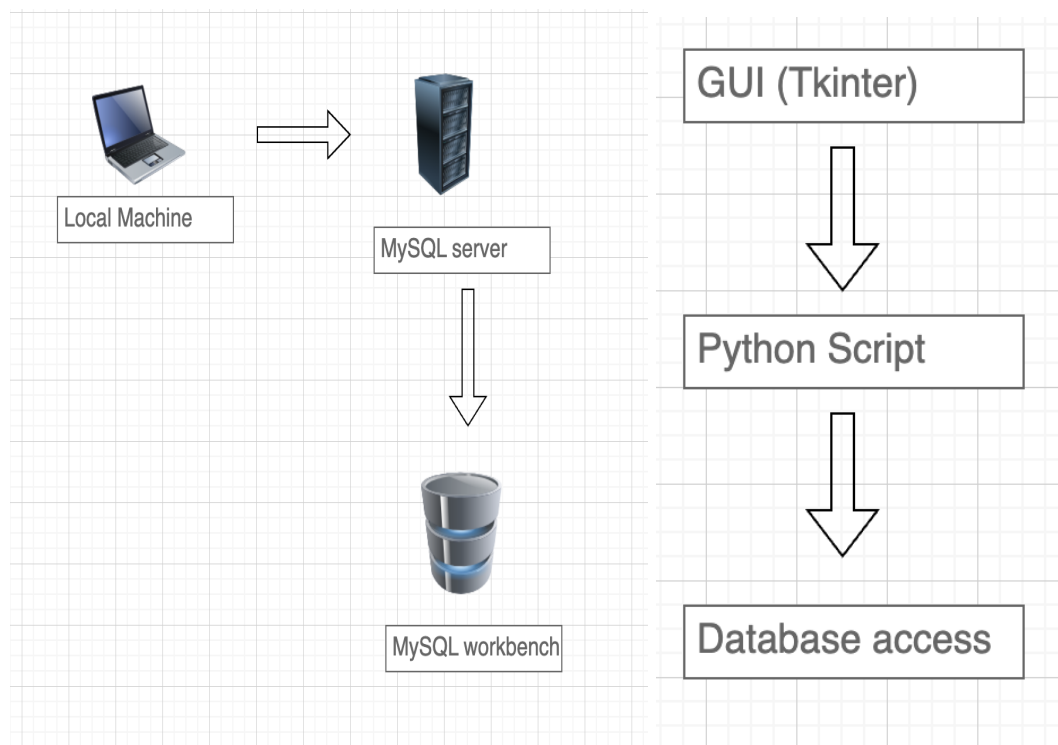


DESIGN DOCUMENT

NXM210046

The Library Management System is intended to be used by librarians to undertake library management activities. The system's functionality includes but is not limited to searching for a book, checking out one or more books, returning borrowed books, adding new borrowers, inquiring about the fine amount, and paying the fine amount for each book checked out and returned late. Borrowers who miss the due date are penalized 25 cents (0.25 US Dollars) each day for each book.

Architecture:



The system's design is based on Python Tkinter for the GUI. It serves as the user's front-end interface for communicating with the system. The model is in charge of connecting with the back-end database in order to run queries and handle database results. MySQL is the database of choice for back-end operations.

4 files are included in this project.

- GUIMain is in charge of operating the Tkinter GUI main loop and interactions.
- AddBorrowers is responsible to add new borrowers
- PayFines handles fines and determines how they interact with the rest of the database.
- CheckIn is responsible for Fine Calculation as well as main library database update.

Assumptions:

- There is only one copy of each book in the library
- In the book search section, the Librarian should only input the ISBN-10 character code. When the librarian enters the ISBN-13 character code, the system displays an error warning.
- To look for books without authors, librarians should input the ISBN number.
- After checkout, change the date using the 'change date' button to calculate fines.