Advanced Programming
COEN 11

Lab 9

Lab 9

- Extend your program for lab 8
  - Include an auto-saving thread to save the info from the list(s) to a binary file every 15 seconds.
- Your thread is in a loop forever.
  - It sleeps for 15 seconds
  - When it wakes up, it opens the file and traverses the list, writing the info to the file.
  - Then closes the files and sleeps again.

Lab 9

- The list and auto-saved file are shared
  - Use a lock!
    - Lock whenever you change the list or handle the list in the auto-save thread/function.
    - Also, lock when you handle (read or write) the auto-saved file.
- Cancel the auto-saving thread before you save the list to the text file at the end.
  - Use the lock to guarantee that you are not in the middle of saving the data to the temporary file when you cancel the thread.

Lab 9

- File Requirements
  - The name of the auto-saved file should be an argument to the program (argv[2]).
  - The file should be binary. Use fwrite to write each node to the file.
  - Add an option to your program and create a new function to read the binary file (with fread into a temp node) and show the contents on the screen.
    - Don’t forget to lock when reading the file!

Lab 9

- File Requirements
  - The file written at the end (argv[1], option zero) and read in the beginning will continue to be a text file
  - Reuse the functions from lab 8

Lab 9

To receive full credit:

- Pre-lab (10%)
  - List of places where you need a lock
- Demo (30%)
  - Show the TA
    - Lists of different sizes
    - Add someone
    - Check the binary file
    - Add someone
    - Check the binary file again
- Submit to Camino (60%)

End

Lab 9