

# ASSIGNMENT

## Title

Processing the book list.

## Background

Array and string manipulations.

## Program Specifications

Implementing the book management program. Information for a book includes the **title** and the **quantity** of the book. The program appears with the menu as follows:

1. Add a book into the list.
2. Search a book.
3. Update a book.
4. Remove a book.
5. Exit the program.

## Function details

### 1. Function 1: Show menu (2 marks)

The program displays a menu and asks users to input an option from 1 to 7.

1. Add a book into the list.
2. Search a book.
3. Update a book.
4. Remove a book.
5. Show the list of books in alphabetical order.
6. Show the list of books in ascending quantity.
7. Exit the program.

### 2. Function 2: Add book (2 marks)

This function allows users to add information about the book including: **[title, quantity]** to the list.

- The program asks users to input the title and quantity of the book. Example is:  
*Title of the book: **Foundations of Programming Using C***  
*Quantity of the book: **20***
- If the size of the array is not enough storage, then the program should the failure message to the user.
- If the program adds data successfully, the message should be displayed.

### 3. Function 3: Search book (2 marks)

This function allows user searching a book by using its title.

- If the book is not existed, the screen shows message "This book is not existed".
- If the book is existed, the screen shows the quantity of this book.

### 4. Function 4: Update book (2 marks)

This function allows user update a book's information.

- The program searches a book's title.
- If the book is not existed, show message "This book is not existed".
- If the book already exists, editing the title and quantity will be allowed.
- If any data is empty, keep old data.

### 5. Function 5: Remove book (2 marks)

This function allows user remove a book from array.

- Application allows user searching for a book's title. The program should call the *search function*.
- If the book is not existed, application displays a message: "This book is not existed".
- If the book is in the array, this book will be removed from array. Then, application displays the message: "This book has been removed from list successfully!"

## Guidelines

- \* The programmer can use **parallel arrays** or a **strut** type to store data.
- \* All input must be validated and checking data type constraint.
- \* After operation in each menu function, the program allows the user going back to menu for further selection of other functions.