LIBRARY MANAGEMENT SYSTEM

SUBMITTED TO: MISS WADEEAH QURESHI

SUBMITTED BY:
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PROBLEM STATEMENT:

libraries having large amount of records and data, Student's record, books record, admin's record, librarian records etc.

It is very difficult to manage that huge amount of unsorted /unauthorized data and record,

A system in which library admin or any educational institute can managethe record of books in authorized and sorted way, and can easily search or delete or add any type of data. An efficient system should be code. And data should be authorized, easy to search, add or remove by the help of data structure and algorithms, It will make it easy for library to manage huge amount of records and data.

SOLUTION:

The library management system is designed to make it easy for educational institute or libraries to manage the huge data in authorized way using data structure and algorithms concepts, easily.

SCOPE:

The library management system is useful to manage scholars and staff in Universities or any other educational institutes. It is very usefulfor institutes to manage huge amount of the library records. It will manage all books in a sorted way which will be very easy for the students to search books of their choice, by category. And will be easy for the admin to enter records of students and books, system will manage, categorized data by using DSA concepts, efficiently.

FEATURES:

- Login for admin
- Login for students
- Admin can add books
- Admin can delete out of stock books
- Admin can check book requests of students
- System will categorized and authorize the data
- Student can search book
- Search by category
- Search by letter
- Search by name
- Student can request book if not found the desired book
- Can own a book for specific time period
- Other functions

LONG TERM GOAL:

Our undergraduate program of bachelors in software engineering at (Mohammad Ali Jinnah University) requires us to complete a project by using the concepts of DATA STRUCTURES AND ALGORITHMS in java that we have learned throughout thes emester to enhance our understanding and give us experience implementing OOP & DSA concepts in real world applications.

RESULTS:
MAIN MENU SCREEN:

```
Output - LIBRARY_MANAGEMENT_SYSTEM_PROJECT (run)  ×

  run:
  ||||||||        ||          |||||||||||   ||||||||||   |||||||||   |||||||||   |||||||||   ||          ||
  ||              ||               ||       ||      ||   ||     ||   ||     ||   ||     ||   ||          ||
  ||              ||               ||       ||      ||   ||     ||   ||     ||   ||     ||   ||          ||
  ||||||||  :::   ||               ||       |||||||||||  ||||||||||  |||||||||   |||||||||       ||  ||
  ||              ||               ||       ||      ||   ||||       ||     ||   ||||                ||
  ||              ||               ||       ||      ||   ||  ||     ||     ||   ||  ||              ||
  ||||||||        |||||||||||  |||||||||||  ||||||||||   ||     ||   ||     ||   ||     ||          ||


  *---*---*---*---*---*
  |                   |
  | :::----SELECT----:::  |
  |                   |
  |      |---------|      |
  |  1)|   ADMIN  |      |
  |      |---------|      |
  |                   |
  |      |---------|      |
  |  1)|  STUDENT |      |
  |      |---------|      |
  |                   |
  *---*---*---*---*---*
  |
```

SELECT ADMIN
ADMIN SIGNUP/ LOGIN /MENU

```
-
:::::SIGN UP ADMIN:::::
---USER NAME---
zahid ali
---Create Pin---
832002

<<<<<LOGIN ADMIN>>>>>
--ENTER Pin--
832002

:::::::ADMIN PORTAL:::::::
1) --ADD BOOKS--
2) --CHECK REQUESTS--
3) --DELETE BOOKS--
|
```

1)ADMIN SELECT ADD BOOKS:

```
:::::::ADMIN PORTAL:::::::
1) --ADD BOOKS--
2) --CHECK REQUESTS--
3) --DELETE BOOKS--
1

:::HOW MANY BOOKS YOU WANT TO ADD?:::
2

<<<<<<<<<<FROM WHICH CATEGORY YOU WANT TO ADD THE BOOK>>>>>>>>>>

---1.COMPUTING CATEGORY---
---2.GENERAL SCIENCE CATEGORY---
---3.URDU LITERATURE/ POETRY OR STORIES
---4.ENGLISH LANGUAGE/ GRAMMER OR POETRY
---5.ENGINEERING CATEGORY---
3

---LIST OF URDU BOOKS---
[Aag Ka Darya, Patras Kay Mazameen, Himaqatein aur Mazeed Himaqatein , Bajang Amad , Uljhay Suljhay, Chaltay Ho to Cheen

:::::ENTER2BOOKS::::
12 URDU
GALIB ASHAR

---LIST OF URDU BOOKS AFTER ADDITION---
[Aag Ka Darya, Patras Kay Mazameen, Himaqatein aur Mazeed Himaqatein , Bajang Amad , Uljhay Suljhay, Chaltay Ho to Cheen

2 BOOKS SUCCESSFULLY ADD:::




--1 BACK TO ADMIN PORTAL--
```

