

Library Management System

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Library management system

1) Login Function

Take Username and password from user and check with the data from the file “Credentials”

If logged in successfully call menu function if not wait for the input again.

```
Library Management System
-----
Welcome back :)
1- Login
2- Quit
Enter your choice: |
```

```
Library Management System
-----
Welcome back :)
1- Login
2- Quit
Enter your choice: 1

Enter username:hh
Enter password:kk
Failed to login wrong username or password

1- Login
2- Quit
Enter your choice:
```

2) Menu Function

Show the user the options to choose from, take only integers that are mapped to a function (1-8)

```
MAIN MENU

1- ADD
2- DELETE
3- MODIFY
4- SEARCH
5- ADVANCED SEARCH
6- PRINT
7- SAVE
8- QUIT
Enter what do you want to do: |
```

3) Add Function

- Take data of the new book from the user and validate ISBN, Month, and year.
- The ISBN should be 13 integers
- Month should be an integer between 1 and 12
- Year should be an integer not more than 2022 and can't be negative

```
"C:\Users\mouha\OneDrive\...
8- QUIT
Enter what do you want to do: 1

Enter the ISBN of the new book: fds
Wrong ISBN format
Enter the ISBN of the new book: 21212
Wrong ISBN format
Enter the ISBN of the new book: 111111111111
Enter the title of the new book:
Title cannot be empty
Enter the title of the new book: ffff
Enter the author name of the new book:
Author name cannot be empty
Enter the author name of the new book: tttt
Enter the quantity of the new book: gfdgf
Wrong quantity format
Enter the quantity of the new book: 23
Enter the price of the new book: sdfsd
Wrong price format
Enter the price of the new book: 4
Enter month of publish: ffgfg
Wrong month format
Enter month of publish: 5555
Wrong month format
Enter month of publish: 12
Enter year of publish: fgfgf
Wrong year format
Enter year of publish: 5555
Wrong year format
Enter year of publish: 2015
```

4) Delete Function

Take ISBN from user and check its validation and check if it exists delete it if not ask the user again.

```
"C:\Users\mouha\OneDrive\...
Deleted successfully
MAIN MENU
1- ADD
2- DELETE
3- MODIFY
4- SEARCH
5- ADVANCED SEARCH
6- PRINT
7- SAVE
8- QUIT
Enter what do you want to do: 2

Enter the book ISBN: fffff
Wrong ISBN format
Enter the book ISBN: 9700000000002
```

5) Modify function

Take ISBN from user and search for its data using linear search algorithm and take the new data from the user and update the data

6) Search Function

Take ISBN that the user is searching for and validate it, if it exists, we use **linear search algorithm** to find it and print its data to the user

```
MAIN MENU
1- ADD
2- DELETE
3- MODIFY
4- SEARCH
5- ADVANCED SEARCH
6- PRINT
7- SAVE
8- QUIT
Enter what do you want to do: 4

Enter the book ISBN: 9700000000005
ISBN: 9700000000005
Title: database systems
Author: Ramez Elmasri
Quantity: 1
Price: 4.50 $
Published: October 2015
press Enter to continue|
```

7) Advanced search

Take a keyword from the user and search for it using strstr() and print all the data of the books that contain this keyword

```
MAIN MENU
1- ADD
2- DELETE
3- MODIFY
4- SEARCH
5- ADVANCED SEARCH
6- PRINT
7- SAVE
8- QUIT
Enter what do you want to do: 5
enter the keyword :data
Search results:

ISBN: 9700000000001
Title: data structures and algorithms
Author: Timberlake Karen
Quantity: 10
Price: 7.50 $
Published: December 2008

ISBN: 9700000000005
Title: database systems
Author: Ramez Elmasri
Quantity: 1
Price: 4.50 $
Published: October 2015

press Enter to continue|
```

8) print function

ask the user how he wants to sort the data (sort by title, sort by price and sort by date) using bubble sort algorithm.

- sort by title: from (a to z)
- sort by price: from (low to high)
- sort by date: from (new to old)

and print to the user

```
1-sort by title
2-sort by price
3-sort by date
How do you want to sort: 2

ISBN: 9700000000009
Title: systems programming
Author: John J. Donovan
Quantity: 9
Price: 2.50 $
Published: May 2017

ISBN: 9700000000008
Title: artificial intelligence
Author: Erik J. Larson
Quantity: 7
Price: 3.57 $
Published: October 2015

ISBN: 9700000000007
Title: discrete structure for computing
Author: Gordon J. Pace
Quantity: 8
Price: 3.80 $
Published: February 2020

ISBN: 9700000000006
Title: mathematics for social scientists
Author: Kropko Jonathan
Quantity: 7
Price: 4.21 $
Published: January 2020
```

10) Quit function

if the data was saved exit from the program without warning message if the user didn't save the new data print a warning message that ask the user if he wants to save the data or not

```
Added successfully

                                MAIN MENU
1- ADD
2- DELETE
3- MODIFY
4- SEARCH
5- ADVANCED SEARCH
6- PRINT
7- SAVE
8- QUIT
Enter what do you want to do: 8
All changes will be deleted...are u sure you want to EXIT
1-Yes
2-No
Enter your choice: 1

Thank You :)
Good Bye :)
Process returned 0 (0x0)   execution time : 540.172 s
Press any key to continue.
|
```