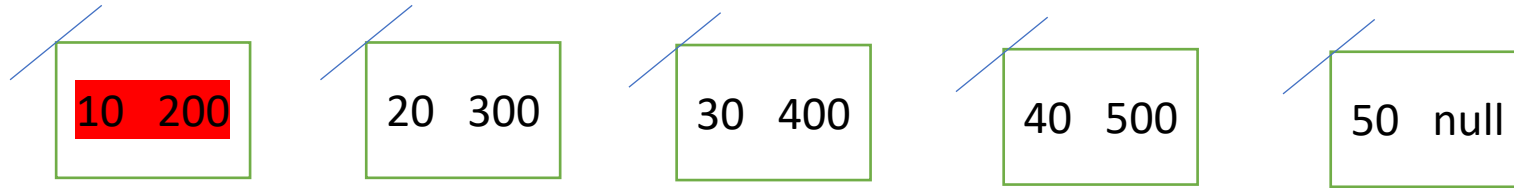




head = 100

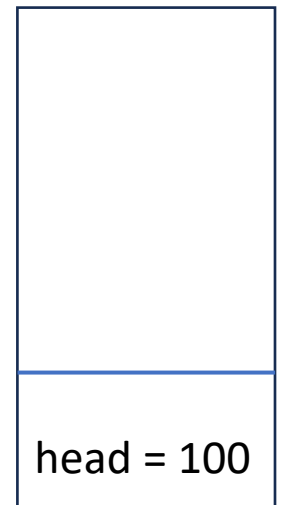


```
list.setHead(reverse(list.getHead()));  
sysout(list);
```

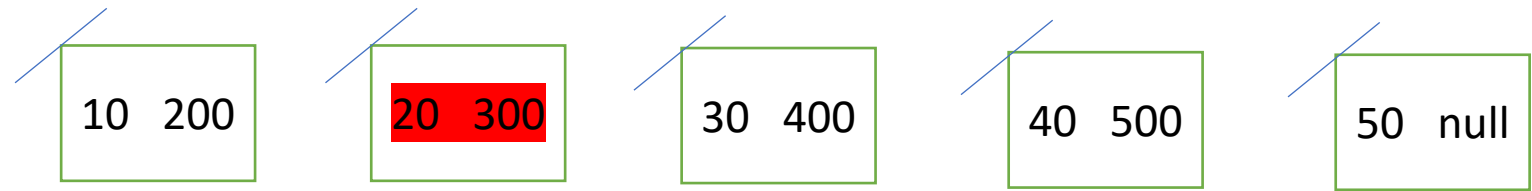
winding

```
public static ListNode reverse(ListNode head)  head = 100  
{  
    ListNode temp;  
    if(head.getNext()==null) return head;  
  
    temp=reverse( head.getNext());  
    head.getNext().setNext(head);  
    head.setNext(null);  
    return temp;  
}
```

**temp = reverse(200) ??**



head = 100

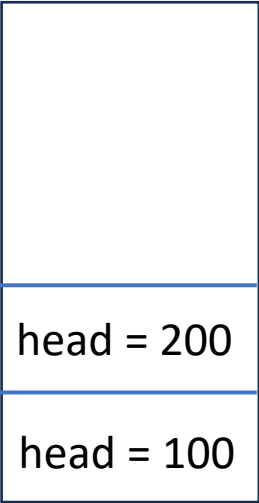


winding

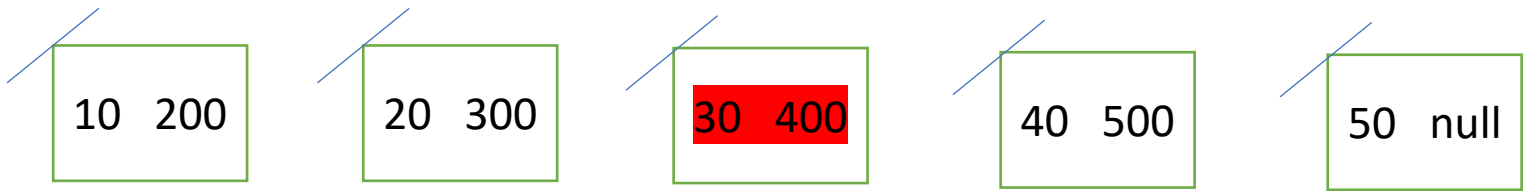
```
public static ListNode reverse(ListNode head)  head = 200
{
    ListNode temp;
    if(head.getNext()==null) return head;

    temp=reverse( head.getNext());
    head.getNext().setNext(head);
    head.setNext(null);
    return temp;
}
```

