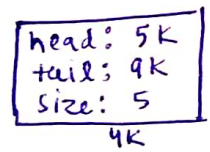
Add at a Index in Linked List

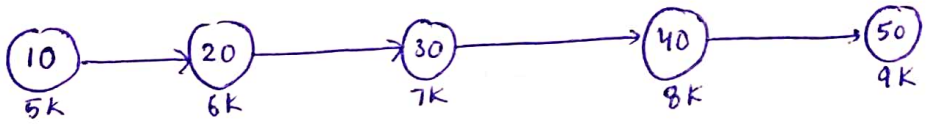
= Hume linkedlist banake mili hai hume addAt function lagana hai!

Special Case (To remember) ★

= Jis index pe bola hai uss index pe vo data add krdo!



T(n): O(n)
S(n): O(1)

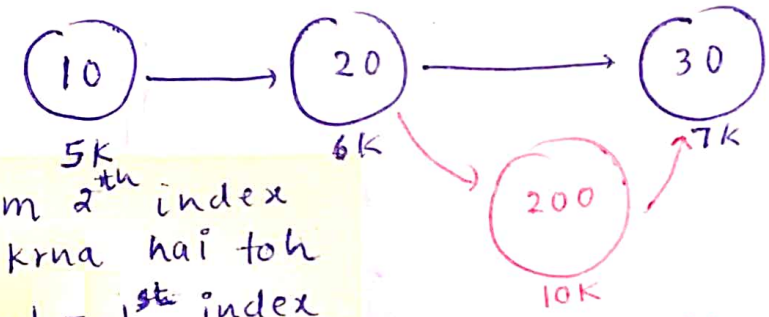


Case 1
(idx < 0 or idx > size)
print → Invalid Argument!

Case 2
(idx = 0)
addfirst logic!

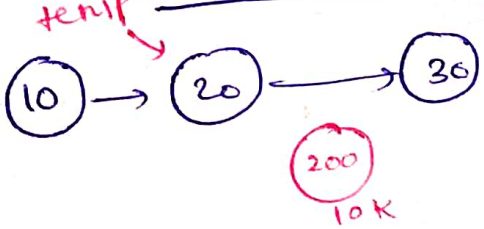
Case 3
(idx = size)
addlast logic!

Case 4
Everything Else! ★

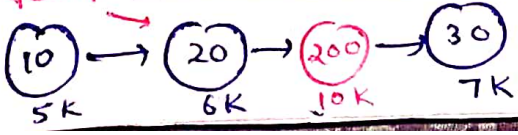


Agar hum 2th index pe add krna hai toh hum 2-1 = 1st index nikal lo.
1st index ka next new node pe point krdo!
new node ka next aaj ke 2nd index pe point krdo! Fir size badado!

Step 2 Iterate to ... node from head

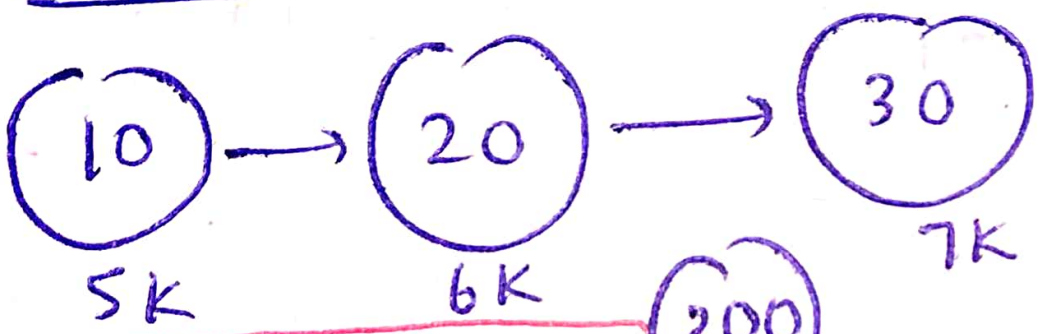


Step 3 node.next = temp.next
temp.next = node



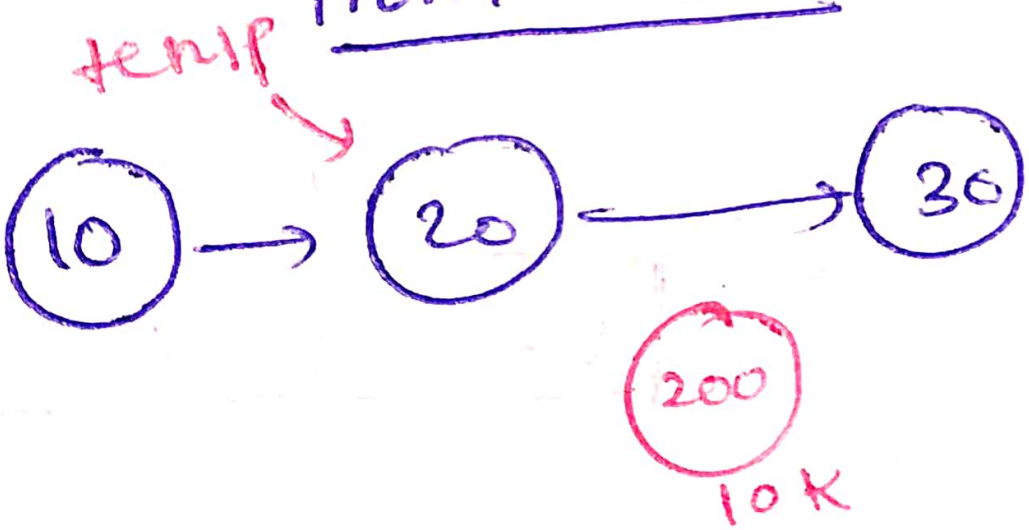

```
pusbic void addAt(int idx, int val){
 if(idx<0 || idx>size){
    Syso("Invalid arguments");
 }else if(idx==0){
    addFirst(val);
 }else if(idx==size){
    addLast(val);
 }else{
    Node node = new Node();
    node.data = val;
    Node temp = head;
    for(int i=0; i<idx-1 ;i++){
      temp = temp.next;
    }
    node.next = temp.next;
    temp.next = node;
     size++;
    }
} }
```

Step 1 Create a node




```
node = new Node()
node.data = 200
```

Step 2 Iterate to idx-1th node from head



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