

DEPI-JAVA Final Project

Library Management System

Team:

- Tasneem Abdeltawab Abdelaziz Kotb
- Nadin Mokhtar Elsaid Elbadwy kandil
- Aya Ebrahim Mohamed Shehawy
- Yasmeen Khaled Mohammed Abd Elhafez

Email:

- tasneemabdelawab205@gmail.com
- nadinkandil19@gmail.com
- ayai65291@gmail.com
- jassmmin2003@gmail.com

Instructor name: Dr/Mina Younan

Main scenario:

Library Management System

Develop an application to manage Library borrowing and returns activities. Consider the following information gathered during the analysis process

Design:

- **Basic Classes:** Library, Contents, Books, Articles, Digital Media, Subscribers, Borrowing Records, and have the following relationships:
- **A library** content can be a book, an article in a journal, or digital media.
- **A subscriber** can borrow any of the library contents, for three weeks, golden subscribers can borrow for three months, after the lease time is over, a fee accrue on the subscriber until the borrowed item is returned.
- **A Librarian/administrator** can print a report about all borrowed books and rank them according to audience interest rates, can save/load data on and from files.

Your extra suggestions are welcome, especially to organize main function, display a menu to the user to:

- Adding/editing/deleting instances belonging to each class,
- Subscriber browsing library contents and select items to borrow.
- Subscriber returning borrowed item and check his balance and pay any late fee if any.

- Admin can print reports of overdue borrowed items.

library.txt

Library ID	Name
1	Main Campus Library
2	CS Library
3	Engineering Library

items.txt

Item ID	Library ID	Category	Title	Author	Publisher	Production Year	Status	Copies
1	1	book	Introduction to Java	Daniel Liang	Pearson	2010	On shelf	10
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subscribers.txt

Subscriber ID	Type	Name	Address	Phone	Email
1	regular	Mohamed
2	golden	Ahmed	...	...	...
3	regular	Mostafa	...	...	...

Borrowing.txt

subscriber ID	Borrow Date	content ID	Return Date	Fee
1	10/1/2013	1	...	0
1	10/1/2013	1	...	50
2	12/2/2013	3	...	...
2	13/2/2013	3	...	...

Extra Features:

- Library view made as interface, and UserMainPage and AdminMainPage are made from it.
- All contents can be borrowed using the same function “borrow” (Polymorphism)
- Search for Contents using filters
- Add Contents to wish list “to_read_list”
- Get notified before the end of the borrowing period by email.

Source code:

[Tasneem205/Library_Management_System: Library Management System as a DEPI project \(github.com\)](#)

note: not all the team used GitHub, so some edits are made by someone and committed by Tasneem205.