2)ADMIN SELECT CHECK REQUEST:

```
Output - LIBRARY_MANAGEMENT_SYSTEM_PROJECT (run)  ×

1

::::::::ADMIN PORTAL:::::::
1) --ADD BOOKS--
2) --CHECK REQUESTS--
3) --DELETE BOOKS--
2

<<<<<<<<BOOK REQUESTS>>>>>>>>>
REQUEST BY = sabir
FROM SEMESTER = 4
REQUEST ID:99836
BOOK NAME= Physics by johna
----------------------------------------

---1 IGNORE REQUEST---
---2 ADD REQUESTED BOOK---
2

:::HOW MANY BOOKS YOU WANT TO ADD?:::
1

<<<<<<<<<<FROM WHICH CATEGORY YOU WANT TO ADD THE BOOK>>>>>>>>>>

---1.COMPUTING CATEGORY---
---2.GENERAL SCIENCE CATEGORY---
---3.URDU LITERATURE/ POETRY OR STORIES
---4.ENGLISH LANGUAGE/ GRAMMER OR POETRY
---5.ENGINEERING CATEGORY---
5

---LIST OF ENGINEERING BOOKS---
[ The Goal, The Design of Everyday Things,  The Existential Pleasures of Engineering, Skunk Works,

:::::ENTER1BOOKS::::
Physics by johna

---LIST OF ENGLISH BOOKS AFTER ADDITION---
[ The Goal, The Design of Everyday Things,  The Existential Pleasures of Engineering, Skunk Works,

1 BOOKS SUCCESSFULLY ADD:::


--1 BACK TO ADMIN PORTAL--
|
<
```

3) ADMIN SELECT DELETE BOOK:

```
--1 BACK TO ADMIN PORTAL--
1


:::::::ADMIN PORTAL:::::::
1) --ADD BOOKS--
2) --CHECK REQUESTS--
3) --DELETE BOOKS--
3


:::HOW MANY BOOKS YOU WANT TO DELETE?:::
1


<<<<<<<<<<<FROM WHICH CATEGORY YOU WANT TO DELETE THE BOOK>>>>>>>>>>


---1.COMPUTING CATEGORY---
---2.GENERAL SCIENCE CATEGORY---
---3.URDU LITERATURE/ POETRY OR STORIES
---4.ENGLISH LANGUAGE/ GRAMMER OR POETRY
---5.ENGINEERING CATEGORY---
2


---LIST OF SCIENCE BOOKS---
[General Science, Space And Science Multiple Edition, he Feynman Lectures on Ph


:::::ENTER1BOOKS::::
General Science


---LIST OF SCIENCE AFTER DELETION---
[Space And Science Multiple Edition, he Feynman Lectures on Physics, Cosmos, Pa


1 BOOKS SUCCESSFULLY DELETED:::




--1 BACK TO ADMIN PORTAL--
```

SELECT STUDENT:
STUDENT LOGIN AND MENU:

```
<<<<<:::LOGIN:::>>>>>

ENTER NAME:
SHAHZAIB
-----------
ENTER ID:
FA20BSSE0062
-----------
ENTER SEMESTER:
3
-----------


:::::::THIS IS YOUR RANDOM PIN BY ADMIN:::::::
428857171


<<<<<ENTER PIN TO LOGIN>>>>>
428857171


::::::::::STUDENTS PORTAL::::::::::
1 <<<SEARCH BOOK BY LETTER>>>
2 <<<SEARCH BOOK BY CATEGORY>>>
3 <<<SEARCH BY NAME>>>
4 <<<REQUEST A BOOK>>>
|
```

