

Linked List Cycle

Question: Given a linked list, determine if it has a cycle in it

Solutions:

```
class ListNode:
```

```
    def __init__(self, x):
```

```
        self.val = x
```

```
        self.next = None
```

```
class Solution:
```

```
    # @param head, a ListNode
```

```
    # @return a boolean
```

```
    def hasCycle(self, head):
```

```
        if head == None or head.next == None:
```

```
            return False
```

```
        slow = fast = head
```

```
        while fast and fast.next:
```

```
            slow = slow.next
```

```
            fast = fast.next.next
```

```
            if slow == fast:
```

```
                return True
```

```
        return False
```

```
if __name__ == '__main__':
```

```
    ll, ll.next, ll.next.next = ListNode(2), ListNode(4), ListNode(3),
```

```
    ll.next.next.next = ll.next
```

```
    print( Solution().hasCycle(ll) )
```