**temp = reverse(300)    ??**



head = 100



winding

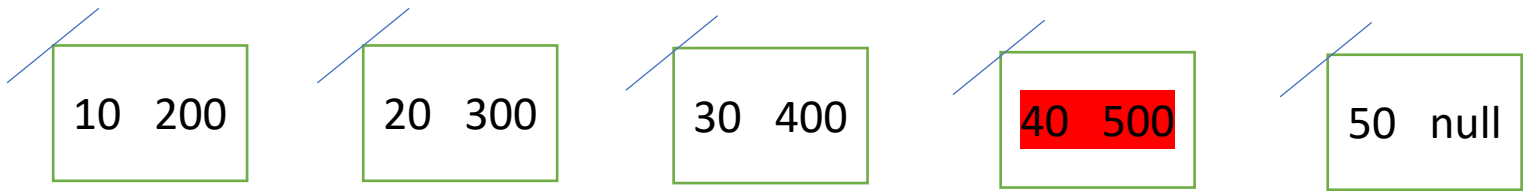
```
public static ListNode reverse(ListNode head)  head = 300
{
    ListNode temp;
    if(head.getNext()==null) return head;

    temp=reverse( head.getNext());
    head.getNext().setNext(head);
    head.setNext(null);
    return temp;
}
```

**temp = reverse(400)    ??**

head = 300
head = 200
head = 100

head = 100



winding

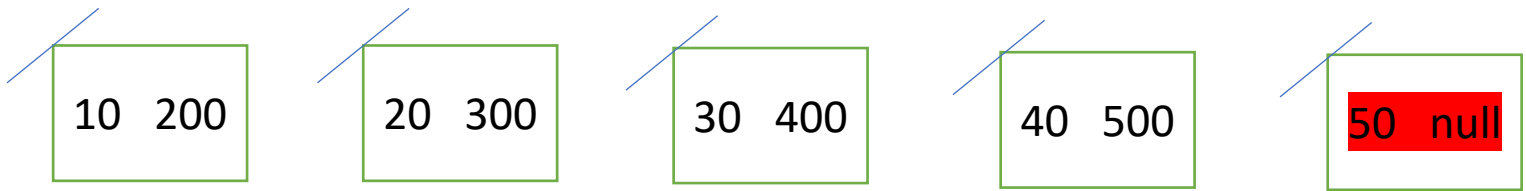
```
public static ListNode reverse(ListNode head)  head = 400
{
    ListNode temp;
    if(head.getNext()==null) return head;

    temp=reverse( head.getNext());
    head.getNext().setNext(head);
    head.setNext(null);
    return temp;
}
```

**temp = reverse(500)    ??**

head = 400
head = 300
head = 200
head = 100

head = 100



winding

public static listNode reverse(listNode head)    **head = 500**

{

listNode temp;

if(head.getNext()==null) return head;    **Condition true**

**return 500**

temp=reverse( head.getNext());

head.getNext().setNext(head);

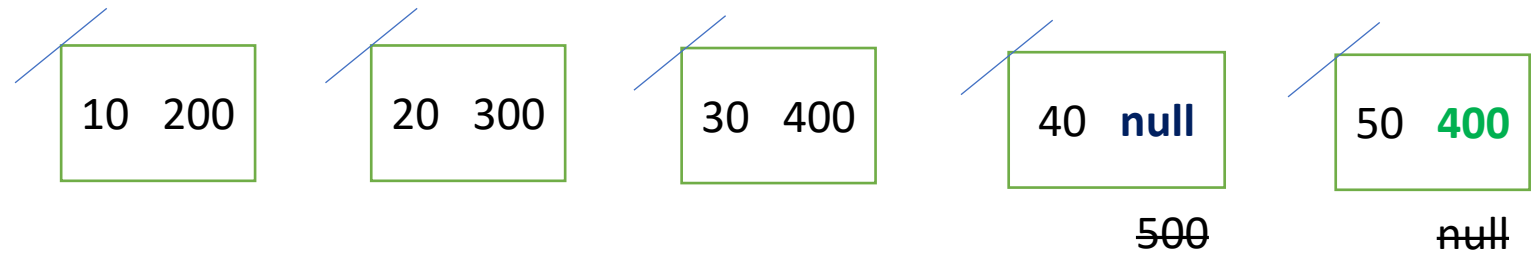
head.setNext(null);

return temp;

}

head = 500
head = 400
head = 300
head = 200
head = 100

head = 100



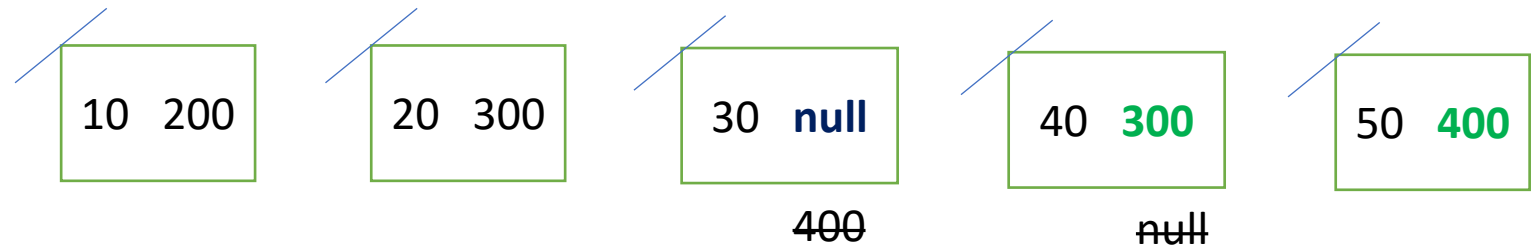
unwinding

```
public static listNode reverse(listNode head)  head = 400
{
  listNode temp;
  if(head.getNext()==null) return head;

  temp=reverse( head.getNext());
  head.getNext().setNext(head);
  head.setNext(null);
  return temp;           //500
}
```

