Practical coding with copilot

Part 1: write C# code using Microsoft copilot

Objective:

You will create a simple library management system that stores up to five book titles using string variables. The system will allow users to add new books, remove a book, and display the list of available books.

Problem Statement:

Imagine you're a librarian managing a small collection of five books. You need a program that allows you to:

- Add books to the collection.
- Remove a book by its title.
- Display the current list of books available in the library.

With the help of Microsoft Copilot, you will build this program using string variables, conditional statements, and loops.

Steps

Create a C# console application that manages a small library of books. The program should:

1. Create Variables for Books:

Set up five string variables to store the book titles.

2. Add a Book:

Prompt the user to input a book title.

Check which book variable is empty and store the new book in that variable.

If all book slots are full, inform the user that no more books can be added.

3. Remove a Book:

Ask the user to input the title of the book they want to remove.

Check if the title exists in the collection and, if found, clear the corresponding variable.

4. Display the List of Books:

Print out the list of books currently in the library, showing only the non-empty book slots.

5. Loop Indefinitely:

Continuously prompt the user to choose whether they want to add or remove a book, or exit the program.

If the user chooses to exit, break the loop and end the program.

6. Handle Invalid Inputs:

If the user enters an invalid action (neither "add" nor "remove"), inform them and prompt again.

7. Conditional Actions:

Only allow adding books if there are empty slots.

Only allow removing books if there are books in the library.

When completed, save your code. You will use this code to complete the final project in this course.

Code:

```
 namespace LibraryManagement
{
    class Program
    {
        static void Main(string[] args)
        {
            // Step 1: Create 5 string variables for book storage
            string book1 = "";
            string book2 = "";
            string book3 = "";
            string book4 = "";
            string book5 = "";

            while (true)
            {
                Console.WriteLine("\nChoose an action: add / remove / display / exit");
                string action = Console.ReadLine().Trim().ToLower();

                if (action == "add")
                {
                    // Check if there is any empty slot
                    if (book1 != "" && book2 != "" && book3 != "" && book4 != "" && book5 != "")
```

```
                    {
                        Console.WriteLine("Library is full. Cannot add
more books.");
                        continue;
                    }

                    Console.Write("Enter the title of the book to add:
");
                    string newBook = Console.ReadLine();

                    if (book1 == "") book1 = newBook;
                    else if (book2 == "") book2 = newBook;
                    else if (book3 == "") book3 = newBook;
                    else if (book4 == "") book4 = newBook;
                    else if (book5 == "") book5 = newBook;

                    Console.WriteLine($"Book \"{newBook}\" added.");
                }
                else if (action == "remove")
                {
                    // Check if there's at least one book to remove
                    if (book1 == "" && book2 == "" && book3 == "" &&
book4 == "" && book5 == "")
                    {
                        Console.WriteLine("Library is empty. Nothing to
remove.");
                        continue;
                    }

                    Console.Write("Enter the title of the book to
remove: ");
                    string removeBook = Console.ReadLine();

                    if (book1 == removeBook) { book1 = "";
Console.WriteLine($"Book \"{removeBook}\" removed."); }
                    else if (book2 == removeBook) { book2 = "";
Console.WriteLine($"Book \"{removeBook}\" removed."); }
                    else if (book3 == removeBook) { book3 = "";
Console.WriteLine($"Book \"{removeBook}\" removed."); }
                    else if (book4 == removeBook) { book4 = "";
Console.WriteLine($"Book \"{removeBook}\" removed."); }
                    else if (book5 == removeBook) { book5 = "";
Console.WriteLine($"Book \"{removeBook}\" removed."); }
                    else
                    {
                        Console.WriteLine("Book not found.");
                    }
                }
                else if (action == "display")
                {
                    Console.WriteLine("\nBooks in Library:");
                    if (book1 != "") Console.WriteLine("- " + book1);
                    if (book2 != "") Console.WriteLine("- " + book2);
                    if (book3 != "") Console.WriteLine("- " + book3);
                    if (book4 != "") Console.WriteLine("- " + book4);
                    if (book5 != "") Console.WriteLine("- " + book5);
                    if (book1 == "" && book2 == "" && book3 == "" &&
book4 == "" && book5 == "")
                        Console.WriteLine("(No books available)");
```

```
                }
                else if (action == "exit")
                {
                    Console.WriteLine("Exiting the Library Management
System.");
                    break;
                }
                else
                {
                    Console.WriteLine("Invalid action. Please type add,
remove, display, or exit.");
                }
            }
        }
    }
}
```