

# CSCI 401 Operating Systems

## Instructor: Gedare Bloom

### Project 1, Part 2 (50 points)

Read all instructions carefully.

***Due Sunday, October 14, 11:59 P.M.***

### **Part 2 (50 points)**

You will be assigned two other students who completed project 1 part 1 other than your own. Exchange HowardU-project1.tgz files with each other. You should eventually have 3 such tgz files including your own. *Note: You can begin this assignment with just one such tgz file, your own, and make more progress as you receive additional tgz files from your assigned “group partners.”*

Extract all .tgz files. Do they extract cleanly to create distinct HowardU-project1 subdirectories? Enter each directory: Are there any pre-compiled executable files there, or only the expected files (Makefile, list.c, list.h, list\_test.c, and README)? Run ‘make’ – does it compile cleanly without any errors or warnings? Run the compiled list\_test program: does it run, and how do you know that all the tests it attempts are successful or fail expectedly? Does the README give you guidance on how to tailor the list\_test program if needed, or how to interpret the results of the test program? Do you have any other comments about the contents of the README?

Now try every list\_test program with every list.c implementation. Make backup copies of every list\_test.c. Copy an original list\_test.c from one directory into the other three. For each copy: run ‘make’ and execute the list\_test program. Did the results of list\_test differ from the list\_test in its original directory? Should they? Did the results of list\_test differ from the original list\_test.c in this directory? Should they? Do this again with a copy of another original list\_test.c, and then again with a copy of the third and fourth list\_test.c files.

Now compare the source code of each (original) HowardU-project1 subdirectory. Does the list.h adequately document the list implementation? Is the list.c implementation readable and understandable? Can you understand the data structures that were used? Do the algorithms make sense based on the function names, arguments, and comments or other documentation? Does the list\_test.c explain what it is testing and provide documentation for how it is expected to work? Do you have any other comments about the code quality?

Did you find any new bugs in your submission during this process? Did you find any bugs in the other HowardU-project1 submissions? Document the bugs and fixes—if you see how to make them (patches welcome).

Write a report that answers the above questions and summarizes your findings. Include whatever evidence you think is appropriate. Identify the authors of the submissions you examined. Submit a PDF version of your report.

Complete the Project1-Rubric.xlsx spreadsheet assigning scores and giving comments as indicated by the instructions in the spreadsheet. There is one worksheet for each of the submissions that you evaluate. Also enter the overall scores you gave in the Google Form provided as a link in the assignment description on the course web site.

## **Submission Instructions (read carefully)**

Make a PDF file with your HowardU username (email address without the @.edu part) as the name. For example I would name my file gedare.bloom.pdf. Upload the PDF file to Project 1 Part 2 on Blackboard. Also, upload the completed Project1-Rubric.xlsx file there. A Google Form will be posted for you to submit the rubric scores.