CS 2123
Data Structures
Assignment 2
Due Friday February 19

1. (100 pts) Write a program to implement the following functions on linked lists. Assume that node structure of a singly linked list is as follows.

```
struct node
{
  int info;
  struct node *next;
};
typedef struct node node;
```

and node structure of a doubly linked list is as follows

```
struct cnode
{
  int info;
  struct cnode *next;
  struct cnode *previous;
};
typedef struct cnode cnode;
```

Implement the below functions whose prototypes are given below

```
node *CopytoSinglyLinked(cnode *head)
node *Previous(node *head, node *current)
void PrintReverse(node *head)
node *RemoveDuplicates(node *head)
```

- *CopytoSinglyLinked* function makes a singly linked copy of a doubly linked list that is provided as a parameter and returns a pointer to the singly linked list.
- *Previous* function returns the previous node of current in a singly linked list pointed by head. If *current* is the first node *Previous* returns null.
- *PrintReverse* function prints a elements of a singly linked list in reverse order. This should be implemented as an iterative function. Use *Previous* function in your implementation.
- *RemoveDuplicates* function removes duplicate elements in a singly linked list that is provided as a parameter. The contents of the list need not be sorted. You should remove duplicates in an unsorted list without changing the order of elements in the list.

Submit your program electronically using the blackboard system

The program you submit should be your own work. Cheating will be reported to office of academic integrity. Both the copier and copiee will be held responsible.