanced trees are o(log n) for all those operations. Compared to BSTs, its time complexity for all operations are o(log n) as well, however because it is not a self balancing tree, its worse case is o(n).

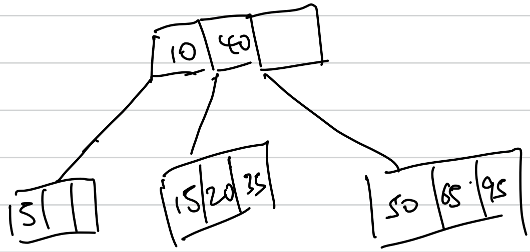
- Either 2-3-4 or black trees are easier to implement. This is due to only having to split the nodes when it is full compared to RB tree as it has a few cases to consider.

- RB Tree



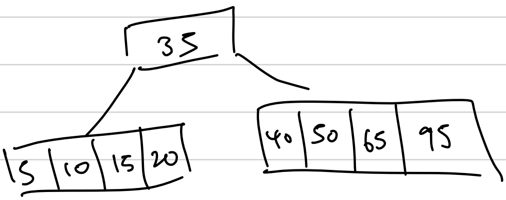
5, 10, 15, 20, 35, 40, 50, 65, 95.

- 2-3,4



5, 10, 15, 20, 35, 40, 50, 65, 95.

- Block trees



5, 10, 15, 20, 35, 40, 50, 65, 95