

CS 327 – INTRODUCTION TO DATABASES

Spring 2025

PROJECT DELIVERABLE 3

Requirements

Phase 3 Deliverable must contain the goal of this phase of the project, and a description of the creation of the database schema and instance and of the application programs. It must also provide any revisions made to the specifications described in Phase 2 Deliverable. It must further describe the problems encountered in Phase 3 and justify the solutions.

- The program must run
 - Make sure you have ample sample data in your tables so that you can sufficiently perform and illustrate all required tasks.
 - You do not have to design a fancy GUI (your interface can be menu-driven.)
1. Run SQL commands for creating tables including primary keys, secondary keys and foreign keys. Run SQL command files that populate each table. Each table is required to have a sufficient number of tuples. Keep in mind the relationships between tables, and plan your data accordingly. You should be able to run these command files successfully with no errors and no integrity violations.

You are to develop a menu driven application system for the public library system database. The following are the menus to be developed. Try to implement all applications described below. If you want you may add more functions and menus. *If you miss a task mention which one. In this case if you have implemented a task with a similar functionality mention it.*

1. Main menu:

- Customer functions (ask for card number/userID, and then show sub-menu).
- Administrative Functions (ask for ID and password, and then show submenu).
- Quit.

2. Customer Functions Submenu:

- Search a Movie by category, title, or director name.
- Movie checkout. (Possibly with search)
- Movie reserve. (Possibly with search)
- Print the list of movies reserved by a customer and their status.
- Movie return. (Possibly with the previous item)
- Compute charges for a movie copy checked out by a customer based on the current date.
- Quit (Log out).

3. Administrative Functions Menu:

- Add a movie copy.
- Search a movie and check the status of its copies.
- Add new customer or Admin.
- Print store information (names and locations).
- Print top 10 most frequent renters in a store and the number of movies each has rented.
- Print top 10 most rented movies in a store.
- Print the 10 most popular movies across stores.
- Find the average charges paid per customer.
- Quit (Log out)

What is expected in your submission:

1. Description of implementation, problems faced.
2. The SQL commands that create your tables
3. The SQL commands that populate your tables (Or, you could give an export)
4. The php source code.
5. A few screenshots of the major screens.

Put 1, 2 in a single Docx or PDF file and 3,4 as a text file. The PHP folder should be given as one ZIP.

And apart from the group submission, there should be

6. **An individual submission that states what the different group members including you did for your project.**

This deliverable is due on the designated final exam day, and it must be demoed in class during this time as well. NO LATE SUBMISSIONS ARE POSSIBLE