Data Structures and Algorithms
Homework 04[1]

Note: You are required to submit your answer in *hand-written* form at the beginning of the next lecture.

Question 1.
Describe an algorithm for calculating the size of a linked lists that contain the head pointer as the only data field (i.e. no `size` data member).

Question 2.
Describe an algorithm for concatenating two singly linked lists that have pointers to indicate heads of lists.

Question 3.
Describe an algorithm for concatenating two doubly linked lists that have pointers to indicate heads and tails of lists.

Question 4.
Describe an algorithm for reversing the order of all nodes in a singly linked list.

Question 5.
Describe an algorithm for sorting a doubly linked list of integers in increasing order.

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[1] *Adapted from Pham Bao Son's DSA-09s2*