

Lab Assignment: Reverse a Singly Linked List

Problem Statement:

Given the head of a singly linked list, write a function to reverse the list and return the new head pointer.

1. Iterative In-Place Method (Preferred):

- Traverse the list using three pointers: `prev`, `current`, `next`.
- Reverse the `next` link of each node until reaching the end.
- Time: $O(n)$, Extra Space: $O(1)$.

Function Signature:

```
Node* reverseList(Node* head);
```

Examples:

- **Input:** 1 → 2 → 3 → 4 → 5
Output: 5 → 4 → 3 → 2 → 1
- **Input:** 10 → 20
Output: 20 → 10
- **Input:** NULL
Output: NULL