**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.");

}

}

}

}

}