STUDENT SELECT SEARCH BY LETTER:

```
Output - LIBRARY_MANAGEMENT_SYSTEM_PROJECT (run)  ×
428857171


::::::::::::STUDENTS PORTAL::::::::::::
1 <<<SEARCH BOOK BY LETTER>>>
2 <<<SEARCH BOOK BY CATEGORY>>>
3 <<<SEARCH BY NAME>>>
4 <<<REQUEST A BOOK>>>
1

:::::Enter letter to list books of this letter:::::
T
The Pragmatic Programmer
The Art of Computer Programming
The Greatest Show on Earth
The Selfish Gene
THE LORD OF THE RINGS
THE ALCHEMIST
THE DA VINCI CODE
THE TWILIGHT SAGA
THINK AND GROW RICH
THE DIARY OF ANNE FRANK
The Design of Everyday Things
The Seven Habits of Highly Effective People

--1.BOOK YOUR BOOK--
--2.REQUEST YOUR BOOK--
1

<<<<<<<BOOK YOUR BOOK>>>>>>>

-------Which Book You Want to Book--------
THE ALCHEMIST

---------SELECT DURATION----------
3 DAYS

<<<<SUMMARY>>>>>>
BOOK NAME: THE ALCHEMIST
OWN FOR: 3 DAYS
NAME: SHAHZAIB
ID: FA20BSSE0062
SEMESTER: 3

--1 BACK TO STUDENTS PORTAL--
|
```

STUDENT SELECT SEARCH BY CATEGORY:

```
--1 BACK TO STUDENTS PORTAL--
1



::::::::::STUDENTS PORTAL::::::::::
1 <<<SEARCH BOOK BY LETTER>>>
2 <<<SEARCH BOOK BY CATEGORY>>>
3 <<<SEARCH BY NAME>>>
4 <<<REQUEST A BOOK>>>
2

---1.COMPUTING CATEGORY---
---2.GENERAL SCIENCE CATEGORY---
---3.URDU LITERATURE/ POETRY OR STORIES
---4.ENGLISH LANGUAGE/ GRAMMER OR POETRY
---5.ENGINEERING CATEGORY---
3
[Aag Ka Darya, Patras Kay Mazameen, Himaqatein aur Mazeed Himaqatein , Baj

--1.BOOK YOUR BOOK--
--2.REQUEST YOUR BOOK--
1

<<<<<<<BOOK YOUR BOOK>>>>>>>>

-------Which Book You Want to Book--------

---------SELECT DURATION----------
3 DAYS

<<<<SUMMARY>>>>>>
BOOK NAME:
OWN FOR: 3 DAYS
NAME: SHAHZAIB
ID: FA20BSSE0062
SEMESTER: 3

--1 BACK TO STUDENTS PORTAL--
 |
```

STUDENT SELECT SEARCH BY NAME:

```
--1 BACK TO STUDENTS PORTAL--
1



::::::::::STUDENTS PORTAL::::::::::
1 <<<SEARCH BOOK BY LETTER>>>
2 <<<SEARCH BOOK BY CATEGORY>>>
3 <<<SEARCH BY NAME>>>
4 <<<REQUEST A BOOK>>>
3


:::SEARCH BOOK::::
ENTER BOOK NAME YOU WANT TO SEARCH:
LET US C
<<<::::NO MATCH FOUND:::>>>

--1.BOOK YOUR BOOK--
--2.REQUEST YOUR BOOK--
2

--------ENTER BOOK NAME YOU WANT TO REQUEST FOR--------
LET US C



<<<<<<<<<<BOOK REQUEST SUMMARY>>>>>>>>>>
:::YOUR REQUEST ID IS 6982:::
Book Name: LET US C

--1 BACK TO STUDENTS PORTAL--
|
```

STUDENT SELECT REQUEST BOOK:

```
::::::::::STUDENTS PORTAL::::::::::
1 <<<SEARCH BOOK BY LETTER>>>
2 <<<SEARCH BOOK BY CATEGORY>>>
3 <<<SEARCH BY NAME>>>
4 <<<REQUEST A BOOK>>>
4

--------ENTER BOOK NAME YOU WANT TO REQUEST FOR--------
PROB AND STATS



<<<<<<<<<<BOOK REQUEST SUMMARY>>>>>>>>>>
:::YOUR REQUEST ID IS 9667:::
Book Name: PROB AND STATS
Student's name: SHAHZAIB
student's ID: FA20BSSE0062
Student's Smemester: 3


--1 BACK TO STUDENTS PORTAL--
|
```

CONCLUSION:

We learn lot while making this project, by making this project our concepts of object oriented programming and data structures become more strong, our implementation skills get more strong.

Face some difficulties also, but after we make them easy for us by taking help from some sources and learn new things and implement them in our project.

At last thanks to miss Wadeeah Qureshi by guiding and teaching us concepts and implementation of data structures, and build our skills which we didn't have before.