Tree Traversal

1. Breadth First
   1. Aka Level Order Traversal
   2. We visit all nodes at the current level before visiting all nodes in the next level.
2. Depth First

A screenshot of a computer

Description automatically generated

* 1. Pre-Order
     1. Visit in the following order
     2. Root
     3. Left subtree
     4. Right subtree
  2. In-Order
     1. Left Subtree
     2. Root
     3. Right Subtree
     4. This order will print the nodes in ascending order.
     5. To get descending order, do the opposite order.
        1. Right Subtree
        2. Root
        3. Left Subtree
  3. Post-Order
     1. Left Subtree
     2. Right Subtree
     3. Root
     4. This traversal traverses the tree from its leaves all the way up to the root.
     5. This is useful in cases where we should start by visiting the leaf nodes first.

A diagram of a triangle with blue circles and black text

Description automatically generated

Pre-Order: 7, 4, 1, 6, 9, 8, 10

In-Order: 1, 4, 6, 7, 8, 9, 10

Post-Order: 1, 6, 4, 8, 10, 9, 7

A screenshot of a computer

Description automatically generated

Pre-Order: 20, 10, 6, 3, 8, 14, 30, 24, 26

In-Order: 3, 6, 8, 10, 14, 20, 24, 26, 30

Post-Order: 3, 8, 6, 14, 10, 26, 24, 30, 20