# LAB#5

## Example#1:

Create a singly linked list, insert each new value at the start of the list. Also display the whole list to show each item in the list.

## Solution:

```
class Node:
    def __init__(self,item=None,next=None):
        self.item=item
        self.next=next
class SLL:
    def __init__(self,start=None):
        self.start=start
    def insert_at_start(self,item):
            temp=self.start
            n=Node(item,temp)
            self.start=n
    def print_list(self):
        temp=self.start
        while temp is not None:
            print(temp.item,end=' ')
            temp=temp.next
mylist=SLL()
mylist.insert_at_start(495)
mylist.insert_at_start(95)
mylist.insert_at_start(5)
mylist.print_list()
```

**Result:**

```
5 95 495
```

**Example#2:**

Create a singly linked list, insert each new value at the end of the list. Also display(traverse) the whole list to show each item in the list.

**Solution:**

```
class Node:
    def __init__(self,item=None,next=None):
        self.item=item
        self.next=next
class SLL:
    def __init__(self,start=None):
        self.start=start
    def isempty(self):
        return self.start==None
    def insert_at_last(self,item):
            temp=self.start
            n=Node(item)
            if self.isempty():
                self.start=n
            else:
                while temp.next is not None:
                    temp=temp.next
                temp.next=n
```

```
19        def print_list(self):
20            temp=self.start
21            while temp is not None:
22                print(temp.item,end=' ')
23                temp=temp.next
24    mylist=SLL()
25    mylist.insert_at_last(88)
26    mylist.insert_at_last(190)
27    mylist.insert_at_last(58)
28    mylist.print_list()
```

**Result:**

```
88 190 58
```

## Class Assignment

**Q.1: Modify the example#1 and example#2 lab#5, by inserting three items roll_no, name and cgpa in the data part. Compile both of the examples 1 and 2 as a one program.**

**Hint:**