

## # Singly Linked Lists

```
class SinglyNode:
```

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

```
    def __str__(self):
        return str(self.val)
```

```
Head = SinglyNode(1)
```

```
A = SinglyNode(3)
```

```
B = SinglyNode(4)
```

```
C = SinglyNode(7)
```

```
Head.next = A
```

```
A.next = B
```

```
B.next = C
```

```
print(Head)
```

```
→ 1
```

# Traverse the list -  $O(n)$ 

```
curr = Head
```

```
while curr:
```

```
    print(curr)
```

```
    curr = curr.next
```

```
→ 1
   3
   4
   7
```

# Display linked list -  $O(n)$ 

```
def display(head):
```

```
    curr = head
```

```
    elements = []
```

```
    while curr:
```

```
        elements.append(str(curr.val))
```

```
        curr = curr.next
```

```
    print(' -> '.join(elements))
```

```
display(Head)
```

```
→ 1 -> 3 -> 4 -> 7
```

# Search for node value -  $O(n)$ 

```
def search(head, val):
```