



Challenge 5: Reverse a Linked List

Can we implement a program which could reverse a linked list? Let's find out.

We'll cover the following



- Problem Statement
 - Input
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 - Sample Input
 - Sample Output
- Coding Exercise

Problem Statement#

You have to define the **reverse** function, which takes a singly linked list and produces the exact opposite list, i.e., the links of the output linked list should be reversed.

Input#

A singly linked list.

Output#

The reversed linked list.



Sample Input#



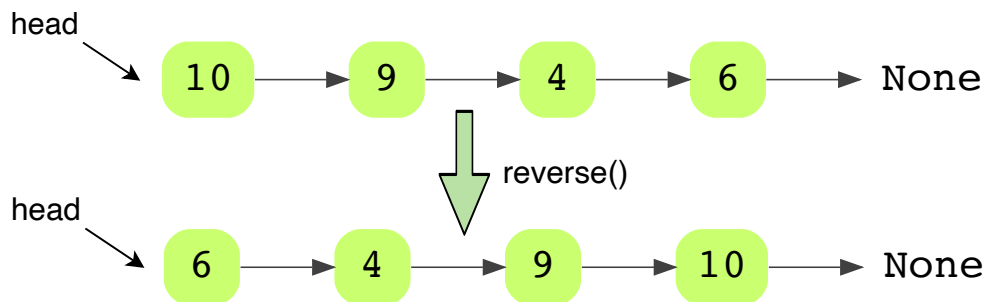
The input linked list object:

```
LinkedList = 0->1->2->3->4
```

Sample Output#

The reversed linked list:

```
LinkedList = 4->3->2->1->0
```



Coding Exercise

Carefully observe all the information above and design a step-by-step algorithm before moving to the actual code.

This problem is designed for your practice, so try to solve it on your own first. If you get stuck, you can always refer to the provided solution.

Good luck!

LinkedList.py

Node.py

```
from Node import Node
from LinkedList import LinkedList
#Access head_node => list.get_head()
#Check if list is empty => list.is_empty()
#Delete at head => list.delete_at_head()
#Delete by value => list.delete(value)
#Search for element => list.search()
#Length of the list => list.length()
#Node class { int data ; Node next_element;}

def reverse(lst):
    # Write your code here
    pass
```



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