

Homework 2

100 Points

Circularly Doubly-Linked List with a sentinel node

Project: Build and process a sorted linked list.

Part A. Change your first homework assignment to process a circularly doubly-linked list with a sentinel node. Demonstrate that both links work by printing the list both forwards and backwards.

Part B. When done, make a copy and change the copy using templates, as shown in [Singly Linked List Template - An Example](#) (see Catalyst).

Grading:

| | |
|-----------------|------|
| Part A | - 70 |
| Build list | |
| Print forward | |
| Print backwards | |
| Delete | |
| Search | |
| Find Largest | |
| Other functions | |
| Part B | - 30 |

Extra Credit: 1 Point

Part A: Write a function that displays the countries whose capital contains a certain letter provided by the user. For instance, if the user enters 'M' or 'm', the output will be:

[RU Russia; Moscow; 143420309](#)
[DO Dominican Republic; Santo Domingo; 8950034](#)
[ES Spain; Madrid; 40341462](#)
[NP Nepal; Kathmandu; 27676547](#)
[MC Monaco; Monaco; 32409](#)
[MX Mexico; Mexico City; 106202903](#)

Run each program once and save the output at the end of the source file as a comment. Compress the folders for both parts (source and header files, input and output files (if any)), and upload the compressed file: [22C_LastName_FirstName_H2.zip](#)