

# COEN 10

# Lab 10

# Lab 10 – Word Manipulation

- ❖ Your code will
  - ◆ Read words from the keyboard,
  - ◆ Place them in a string array,
  - ◆ Execute some tasks on the array

# Lab 10 – Word Manipulation

## ❖ Task 1: Input up to 10 words

### ◆ Keep track of the number of words

- ^D will stop the input
- Check the value returned by scanf

### ◆ Insert the words in alphabetical order in the array, one by one

- Use strcmp to find the right place and open a slot by shifting the other elements down

### ◆ Show the words in the array

# Lab 10 – Word Manipulation

- ❖ Task 2: Reverse the array
  - ◆ Swap the strings
    - Use strcpy and a temp array
  - ◆ Show the words in the array

# Lab 10 – Word Manipulation

❖ Task 3: convert all lowercase letters to uppercase letters

◆ Use a pointer to traverse each string

- Calculate the length as the strings are traversed
- Fill up the length array

◆ Use `islower ()`, `toupper ()`

- You may need to include a .h file

◆ Show the words in the array

# Lab 10 – Word Manipulation

- ❖ Task 4: show the following info about the words
  - ◆ Shortest and longest words
    - Show the first shortest and the first longest
    - Use info in the length array
  - ◆ Average length of the words
    - Use info in the length array
  - ◆ Words starting with something other than a letter
    - Use isalpha ()

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## ❖ Requirements

### ◆ Global variables

- string array
- length array
- counter

### ◆ Functions to

- Input and show
- Reverse and show
- Convert to uppercase and show
- Calculate and show info
- Output the array

# Lab 10 – Word Manipulation

## ❖ Demo

- ◆ Execute the program on the terminal to the TA
- ◆ Show the TA how the program handles
  - Input with less than 10 words
  - Input with 10 words
  - Input with more than 10 words

## ❖ Submit

- ◆ Upload to Camino
- ◆ Don't forget to put your name on it!