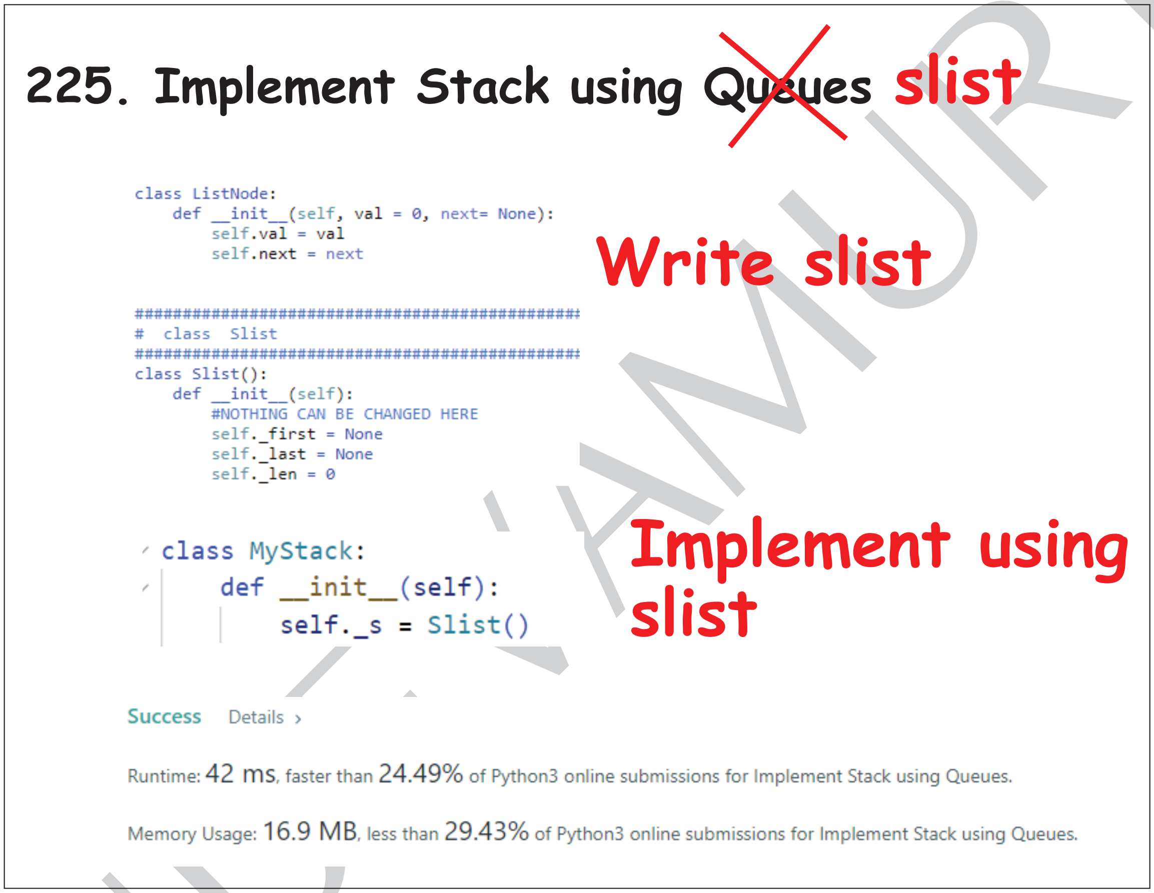
19.12 LeetCode Problems 225, 235, 632 and 641 using *slist*



225. Implement Stack using ~~Queues~~ slist

```
class ListNode:
    def __init__(self, val = 0, next= None):
        self.val = val
        self.next = next


###############################################
#  class  Slist
###############################################
class Slist():
    def __init__(self):
        #NOTHING CAN BE CHANGED HERE
        self._first = None
        self._last = None
        self._len = 0
```

Write slist

```
class MyStack:
    def __init__(self):
        self._s = Slist()
```

Implement using slist

Success Details ›

Runtime: 42 ms, faster than 24.49% of Python3 online submissions for Implement Stack using Queues.

Memory Usage: 16.9 MB, less than 29.43% of Python3 online submissions for Implement Stack using Queues.

