

An-Najah Nation University
Faculty of Engineering and
Information Technology



جامعة النجاة الوطنية
كلية الهندسة وتكنولوجيا
المعلومات

Computer Engineering Department
Object Oriented Programming (10636212)

HW 1 [ILO2]

Due to 26/03/2020

In this assignment, you will implement a program to maintain an updated information for available books in a small library. The book information contains the title, author, published year, and a unique ISBN code. By using this ISBN number, the user should be able to retrieve and update information on the book, such as the title, author, published year and whether it is available or not.

Define a class called **Book** with the following private fields:

- **ISBN:** String
- **Title:** String
- **Author:** String
- **Edition:** int
- **Published Year:** int
- **Borrowed:** boolean

You should provide the required constructors in addition to the **set** and **get** public methods to manipulate the private fields.

Your program should keep the updated information for all books in an **ArrayList**. The user will retrieve and update the information with the following commands in the following format:

- **Add** ISBN
- **delete** ISBN
- **set** ISBN attribute value
- **get** ISBN attribute
- **rent** ISBN
- **return** ISBN
- **search** attribute keyword
- **print**
- **Quit**

Ex:

> Add 0134743356

(create a new book with ISBN = 0134743356)

> set 0134743356 title Java How to Program

(set the title of book 0134743356 to "Java How to Program")

> set 0134743356 author Paul Deitel

(set the author of book 0134743356 to "Paul Deitel")

> set 0134743356 published_year 2017

(set the published year of book 0134743356 to "2017")

> borrow 0134743356

(set the status of book 0134743356 to "borrowed")

> get 0134743356 title

(display the title "Java How to Program")

> search title Java

(display all the books with "Java" in their title the title)

> print

(print all books)

> delete 0134743356

(delete the book with ISBN 0134743356)

> Quit

The Print command should display all information of the books in roughly the following form:

ISBN	Title	Edition	Author	Year	Available
9332585737	C++ How to Program	10th	Paul Deitel	2017	Available
0134743356	Java How to Program	11th	Paul Deitel	2017	Not Available
.

Notes:

- Keywords are case insensitive. 'a' is equivalent to 'A'.
- The books should be printed in order of their ISBNs.