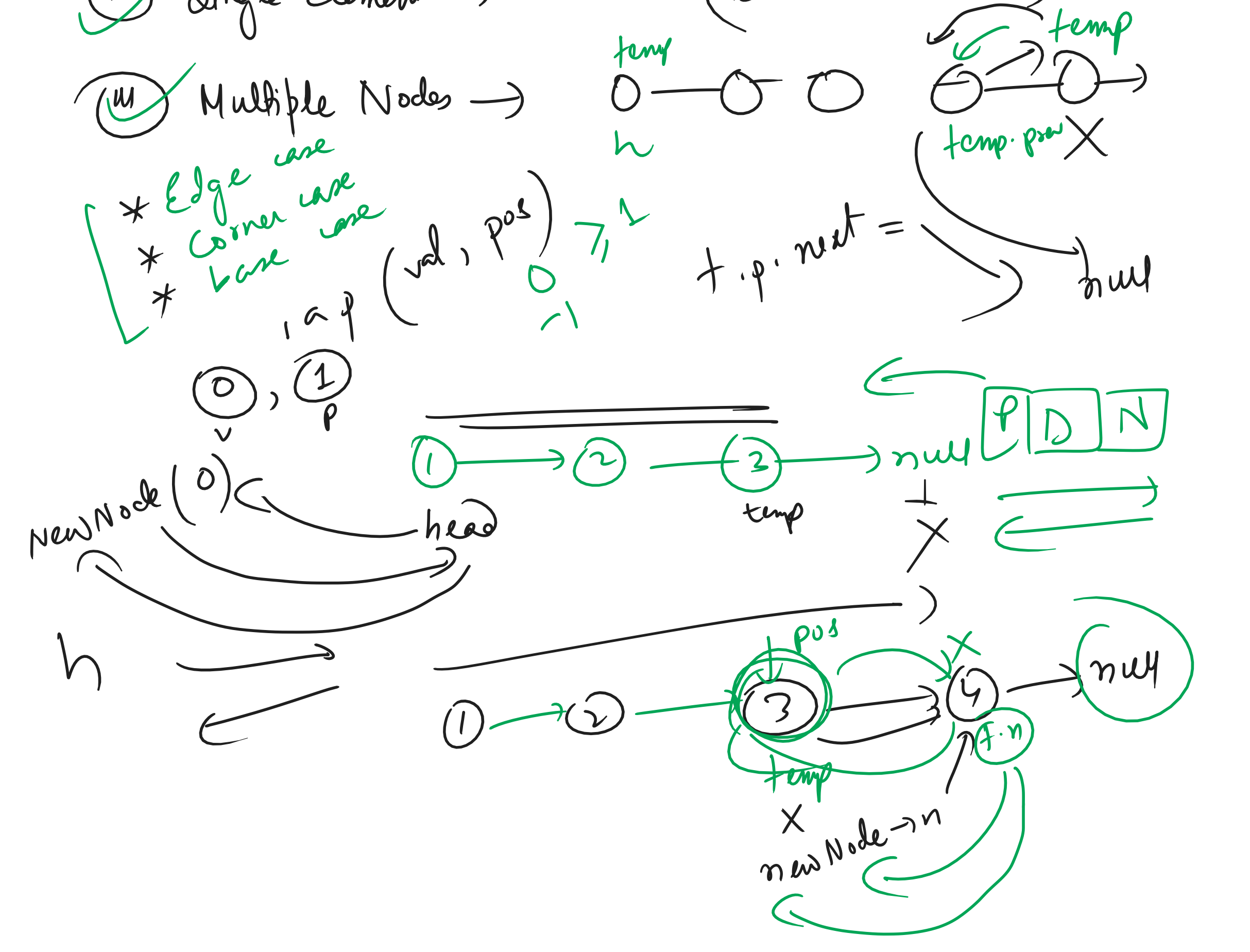
Delete Operation in a Doubly linked list :→

