Lab 4

Programming to C
CSCI 112, Fall 2020

Objectives

- Work with strings
- Read and write to a file

Description:

This comes from problem 1, chapter 8 on page 515, 516.
You are to write a program that will read the names of hurricanes that affected Florida, their categories, and their date from the file /public/lab4/hurricanes.csv. You will write the list sorted by name to a file. Only print the number of the category, not the whole phrase that is in the file for category.

Requirements:

- Best practice: create a directory called lab4 to work in
- Read from the file /public/lab4/hurricanes.csv
- Write the output to a file
- DO NOT USE GLOBALS.
- MUST COMPILE WITH -Wall
- You must submit:
    - 1) Screen shot showing your successful compile and the output
    - 2) source code
    - 3) output file
- Use an array of character strings to store each line read in.
  Example: char *hurricanes[100];
  This means you have to allocate memory (malloc or calloc) for each string before you read it in.
- Use fgets to read in the line.

A Section of My Output

```
Hurricanes in Florida with category and date
Agnes        1    19-Jun 1972
Alma         2    9-Jun 1966
Andrew       5    24-Aug 1992
Betsy        3    8-Sep 1965
Charley      4    13-Aug 2004
Cleo         2    27-Aug 1964
David        2    3-Sep 1979
Dennis       3    10-Jul 2005
Donna        4    10-Sep 1960
Dora         2    10-Sep 1964
Earl         1    3-Sep 1998
Easy         3    5-Sep 1950
Elena        3    1-Sep 1985
Eloise       3    23-Sep 1975
```

Submission

- Due Date: Sunday, 10/11 at 11pm

  Each student will complete and submit this assignment individually. I will check for plagerism. Labs submitted after the due date/time will not be accepted.

Grading

Points (100 pts)

- 5 points – comments explaining what your program does
- 10 points – indent your code so it is readable
- 15 points – submitted screenshot and output file as required above
- 15 points – compiles successfully with -Wall – no warnings
- 5 points – does not use globals
- 15 points – submitted source code
- 5 points – reads from the file in /public/lab4
- 5 points – prints to a file in a pleasing manner and shows all the information

- 5 points – uses fgets to read in each line
- 5 points – stores each line in an array of strings
- 5 points – sorts the array
- 5 points – prints only the category number
- 5 points – uses at least 2 functions plus main
- 10 points – uses malloc or calloc to allocate memory