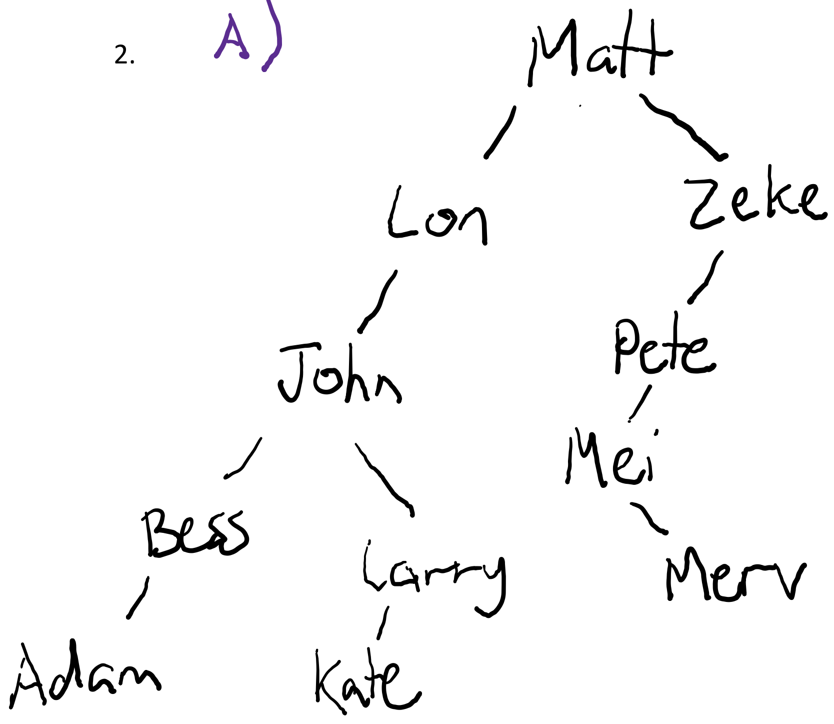
1.

```java
/**
 * Returns whether {@code x} is in {@code t}.
 *
 * @param <T>
 *            type of {@code BinaryTree} labels
 * @param t
 *            the {@code BinaryTree} to be searched
 * @param x
 *            the label to be searched for
 * @return true if t contains x, false otherwise
 * @requires IS_BST(t)
 * @ensures isInTree = (x is in labels(t))
 */
public static <T extends Comparable<T>> boolean isInTree(BinaryTree<T> t,
        T x) {

    boolean inTree = false;
    BinaryTree<T> left = t.newInstance();
    BinaryTree<T> right = t.newInstance();
    T node = t.root();

    if (t.size() > 1) {

        t.disassemble(left, right);

        // goto left or right branch
        if (node.compareTo(x) == -1) {
            inTree = isInTree(left, x);
        } else if (node.compareTo(x) == 1) {
            inTree = isInTree(right, x);
        }

        t.assemble(node, left, right);

    }

    if (!inTree) {
        inTree = node.equals(x);
    }

    // This line added just to make the component compilable.
    return inTree;
}
```

2. A)



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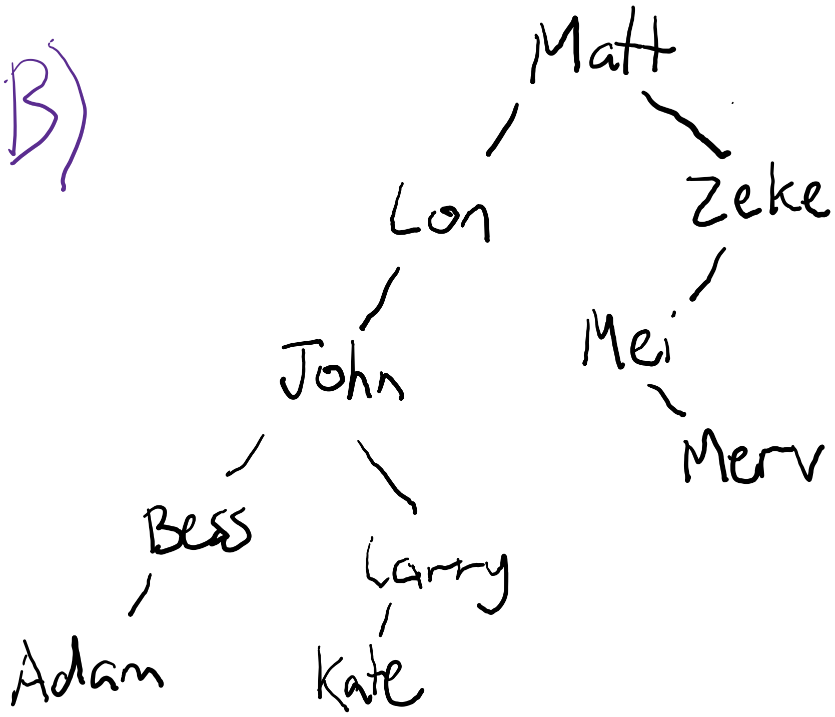
B)



