Lab 05
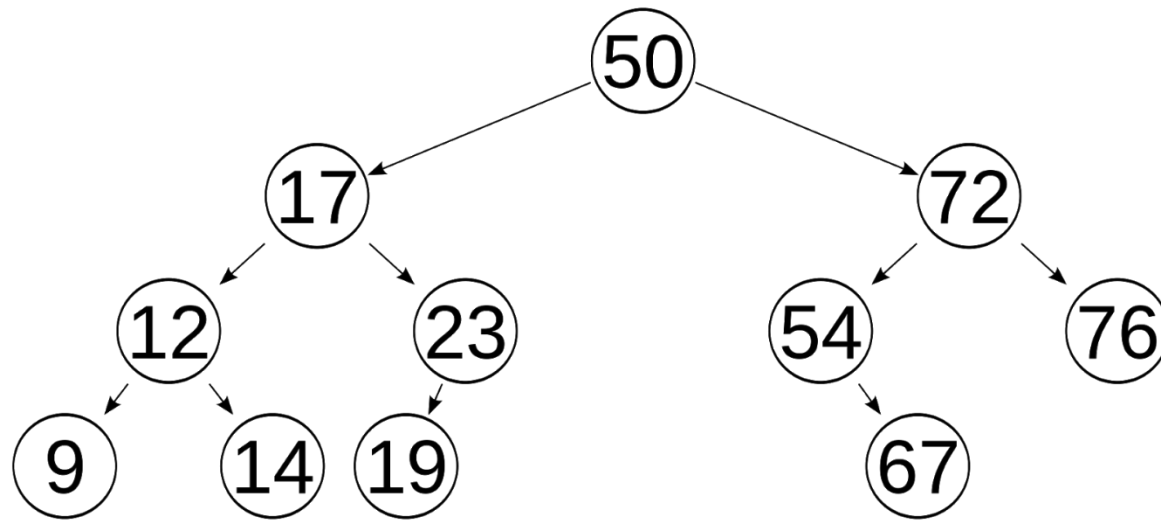
- Tree data structure

Lab05

Create two classes Node and Tree that can hold these data below.
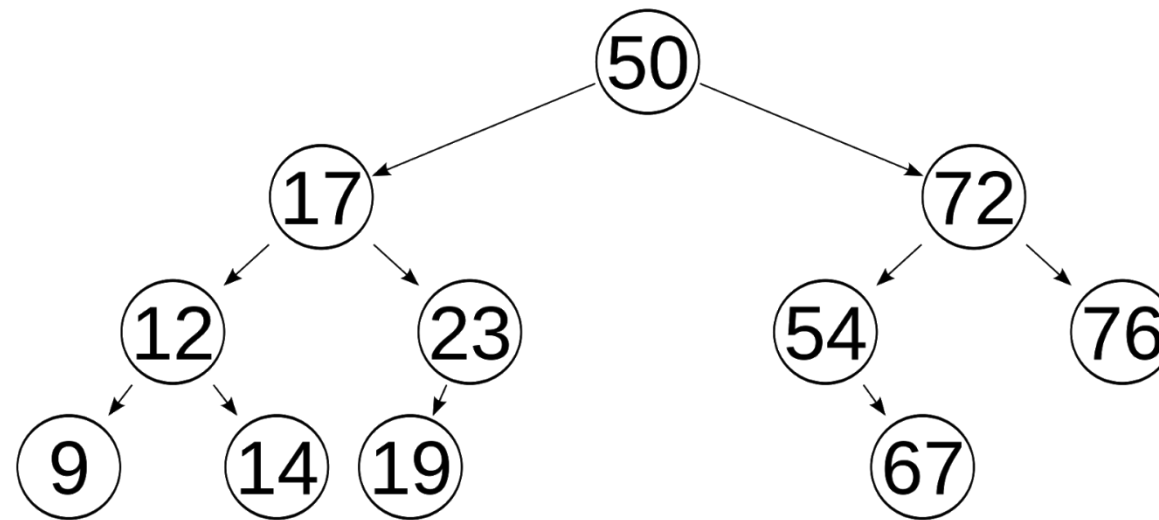(no need to add implementation of operations inside the Tree class yet.)

Lab05

Exercise 2

Make an extension to Exercise 1.
Add full implementation for the Binary Search Tree. Test it in Main by inserting the following data. Construct the same tree as below. Then test traversal of this tree using in-order (LDR), post-order (LRD) and pre-order methods (LRD).

Lab05

Construct a BST that can hold name of students. Test your program in main.

Hint: you can use name (string A-Z order) for the criteria when testing condition whether the product data should be store in the left or right sub-tree.

Lab05

Construct a BST that can store product list. Test your program in main. Also add function search so that we can search for a product by ID.

Hint: you can use product ID or product name for the criteria when testing condition whether the product data should be store in the left or right sub-tree.

Lab05

 Generate 1 million citizen ID and store in a file csv.

Read data from file and store these citizen ID of person into a binary search tree. Create ADT operations below:

a-Insert data to BST

b-Display this BST using pre-order traversal (DLR)

c-Display this BST using in-order traversal (LDR)

d-Display this BST using post-order traversal (LRD)

e-Search data in a BST. Ask a user for citizen ID then the program tell whether this ID is exist in the BST.

Test your program in main.