

Exercise 2: SLL Functions

For this exercise, you may work with another student. If you do so, write **both names in the header**, but turn in **two copies** of the project, one with your name on the folder and the other with the other student's name on the folder.

Folder name: **A250_E2_YourLastName_YourFirstName**

Due Date:

- **MW class:** Wednesday, Sep. 9, at the beginning of class.
- **TTh class:** Thursday, Sep. 10, at the beginning of class.

Turn in:

- The project in the **Q drive**
- A **printed copy** of the **implementation of the three functions** described below (**NOT** the whole project), including the **name header**.

The project **sll_functions** contains a **Main.cpp** file with all the testing cases and the **AnyList** class. Your job is to *declare* and *define* the functions below:

- Function **getNumOfItems**
 - Returns the number of nodes in the list.
- Function **insertBack**
 - Inserts a node to the **back** of the list.
 - Cases to consider:
 - The list is empty.
 - The list has only one node.
 - The list has more than one node. Using a **while** loop, you will need to **traverse** the list to insert a new node at the very end of the list. Use a pointer **current** to traverse the list.
 - Write a **comment for each statement** in the **insertBack()** function (even if the comment sounds redundant). This will help you understand better what each statement does and the flow of your code.
- Function **deleteFirstNode**
 - Deletes the first node in the list.
 - Consider the case when the list is empty and output the error message **"Cannot delete from an empty list."**

IMPORTANT:

- Do **not** add any additional member variables to the classes
- Do **not** modify any code segment already in the file

EXPECTED OUTPUT (see next page)

```
TESTING - Check if list is empty...
Total number of items: 0

TESTING - Start inserting...
Inserted: 2 4 5 8 9
List is: 2 4 5 8 9

TESTING - Start deleting...

Delete first node...
Total number of items is now: 4
List is now: 4 5 8 9

Delete first node...
Total number of items is now: 3
List is now: 5 8 9

Delete first node...
Total number of items is now: 2
List is now: 8 9

Delete first node...
Total number of items is now: 1
List is now: 9

Delete first node...
Total number of items is now: 0
List is now: List is empty.

Delete first node... Cannot delete from an empty list.
Total number of items is now: 0
List is now: List is empty.

Press any key to continue . . .
```