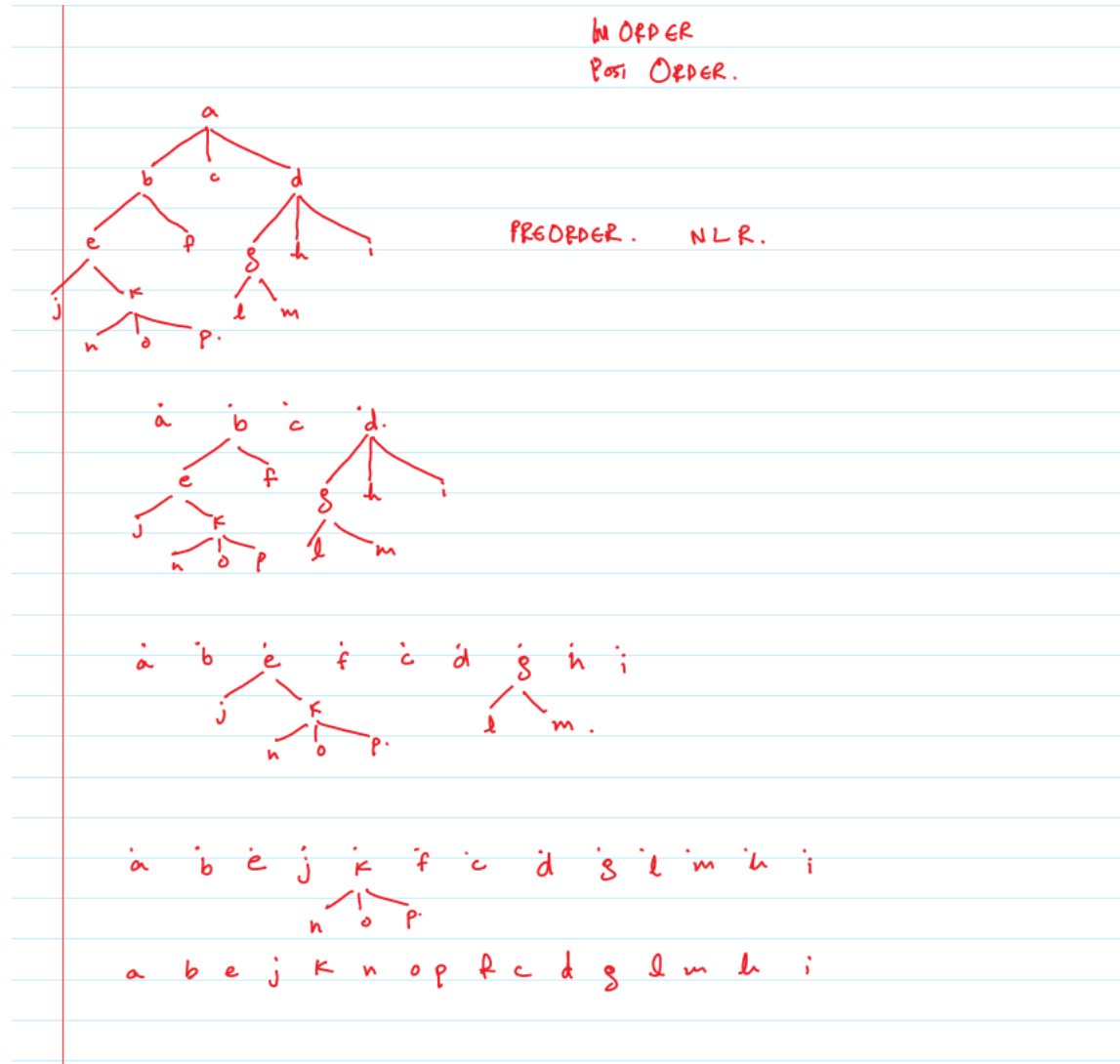
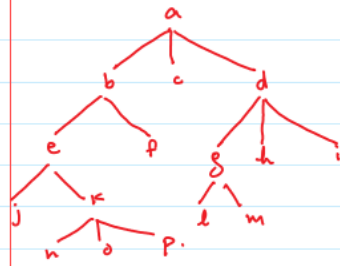


Discrete Lecture # 28

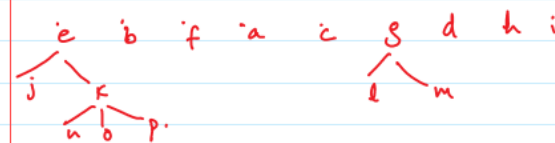
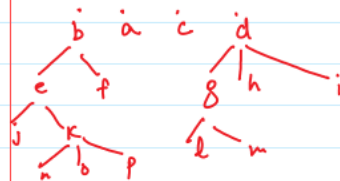
- Pre - order
 - NLR



