**LAB 6 ─ Introduction to C and Basic I/O**

Submit the solutions, C programs, using the following command:

**submit 2031 lab6 lab6a.c lab6b.c**

**The due date is 30 minutes before lab sessions start on Wednesday.**

# Problem A

## Specification

Write a C program to convert measurements from inches to centimeters (1 inch = 2.54 cm). The program reads a measurement in inches and outputs the equivalent measurement in centimeters. It then continues to read and convert the next measurements until a zero is entered.

## Implementation

The program should:

* + - be named lab6a.c
    - use a loop to read and convert one input at a time. The loop ends and the program terminates when the input is zero.
    - display before each input the following prompt:

Enter the measurement in inches>

* + - use scanf to read inputs, which are measurements in inches, of type float.
    - display the outputs in centimetres with two decimal digits.

## Sample Inputs/Outputs:

indigo 336 % lab6a

Enter the measurement in inches>2

5.08 cm

Enter the measurement in inches>5.5

13.97 cm

Enter the measurement in inches>10.765

27.34 cm

Enter the measurement in inches>0

indigo 337 %

# Problem B

## Specification

Write a C program to count the number of blank characters (white spaces) in a line of characters. The program reads from the standard input a line of characters and outputs the number of blank characters found in the line.

## Implementation

The program should:

* + - be named lab6b.c
    - use fgets to read a line of characters. You need to include string.h .

* + - display the following prompt before each input:

Enter a line of characters>

## Sample Inputs/Outputs:

indigo 352 % lab6b

Enter a line of characters>Welcome to CSE 2031. 3

indigo 353 % lab1b

Enter a line of characters>123456789 0

indigo 354 % lab1b

Enter a line of characters>a b c d e f g h 7

indigo 355 %

# Common Notes

All submitted files should contain the following header:

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* EECS2031 – Lab 6
* Filename: Name of file
* Author: Last name, first name
* Email: Your preferred email address
* EECS login ID: Your EECS login ID

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In addition, all programs should follow the following guidelines:

* + Include the stdio.h library in the header of your .c files.
  + Use printf to print texts and outputs according to the required formats.
  + End each output result with a new line character ‘\n’.

## Assume that all inputs are valid (no error checking is required).