

Enunț

Scrieți o aplicație pentru o bibliotecă.

Aplicația stochează:

- cărți: <id>, <titlu>, <descriere>, <autor>, etc
- clienți: <id>, <nume>, <CNP>, etc

Creați o aplicație care permite:

- gestiunea listei de cărți și clienți.
- adaugă, șterge, modifică, lista de cărți, lista de clienți
- căutare carte, căutare clienți.
- Închiriere/returnare carte
- Rapoarte:
 - Cele mai închiriate cărți.
 - Clienți cu cărți închiriate ordonat după: nume, după numărul de cărți închiriate
 - Primi 20% dintre cei mai activi clienți (nume client si numărul de cărți închiriate)

Listă de funcționalități

Număr	Descriere
F1	Adăugare carte în listă
F2	Modificare carte din listă
F3	Șterge carte din listă
F4	Adăugare client în listă
F5	Modificare client din listă
F6	Șterge client din listă
F7	Caută carte din listă
F8	Caută client din listă
F9	Închiriază carte
F10	Returnează carte
F11	Raport cele mai închiriate cărți
F12	Raport clienți după numărul de cărți închiriate
F13	Raport cei mai activi 20% clienți

Scenarii de rulare

F1 : Adăugare carte în listă

User Input	Program output	Description
1 2		Accessing the option using the menu
	Input id	Asking user for input
1		User inputs book id
	Input title	Asking user for input
Moby Dick		User inputs book name
	Input description	Asking user for input
Book about a whale		User inputs book description
	Input author	Asking user for input
Herman Melville		User inputs book author
	Input copies available	Asking user for input
2		User inputs number of copies available
	The book has been added	Confirms action

F2 : Modificare carte din listă

User Input	Program output	Description
1 3		Accessing the option using the menu
	Input id of the book to modify	Asking user for input
1		User inputs book id
	Choose what to modify	Prompt submenu asking user for input (1 = Title, 2 = Desc, 3 = Author, 4 = Nr of copies)
2		User chooses to modify book description
	Input description	Asking user for input
Book about a white whale		User inputs book description
	The book has been modified	Confirms action

F3 : Șterge carte din listă

User Input	Program output	Description
1 4		Accessing the option using the menu
	Input id of the book to remove	Asking user for input
1		User inputs client id
	The book has been removed	Confirms action

F4 : Adăugare client în listă

User Input	Program output	Description
2 2		Accessing the option using the menu
	Input id	Asking user for input
1		User inputs client id
	Input name	Asking user for input
John Peterson		User inputs client name
	Input uuid	Asking user for input
4128920		User inputs uuid
	The person has been added to the list	Confirms action

F5 : Modificare client din listă

User Input	Program output	Description
2 3		Accessing the option using the menu
	Input id of the book to modify	Asking user for input
1		User inputs client id
	Choose what to modify	Prompt submenu asking user for input (1 = Name , 2 = UID)
1		User chooses to modify client name
	Input name	Asking user for input
John Peterson Jr.		User inputs client name
	The client has been modified	Confirms action

F6 : Șterge client din listă

User Input	Program output	Description
2 4		Accessing the option using the menu
	Input id of the client to remove	Asking user for input
1		User inputs client id
	The client has been removed	Confirms action

F7 : Caută carte din listă

User Input	Program output	Description
3		Accessing the option using the menu
	Choose what to search after	Prompt submenu for selecting search criteria
1		User chooses to search by ID
	Input ID	Asking user for input
12		User enters ID = 12
	The results are : ID : 12, Title : Moby Dick ...	Program prints the search results
3		Accessing the option using the menu
	Choose what to search after	Prompt submenu for selecting search criteria
2		User chooses to search by Title
	Input Title	Asking user for input
harry POTTER		User enters the title
	The results are : ID : 3, Title : Harry Potter and the Sorcerer's Stone ... ID : 4, Title : Harry Potter and the Sorcerer's Stone ... ID : 29, Title : 3. Harry Potter and the Prisoner of Azkaban	Program prints the search results
3		Accessing the option using the menu

User Input	Program output	Description
	Choose what to search after	Prompt submenu for selecting search criteria
3		User chooses to search by Author
	Input Author	Asking user for input
kin		User enters the author
	The results are : ID : 11, Title : The Stand, Author : Stephen King ... ID : 214, Title : Euphoria , Author : Lily King	Program prints the search results

F8 : Caută client din listă

User Input	Program output	Description
4		Accessing the option using the menu
	Choose what to search after	Prompt submenu for selecting search criteria
1		User chooses to search by ID
	Input ID	Asking user for input
12		User enters ID = 12
	The results are : ID : 12, Name: Thomas Jefferson, UID:	Program prints the search results
4		Accessing the option using the menu
	Choose what to search after	Prompt submenu for selecting search criteria
2		User chooses to search by Name
	Input Name	Asking user for input
Thomas		User enters name
	The results are : ID : 12, Name: Thomas Jefferson, UID: 100 ID : 38, Name: Thomas Edison, UID: 900 ...	Program prints the search results
4		Accessing the option using the menu
	Choose what to search after	Prompt submenu for selecting search criteria
3		User chooses to search by UID
	Input UID	Asking user for input
900		User enters uid

User Input	Program output	Description
	The results are : ID : 38, Name: Thomas Edison, UID: 900	Program prints the search results

F9 : Înciriază carte

User Input	Program output	Description
5		Accessing the option using the menu
	Input Client ID	Asking user for input
1		User chooses client with ID 1
	Input Book ID	Asking user for input
2		User chooses Book with ID 2
	The book has been successfully borrowed	Confirms action
	Event ID: 1	Prints the Borrow Event ID
1		User chooses client with ID 1
	Input Book ID	Asking user for input
2		User chooses Book with ID 2
	No copies left to borrow	Prints error message

F10 : Returnează carte

User Input	Program output	Description
6		Accessing the option using the menu
	Input Event ID	Asking user for input
1		User chooses borrow event with ID 1
	The book has been successfully returned	Confirms action

F11 : Raport cele mai închiriate cărți

User Input	Program output	Description
7		Accessing the option using the menu
	Choose report type	Prompt submenu asking for report
1		User chooses to see the most rented books

User Input	Program output	Description
	ID : 1 ...	Prints results
	ID : 2 ...	
	ID : 3 ...	
	ID : 4 ...	
	ID : 5 ...	

F12 : Raport clienți după numărul de cărți împrumutate

User Input	Program output	Description
7		Accessing the option using the menu
	Choose report type	Prompt submenu asking for report
2		User chooses to see clients ordered by name
	ID : 1, Name : Arnold ...	Prints results
3		User chooses to see clients ordered by number of borrowed books
	ID : 41, ..., Borrowed: 4214 ...	Prints results

F13 : Raport cei mai activi 20% clienți

User Input	Program output	Description
7		Accessing the option using the menu
	Choose report type	Prompt submenu asking for report
3		User chooses to see the most active 20% clients
	ID : 41, ..., Borrowed: 4214 ...	Prints results

Plan de iterații

- I1: F1, F2, F3, F4, F5, F6
- I2: F7, F8, F9, F10
- I3: F11, F12, F13