Classes – Homework 8

- This is an individual assignment.

- Before you start on the homework, please read the rules on collaboration and submission in the syllabus.

Task 1 Write a Python data class named Book that represents information about a book. Each book should have the following attributes:

- title (string): The title of the book.

- author (string): The author of the book.

- publication_year (int): The year the book was published.

- isbn (string): The International Standard Book Number of the book.

Task 2 Additionally, implement 4 accessor (functions that get the values) methods: `get_title`, `get_author`, `get_year`, `get_isbn` , and the following additional methods in the class:

- `to_str`: Return a string representation of the book in the format "Title by Author (Year)".

- `is_published_recently(current_year)`: Return True if the book was published within the last 10 years based on the current year; otherwise, return False.

Task 3 Out of the class add following functions:

1. A function named `enter_book_data()` that has no parameters but takes user input: title, author, publication year, and isbn number. This function shout make and return an object `Book` created based on the user input.

2. The function `main()`:

   Should create two book objects as in example 1 and 2:

   ```
   book1 = Book("The Great Gatsby", "F. Scott Fitzgerald", 1925, "978-3-16-148410-0")
   book2 = Book("The Last Wish", "Andrzej Sapkowski", 1993, "0-575-07192-1")
   ```

   The `main()` function should also call `enter_book_data()`, save the output in a variable called `book3` and print data about the new object.

Output

Example 1:

```
book1 = Book("The Great Gatsby", "F. Scott Fitzgerald", 1925, "978-3-16-148410-0")
print(book1.to_str())
The Great Gatsby by F. Scott Fitzgerald (1925)
print(book1.is_published_recently(2023))
False
print(book1.get_isbn())
978-3-16-148410-0
print(book1.get_year())
1925
```

Example 2:

```
book2 = Book("The Last Wish", "Andrzej Sapkowski", 1993, "0-575-07192-1")
print(book2.to_str())
The Last Wish by Andrzej Sapkowski (1993)
print(book2.is_published_recently(2023))
False
print(book2.get_title())
The Last Wish
print(book2.get_author())
Andrzej Sapkowski
```

Example 3 (when you run the program):

```
Enter book title: The Witcher: Blood of Elves
Enter author: Andrzej Sapkowski
Publication year: 1994
ISBN: 0-575-07192-1

The Witcher: Blood of Elves by Andrzej Sapkowski (1994)
```

Submission Requirements

The title for this lab is hw8. Your submitted file is required to be named `hw8.py`.

Grading

The rubric for this assignment is available through Gradescope.