# CS265: Advanced Programming Tools and Techniques

Spring 2022

***Lab #5***

**Before you start**

* Leverage the man or help utilities to access the manual pages for commands and really learn how commands work
* All C functions are described in section 3 of the man pages, so you might find this command helpful

man -s3 printf

**Setting Up the Lab**

* Make an appropriate subdirectory for this lab and go there
* Ensure your directory restricts access to other students

$ mkdir cs265 (if you do not have it already, cd if you do)

$ chmod go-rwx cs265 (if you have not done this already)

$ cd cs265

$ mkdir lab5

$ chmod go-rwx lab5

$ cd lab5

**Setup**

In this lab we will work with books. A book for this lab is defined as a structure that has a book id, a title and an author. For simplicity, you may assume that the author and the title are character arrays of size 50, and that the id is an int data type.

## Part 1

Write a C program, named **lab5\_1.c**, that defines the book structure and implements the createBook and printBook functions. It is up to you to define the appropriate prototype for these functions, that is, the arguments, argument data types and return values that you deem appropriate. In the main function, the program should create and print the following books

The Da Vinci Code, by Dan Brown

Twilight, by Stephanie Meyer

To Kill a Mockingbird, by Harper Lee

The Godfather, by Mario Puzo

Little Women, by Louisa May Alcott

## Part 2

Write a C program named, **lab5\_2.c**, to include the implementation of a list of books and implements (at least) two functions insertBook and printList. You are responsible to choose the appropriate prototype for these functions. In the main program, create a list of the same five books as above and print the list.

**What to submit**

Zip your C programs lab5\_1.c and lab5\_2.c and submit your **lab5.zip** by the deadline.