

KATHMANDU UNIVERSITY

*Dhulikhel, Kavrepalanchok*

*Estd. 1991*



**Project on: Book Management system**

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A book management system is a software that maintains details of a book. This mini-project on book management system focuses on adding, editing and deleting book details. The book details include title of the book, name of author and ISBN number of the book. In together there are 12 functions in the project, thus ensuring modularity and readability in the program. The major portion of the project involves file handling. Thus, majority of the functions involve reading and writing on files. The program also arrays, file pointer, structures and many other C programming concepts.

This book management system also has a login and signup options thus providing a bit of security to who views and delete data. The 12 function in the program are:

- 1) clear(): This function examines the OS of user and clears the interface accordingly.
- 2) welcome(): This function prints a welcome interface for the user.
- 3) addbook(): This function adds books and it's detail from user in the book\_details.txt file.
- 4) editdetail(): This function edits the detail of a book by asking which book to edit.
- 5) display(): This function prints all the books with it's detail.
- 6) searchbook(): This function searches the book desired by user by asking user the id and provides all the details of the book.
- 7) delete(): This function deletes the details of the book from the file as per the book id given by the user.
- 8) book\_management\_interface(): This function prints the options that a user has in the book management system and asks the user to enter the number. As per the number provided by user, it directs user to another function.
- 9) login(): This function asks user their username and password, compares it with details in file and directs user to book\_management\_interface() function.
- 10) signup(): The function asks user to enter their name, desired username and password and stores it in a file for login purpose.
- 11) logininterface(): This function asks user if they want to login or signup and proceeds accordingly.
- 12) main(): This function calls welcome function and logininterface function.

The main functions runs first and then it calls welcome function and the program proceeds as follows:

On the first instance of running the program, the welcome function gets executed which prints a welcome interface.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
*****

Welcome to the Book Managent System.

*****

Press Enter to continue.
```

After user presses enter, user gets directed to a login interface. Where user is given three option to Login, Signup or exit from the program.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
***Login to the book Managent System***
*****

1.Login
2.Signup
3.Exit

*****

(1/2/3)?:
```

If user presses 2, function signup is executed and user will be asked their name, desired username and password and saves it in user\_details.txt. After which they are prompted back to login interface. However, if they enter username already in database, they are asked to enter another username and same process continues.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
*****WELCOME TO SIGNUP PORTAL*****

Enter your name:      Nigam Niraula
Enter the Username you desire(oneword):      Nigam
Error the username already exists.Please choose another!

Enter the Username you desire(oneword):      nini
Enter your Password:   niraula
```

If user presses 1, function login is executed user will be asked to enter their username and password. If user enters right username and password (checked from the file username and password are stored after signup), they proceed to book management interface. Else, they are prompted back to login interface.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
*****WELCOME TO LOGIN PORTAL*****

Enter your Username:   nini
Enter your Password:   niraula
```

“Username and password both valid”

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
*****WELCOME TO LOGIN PORTAL*****

Enter your Username:   axnaxx
Enter your Password:   xaxaxa
```

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter valid Username.

***Login to the book Managent System***

*****

1.Login
2.Signup
3.Exit

*****
(1/2/3)?:
```

“Invalid Username results to going back to login interface with a message of Enter valid username at the top”

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
*****WELCOME TO LOGIN PORTAL*****

Enter your Username:  Nigam

Enter your Password:  nira
```

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter a valid password.

***Login to the book Managent System***

*****

1.Login
2.Signup
3.Exit

*****
(1/2/3)?:
```

“Invalid Password results to going back to login interface with a message of Enter valid password at the top”

When both username and password are valid book\_management\_interface() function gets executed and a book management interface is shown.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System

***Welcome to the Book Management System, Nigam***

*****

1.Add book
2.Edit details of a book
3.Display the detail of all books
4.Delete a book
5.Search a book
6.Exit

