# Objectives

The project is mainly based on following objectives:

* To create a project using C-programming and its features.
* To implement features like control statement, structures and file handlings.
* To concise the memory of program as far as possible.
* To get an idea about making a simple project using C.
* To be able to solve problems by Compiling and Debugging.

# Algorithm

**Main function**

**steps**

1. Start with welcome screen
2. Get password from user
3. Check password. Is password correct

Yes:-goto step 4

No:-print wrong message and goto step 2

1. Display mainmenu as below

* 1.add books
* 2.delete books
* 3.search books
* 4.issue books
* 5.view book list
* 6.edit book’s record
* 7.close application

1. Get choice from user

Choice:-1 call function addbook

Choice:-2 call function deletebook

Choice:-3 call function searchbook

Choice:-4 call function Issuebooks

Choice:-5 call function viewbook

Choice:-6 call function editbooks

Choice:-7 goto step 6

6.stop

**Addbook function**

**Steps**

1.declare file pointer ‘fp’

2.display categories of book to be added

3.get option from user.Is user want to add books

Yes:-goto step 3

No:-go back to main menu

4. Open file ‘fp’ to write

5. Assign the pointer to the end of the file to write

6. get data from user

7. write input data on a file

8. close file

9.print option to add another books

Yes:-goto step 1

No:-go back to main menu

**Deletebook function**

**Steps**

1.get book ID from user to delete

2. Declare file pointer ‘ft’

3.open file ‘fp’ to read

4. Assign the pointer to the beginning of the file to be read

5.loop until ‘End of file’ is not encountered read data from file.

6.Is user input book id= book Id on a file

Yes:- a. open ‘ft’ file and copy all data of ‘fp’ file in ‘ft’file except that data which we want to delete

b. delete ‘fp’ file and rename ft file by ‘fp’ file name and goto step 7

No:-print error message and close file and go back to main menu

7.close file

8.print option to delete another book

Yes:-goto step1

No:-go back to main menu

**Searchbook function**

**Steps**

1. Display option for search

* 1. Search by id
* 2.Search by book name

1. Open the fie ‘fp’ to read
2. Assign the pointer to the beginning of the file to be read
3. If option is search by id

* Get book id from user
* Loop until ‘End of file’ is not encountered read data from file
* Is user input book id =book id on a file

Yes:- Display all information about that book id and goto step 6

No:- Print sorry message and goto step 6

1. If option is search by book name

* Get book name from user
* Loop until ‘End of file’ is not encountered read data from file
* Is user input book name=book name on a file

Yes:-display all information about that book and goto step 6

No:-print sorry message and goto step 7

1. Close file
2. Display option to search another book

Yes:-goto step 1

No:- go back to main menu

**Issuebook function**

**Steps**

1. Display option as below

* 1.Issue book
* 2.View issued book
* 3.Search issued book
* 4.Remove issued book

1. Open ‘fs’ file
2. Assign the pointer to the beginning of the file to be read
3. Get choice from user

Choice -1

1. Get book id from user
2. Loop until ‘End of file’ is not encountered read data from file
3. Is input book id=book id on a file

Yes:-get student name whom book has to issue

No:-print sorry message and goto step e

1. Write information of student and issued data on a file
2. Display option to issue another book

Yes:-goto step a

No:-goto step 5

Choice-2

1. Loop until ‘End of file’ is not encountered read data from file
2. Display list of issued book with student name, issued date and return date
3. Goto step 5

Choice-3

1. Get book id from user
2. Loop until ‘End of file’ is not encountered read data from file

c. Is user input book id =book id on a file

Yes:- Display student name whom book was issued

No:- Print sorry message and goto step d

1. Display option to search another issued book

Yes:- goto step a

No:-goto step 5

Choice-4

a.declare the file pointer ‘fg’

b. get book Id from user to delete from issued list

c. Loop until ‘End of file’ is not encountered read data from file

d. Is user input book id= book Id on a file

Yes:- 1. open another ‘fg’ file and copy all data of ‘fs’ file in ‘fg’ file except that data which we want to delete

2. delete ‘fs’ file and rename ‘fg’ file by ‘fs’ file name and goto step e

No:-print error message and goto step e

e.print option to search another book

Yes:-goto step b

No:-goto step 6

5. Close file

6. Go back to main menu

**Viewbook function**

**Steps**

1. Open ‘fs’ file
2. Assign the pointer to the beginning of the file to be read
3. Loop until ‘End of file’ is not encountered read data from file
4. Display list of all book with complete information
5. Show total number of books in library
6. Close file
7. Go back to main menu

**Editbook function**

**Steps**

1. Get book id to be edited from user
2. Open file ‘fs’
3. Assign the pointer to the beginning of the file to be read
4. Loop until ‘End of file ‘ is not encountered read data from file
5. Call function checkid. Is checkid=1

Yes:-goto step 6

No:-display sorry message and goto step 7

1. a.get new data from user of that book which to be edited

b.Assign the pointer to the current position

c.Overwrite the new data on old data of that book and goto step 7

No:- Display sorry message and goto step 7

1. Close file
2. Display option to edit another book

Yes:-goto step 1

No:-goto step 8

1. Go back to main menu

**Checkid function**

**Steps**

1. Assign the pointer to the beginning of the file to be read
2. Loop until ‘End of file ‘is not encountered read data from file
3. If user input id=id on a file

Yes:-return value 1

No:-return value 0

This function check whether user input id already exit in a file or not.

**Getdata function**

**Steps**

1. Print”Enter information below”
2. Get categories from user
3. Get book id
4. Call function checkid. Is checkid=0

Yes:-goto step6

No:-goto step 5

1. Get book name,book author name,quantity,price and rack no. where that book located from user
2. Go back to main menu

This function get data from the user for all information of book.

**Password function**

**Steps**

1. Declare two string ‘pass’ and ‘ password=abcd1234’
2. Print “Enter the password”.
3. Until user entered the enter key get character for user
4. Store input character in string ‘pass’
5. Compare two string ‘pass’ and ‘password’ .Is both equal

Yes:-goto step 6

No:-print error message and goto step 2

6. Print password match message

7. Goto main menu

# References

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