head = 400
head = 300
head = 200
head = 100

head = 100



unwinding

```
public static ListNode reverse(ListNode head)  head = 300
{
    ListNode temp;
    if(head.getNext()==null) return head;

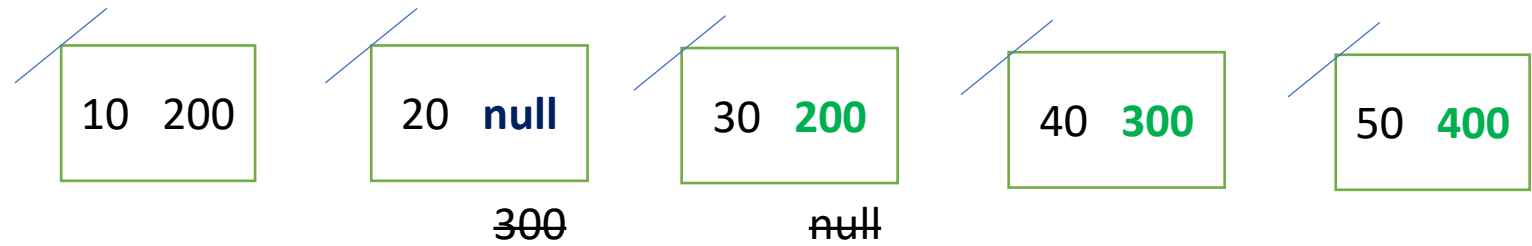
    temp=reverse( head.getNext());
    head.getNext().setNext(head);
    head.setNext(null);
    return temp;           //500
}
```

**temp = 500 returned**

head = 300
head = 200
head = 100



head = 100

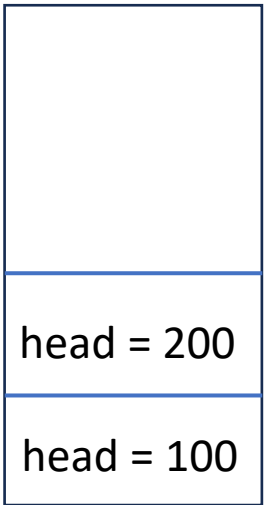


unwinding

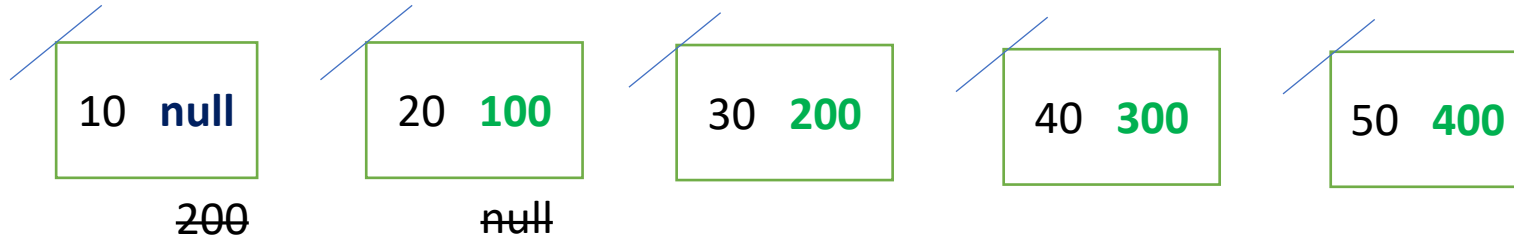
```
public static listNode reverse(listNode head)  head = 200
{
  listNode temp;
  if(head.getNext()==null) return head;

  temp=reverse( head.getNext());
  head.getNext().setNext(head);
  head.setNext(null);
  return temp;      //500
}
```

temp = 500 returned



head = 100



unwinding

```
public static ListNode reverse(ListNode head)  head = 100
```

```
{
```

```
    ListNode temp;
```

```
    if(head.getNext()==null) return head;
```

```
    temp=reverse( head.getNext());
```

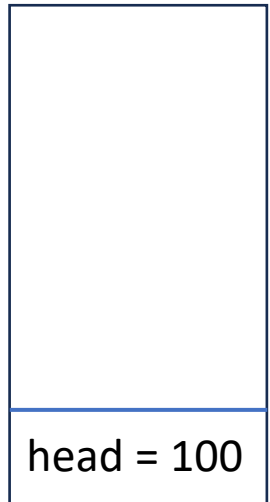
```
    head.getNext().setNext(head);
```

```
    head.setNext(null);
```

```
    return temp;           //500
```

```
}
```

**temp = 500 returned**



```
list.setHead(reverse(list.getHead())); // function call  
sysout(list);
```



```
list.setHead(500); // returned value is set to head  
sysout(list);
```