Figure 19.20: L225:Stack using *Slist*

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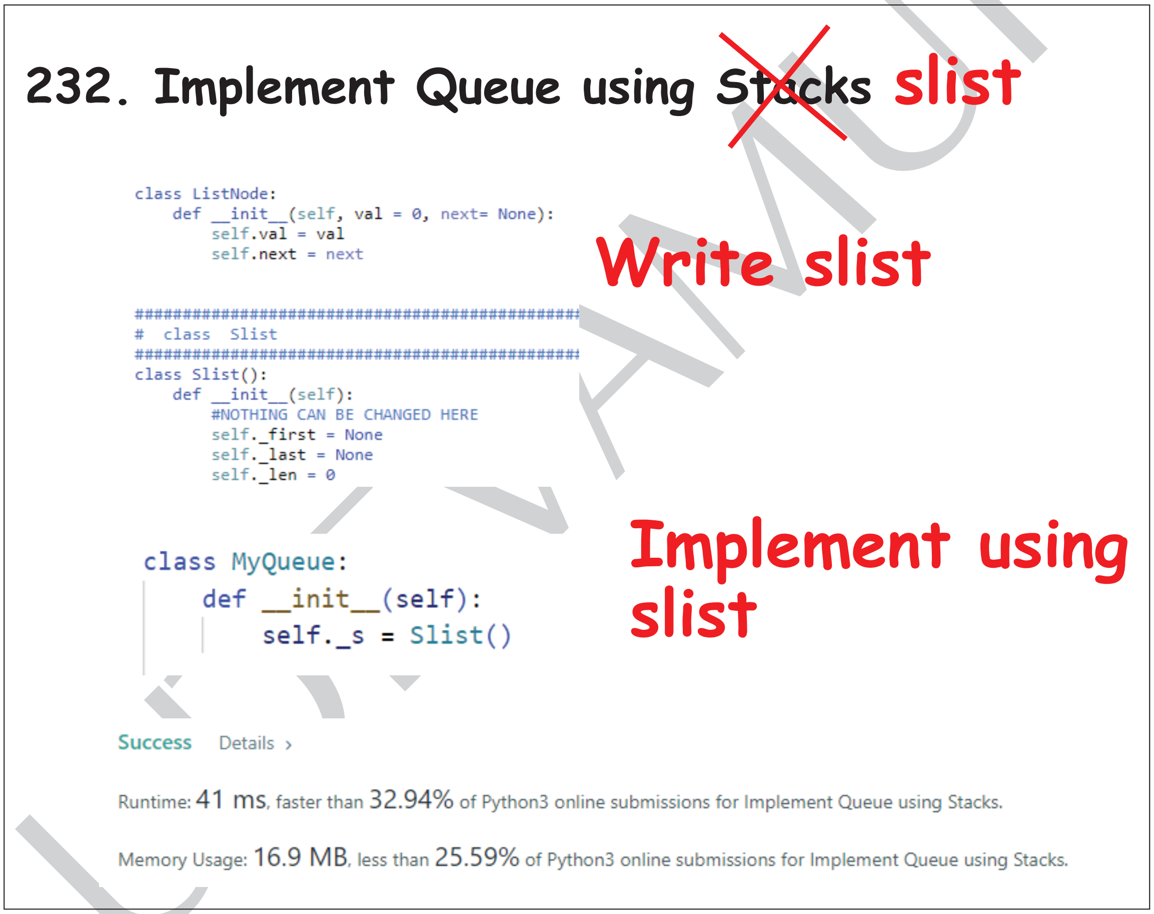

232. Implement Queue using ~~Stacks~~ slist

```
class ListNode:
    def __init__(self, val = 0, next= None):
        self.val = val
        self.next = next


###############################################
#  class  Slist
###############################################
class Slist():
    def __init__(self):
        #NOTHING CAN BE CHANGED HERE
        self._first = None
        self._last = None
        self._len = 0
```

Write slist

```
class MyQueue:
    def __init__(self):
        self._s = Slist()
```

Implement using slist

Success Details ›

Runtime: 41 ms, faster than 32.94% of Python3 online submissions for Implement Queue using Stacks.

Memory Usage: 16.9 MB, less than 25.59% of Python3 online submissions for Implement Queue using Stacks.

