

Exercise 1:

In this exercise you will write a library that provides types and functions to handle two kinds of publications: books and magazines.

1. Launch the terminal
 2. Create a new directory with the name "Lab06" inside "CSC215"
 3. Write a C file "pub.h" the contains the following definitions:
 - a. A type PubType that has two values Book and Magazine
 - b. A type CoverType that has two values Hardcover and Paperback
 - c. A structure Publication that contains the following members:
 - i. type of the publication (book or magazine)
 - ii. title of the publication
 - iii. number of pages of the publication
 - iv. type of the cover (hardcover or paperback)
 - v. price of the publication
 - vi. more info to id the publication, namely:
 1. isbn if the publication is a book
 2. issn, volume, issue of the publication is a magazine
 - d. A structure PubList that contains the following members:
 - i. number of items in the list
 - ii. array of publications to be allocated dynamically
- 3 points

Exercise 2:

1. Write a C file "pub.c" that define the following functions:
 - a. function readpub: that read a publication information from the keyboard and returns it
 - b. function findpub: that takes a pointer to a publication and a publication list, and search for the publication in the list. If the publication is found, returns its index and -1 otherwise.
 - c. function getallbooks: that takes a publication list and returns a new publication list that contains only the books from the original list.
 2. Compile and check your code.
- 4 points

Note: Two publications match if they are both books and have same isbn, or both magazines and have same issn, volume and issue numbers.

Exercise 3:

1. Write a C program "test.c" that uses pub.c to do the following:
 - a. Asks the user to enter the number of publications to read
 - b. Creates a publication list with sufficient room to hold those publications
 - c. Reads the publications information from the user into the list, making sure that each publication is entered only once
 - d. Creates a new publication list the contains only books and prints the sum of their prices to the screen
 2. Compile and test your code.
- 3 points