Prac10 -sohail

1. Same as the demo app
2. Same as the demo app
3. Different to the demo app
4. a) Compared to 2-3-4 trees and B-trees height, BST height is larger almost all the time. Red-black however might sometimes a higher height than BST.

b) In terms of inserting, finding, and deleting, all three algorithms would be faster. This is because they are self-balancing and use fewer comparisons and checks than binary search trees. If the node is at the bottom of the tree, the binary search tree can take O(N) time for insertion, deletion, and finding, whereas with the other algorithms we are testing, this cannot happen.

c) I personally think that the red-black trees would be the hardest to implement and the 2-3-4 and B-trees would be easier to implement due to its easy concept.

d) In an inorder traversal, the left child is inspected first (along with its entire subtree), followed by the node, and finally the right child (along with its entire subtree. I believe that this traversal method would work the same in redblack tree as it did in BST. In 2-3-4 and b-trees it would start from the left go up then down then down to the right.