**COMSATS University Islamabad Sahiwal Campus**

**(Department of Computer Sciences)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Title:** | Object Oriented Programing | | | | **Course Code:** | | CSC241 | | **Credit Hours:** | 4(3,1) |
| **Course Instructor:** | Ali Sher Kashif | | | | **Programme Name:** | | | BS (CS) | | |
| **Semester:** | 3rd | **Batch:** | FA23 | **Section:** | E | | | **Date:** | 07-10-2024 | |
| **Time Allowed:** | 20 minutes | | | | **Maximum Marks:** | | | | 10 | |
| **Student’s Name:** |  | | | | **Reg. No.** | CUI/ /SWL | | | | |

**LAB Task # 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.