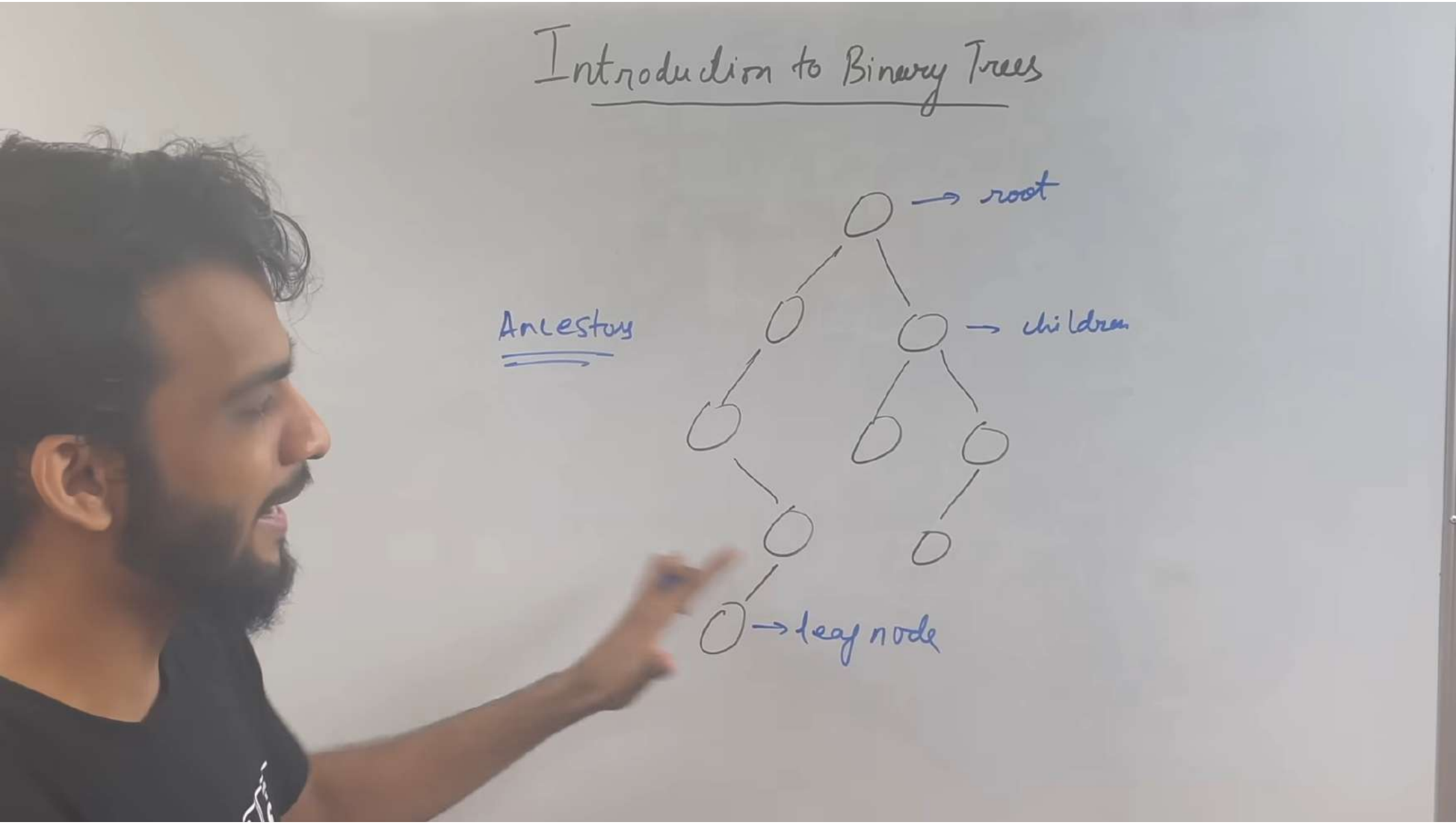
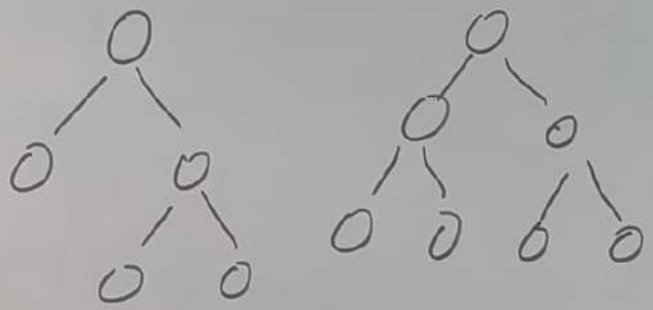

Introduction to Binary Trees
root
Ancestors
children
leaf node

Introduction to Binary Trees

Full BT → either has 0 or 2 children.