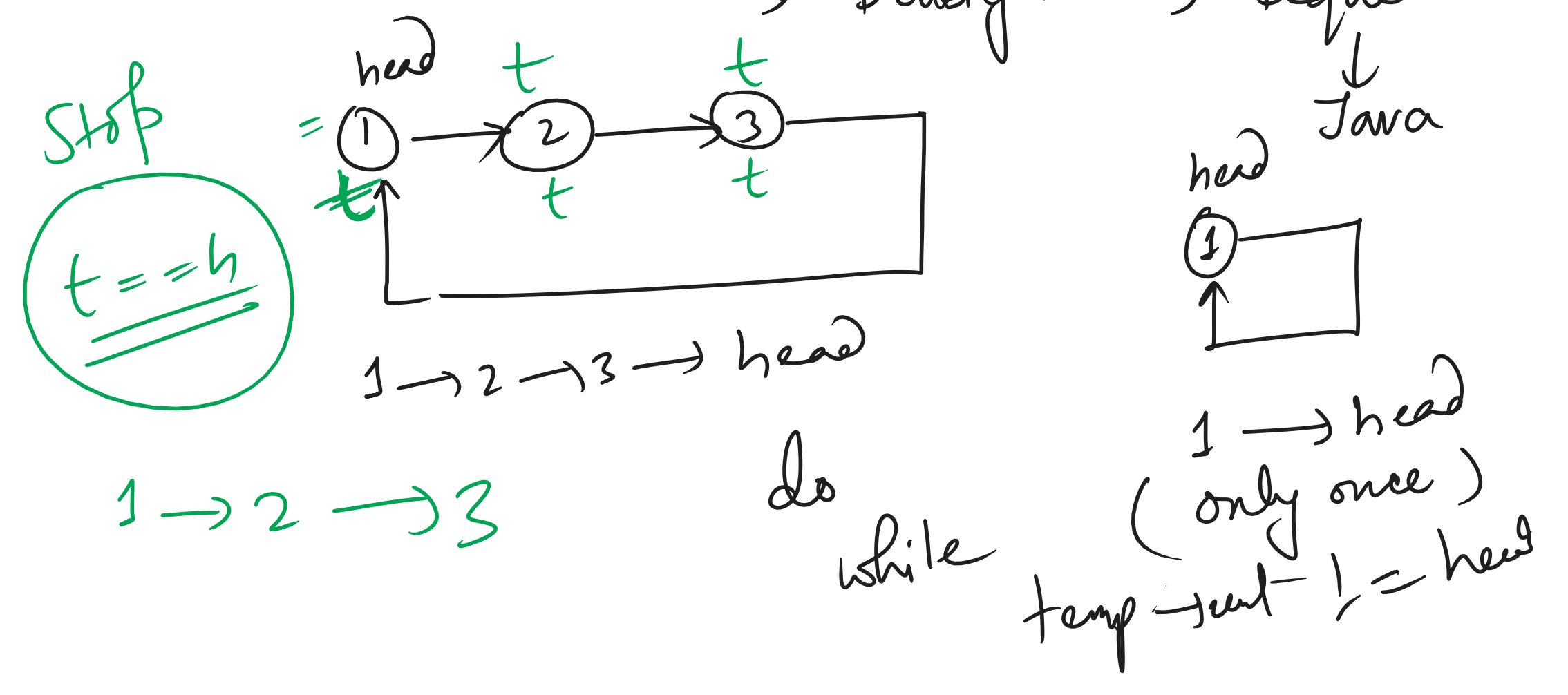
Delete End

- (i) Empty → can't delete (head == null)
- (ii) Single Element → (head.next == null) JVM
- (iii) Multiple Nodes →

[* Edge case
* Corner case
* Base case]



