



COMSATS University Islamabad Sahiwal Campus
(Department of Computer Sciences)

Course Title:	Object Oriented Programing				Course Code:	CSC241	Credit Hours:	4(3,1)
Course Instructor:	Ali Sher Kashif				Programme Name:	BS (CS)		
Semester:	3 rd	Batch:	FA23	Section:	E	Date:	01-10-2024	
Time Allowed:	20 minutes				Maximum Marks:	10		
Student's Name:					Reg. No.	CUI/	/SWL	

Quiz # 02

Course Learning Outcome (CLO-02):

Demonstrate an understanding of the concept of encapsulation and apply it to solve real-world problems using Object-Oriented Programming.

Question 1: (10 Marks)

You are a software engineer at a publishing company, and your team is responsible for developing a catalog system that maintains details about books. To ensure proper organization and secure data handling, your manager asks you to design a class named **Book**, which encapsulates essential details of each book. The class should store the book's **author** and **chapter names**.

Additionally, the system must allow for comparison of two **Book** objects to determine if they are written by the same author or if they differ. It should also have functionality to compare the number of chapters in two books and display the author of the book with the greater number of chapters.

Part 01:

You are required to create a class named **Book**. The class should **encapsulate** the following details:

- **author** (String)
- **chapterNames** (String array with a maximum size of 100)

Part 02:

Assume that you have already created a **Book** class with a **no-argument constructor** and a **parameterized constructor** that accepts the author's name and chapter names.

Write a code snippet demonstrating how to declare and initialize both book objects as described above.

Part 03:

You have designed the Book class with the following method to **compare the authors** of two books

Part 04:

In this scenario, the company also wants to **compare** two books based on the number of chapters. You have already implemented a method in the Book class called **compareChapterNames**(Book otherBook) that compares the number of chapters in two books and returns the book with more chapters.

Write a code snippet that compares the chapters of two Book objects, book1 and book2, and prints the author of the book that has more chapters.