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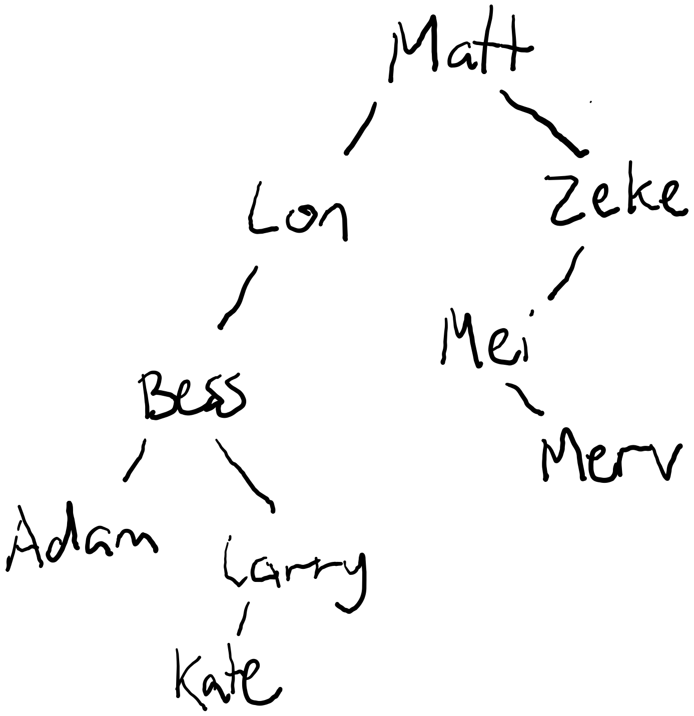
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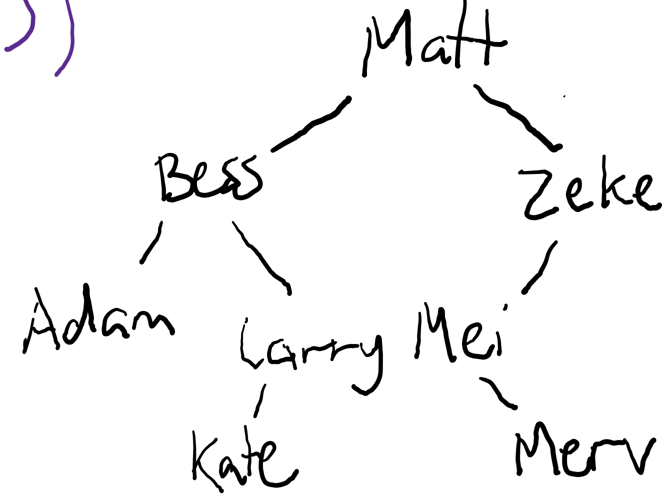
D)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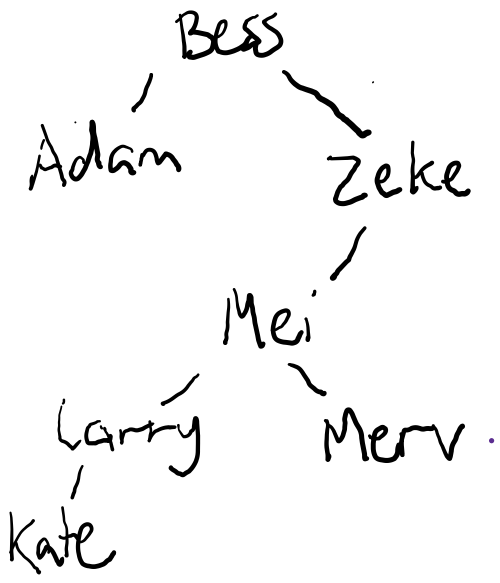
E)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