Problem Statement : Insert an element at the beginning of an linked list using Python

Objective : Implementation of Inserting an element at the beginning of an linked list using Python

Source Code :

```python
class Node:
    def __init__(self, value):
        self.data = value
        self.next = None

class LinkedList:
    def __init__(self):
        self.head = None

    def insetAtHead(self, value):
        newNode = Node(value)
        newNode.next = self.head
        self.head = newNode

    def display(self):
        current = self.head
        while current:
            print(current.data, end=" -> ")
            current = current.next
        print("None")


list = LinkedList()
list.insetAtHead(5)
list.insetAtHead(7)
list.display()
```

Output :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  GITLENS
SAKIB DS Lab Report 02
  python -u "c:\PU Projects\PUC Cours
blem01.py"
7 -> 5 -> None
SAKIB DS Lab Report 02
```

Problem Statement : Insert an element at the end of an linked list using Python

Objective : Implementation of Inserting an element at the end of an linked list using Python

Source Code :

```python
class Node:
    def __init__(self, value):
        self.data = value
        self.next = None

class LinkedList:
    def __init__(self):
        self.head = None

    def insertAtTail(self, value):
        newNode = Node(value)

        if self.head is None:
            self.head = newNode
            return

        current = self.head
        while current.next:
            current = current.next
        current.next = newNode


    def display(self):
        current = self.head
        while current:
            print(current.data, end=" -> ")
            current = current.next
        print("None")

list = LinkedList()
list.insertAtTail(99)
list.insertAtTail(100)
list.display()
```

Output :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  GITLENS
SAKIB DS Lab Report 02
  python -u "c:\PU Projects\P
blem02.py"
99 -> 100 -> None
SAKIB DS Lab Report 02
```

Problem Statement : Insert an element between nodes using Python

Objective : Implementation of Inserting an element between nodes of an linked list using Python

Source Code :

```python
class Node:
    def __init__(self, value):
        self.data = value
        self.next = None
class LinkedList:
    def __init__(self):
        self.head = None

    def insertAtAnyPos(self, pos, value):
        newNode = Node(value)

        if self.head == None:
            self.head = newNode
            return

        if pos == 1:
            newNode.next = self.head
            self.head = newNode
            return

        current = self.head
        for i in range(pos - 2):
            current = current.next
        newNode.next = current.next
        current.next = newNode

    def display(self):
        current = self.head
        while current:
            print(current.data, end=" -> ")
            current = current.next
        print("None")

list = LinkedList()
list.insertAtAnyPos(3, 25)
list.insertAtAnyPos(1, 50)
list.insertAtAnyPos(2, 75)
list.display()
```

Output :

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  GITLENS
SAKIB DS Lab Report 02
  python -u "c:\PU Projects\PUC C
blem03.py"
50 -> 75 -> 25 -> None
SAKIB DS Lab Report 02
```