CSC180 – Lab 9

Reminder: submitting a lab that another team completed is a serious academic offence. Letting another team copy or read your code is also an academic offense. Students caught submitting labs that are not their own, as well as the students from whom the code was copied, will be penalized severely.

For this lab, define the following structure:

```c
struct node{
    int value;
    struct node *next;
    struct node *prev;
}
```

1. Write a function with the signature

```c
void mergeLinkedLists(struct node **dest, struct node **l1, struct node **l2)
```

that takes in a pointer to a linked list *dest, and linked lists l1 and l2 which are sorted in ascending order, and places all the nodes from l1 and l2 into *dest, such that the linked list in *dest ends up being sorted. You should not call malloc when doing this. You may modify the linked lists l1 and l2. Your program should run in O(n) time.

2. Write a function that reverses a linked list (i.e., 1->2->3->0 should become 0->3->2->1)