**LINKED LISTS**

Difference between lists and linked lists:  
  
 **List (Array List / Dynamic Array)**

* Stored in **contiguous memory**.
* Each element can be accessed directly with an **index** (O(1) lookup).
* Adding/removing at the **end** is fast (O(1) amortized).
* Inserting/removing in the **middle** is costly (O(n)) because elements must shift.

 **Linked List**

* Stored in **non-contiguous memory**; each element (node) holds data plus a pointer/reference to the next (and possibly previous).
* No direct index access; must **traverse** (O(n) lookup).
* Inserting/removing at **beginning or middle** can be efficient (O(1) if you already have the node reference).
* Uses more memory (extra pointer(s) per node).

**BIG O AND LINKED LIST**

