Data Structure
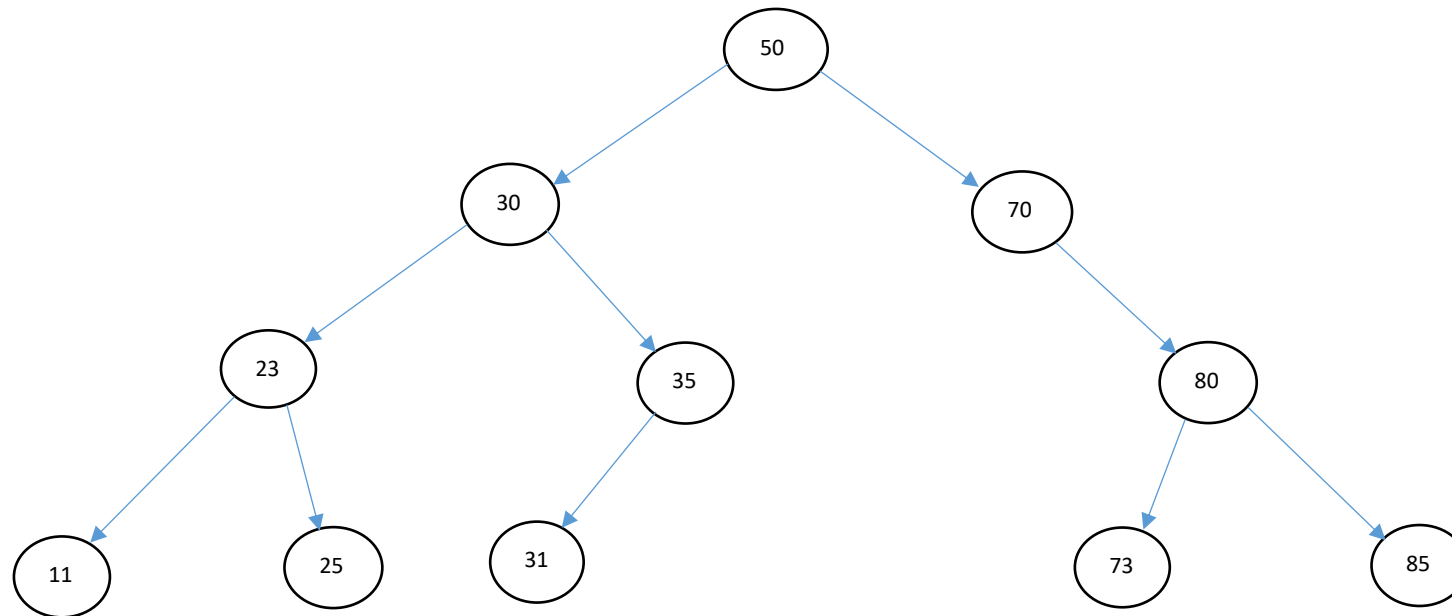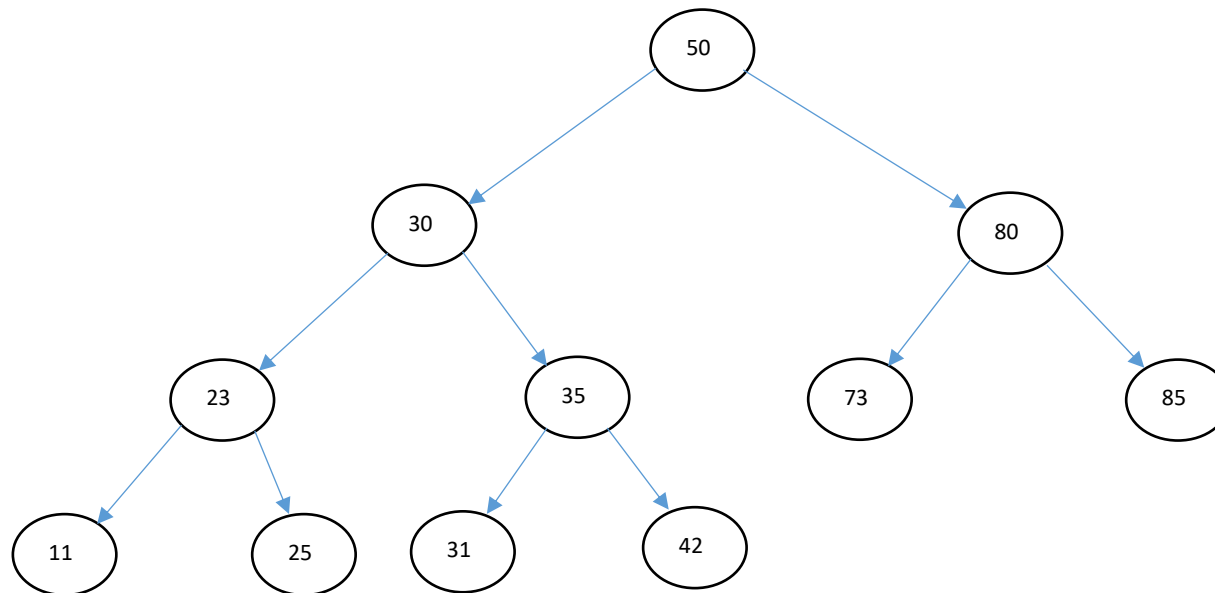
Section 3:
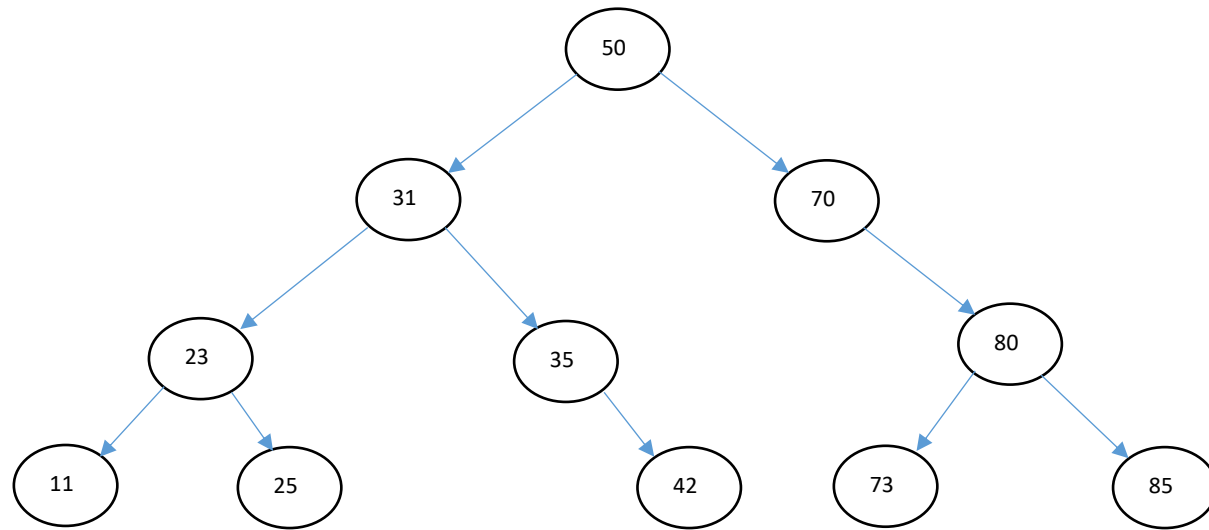
- Problem 1

1. Since node (42) is a leaf node have no childes so we can deleted without needing to any other operations

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                              ( 50 )

              ( 30 )                      ( 80 )

        ( 23 )      ( 35 )        ( 73 )      ( 85 )

   ( 11 )   ( 25 )  ( 31 )  ( 42 )
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2. Since node (70) had only right child so:

    a. We make the right pointer at the (50) points at the (80) node

    b. Then we can delete the (70)

3. Since node (30) have 2 child so we either choose successor or predecessor

    a. We decide to choose predecessor

    b. So we go to the right child which is the following sub tree ⟶

    c. We choose the minimum which in this case is node (31)

    d. Then we copy node (31) value to node (30)

    e. Finally we delete node (31) from the right subtree