Ned University of Engineering and Technology

Computer and Information Systems Engineering

DSA CS-218 Open Ended Lab

Submitted by: Farah Hussain

Roll No: CS-20003

Submitted to: Miss Ibshar Ishrat
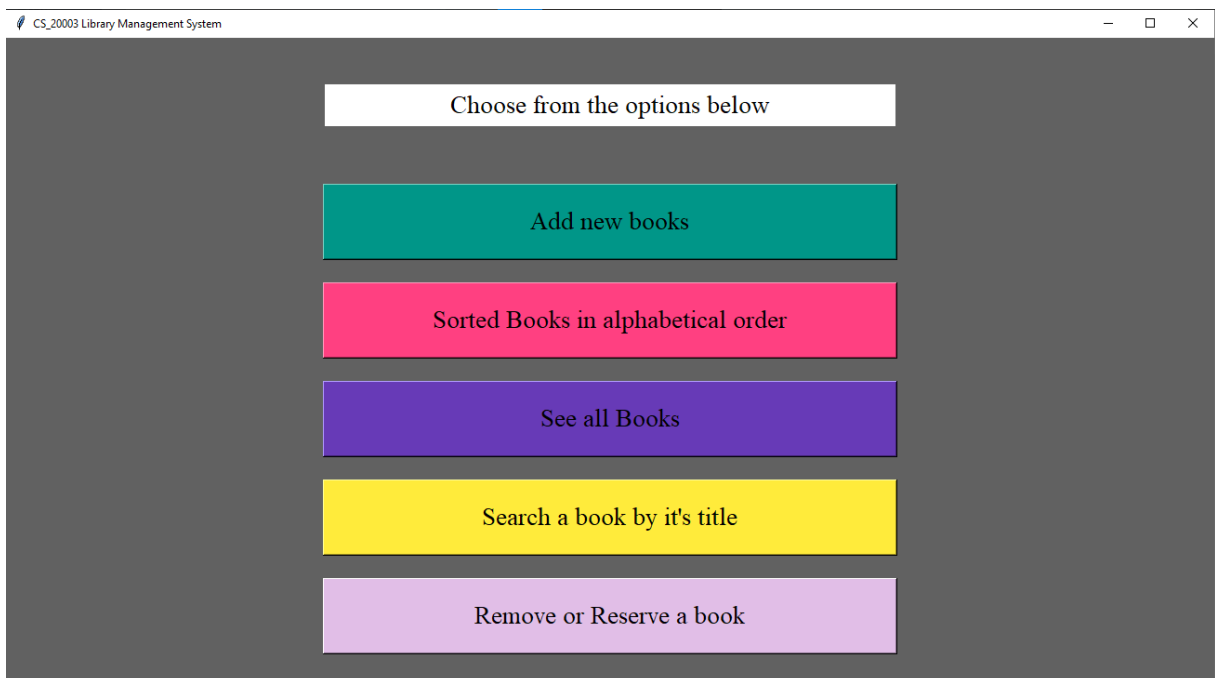
Problem Statement

Implement a library management system.

