

CS61A

TREES, DATA ABSTRACTION, SEQUENCES

LOGISTICS AND REMINDERS

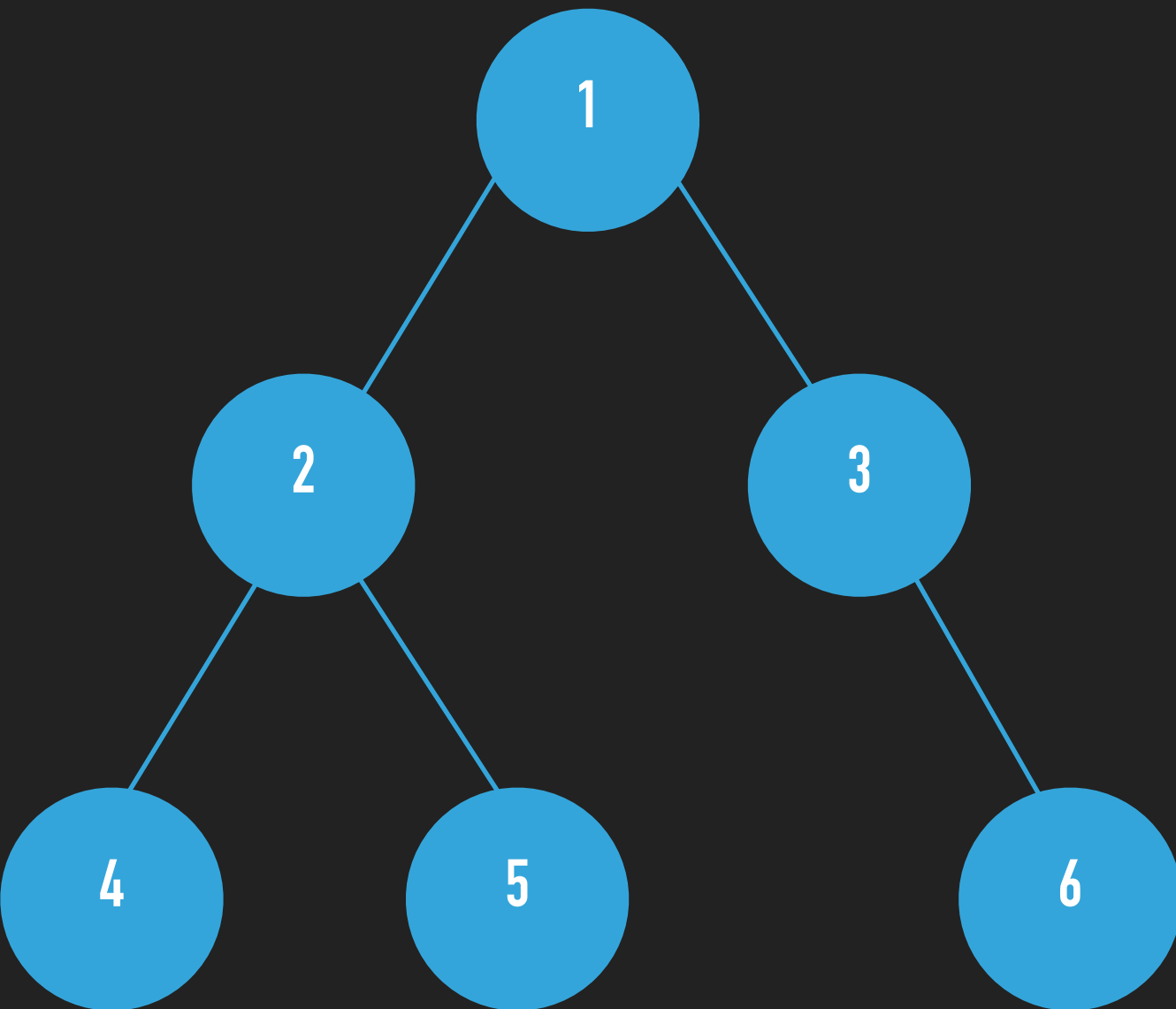
- ▶ Lab04 due **Today**
- ▶ Cats project due **Friday**
- ▶ Hog Composition due **Friday**

