

# Quiz #04 – OOP – BSDSF22

17 Oct 2023

10-15 minutes

Name: \_\_\_\_\_ Roll No: \_\_\_\_\_

**Honor Code:** By signing below, I am declaring under oath that  
I will solve the quiz by myself solely and will not  
take any help from neighboring fellows.

Signature

Through the understanding of following diagram, define a simple **Author** class just with constructor (i.e. init), getters/setters and str functionalities. Later define the **Book** class as exactly mentioned in the diagram. Assume that a book is written by one and only one author. The Book class (as shown in the class diagram) contains the following members:

- Four private data members: name (string), author (an instance of the class Author that we have created earlier), price (double), and qtyInStock (int, with default value of 0). The price shall be positive and the qtyInStock shall be zero or positive.
- Take note that data member author is an instance (object) of the class Author, instead of a fundamental type (such as int, double). In fact, name is an object of the class string too.
- The public getters and setters for the private data members. Take note that getAuthor() returns an object (an instance of class Author).
- A public member function print(), which prints "'book-name' by author-name (gender) @ email".
- A public member function getAuthorName(), which returns the name of the author of this Book instance.
- The hallow diamond shape in the class diagram denotes aggregation (or has-a) association relationship. That is, a Book instance has one (and only one) Author instance as its component.