Figure 19.21: L225:Queue using *Slist*

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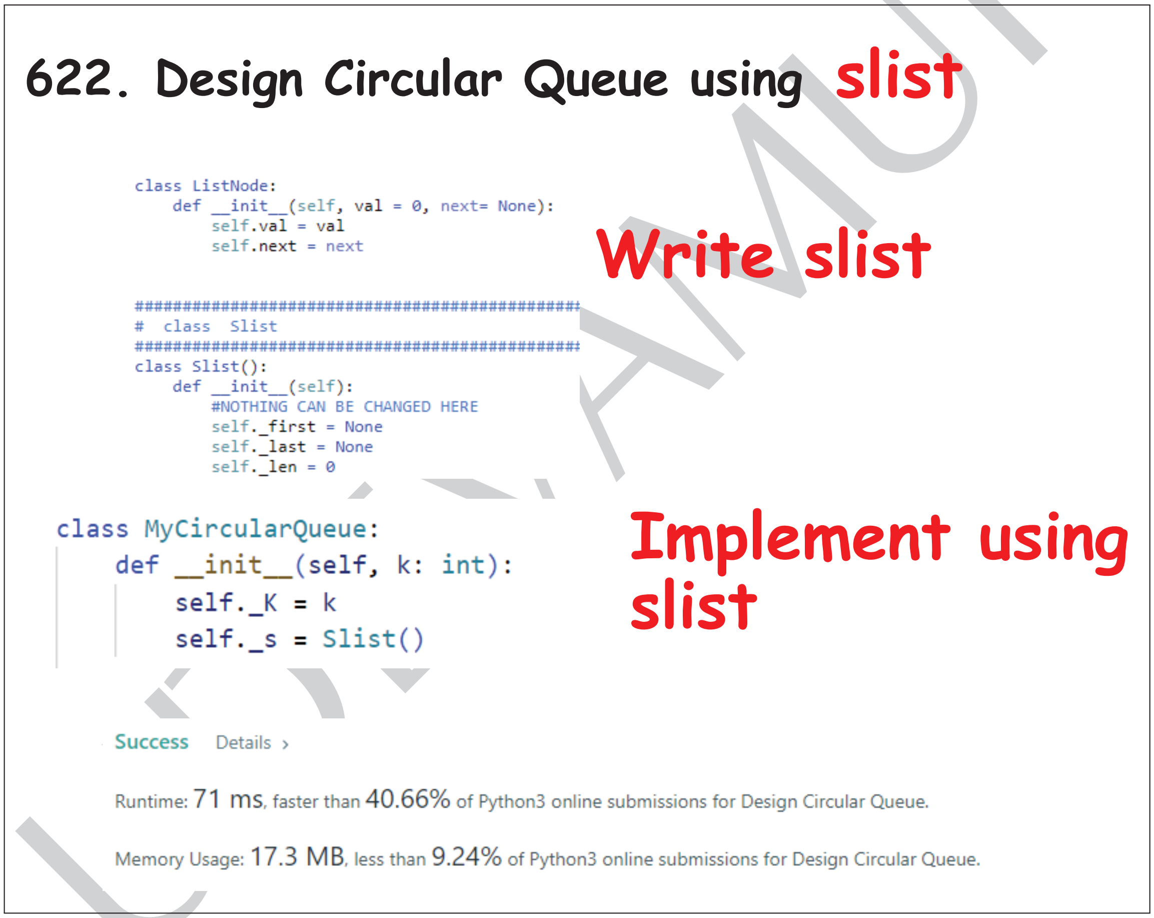

622. Design Circular Queue using slist

```
class ListNode:
    def __init__(self, val = 0, next= None):
        self.val = val
        self.next = next


###############################################
#  class  Slist
###############################################
class Slist():
    def __init__(self):
        #NOTHING CAN BE CHANGED HERE
        self._first = None
        self._last = None
        self._len = 0
```

Write slist

```
class MyCircularQueue:
    def __init__(self, k: int):
        self._K = k
        self._s = Slist()
```

Implement using slist

Runtime: 71 ms, faster than 40.66% of Python3 online submissions for Design Circular Queue.

Memory Usage: 17.3 MB, less than 9.24% of Python3 online submissions for Design Circular Queue.

