United International University
CSE 1116 - Coding Test 1 - Set B

Write your name and ID on the question paper. Marks are on the right. Return question.

Q1a) Create a class named LibraryBook that has the following four attributes: [3]

- final String libraryName
- String bookTitle
- boolean isAvailable
- int bookID

b) Create two constructors:

i) A **default constructor** that prints **"Library System Initialized"**, sets **bookTitle to "Untitled"** and **isAvailable to true**. **[2]**

ii) A **parameterized constructor** that takes three parameters named **bookID, bookTitle, and isAvailable**. Use this reference to initialize the instance variables. It should print **"Library System Initialized"** and display the current book information. **[3]**

c) Create 1 instance initialization block that sets the **libraryName to "UNKNOWN" and prints "Loading Book Metadata..." [2]**

d) Create 1 static block that prints "Accessing Library Network..." [2]

e) Create the following methods:

- **borrowBook()**: Change the isAvailable flag to false if the book is available; otherwise, print a message indicating the book is not available. **[3]**

- **returnBook()**: Change the isAvailable flag to true and print a message confirming return. **[3]**

- **displayBookInfo()**: Display complete book details. **[2]**

- **transferBook(LibraryBook b)**: Transfer the current book to another LibraryBook object by **swapping the bookTitle and isAvailable status**. Print messages to show the transfer. **[3]**

f) Create another class named Library with the main method: [1]

- Create two instances of LibraryBook using both constructors. **[1]**

- Perform the following operations:

    1. Borrow a book **[1]**
    2. Return a book **[1]**
    3. Transfer book details to another LibraryBook **[1]**
    4. Display book information after each operation **[2]**