

COSC2430 lab2: Linked List Template

1. Introduction

You will implement a C++ program to add and remove objects in a linked list. The purpose of this lab is to get students familiar with Linked List operations and type template. Please name the folder on the server as “lab2”.

2. Input files

- The first line of the input will contain a string, this string will either be “string”, “integer”, or “character” this will indicate the data type of the data that will be added to the linked list, each input file only contains a single data type.
- The second line of the input will tell you how to add data into the linked list, it will either be “head” or “tail”. If its “head” that mean all the data should be added at the head for this input file, and if its “tail” that mean all the data should be added at the tail for this input file.
- Each element will be on its own line.
- Beside the data to be added to the linked list, there will be two remove operation, it will either be “remove head” or “remove tail”. If its “remove head” that mean removing the first element of the linked list, and if its “remove tail” that mean removing the last element of the linked list. “head”, “tail”, “remove” are keywords and will never appear as a data to be added to the linked list.
- There will be no empty lines
- There might be empty input file, in this case the output should be empty.

3. Output files

- The output file should display every element of your linked list.
- Each element will be separated by a space (note there is no extra space at the end of the output).

4. Examples

input1.txt

```
string
head
world
digital
remove tail
hello
print
remove tail
```

ans1.txt

```
print hello
```

input2.txt

```
int
tail
23
2
remove head
0
45
remove tail
15
```

ans2.txt

```
2 0 15
```

input3.txt

```
char
head
c
remove tail
remove tail
h
w
o
p
e
remove head
remove tail
remove head
r
```

ans3.txt

```
r o w
```

5. Turn in your lab assignment

lab2 needs to be turned in to our Linux server, follow the link here

https://rizk.netlify.app/courses/cosc2430/2_resources/

Make sure to create a folder under your root directory, name it “lab2” (case sensitive), copy all your .cpp and .h file to this folder, “ArgumentManager.h” need to be included as well.

PS: This document may have typos, if you think something illogical, please email TAs for confirmation.