TREES

February 10, 2024

Aula 08

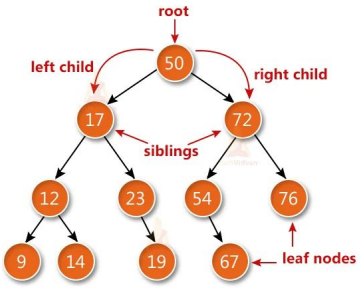
DEFINITION

01. What is a Tree in programming?

Trees are well-known as a non-linear data structure. They don't store data in a linear way. They organize data hierarchically.

02. Terminology summary

- *Root is the topmost node of the tree*
- *Edge is the link between two nodes*
- *Child is a node that has a parent node*
- *Parent is a node that has an edge to a child node*
- *Siblings have the same parent*
- *Leaf is a node that does not have a child node in the tree*



03. Properties of Tree Data Structure:

- *Number of edges: An edge can be defined as the connection between two nodes. If a tree has N nodes then it will have (N-1) edges.*
- *Depth of a node: The depth of a node is defined as the length of the path from the root to that node.*
- *Height of a node: The height of a node can be defined as the length of the longest path from the node to a leaf node of the tree.*
- *Height of the Tree: The height of a tree is the length of the longest path from the root of the tree to a leaf node of the tree.*
- *Degree of a Node: The total count of subtrees attached to that node is called the degree of the node. The degree of a leaf node must be 0.*
- *The degree of a tree is the maximum degree of a node among all the nodes in the tree.*

KEY TAKEAWAYS

- Prioritizing tasks is crucial for effective time management.
- Utilizing the right tools can enhance productivity.
- Overcoming procrastination requires self-awareness and targeted strategies.
- Time blocking helps in allocating specific time slots for different activities.

ACTION ITEMS

- Participants to download and explore a time management app of their choice.
- Set specific goals for the upcoming week using time-blocking techniques.

NOTE

Download and Explore Time Management App:

Action: *Participants are encouraged to download the fictional app "Productivity Pro" from their respective app stores.*
Deadline: *Complete the download and initial exploration by the end of the day.*

Set Specific Goals Using Time-Blocking:

Action: *Each participant should create a time-blocked schedule for the upcoming week, allocating dedicated time slots for important tasks.*
Deadline: *Submit the time-blocked schedule via email by the end of the week.*

Reflect on Procrastination Triggers:

Action: *Take some time to identify personal triggers for procrastination discussed during the workshop.*
Deadline: *Note down at least two identified triggers and strategies to overcome them by the end of the day.*