Homework 14

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```java
    */
    public static <T extends Comparable<T>> boolean isInTree(BinaryTree<T> t,
            T x) {
        boolean found = false;
        boolean leftFound = false;
        boolean rightFound = false;

        if (t.size() != 0) {
            int compare = x.compareTo(t.root());
            if (compare == 0) {
                found = true;
            } else if (compare < 0) {
                BinaryTree<T> left = t.newInstance();
                BinaryTree<T> right = t.newInstance();
                T temp = t.disassemble(left, right);
                leftFound = isInTree(left, x);
                t.assemble(temp, left, right);
            } else {
                BinaryTree<T> left = t.newInstance();
                BinaryTree<T> right = t.newInstance();
                T temp = t.disassemble(left, right);
                rightFound = isInTree(left, x);
                t.assemble(temp, left, right);
            }

            found = found || leftFound || rightFound;
        }

        return found;
    }
```
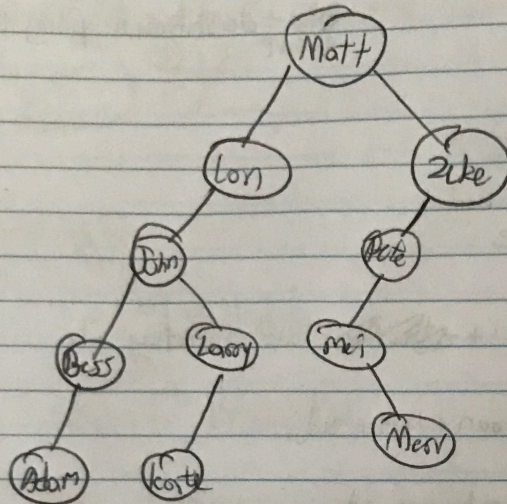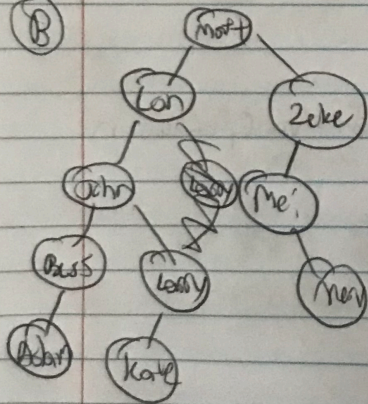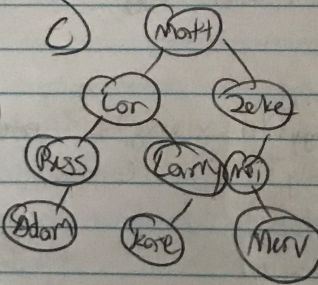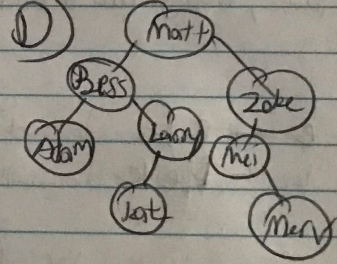
1)

A)

Tree A: Matt → Lon, Zeke; Lon → John; John → Bess, Larry; Bess → Adam; Larry → Kate; Zeke → Pete; Pete → Mei; Mei → Merv

B)

Tree B: Matt → Lon, Zeke; Lon → John, Larry, Mei; John → Bess; Bess → Adam; Larry → Kate; Mei → Merv

C)

Tree C: Matt → Lon, Zeke; Lon → Bess, Larry, Mei; Bess → Adam; Larry → Kate; Mei → Merv

D)

Tree D: Matt → Bess, Zeke; Bess → Adam, Larry; Larry → Kate; Zeke → Mei; Mei → Merv

E)

Tree E: Bess → Adam, Larry; Larry → Kate, Zeke; Zeke → Mei; Mei → Merv

2)