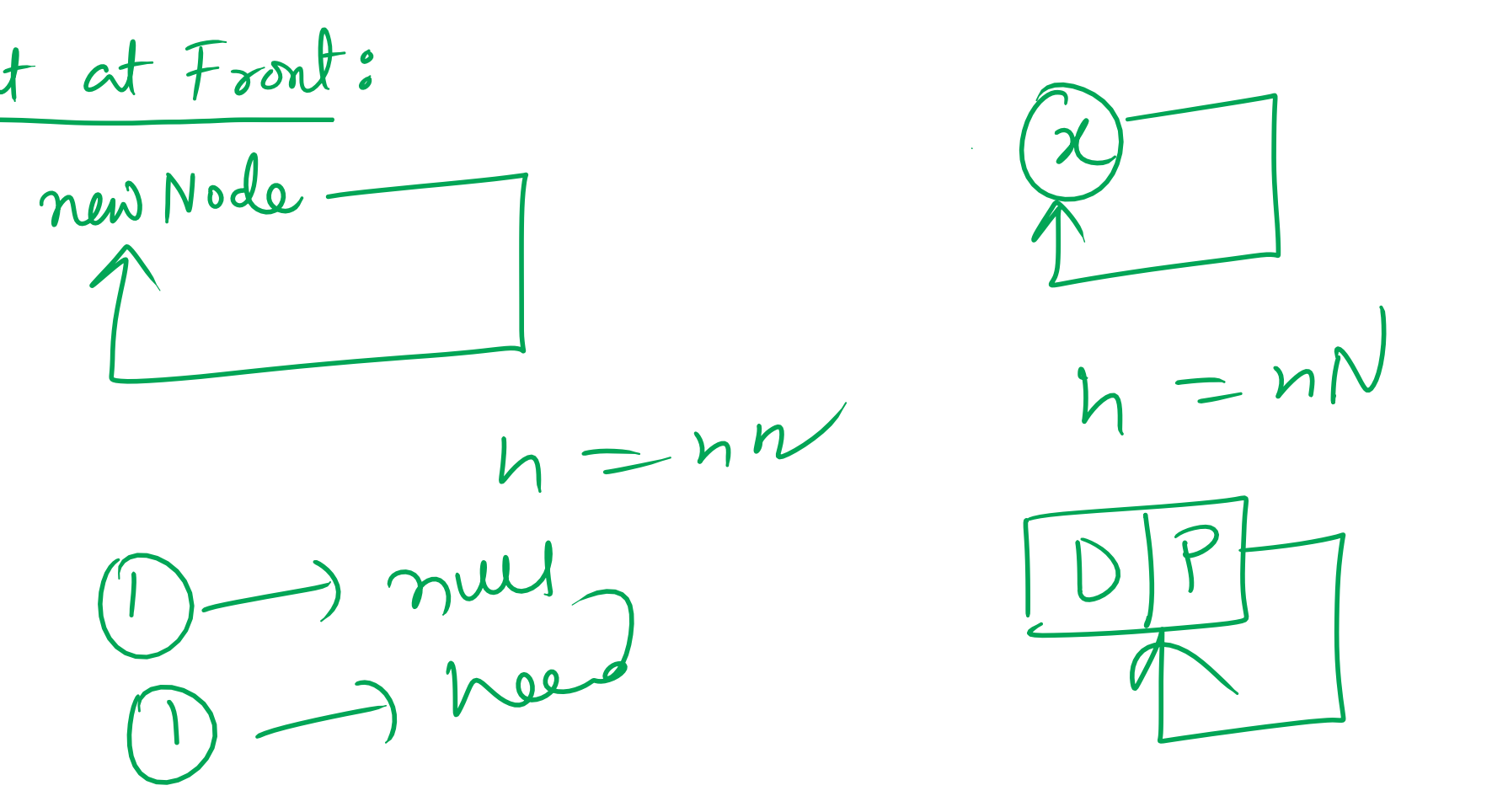
Circular Linked List → Singly / Doubly → Deque → Java

