

## Course #3 Data Structures

### Assignment #2 Linked List

Implement a Linked List of integer class "MyLinkedList" with the following methods:

- 1) Add element at given index. `void add(element, index)`
- 2) Add element to the tail. `void push(element)`
- 3) Remove element at given index and return this element. `int remove(index)`
- 4) Remove the element at the tail and return it. `int pop()`
- 5) Clear all elements. `void clear()`
- 6) Length. `int length()`
- 7) Print. `void print()`
- 8) Search. `int search(element)`
- 9) Concatenate another Linked List. `MyLinkedList concat(list)`
- 10) Convert it to an Array. `MyLinkedList convert()`

### Sample Run: (inputs in green)

```
Welcome to linked lists
Operation: add 10 0
Operation: push 20
Operation: remove 1
20
Operation: add 30 0
Operation: add 50 9
Invalid operation
Operation: push 60
Operation: length
3
Operation: concat 11 12 13
Operation: print
30 10 60 11 12 13
Operation: pop
13
Operation: convert
30 10 60 11 12
Operation: search 60
2
Operation: search 90
-1
Operation: clear
Operation: length
0
Operation: end
```

**Hint:** You can split input string by space.