Figure 19.22: L622:Circular Queue using *Slist*

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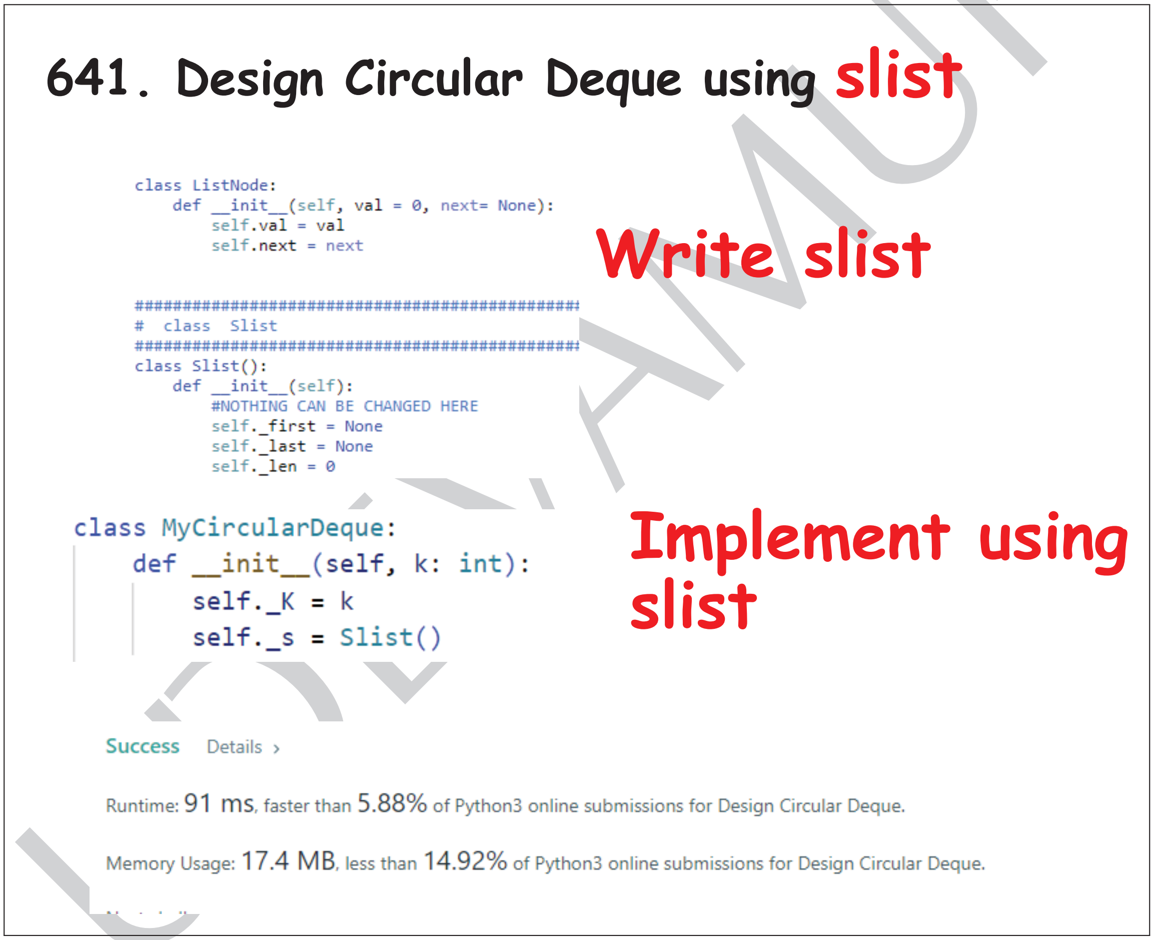

641. Design Circular Deque using slist

```
class ListNode:
    def __init__(self, val = 0, next= None):
        self.val = val
        self.next = next


###############################################
#  class  Slist
###############################################
class Slist():
    def __init__(self):
        #NOTHING CAN BE CHANGED HERE
        self._first = None
        self._last = None
        self._len = 0
```

Write slist

```
class MyCircularDeque:
    def __init__(self, k: int):
        self._K = k
        self._s = Slist()
```

Implement using slist

Success Details ›

Runtime: 91 ms, faster than 5.88% of Python3 online submissions for Design Circular Deque.

Memory Usage: 17.4 MB, less than 14.92% of Python3 online submissions for Design Circular Deque.

Figure 19.23: L641:Circular Deque using *Slist*

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