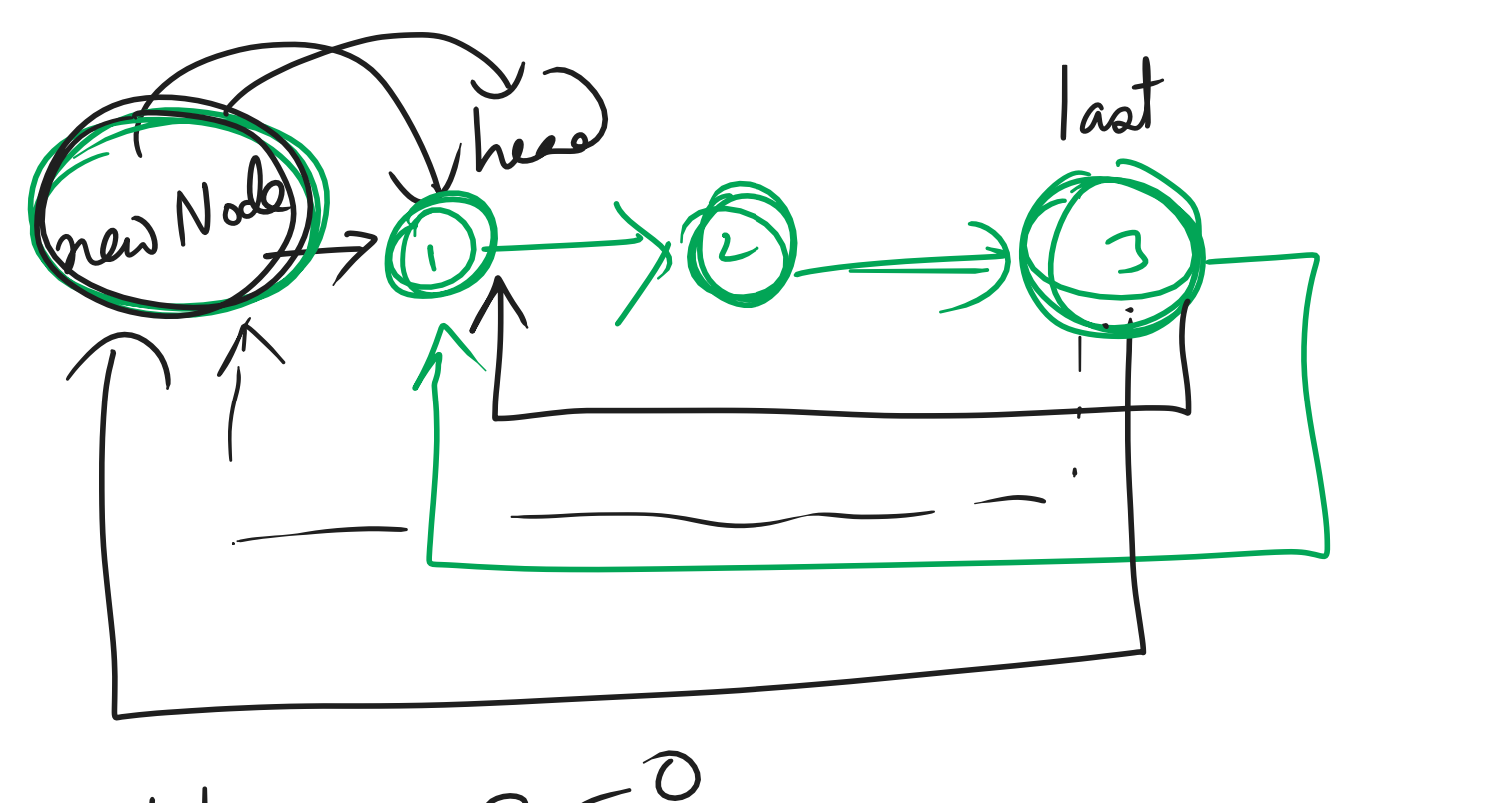


do while

1 → head (only once)

temp.next != head





last.next == head

Stop

last.next = nN

nN.next = head

h = nN

3 0011
3 0011
0000

S - 0
D - 1

Bitwise Not operator :→

0	1
1	0

T	F
F	T

TV

5 → 0101

~5 → 1010 = (10)

PV −6 = 10

abs(−6) = 6 → 0110 (TV)

1's → 1001

+1 → 0001

2's com → 1010 → (TV) (10)

−6 = 10

MCQ: ~5

(a) 2
(b) 3
(c) 4
(d) −6
(e) 10

$\sim n = [-n-1]$

$\sim 5 = -5-1 = -6$

$\sim(-100) = -(-100)-1 = 100-1 = 99$

[Power of 2]

(8) ✓ 2^3, (3) X, (5) X, (9) X, (16) ✓ 2^4

8 → 1000
7 → 0111
n&(n−1) 0000

16 → 10000
15 → 01111
16&15 00000

```
if (n & (n-1) == 0) {   // Bitwise
    return true;
} else {
    false;
}
```

(10) 10 % 2 == 0, (12), (14), (20)

LeetCode → 191 → Hamming Weight (No of Set Bit)

Bitwise

11 → 1011 → (3) → HW

Count = 0
++ 1
++ 2
++ 3

n&1 == 1

1011
0001
0001

while (n>0)

101
& 001
001

n = n>>1

10
01
00

1 →
1
1
0 → stop

* Which is the parent class of all classes in Java? → java.lang.Object
* Which is the parent class of all Errors & Exceptions in Java?
  Throwable → Object
  Throwable → Errors, Exceptions
* Why are strings immutable in Java?
  We cannot modify the original string. We can just create a copy.
  To modify → mutable strings → String Builder, String Buffer

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