

Semester Project of Advanced Programming & Introduction to Programming II

Library Management System

Project Description V1 : 13.04.2021

Project Delivery : End of Finals

Please read this document at least 3 times

*You can use MySQL, **MS-SQL**, SQLite, Json (this is not a relational database, but you can use it as text file), PostgreSQL etc... as your relational database of your project.*

*You can use any of Java, **C#**, Python, PHP, ASP.Net or Mobile Programming (Swift, etc...) languages as programming language.*

Login Panel

- 1) There must be a registration system for both students and teachers. (There is no need of approval for student registration. Teachers are going to be registered as a student before they get approved by admin.) To do this, you can add rank information to users table. (For example, Rank 1 is admin, Rank 2 Teacher, Rank 3 Student and keep ranks in different table)
- 2) User should enter either school number or their email and their password to log in. So you have to automatically detect whether it is a student number or email and check for both.
- 3) Passwords should be stored salted hashed in the database (such as SHA256(random string + password)).
- 4) You also have to implement a login protection system as for prevention of password brute forcing as shown in lecture 7

Library Panel

- 1) Books in the library should contain title, number of pages, category, author and publishing year information
- 2) The books in the library should have “quantity of the book” information. For example there can be 2 of the same book. When user takes one of the books, that book’s quantity should be 1.

- 3) User should be able to search the books in library. When searching, it should be searched as if it contains the searched term. (eg: %word%). All users should be able to see all the books. However, it should not be possible to take books that have 0 quantity. Also, a filter should be added and, if checked, books that have 0 quantity should not be displayed.
- 4) User should be able to sort the books by their names, authors or categories. Also, there should be quick search feature that searches the books by their names' first letter.
- 5) Students can take maximum 5 books at the same time. There is no limit for lecturers. This number of limit should be adjustable. This setting should be stored in database and should be adjustable in Admin Panel. You should compose a new table for settings.
- 6) The book return period for students is 7 days. There is no return period for teachers. This period time should be adjustable. This setting should be stored in database and should be adjustable in Admin Panel.
- 7) Also, students and teachers should be able to see books they have taken.
- 8) Admin should be able to see information of books taken. (by who and when)
- 9) Students whose book period has passed should be notified with a message. For this, there should be a simple private message / notification system for each user.
- 10) Users should be able to return books with the return button from taken books section on their panels. There should be Returned Books List, in the admin panel and the books should be considered returned after the approval of the admin.
- 11) In your library database, there has to be at least 1,000 different books (with different counts) and 30 test user account. Some accounts will be teacher some will be students. You can automatically generate random books and user accounts your or find some real book (this would be better) lists and import them.
- 12) Assing books to the users randomly and test the system and show if it is working correctly or not.
- 13) When planning, designing and developing the project, you have to think as your employer is paying you money for this project and liket that you will use this project in your real life. So the features of the project has to be as useful and realistic and possible.**
- 14) You should add comments to your each class, method, code, etc. and develop your project in a more understandable way.

There will not be a final exam. Your grade will be based on this Project. Thus, take this Project very seriously and start working on it immediately. Look the internet for the parts that you do not know. Create an account on <https://stackoverflow.com/> and ask there, or look for answers there. When doing the Project, you can ask the parts that you cannot solve in our discord channel. Our discord channel link: <https://discord.gg/6Mrb8MwteQ> . My email: furkan.gozukara@toros.edu.tr . Also you can contact me through our discord channel.

- 1. Lastly everyone will record a very detailed video to explain the project.**
2. Video will be recorded with OBS studio in 1080p (high quality so that I can read explained code easily) resolution.
3. It is mandatory to use microphone when recording and explaining the project verbally by speaking.
4. Before starting to record your video, make a test recording and be sure that your video recording and your voice is in good quality and working as expected.
5. Turkish students can record the video in Turkish.
6. The project has to be made in English.
7. Non-Turkish students can also record their video in Turkish if their Turkish is better than their English. However, they should use English if their English is better than their Turkish.
8. When explaining your Project, you need to explain every piece of your written code.
9. What does that particular code piece or that particular class or that particular method, etc. and how did you write it. ***If you take a code from internet or elsewhere, make a comment and put your source link above of that code block.***
- 10. Moreover, you have to explain and show every feature of your application. If you only explain your codes, your project will be counted as invalid. So run your application and do example of every feature such as register, login, get book, return back book, book time expiration message/alert whatever the feature there are. It is**

also mandatory to show and explain your database content and database design as well.

11. Once your video is recorded, you will upload your video to Google Drive and also YouTube. In your project delivery, compose a text file which includes your YouTube video link and google drive video link. Make sure that both google drive video and YouTube video is accessible to everyone who has link. YouTube video can be unlisted. But do not make the video private.
12. Finally, ZIP or RAR your entire Project and upload to your Google drive. In this final ZIP or RAR archive, all of the code you have written has to be included with video recording links. After you get your Google drive upload link of your project, send me that link as email: furkan.gozukara@toros.edu.tr
13. When sharing your Google drive upload link as email, make sure that your upload's visibility is set correctly. Set it as who has link can view or download so that I can download it.
14. Everyone will be sending a Word or PDF document along with their final project files. This document will contain screenshots of your all comments to the lecture videos (all of the 14 lecture videos). Take screenshots with high resolution. Your comment has to be clearly readable. Those who fails to send this document will be counted as not attended to the lectures. Therefore, they will get FF.
15. If your comment is not visible in YouTube comments section, it is fine. Just take screenshot of your comment after you posted the comment.

Note: Pictures are only to give an idea about project. You need to change the design according to the rules requested above

You can use ComboBox to make selection parts with multiple options.

Admin Paneli

Kitap Ekle

Kitapları Listele

Kullanımdaki
Kitaplar

Öğretmen Onayları

Kütüphane Yönetim Sistemi

Giriş Ekranı

Okul Numarası:

Şifre:

Giriş Yap

Üye Ol

Kitapları Listele

Kitap Arama

Kitap Adı:

Harf ile Başlayan:

Kitap Türü:

Yazar Adı:

Kitabı Ara

Seçilen Kitabı Al

Öğretmen/Öğrenci Giriş Sayfası

Kitapları Listele

Üzerimdeki Kitaplar

Bildirimler

Kütüphane Yönetim Sistemi Üye Olma Paneli

Ad:

Şifre:

Soyad:

Şifre Tekrar:

E-Mail:

Durum:

Okul Numarası:

Üye
Ol