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COURSE: CSC 341*[Data Structure]*

ASSIGNMENT

Implementation Of a Linked List Using Python Programming Language

IMPLEMENTATION CODE

```
# A single node of a singly linked list
class Node:
    # constructor
    def __init__(self, data=None, next=None):
        self.data = data
        self.next = next


# A Linked List class with a single head node
class LinkedList:
    def __init__(self):
        self.head = None

    # insertion method for the linked list
    def insert(self, data):
        newNode = Node(data)
        if (self.head):
            current = self.head
            while (current.next):
                current = current.next
            current.next = newNode
        else:
            self.head = newNode

    # print method for the linked list
    def printLL(self):
        current = self.head
        while (current):
            print(current.data)
            current = current.next


# Singly Linked List with insertion and print methods
LL = LinkedList()
LL.insert(3)
LL.insert(4)
LL.insert(5)
LL.printLL()
```

OUTPUT OF THE CODE ABOVE:

```
3

4

5

Process finished with exit code 0
```

OBSERVATION:

I noticed that linked list works with a chain of nodes in which each node is connected to each other by means of pointers or references. It is dynamic in nature; that means that the size of the linked list can vary depending on the requirements of the users. It is a collection of similar kinds of items. The basic building block of linked list is a node