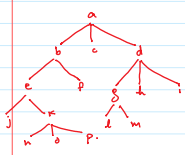
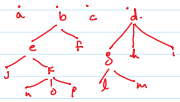
Lec # 28.

Tree Traversal.

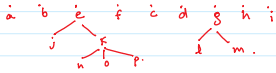
PRE ORDER
IN ORDER
POST ORDER.



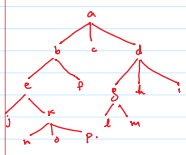
PREORDER. NLR.



a b c d e f g h i j k l m n o p.

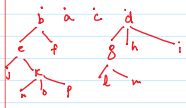


a b e f c d g h i j k l m n o p.

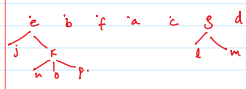


a b e j k f c d g l m h i n o p.

INORDER.
LNR.



e b f a c g d h i j k l m n o p.

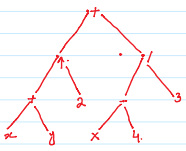


j e k b f a c l g m d h i n o p.

POST ORDER.
LRN.

Expression Evaluation.

Ex5 Find rooted tree for the expression.
657 $((x+y)\uparrow 2) + ((x-4)/3)$?



operand = leaves.
operations = Internal Vertices.

INORDER = Expression back.

POSTORDER = POSTFIX Expression
INORDER = INFIX "

Ex7 Evaluate the PREFIX Expression.

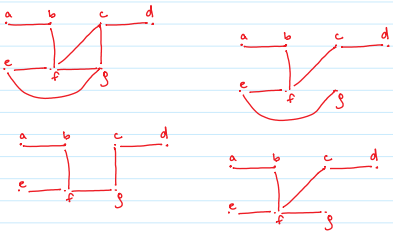
+ − * 2 3 5 / ↑ 2 3 4.
+ − * 2 3 5 / 8 4
+ − * 2 3 5 2
+ − 6 5 2
+ 1 2
3.

Ex8 Evaluate the POST fix Expression.

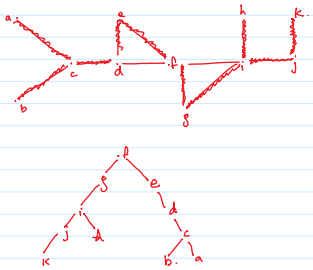
7 2 3 ↑ − 4 ↑ 9 3 / +.
7 6 − 4 ↑ 9 3 / +.
1 4 ↑ 9 3 / +.
1 9 3 / +.

1 [9 3 1] + .
1 3 +
4 .

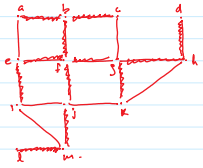
Spanning Tree.
1- Sub graph.
2- All Vertices.

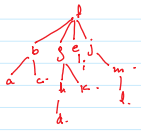


Depth first.



Breadth first.





Quiz # 6
Evaluate the prefix Expression.
∧ ∨ p p p
Find the Value in Simplified form.

Quiz # 7.
Suppose we have the graph given by.

$$\begin{array}{c} \\ a \\ b \\ c \\ d \\ e \\ f \end{array} \begin{pmatrix} 1 & 1 & 1 & 0 & 0 & 0 \\ 1 & 1 & 1 & 0 & 0 & 0 \\ 1 & 1 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 0 & 1 & 1 & 1 \\ 0 & 0 & 0 & 1 & 1 & 1 \end{pmatrix} \begin{array}{c} \\ a \\ b \\ c \\ d \\ e \\ f \end{array}$$

Find Spanning tree.