**The University of Lahore, CS&IT Department**

**Programming Fundamentals - LAB**

**Assignment # 01**

**Start Date: 22/10/2024 Section: 2-I Total Marks: 20**

**Due Date: 24/10/2024** **Program: BSCS**

**Instructions**

1. Understanding the problems is part of the assignment. So, no query, please.
2. You will get zero marks if found any type of plagiarism.
3. No submission after due date.
4. Upload pdf file containing your code and screenshots of outputs.

**Q1:** **Write a C++ program that multiply two matrices using loops and Array.[10]**

**Q2: Library Book Tracking System [10]**

**Scenario**

You are tasked with creating a simple library book tracking system. The library has several racks, and each rack has multiple shelves. You will use a 2D array to represent the positions of books on these racks.

**Requirements**

1. **Define the Array:**
   * Use a 2D array libraryRack to represent the library racks. Assume there are 5 racks, each with 4 shelves. The array should be initialized to hold the titles of the books (or a placeholder if empty).
2. **Input Book Titles:**
   * Use nested loops to allow the user to input the titles of books for each position (row = rack number, column = shelf number).
   * Prompt the user to enter the position (rack and shelf) where they want to place a book.
3. **Display Library Contents:**
   * Use nested loops to display the current contents of the library rack, indicating the position (rack and shelf) for each book.
4. **Find a Book:**
   * Implement a feature that allows the user to search for a book by title. If found, display its position (rack and shelf). If not found, indicate that the book is not in the library.

Example Output

