\*\*\*None-Linear Data Structures

1. Trees

2. Graphs

+ Linear is data structured one after the other

+ But non-linear one there is no sequential line arrangement but have interconnected more complex structure

\*\*Trees

\*Root - Start of tree (First node of tree)

\*Leaf - Last node of a Branch

\*Edges - similar to graphs, these connect nodes

\*Branches - different paths with different nodes + edges

\* Hierarchy of one Branch :- Root -> Parent nodes -> Child Nodes

\* Height of a tree - Root to Leaf(last node of branch) nodes count / Number of children in a single branch.(Root excluded)

\* Siblings - Nodes with similar hierarchy level in another branch

\* Graphs have circles/loops but Trees have ends(ends with a leaf node)

\*\*Binary Search Tree

\* Binary means 2 So, these have only TWO CHILDREN nodes

\* Any SINGLE NODE can have ONLY 2 or LESS number of CHILDREN

\* other search trees are multiway trees

\* We use these for searching

\* Any BST Root have 2 children

\* Left hand side - if Parent(Root in here) > Child node value -> Left Child

\* Right hand Side - if Parent < Child -> Right Child

Ex:- 20, 5, 30, 4, 25, 40, 10, 15, 29

