

6.3 Mutating Trees

MAIN TREE OPERATIONS :

- Insertion
- Deletion

TEMPLATE FOR DELETION:

```
def delete_item(self, item: Any) -> bool:
    """Delete one occurrence of <item> from this tree.

    Return True if <item> was deleted, and False otherwise.
    Do not modify this tree if it does not contain <item>.
    """
    if self.is_empty():
        ...
    elif self._subtrees == []:
        ...
    else:
        ...
        for subtree in self._subtrees:
            ... subtree.delete_item(item) ...
        ...
```

- **One problem that may arise:**
 - Deleting a leaf , in deleting this item we get an empty subtree!
- It is **extremely dangerous** to remove an object from a list during iteration!!!