Lab 11 and Lab 12 – Assignment 9

- **Assignment Deadline: 20 April 2023, 11:59PM**
- **Submission:1) a cpp file with student ID and name, 2) a screenshot of result and code**

Problem: Linked List

- **Develop the following four functions:**
- **Lab 11**
  > void **printList**(Linkedlist **head); // print a linkedlist
  > void **addAtEnd**(Linkedlist **head, int value); // add a node at the end of the list
- **Lab 12**
  > void **addAtBeginning**(Linkedlist **head, int value); // add a node at the beginning
  > bool **deleteNthNode**(Linkedlist **head, int n);
  > // delete nth node in the list.
  > // n=1 for the first node
  > // return false if the deletion operation is successful; otherwise false.

- The following code in main() should output the sample result in the next page

  > Linkedlist *head = NULL;
  > addAtEnd(&head, 4);
  > addAtEnd(&head, 5);
  > addAtEnd(&head, 6);
  > printList(&head);
  > addAtBeginning(&head, 3);
  > addAtBeginning(&head, 2);
  > addAtBeginning(&head, 1);
  > printList(&head);
  > deleteNthNode(&head, 3);
  > printList(&head);
  > deleteNthNode(&head, 1);
  > printList(&head);
  > deleteNthNode(&head, 1);
  > printList(&head);
  > deleteNthNode(&head, 3);
  > printList(&head);
  > deleteNthNode(&head, 2);
  > printList(&head);

- **Sample result**

```
4 5 6
1 2 3 4 5 6
1 2 4 5 6
2 4 5 6
4 5 6
4 5
4
```