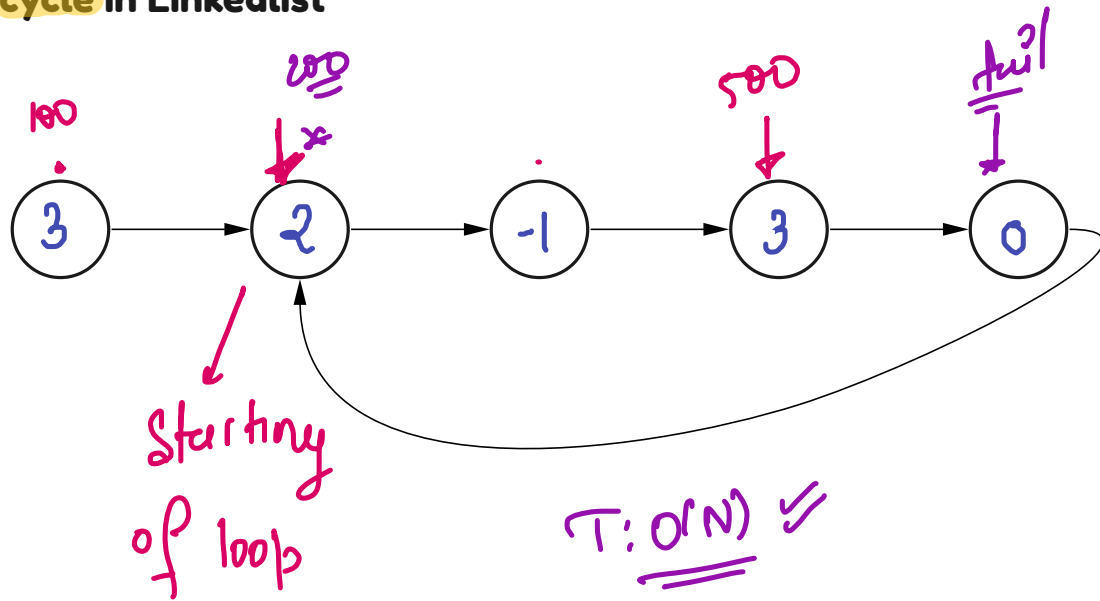
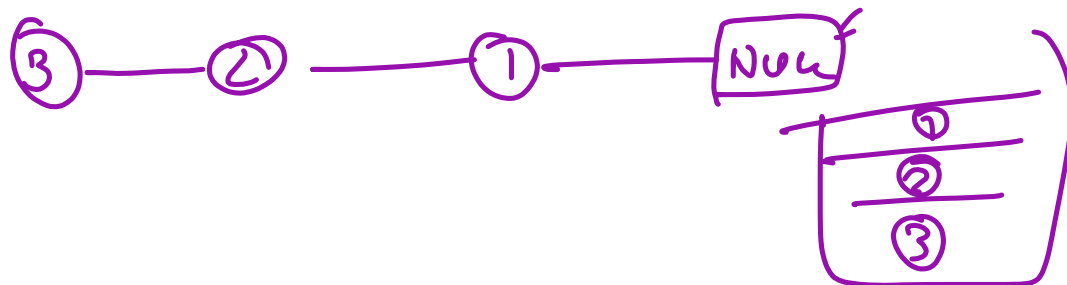
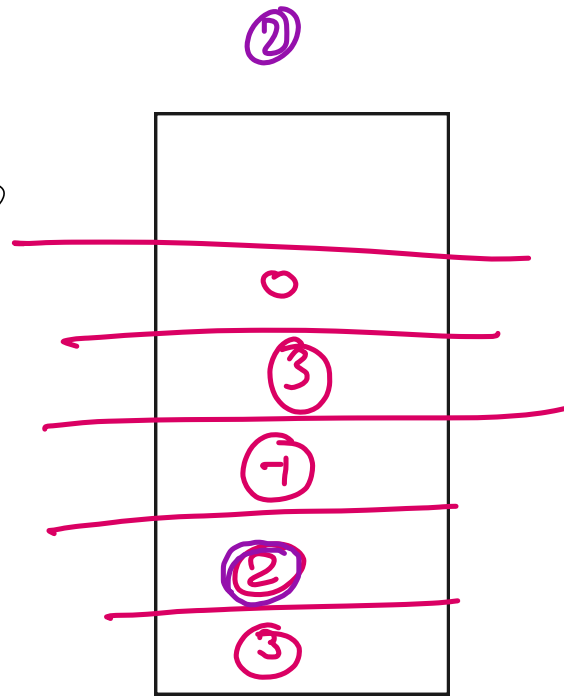


## Detect a **cycle** in Linkedlist



$T: O(N) \checkmark$

$S: O(N)$



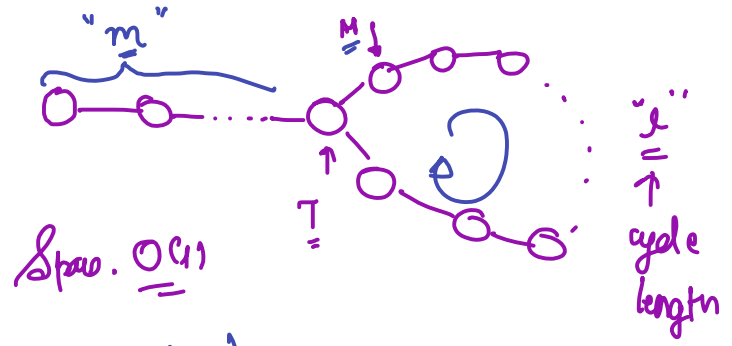
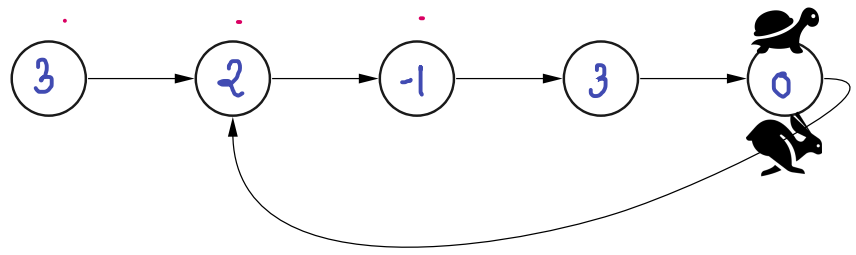
Hashtube - for O(1) access  
(Extra space)

(optimized)

Detect a **cycle** in Linkedlist

slow

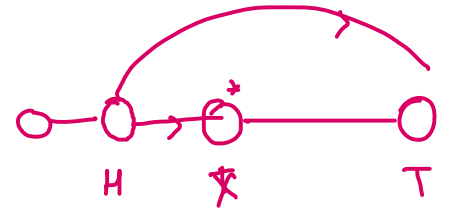
fast



Space:  $O(1)$

Time:  $O(N)$

$m + l$   
- total nodes



H  $\rightarrow$  1 step behind  
it will catch up w/ T  
in 1 iteration