- In - Order :
 - LNR



INORDER.
LNR.



j e k b f a c l g m d h i

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

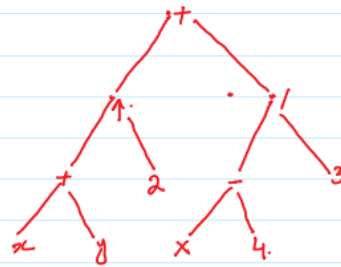
-
- POST ORDER :
 - LRN

POST ORDER.

L.R.N.

Expression Evaluation.

Ex 5 Find rooted tree for the expression.
657 $((x+y)^2) + ((x-4)/3)$?



operands = leaves.
operations = internal
Vertices.

INORDER = Expression back.

POSTORDER = POSTFIX Expression.

INORDER = INFIX ..

INORDER = INFIX ..

Ex 7 Evaluate the PREFIX Expression.

$+ - * 2 3 5 / \uparrow 2 3 4$
 $+ - * 2 3 5 / 8 4$
 $+ - * 2 3 5 2$
 $+ - 6 5 2$
 $+ 1 2$
 3

Ex 8: Evaluate the Postfix Expression.

$$\begin{array}{ccccccccccc}
 7 & \boxed{2 \ 3 \ *} & - & 4 & \uparrow & 9 & 3 & / & + \\
 \boxed{7 \ 6 \ -} & 4 & \uparrow & 9 & 3 & / & + \\
 \boxed{1 \ 4 \ \uparrow} & 9 & 3 & / & + \\
 1 & \boxed{9 \ 3 \ /} & +
 \end{array}$$

New Section 2 Page 1

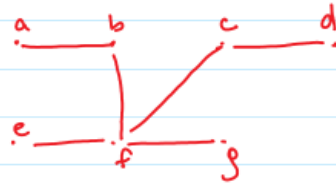
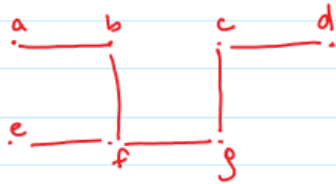
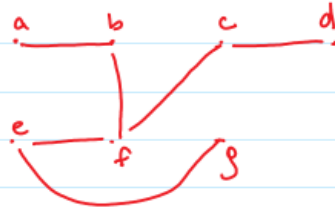
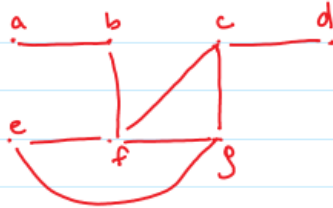
$$\begin{array}{cccc}
 1 & \boxed{9 \ 3 \ /} & + & . \\
 1 & 3 & + & \\
 4 & & & .
 \end{array}$$

- Spanning Tree
 - Should be a sub graph of the original graph
 - Must have all vertices

Spanning Tree.

1- Sub graph.

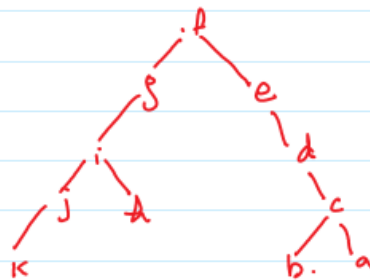
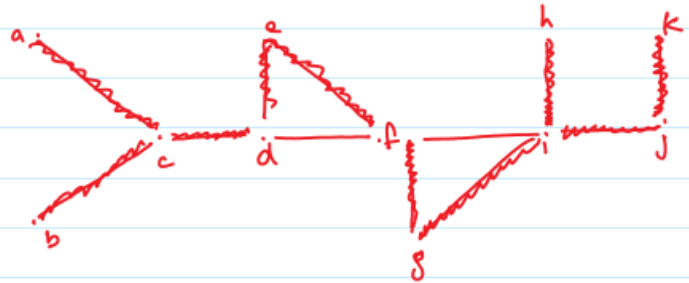
2- All Vertices.



○

- Depth First:
 - Start at a vertex and go to its depth
 - When no more vertices are left track back to original vertex and continue

Depth First -



- Breadth First :

- Start from a vertex and explore all of its adjacent edges and move to the next vertex
- Dont add any vertex that have be explored once

Breadth First.

