

CS 101
Data Abstraction
Spring 2020
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Linked List - A Practice Session

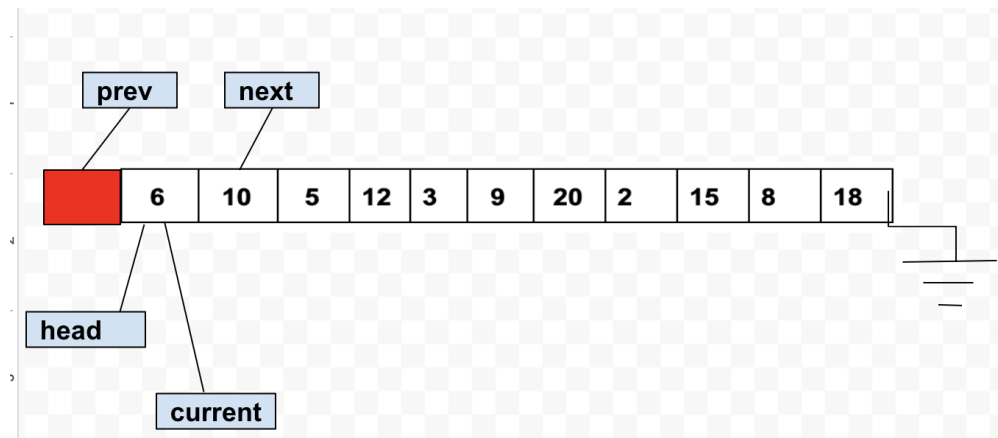
Try it out

1. Implement Reverse Linked List in Links.java

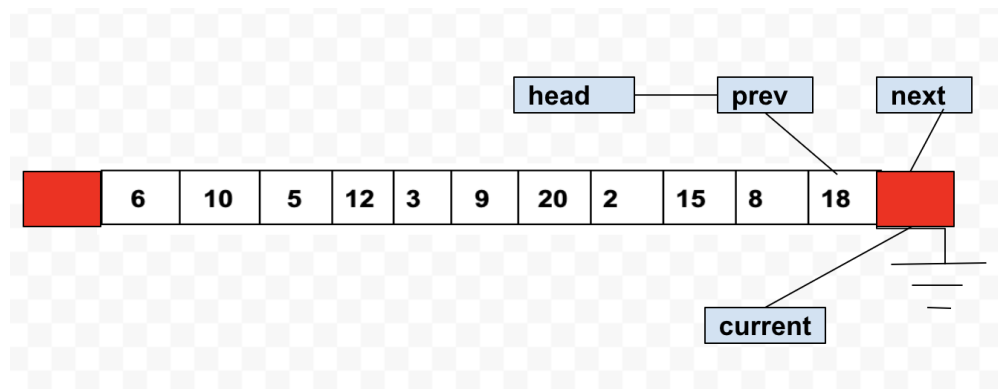
```
public void reverseList(){
    /* add logic to reverse list */
}
```

2. How to implement the reverseList?

Before:



After:



3. Steps to implement in the reverseList:

- Step 1: Initiate two pointers, namely, prev and next to null value.
- Step 2: Initiate a current pointer to point to the head node.
- Step 3: Iterate through the list till the current pointer becomes null.
- Step 4: Set the next pointer of the current node to the prev node.
- Step 5: Increment prev, current and next pointers to the next round.
- Step 6: Exit iteration once the current node reaches the end of the list, which is the null.
- Step 7: Set head node to be the prev node.

- 4. Make a call to the reverseList() from the LinksStub class. This call should be made for every link in the array.
- 5. Make a call to the displayList() from the LinksStub class. This call should be done before and after the reverseList()

Sample output:

```

1 amohan@ALDENV8075 classes % java LinksStub
1 0->1->2->3->
1 4->5->6->7->
1 8->9->10->11->
1 12->13->14->15->
1 16->17->18->19->
1 -----
1 3->2->1->0->
1 7->6->5->4->
2 11->10->9->8->
2 15->14->13->12->
2 19->18->17->16->
2 -----
2 0->1->2->3->
2 4->5->6->7->
2 8->9->10->11->
2 12->13->14->15->
2 16->17->18->19->
2 -----
3 amohan@ALDENV8075 classes %
3

```