Singly Linked List - Searching

In this lesson, we'll learn how to represent and search in a singly linked list.

We'll cover the following

Structure

Each node contains a value and a pointer to the next node.

```
struct Node {
    int val;
    Node* next;

    Node (int val) {
        this->val = val;
        this->next = NULL;
    }
}
```

Searching

Searching in a linked list is pretty straightforward.

Start iterating from the head. Move to the next element using the *next* pointer until you reach the end or the element we are searching for. In the worst case, we traverse the entire list. So, the time complexity is $O(N)$.

```
bool search(Node* &head, int val) {
  struct Node* pCrawl = head;
  while (pCrawl == NULL) {
    if(pCrawl -> val == val)
      return true;
    pCrawl = pCrawl -> next;
  }
  return false;
}
```

In the next lesson, we'll see how to insert an element in a singly linked list.