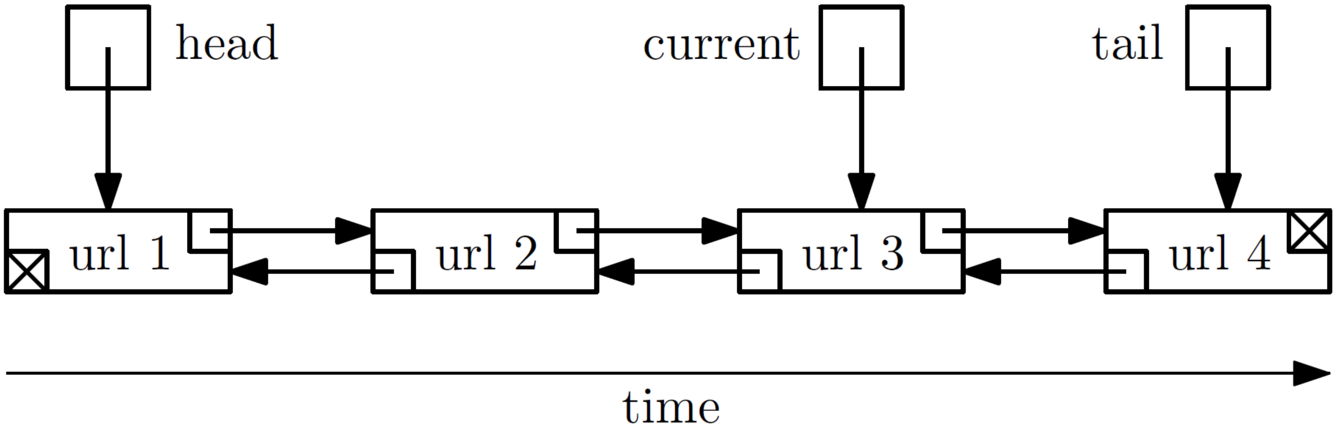
**CSCI 2380** **Fall 2023** **Mr. Gustavo Dietrich**

**Homework 8:** Doubly linked-lists **Due Date:** 11/8/23

In a previous homework, you implemented the "history" feature of a web browser using two stacks. These stacks were part of the C++ <stack> library, written by someone else. Here you'll roll your own implementation from scratch using just one **doubly linked list**.



**Note:** In this example the URLs were entered in the order indicated by the time arrow (i.e., url1 was entered first, url2 was entered next, and so forth).

The following files have been given to you:

1. A C++ header file (browserhistory.h) declaring the **BrowserHistory** class.

2. A C++ source file (main.cpp) containing a main() function with tests.

Create new C++ source file named **browserhistory.cpp** that implements the class declared in browserhistory.h so that browserhistory.cpp and the provided files compile into a program that runs with no failed tests.

Submit just the source code of **browserhistory.cpp**. You don't need to submit the main.cpp nor the header file because I will use my own browserhistory.h and main.cpp files to evaluate your browserhistory.cpp file.

Review the examples discussed in class and the textbook to get an idea of what you need to do. Analyze carefully the tests because that will help you understand how the methods that you need to create work.

Do not hesitate to use the corresponding topic in Discussions to post your questions/doubts about this assignment. I will reply as soon as I can.

**IMPORTANT:**

Make sure your program compiles and executes in full (it should pass all the tests included in main()).
**You must submit ONLY ONE solution per team.**
Your program must be well commented, use meaningful identifiers, and use indentation to improve its readability.

Your program must have the following comments at the top:

```
//******************************************************************************
// Team #                    CSCI 2380                    Fall 2023          Homework # 8
// First and Last Name
// First and Last Name
//
//******************************************************************************
```

**When done, submit your solution through Blackboard using the "Assignments" tool. Do Not email it.**
**Paste the link to your final solution along with your source code in the textbox opened when you click on Create Submission before you click on Submit.**

The following is the basic criteria to be used to grade your submission:

You start with 100 points and then lose points as you don't do something that is required.

-11: Incorrect implementation of BrowserHistory(string default_url)
-11: Incorrect implementation of current_url()
-11: Incorrect implementation of go_to_url(string url)
-11: Incorrect implementation of back()
-11: Incorrect implementation of can_go_back()
-11: Incorrect implementation of past_url_count()
-11: Incorrect implementation of forward()
-11: Incorrect implementation of can_go_forward()
-11: Incorrect implementation of future_url_count()

-20: Program crashes when executed
-5: Unnecessary statements in your code
-10: Missing/too few comments
-5: Your solution produces memory leaks (doesn't delete dynamic variables created with the new operator)
-40: Program does not compile
-20: Incorrect/missing source code
-20: Incorrect/missing link to your Repl.it solution
-100: No team contribution
-100: The code submitted is not your creation (you got it from a web site or another person)
-10: Late
-100: No submission.
-101: Incorrect submission. Talk to me please.