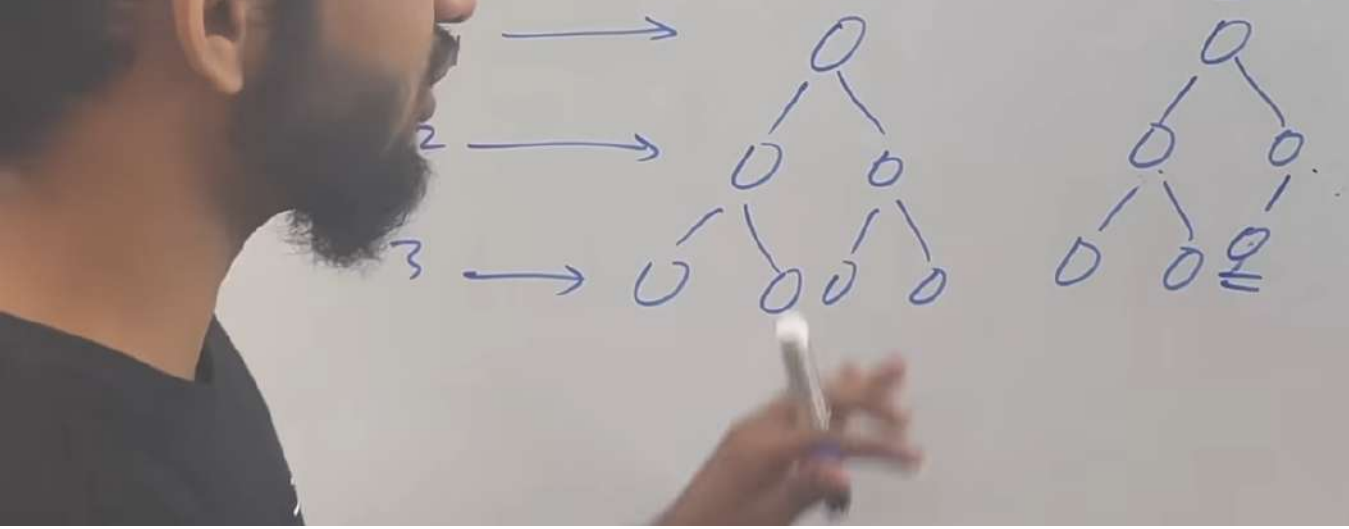


- Full Binary Tree
- Complete BT
- Perfect BT
- Balanced BT
- Degenerate Tree

Introduction to Binary Trees

Complete BT → 1) all levels are completely filled except the last level.

2) the last level has all nodes as left as possible.



- Full Binary Tree
- Complete BT
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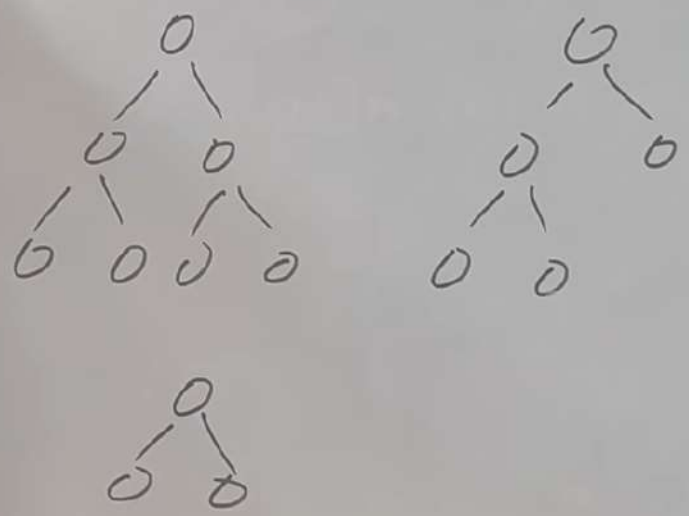
Introduction to Binary Trees

Perfect BT → all leaf nodes are at same level.



- Full Binary Tree
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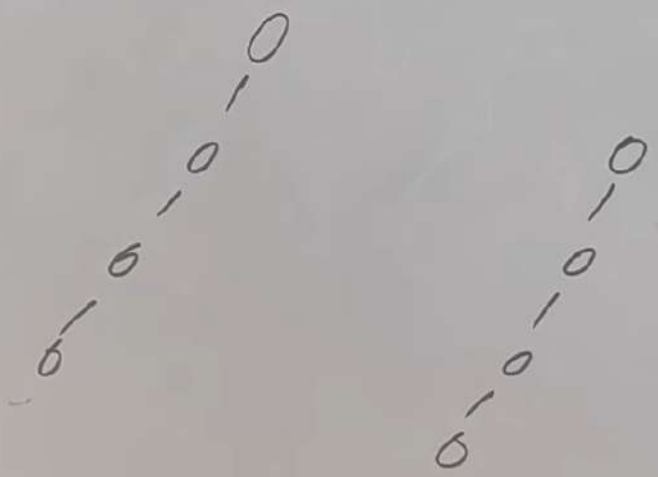
- Degenerate Tree

Introduction to Binary Trees

Balanced BT → height of tree at max $\log(N)$ nodes

$n = 8 \quad \log_2 8 = 3$



- Full Binary Tree
- Complete BT
- Perfect BT
- Balanced BT
- Degenerate Tree

$n = 4$