Aaron Patrick Monte
K20059926
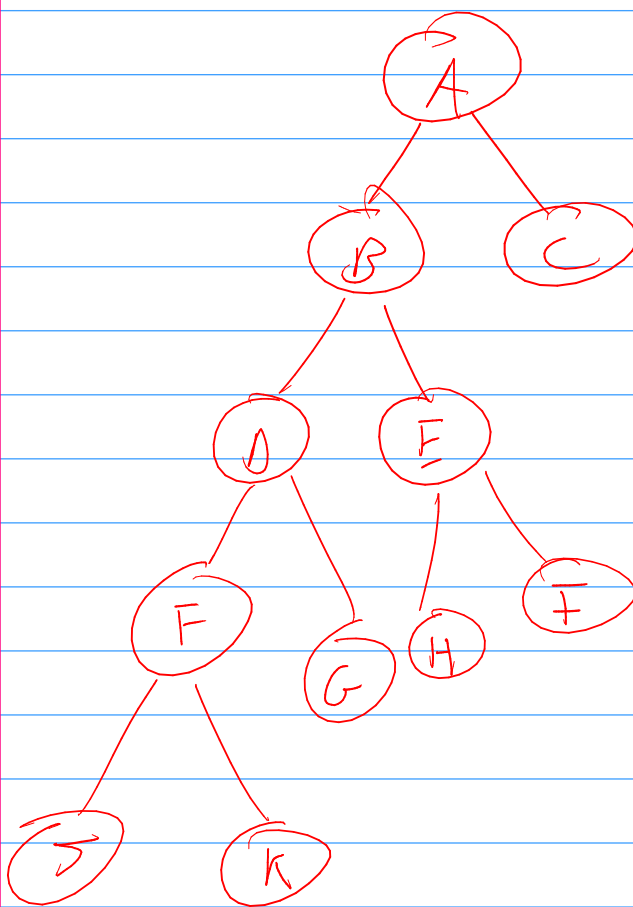Data Structures – Week 6

Exercise 1 – Tree

- Draw a tree that has 11 nodes.
  6 of those nodes are leaves.
- For each node:
  - name its ancestors and descendants,
  - Name its siblings,
  - say if the node is internal or external,
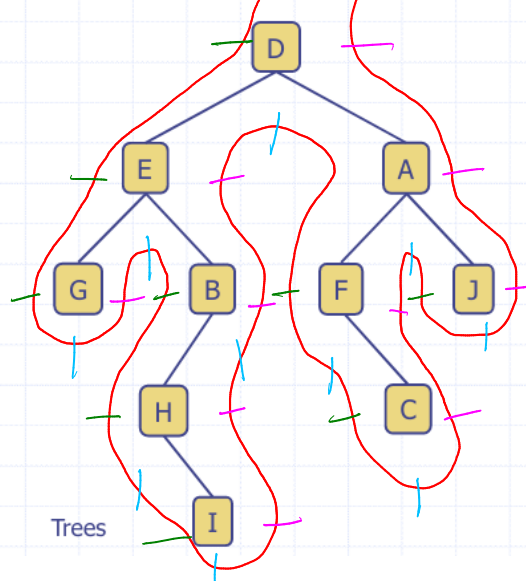 - give its depth.
- Evaluate the height of the tree

Node D:
Ancestors: A, B
Siblings: E
Interal: True
Depth: 2

Tree height: 4

Exercise 2 – Binary tree traversals

❑ List the nodes of the following binary tree in preorder, postorder and inorder traversals.

Pre	In	Post
D	G	G
E	E	I
G	H	H
B	I	B
F	B	E
H	D	C
I	F	F
F	C	J
C	A	A
J	J	D

❑ Represent the below array as a binary tree

0	1	2	3	4	5	6	7	8	9	10	11	12
	Iain	Beryl	Otto	Anne	George	Janet	Paul					Rachel