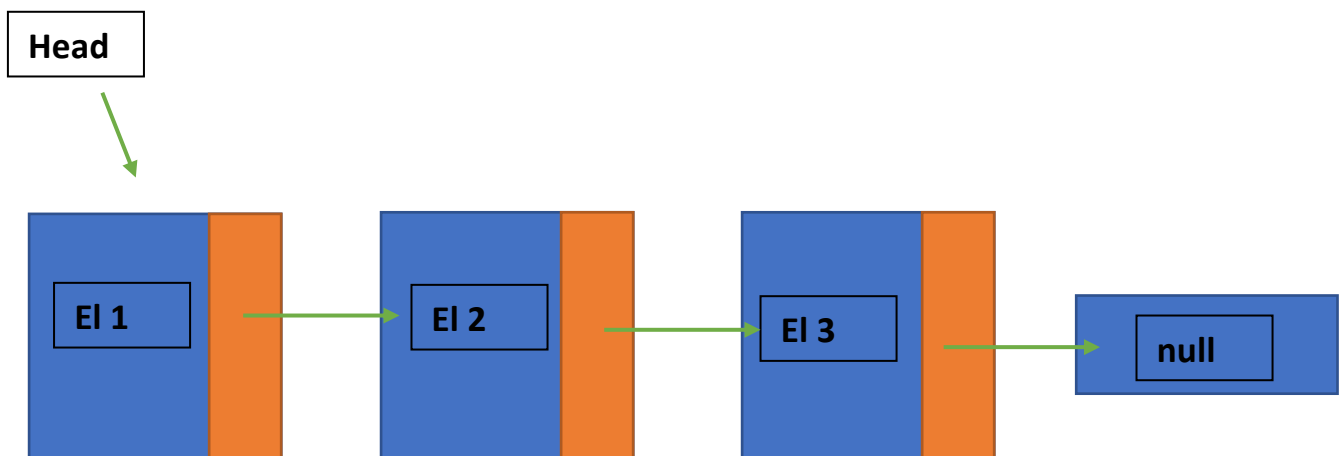


## Linked List

- Each item in the list is called a node
- The first item in the list is the head of the list
- Each item in the list is aware of another item in the list, because each item in the list contains a link to the next item in the list
- We need to store some extra information with each item to know which item comes after them
- Last item in the list always point on the null, because nothing comes after it
- It's bad for random access
- It's bad to inserting new element at specified position
- It's good if we want to load a bunch of data into the list and we will always going to be interested whatever's at the front of the linkedlist

**To traverse the list we will start from the head and go to every next after that**



To insert new item to the list (to the front of the list):

1. Create a new node of newElement
2. Assign El1 to the next field
3. Assign head to newElement
4. Will be  $O(1)$  time complexity

To remove element from the list (from the front of the list):

1. Assign newElement to a temporary variable "removedNode"
2. Assing "head" to El1
3. Return "removedNode"
4. Will be  $O(1)$  time complexity

**This is called Singly Linked list because we have only one link between every node**

