Department of Computing and Information System
Course Title: Structured Programming with Lab
Course Code: CIS 115 & 115L
Assignment: Summer 2025

Assignment Title: Bookstore Management System

Scenario:

Rahim owns a small bookstore that keeps records of books and customer orders manually using paper and notebooks. Rahim wants to automate this system to better manage book inventory and customer orders. Rahim hires you to develop a simple Bookstore Management System using C programming.

The system should allow the store staff to:

- Add new books with details like title, author, price, and quantity in stock.
- Update the details of existing books.
- Remove books that are no longer available.
- Show all books currently in the inventory.

Customers can:

- View available books.
- Place orders for books by specifying the book title and quantity.
- Cancel orders they have made.
- View all their placed orders.

The system should maintain data **only in memory** (no file saving), and use **simple arrays** to hold book and order information. The program should have menus for staff and customers, and use functions to separate different operations.

Theory Part   Marks: 35

Task 1

(a)   Draw a flowchart diagram and write pseudocode for the staff panel.   [7]

(b)   Draw a flowchart diagram and write pseudocode for the customer panel.   [5]

Task 2

(a)   Which data structure will you use to store books and orders in this program?   [4]
Explain why.

(b)   Prepare a simple project plan listing the main requirements and your approach   [4]
to implement them.

(c)   Write pseudocode to calculate the total value of all books currently in stock.   [5]

(d)   How does memory management apply when using arrays to store books and   [5]
orders? Explain any limitations.

Task 3

(a)   Explain what you have learned from this project. How could the system be   [5]
improved in the future?

Lab Part

Task – 1   **Marks: 25**

(a)   Develop the Staff Panel: [10]

- Add new book information.
- Update existing book details.
- Remove a book from inventory.
- Display all books.

Task – 2

(a)   Develop the Customer Panel: [10]

- Search for a book by title.
- Place an order.
- Cancel an order.
- Display all customer orders.

Analytical Part

(a)   Prepare a short video explaining the project's theory and lab implementation.   [5]

Submission Guidelines:

- **Deadline: 10th August 2025**

- Your file must be named like this -> **ID_Name_SP_Summar_2025. For example, xxxxxxx_Neel_SP_Summar_2025**

- **Deadline is fixed; no excuses will be considered if you miss the deadline.**

- **Any kind of plagiarism will be severely penalized.**