AGENDA

- ▶ Trees
- ▶ Problems

TEXT

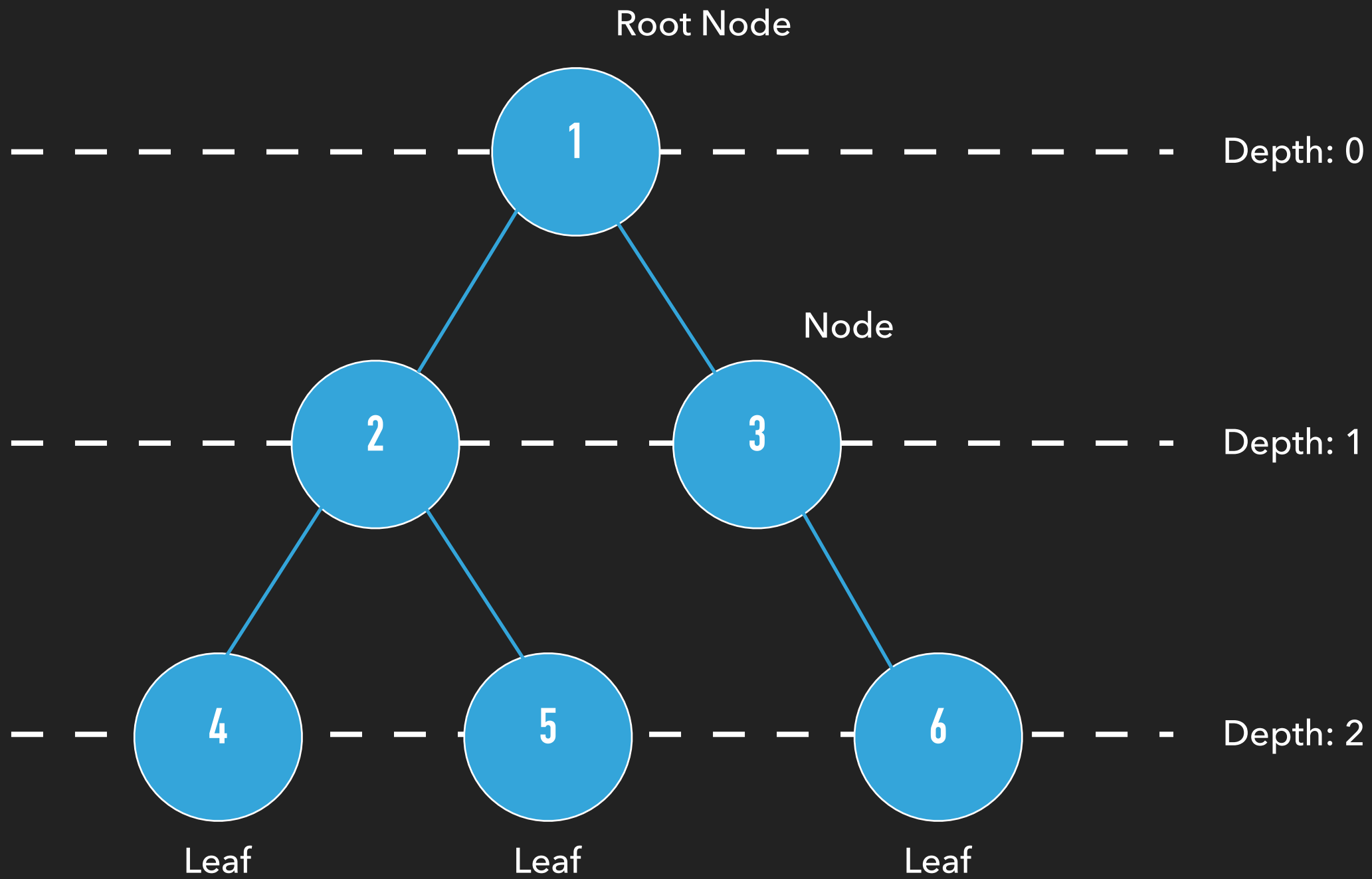
WE MEAN



NOT



Height = Biggest Depth = 2

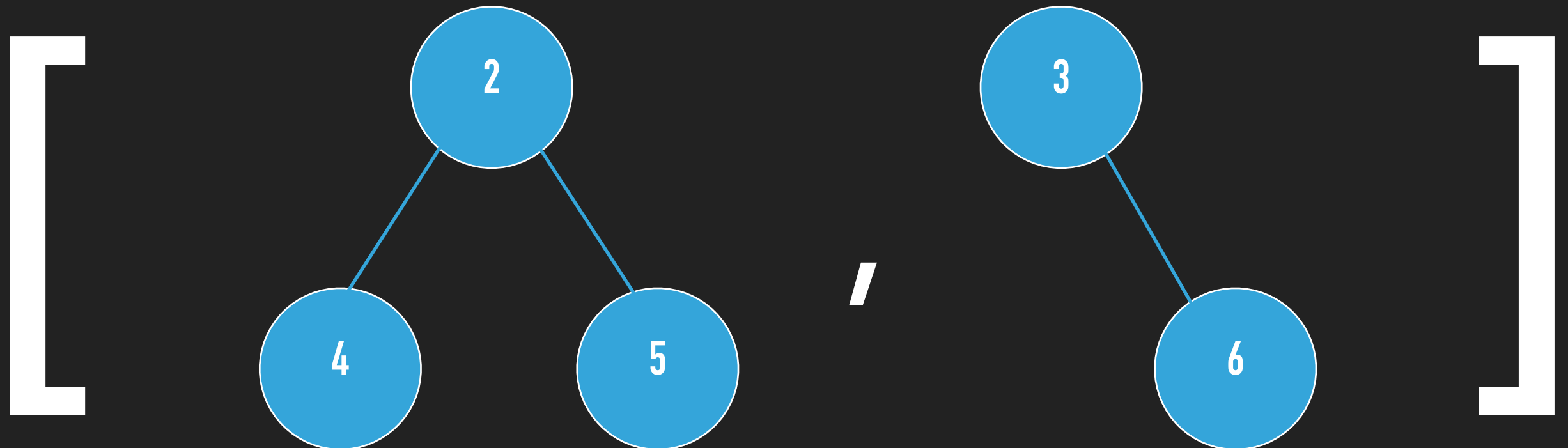


HOW TO INTERACT WITH TREES

- ▶ Make trees - **tree(label, branches=[])**
- ▶ Get label of root node - **label(t)**
- ▶ Get branches - **branches(t)**
- ▶ Is the tree a leaf? - **is_leaf(t)**

LOOKING AT THE PREVIOUS TREE

- ▶ `label(t) : 5`
- ▶ `is_leaf(t) : False`
- ▶ `branches(t):`



PROBLEM SOLVING

- ▶ Base case often has to do with **is_leaf**
- ▶ There are times no explicit base case is needed
- ▶ **[fn(b) for b in branches(t)]** or iterating through branches
is common pattern
- ▶ Recommended Exam Problem: Summer '18 Final Q6)