

LAB#7

Example#1:

Write a program to delete the first element from the list.

Solution:

```
1  class Node:
2      def __init__(self,item=None,next=None):
3          self.item=item
4          self.next=next
5  class SLL:
6      def __init__(self,start=None):
7          self.start=start
8      def insert_at_start(self,item):
9          temp=self.start
10         n=Node(item,temp)
11         self.start=n
12     def delete_first(self):
13         if self.start is None:
```

```
14             print("The list is empty")
15         else:
16             self.start=self.start.next
17
18
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_start(190)
26  mylist.insert_at_start(100)
27  mylist.insert_at_start(199)
28  mylist.insert_at_start(1)
29  mylist.insert_at_start(99)
30  mylist.print_list()
31  mylist.delete_first()
32  print('')
33  mylist.print_list()
```

Result:

```
99 1 199 100 190
1 199 100 190
```

Example#2:

Write a program to delete the last element from the list.

Solution:

```
1  class Node:
2      def __init__(self,item=None,next=None):
3          self.item=item
4          self.next=next
5  class SLL:
6      def __init__(self,start=None):
7          self.start=start
8      def insert_at_start(self,item):
9          temp=self.start
10         n=Node(item,temp)
11         self.start=n
12     def delete_last(self):
13         if self.start is None:
14             print("The list is empty")
15         elif self.start.next is None:
16             self.start=None
17         else:
18             temp=self.start
19             while temp.next.next is not None:
20                 temp=temp.next
21             temp.next=None
```

```

22     def print_list(self):
23         temp=self.start
24         while temp is not None:
25             print(temp.item,end=' ')
26             temp=temp.next
27 mylist=SLL()
28 mylist.insert_at_start(190)
29 mylist.insert_at_start(100)
30 mylist.insert_at_start(199)
31 mylist.insert_at_start(1)
32 mylist.insert_at_start(99)
33 mylist.print_list()
34 mylist.delete_last()
35 print('')
36 mylist.print_list()
37 mylist.delete_last()
38 print('')
39 mylist.print_list()
40

```

Result:

```

99 1 199 100 190
99 1 199 100
99 1 199

```

Class Assignment

Q: Write a program to delete a specific element from the list.