

RAPORT

Lucrarea de laborator
Asistentă pentru OOP

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Lucrare de laborator

Tema lucrării: Bazele OOP

A simple laboratory work focused on the basics of Object-Oriented Programming (OOP). In this lab, students will create a basic program to manage a library of books using Python. This lab covers the fundamental concepts of classes, objects, and basic inheritance.

Lab Title: Simple Library Management System

Objective: To create a simple Library Management System using Object-Oriented Programming concepts.

Sarcina lucrării:

1. Implement two classes: Book and Library.
2. The Book class should have attributes like title, author, and ISBN.
3. The Library class should have a list to store books and methods to add a book, remove a book, and display all books in the library.
4. The code should be uploaded to your github account, if not then make sure you'll create one.
5. Your repository should be public.
6. You can use gitUI, fork or other programs instead of git command line.

Codul :

class Book:

```
def __init__(self, title, author, isbn):
    self.title = title
    self.author = author
    self.isbn = isbn

def __str__(self):
    return f"Title: {self.title}, Author: {self.author}, ISBN: {self.isbn}"
```

class Library:

```
def __init__(self):
    self.books = []

def add_book(self, book):
    self.books.append(book)
    print(f"Book '{book.title}' added to the library.")

def remove_book(self, isbn):
    for book in self.books:
        if book.isbn == isbn:
            self.books.remove(book)
            print(f"Book with ISBN {isbn} removed from the library.")
```

```
        return
    print(f"Book with ISBN {isbn} not found in the library.")

def display_books(self):
    if not self.books:
        print("The library is empty.")
    else:
        print("Books in the library:")
        for book in self.books:
            print(book)

book1 = Book("The Great Gatsby", "F. Scott Fitzgerald", "9780141182636")
book2 = Book("To Kill a Mockingbird", "Harper Lee", "9780061120084")

library = Library()

library.add_book(book1)
library.add_book(book2)
library.display_books()

library.remove_book("9780141182636")
library.display_books()
```

