Trees are nothing new – they’re fancy linked lists:

![Binary Tree Diagram]

**Theorem:** If there are \( n \) data items in our representation of a binary tree, then there are _______ **nullptrs**.

---

**One Algorithm, Three Traversals:**

```cpp
BinaryTree.cpp
50  void BinaryTree<T>::___Order(TreeNode * cur) {
51      if (cur != nullptr) {
52          // Code here
53          ___Order(cur->left);
54          ___Order(cur->right);
55      }
56  }
```

Traversals:  

![Tree Traversals Diagram]
A Different Type of Traversal

Strategy:

```
void BinaryTree<T>::levelOrder(TreeNode * root) {
    // Implementation
}
```

Traversals vs. Search:

Breadth First Search:

Depth First Search:

Dictionary ADT

```
#pragma once

class Dictionary {
    public:
    // Implementation
    private:
        // Implementation
    }
```

A Searchable Binary Tree?

```
private:
    // Implementation
```

CS 225 – Things To Be Doing:

1. Exam 1 Friday in lecture practice on PrairieLearn
2. mp_lists extra credit due today.
3. Daily POTDs