Lab05

Deadline 11:59PM Oct 28

Requirements

Write a recursive function to reverse a string and print, i.e., ”cat is running” becomes ”running is cat”. Your main function should be able to take the file as a command line argument, and your main function should be able to read the file correctly. The output is using `printf` to the console.

The input file is can be a multiline text file and it must reverse the order of lines as well. Below is a sample of the input and output.

Input

cat is running
dog is walking
zebra is crawling

Output

crawling is zebra
walking is dog
running is cat

Restrictions

Below are restrictions in terms of how to implement the lab

- The input will be through a command line argument . The run command will be `./a.out <input file name>`, so the program should never prompt the user for any input.
- Only use standard library as announced in the course website.
- You can assume that the file will always have a new line at the end. The input file is guaranteed to include this last empty line. For example, in this example file:
  cat is running
  dog is walking
  <-(notice that there is an empty new line)
- Corner case must be handled by using `return -1` and print appropriate messages.
- Except the `main` function to parse a file (parsing file must be done in the `main`), there must not be any loop (for or while).
- Any reverse string functions must be written in `reverse.c` file, not in `main.c`.
- Make sure to run with debug mode to ensure that the program exit with the code 0. Anything other than exit code 0 means there is a bug. You can run in debug mode by
  - Click  on the toolbar.

Grading

This lab will be marked out of 6. For full marks this week, you must:

- (1 point) Correctly use git/GitHub and the repository following the lab handout
- (4 points) Generate a correct solution to the problem(s) in this lab
- (1 point) Handling corner cases and gracefully exit

Submission Files and Expected Outputs

- Github classroom link is posted on Learning Hub.
- Files to submit
    - lab5.c (do not capitalize)
    - reverse.c
    - reverse.h
    - AXXXX.txt (empty file, but with your A number as file name)
    - Only push ony these files to Git