<https://www.youtube.com/watch?v=SMIq13-FZSE>

<https://www.youtube.com/watch?v=tZxPqhkRLiw&list=PLsyeobzWxl7oRKwDi7wjrANsbhTX0IK0J&index=7>

LinkedList Implementation in Java Using Array

**public** **class** Node {

**int** data;

Node next;

}

**public** **class** LinkedList {

Node head;

**public** **void** insert(**int** data) {

// create a new node everytime we insert

Node node = **new** Node();

node.data = data;

node.next = **null**;

// If No nodes currently

**if** (head == **null**) {

head = node;

} **else** {

Node n = head;

// traverse linkedlist

**while** (n.next != **null**) {

n = n.next;

}

n.next = node;// second last node is pointing to last node

}

}

**public** **void** insertAtStart(**int** data) {

// create a new node everytime we insert

Node node = **new** Node();

node.data = data;

node.next = **null**;

node.next = head; // store current head to new head

head = node; // make current node as head;

}

**public** **void** insertAt(**int** index, **int** data) {

// create a new node everytime we insert

Node node = **new** Node();

node.data = data;

node.next = **null**;

// insert at start

**if** (index == 0)

insertAtStart(data);

**else** {

// traverse

Node n = head;

**for** (**int** i = 0; i < index - 1; i++) {

n = n.next;

}

node.next = n.next;// store current next into new next

n.next = node;

}

}

**public** **void** deleteAt(**int** index) {

// delete head node

**if** (index == 0) {

head = head.next;

} **else** {

// traverse

Node n = head;

Node n1 = **null**;

**for** (**int** i = 0; i < index - 1; i++) {

n = n.next;

}

n1 = n.next;

n.next = n1.next;

System.***out***.println("deleted n1 " + n1.data);

n1 = **null**;// will be garbage collected

}

}

**public** **void** printLinkedList() {

Node node = head;

**while** (node.next != **null**) {

System.***out***.println(node.data);

node = node.next;

}

System.***out***.println(node.data);

}

}

**package** test;

**public** **class** Tester {

**public** **static** **void** main(String[] args) {

LinkedList list = **new** LinkedList();

list.insert(18);

list.insert(45);

list.insert(12);

list.insertAtStart(25);

list.insertAt(0,55);

list.deleteAt(2);

list.printLinkedList();

}

}