# Linked List

- Linked List is a sequence of links which contains items. Each link contains a connection to another link. Linked list is the second most-used data structure after array.



- Create a List ADT with the following operations.

| Operation | Description |
|---|---|
| 1. void add(int item) | add item to the end of the List |
| 2. void addbegin(int item) | Add item at the beginning of the list |
| 3. void addanypos(int pos, int item) | Add item at position pos in the List, moving the items originally in positions pos . |
| 4. bool contains(int item) | return **true** iff item is in the List |
| 5. int size() | return the number of items in the List |
| 6. bool isEmpty() | return true iff the List is empty |
| 7. int get(int pos) | return the item at position pos in the List (error if pos is less than 0 or greater than or equal to size()) |
| 8. int indexOf(int item) | Return position of the specified element in the list |
| 9. void removefirst() | Remove first element of the list |
| 10. void removelast() | Remove last element of the list |
| 11. void  remove(int pos) | remove and return the item at position pos in the List |
| 12. void reverse() | Reverse the element of the list |
| 13. void sort() | Sort the element of the list in ascending order |