*****

Enter the S.N of the task you want to perform:
```

When user presses 1, addbook() function is executed that asks user book id, name of book, name of author and ISBN number of book and stores it in book\_details.txt file. Then, the user proceeds back to book management interface.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter Book Id:5
Enter Book Name:Danny The Champion Of The World
Enter Author Name:Roald Dahl
Enter ISBN number:978-0-141-36541-1
```

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
1      Think Like A Monk      Jay Shetty      978-0-0-838659-7
2      Physics Of The Impossible      Michio Kaku      978-0-141-03
3      The Diary Of A Young Girl      Anne Frank      978-93-52230-98-3
4      Steelheart      Brandon Sanderson      978-0-575-10404-4
5      Danny The Champion Of The World      Roald Dahl      978-0-141-36541-1
```

“The picture above shows that the book detail is added successfully.”

When user presses 2, editdetail() function gets executed where user is asked book id of book he wants to edit. After giving the book id,the user is asked to enter edited details of book and the book details is edited accordingly.Then, the user proceeds back to book management interface.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter Book Id to update:5
Enter Edited Book Name:Danny World
Enter Edited Author Name:Roald Dahl
Enter Edited ISBN:09218-82318
```

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
1      Think Like A Monk      Jay Shetty      978-0-0-838659-7
2      Physics Of The Impossible      Michio Kaku      978-0-141-03
3      The Diary Of A Young Girl      Anne Frank      978-93-52230-98-3
4      Steelheart      Brandon Sanderson      978-0-575-10404-4
5      Danny World      Roald Dahl      09218-82318
```

“Edited detail of book with book id 5”

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter Book Id to update:10
No record found

*****
Press any key and enter to continue.
```

If user enters id that is not available in data it prints No record found.

When user presses 3 display function gets executed and prints all the book details available in database. Then, the user proceeds back to book management interface.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
1      Think Like A Monk      Jay Shetty      978-0-0-838659-7
2      Physics Of The Impossible      Michio Kaku      978-0-141-03
3      The Diary Of A Young Girl      Anne Frank      978-93-52230-98-3
4      Steelheart      Brandon Sanderson      978-0-575-10404-4
5      Danny The Champion Of The World      Roald Dahl      978-0-141-36541-1
6      Into No Man's Land      Ellen Emerson White      978-0-545-39888-6
7      Can Love Happen Twice      Ravinder Singh      978-0-143-41723-1
8      One Indian Girl      Chetan Bhagat      978-81-291-4214-6
9      Alchemist      Paulo Coelho      978-0-06-112241-5

*****
Press any key and enter to continue.
```

When user presses 4, delete function gets executed and it deletes all the details of given book id. Then, the user proceeds back to book management interface.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter Book ID of book to delete:9
```

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
1      Think Like A Monk      Jay Shetty      978-0-0-838659-7
2      Physics Of The Impossible      Michio Kaku      978-0-141-03
3      The Diary Of A Young Girl      Anne Frank      978-93-52230-98-3
4      Steelheart      Brandon Sanderson      978-0-575-10404-4
5      Danny The Champion Of The World      Roald Dahl      978-0-141-36541-1
6      Into No Man's Land      Ellen Emerson White      978-0-545-39888-6
7      Can Love Happen Twice      Ravinder Singh      978-0-143-41723-1
8      One Indian Girl      Chetan Bhagat      978-81-291-4214-6
```

“No Details of book 9 in database”

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter Book ID of book to delete:10
No record found

*****
Press any key and enter to continue.
```

“If user enters id that is not available in data it prints No record found.”

When user presses 5 , searchbook() function gets executed. It asks user to enter the id of the book they want to search. If the book of given id is available it prints the details.However, if there is no record of given book id it prints record not found.

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter Book Id to search:5
5          Danny The Champion Of The World          Roald Dahl          978-0-141-36541-1

*****
Press any key and enter to continue.
```

```
nigam@DESKTOP-93F21ND: /mnt/d/KU/Book Management System
Enter Book Id to search:10

Record Not Found

*****
Press any key and enter to continue.
```

“If user enters id that is not available in data it prints record not found.”

When user presses 6. They exit from the program.



