Module Exercise: [*Binary Search Trees*]

Don’t forget to:

- Submit your answers to this activity on **Collab**
- Everybody must submit individually!

Create a Binary Search Tree

- On the following slide you will be given **two lists of names** in the order that they are added to an empty **Binary Search Tree**.
- Your task is to **build** two Binary Search Trees based on these two lists.
- We will compare two names alphabetically (that is names that appears first alphabetically are **less** than a name that appears later alphabetically).

Create a Binary Search Tree

List 1: Leo, Hester, Ressie, Keira, Damian, Victor, Collin, Marci, Ashlie, Willis, Eric, Mya, Elizabeth, Ralph

1. List out the tree created by the add order of **list 1** using **post-order traversal**.
2. If we **removed** the node containing **Damian**, what two values could we replace it with?
3. What if we **removed** the node containing **Ressie**?

List 2: Victor, Ralph, Leo, Mya, Eric, Elizabeth, Hester, Damian, Willis, Collin, Keira, Marci, Ashlie, Ressie

4. List out the tree created by the add order of **list 2** using **post-order traversal**.
5. Compare the tree from **list 1** with the tree from **list 2**, *which do you think would preform better for the add and remove methods? Why is that?*