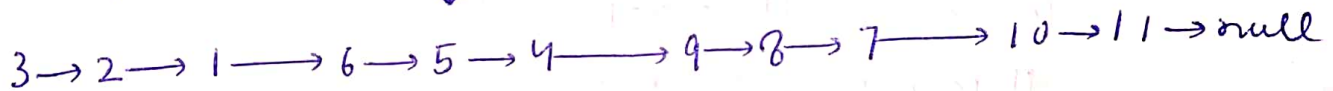
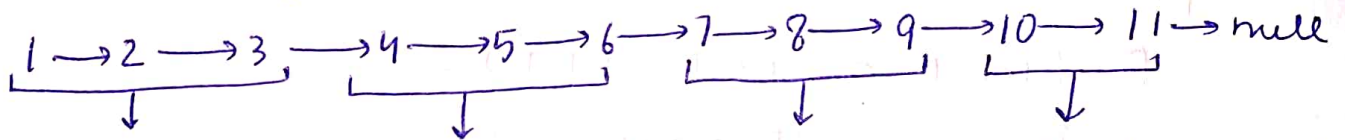


● K Reverse in Linked List

= Hume ek list given hai aur sath me (K) ki value bhi given hai!

= Hum (K) ki value ke loop me reverse krna hai!

= Time Complexity: Linear, Space Complexity: Constant



= Hum ek previous aur ek current naam ki list lagengy!

$p = \text{NULL}$

$c = 3 \rightarrow 2 \rightarrow 1 = p$

= K baar, removeFirst from given linkedlist and addFirst to current list!

$\therefore p = 3 \rightarrow 2 \rightarrow 1$

$c = 6 \rightarrow 5 \rightarrow 4^* = p$

= $\boxed{\begin{array}{l} \text{prev} = \text{current} \\ \text{current} = \text{new} \end{array}}$

$\therefore p = 3 \rightarrow 2 \rightarrow 6 \rightarrow 5 \rightarrow 4$

= Aab previous me phle se kuch hai, toh

$c = 9 \rightarrow 8 \rightarrow 7^* = p$

$\boxed{\begin{array}{l} \text{prev.next} = \text{curr.head} \\ \text{prev.tail} = \text{curr.tail} \end{array}}$

$p = 3 \rightarrow 2 \rightarrow 1 \rightarrow 6 \rightarrow 5 \rightarrow 4 \rightarrow 9 \rightarrow 8 \rightarrow 7$

$c = 10 \rightarrow 11^* = p$

prev ka size bada dengy (K) se.

\therefore

$p = 3 \rightarrow 2 \rightarrow 1 \rightarrow 6 \rightarrow 5 \rightarrow 4 \rightarrow 9 \rightarrow 8 \rightarrow 7 \rightarrow 10 \rightarrow 11$

$c = \text{new}$

= Agar koi bhi group (K) ke equal ya (K) se bada nahi hua toh, hum removeFirst and addlast krengey

= Aab jo previous me pada hai vo humara desired output hai!

```

public void kReverse (int k) {
    LinkedList prev = null;
    while (this.size > 0) {
        LinkedList curr = new LinkedList();

        if (this.size >= k) {
            for (int i = 0; i < k; i++) {
                int val = this.getFirst();
                this.removeFirst();
                curr.addFirst(val);
            }
        } else {
            int sz = this.size;
            for (int i = 0; i < sz; i++) {
                int val = this.getFirst();
                this.removeFirst();
                curr.addLast(val);
            }
        }

        if (prev == null) {
            prev = curr;
        } else {
            prev.tail.next = curr.head;
            prev.tail = curr.tail;
            prev.size += curr.size;
        }

        this.head = prev.head;
        this.tail = prev.tail;
        this.size = prev.size;
    }
}

```