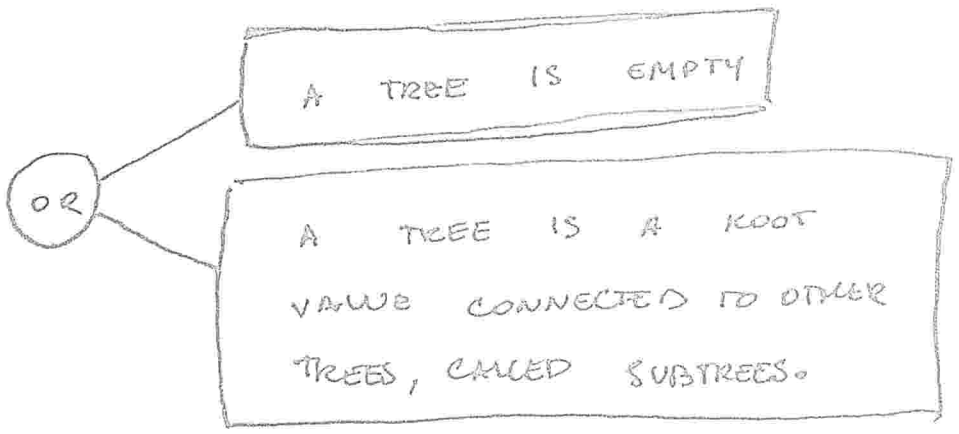
CSC 148 — 20161021

TREES

FOR DATA WHICH IS:
- NON-LINEAR
- HIERARCHICAL

RECURSIVE DEFINITION OF A TREE:



TERMINOLOGY

INTERNAL VALUE	A NODE WITH CHILDREN
SIZE	# NODES OF THE TREE
HEIGHT	MAX # VERTICES FROM THE TOP TO THE BOTTOM
CHILD, PARENT	STAND OF THE NODES ON THE BOTTOM AND TOP OF THE EDGE (RESP.).
DESCENDANT, ANCESTOR	AN ELEMENT OF A GIVEN SUBTREE CORRESPONDING TO A PARTICULAR NODE
LEAF	AN ELEMENT OF THE TREE WITHOUT CHILDREN.

TREE RECURSION PATTERN:

```
DEF f(SELF):
    IF SELF.IS_EMPTY():
        ...
    ELSE:
        ... SELF._ROOT ...
        FOR SUBTREE IN SELF._SUBTREES:
            ... f(SUBTREE) ...
```