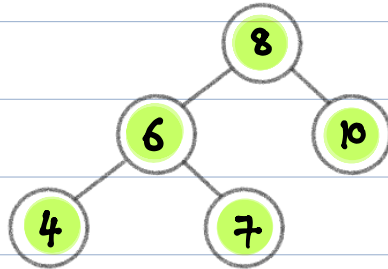# Search in Binary Search Tree

Given a binary tree and a key, search if the key is present or not.

key = 4

until you find the node with the given key or reached to the leaf node keep doing the following:

if key is found return True.
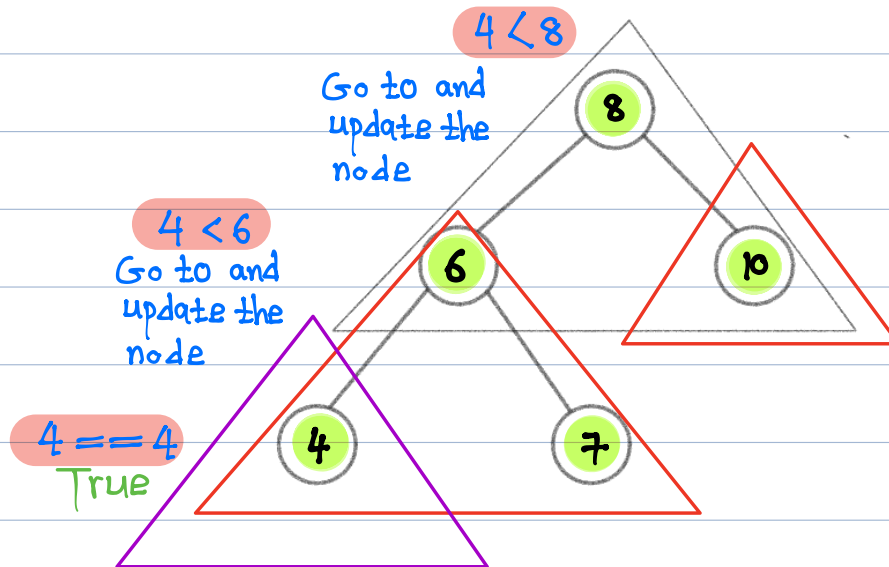
if key > root.key :

      Go to the right side

      update the node with the node on the right side.

if key < root.key :

      Go to the left side

      update the node with the node on the left side.

key= 4

4 < 8

Go to and
update the
node

8

4 < 6

Go to and
update the
node

6

10

4 == 4
True

4

7

```
def search (root, key):

    if not root:

        return none

    while root is none:

        if root. key == key:

            return True

        elif key < root.key:

            root = root. left

        else:

            root = root.right
    // if key is not found
    return False
```

Iteration	key	root. key	new root
one	4 < 8		root = left. root=6
second	4 < 6		root = left. root = 4
third	4 == 4		return True