Implement and use any sorting algorithm to sort the books on the basis of any attribute (e.g. book ID, no. of books, author, title etc.). Prepare the complete software (in Python). Insert at
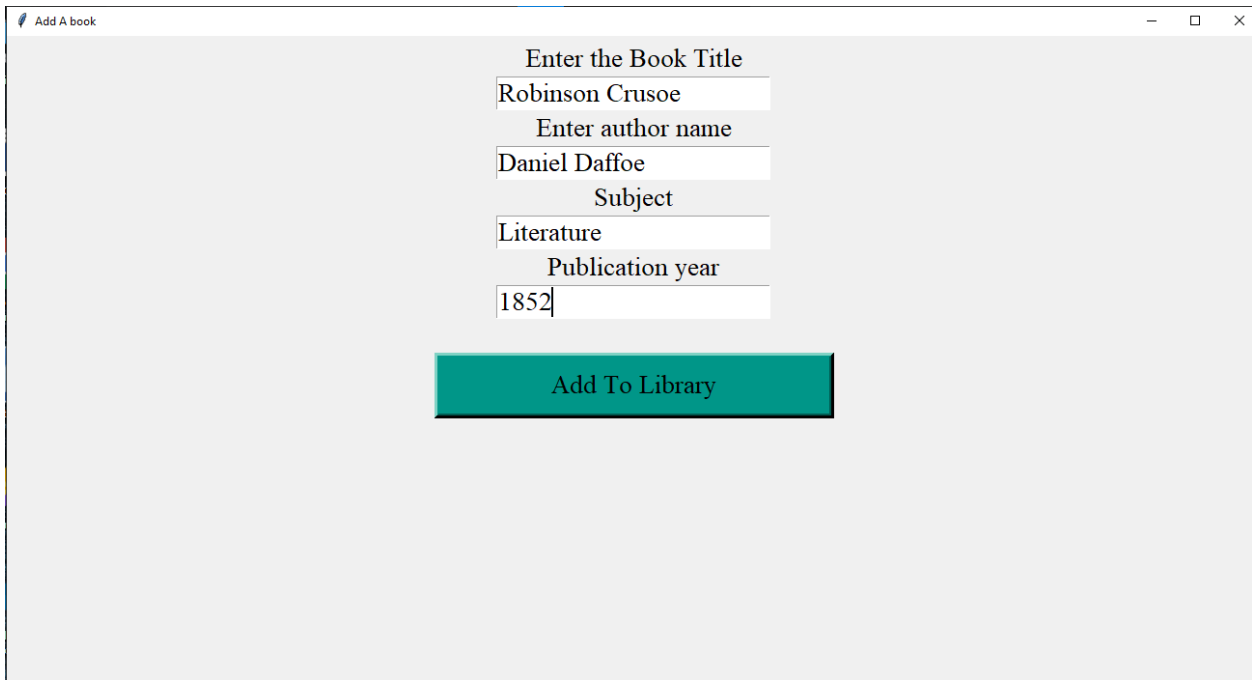
About Project

The software is developed using python. The library used for GUI is Tkinter.

The software is the library management system. It has following functionalities as shown in the screenshot below:

Add The Book

The user can add the book by filling all the fields which are book title, author, subject, publish year. I have set the availability field to available while adding a book. This option can be reserved by choosing reserve option in the software.

File used

The file used to save all the records of books is CSV file using python CSV module.

The book record is stored in the file named CS20003_library.csv.

View all books sorted alphabetically

The software shows all the records to the user. Tree View is used from python Tkinter ttk library to show all the books in tabular form.

Search in a Book record

User can search the book by entering its title. If the book is in the record its detail shows up below otherwise the user is prompted that the book is not found in the record.

Remove or Reserve a Book:

The user can select any record in the table that is tree view and select the desired option. The book can be reserved and availability is changed to reserved in the table. If the user removes then the record is deleted from the file.

Book Title	Author	Subject	Publication year	Availability
Beauty And The Beast	Gabrielle-Suzanne Barbot de Villeneu	Fairy Tale	1970	available
Robinson Crusoe	Daniel Daffoe	Literature	1719	reserved
Animal Farm	George Orwell	Literature	1945	available
The Alchemist	Paulo Coelho	Literature	1988	available
Don Quixote	Miguel de Cervantes	romance	1612	available
Lord of the Rings	J.R.R. Tolkien	tragedy	1954	available
Harry Potter and the Sorcerer's Stone	J.R.R. Tolkien	fantasy novel	1997	reserved
And Then There Were None	Agatha Christie	Mystery	1939	available
Alice's Adventures in Wonderland"	Lewis Carroll	Fantasy	1865	available
The Lion, the Witch, and the Wardrol	C.S. Lewis	Children's fantasy, Christian literatur	1950	available

Select a row above and perform your desired option

Reserve book

Remove book