

Library Book Management Database

Group-5

P4 - GitHub Link: - https://github.com/YanrongHuang/DAMG6210_Group5/tree/main

Implementation details

Object type	Quantity or Yes/No	Comment
Tables	Yes (12)	Assigned, Book, Book_Reserve, E_Book, Library, Library_Staff, Location, Paper_Book, Person, Room, Room_Reserve, Users
Views	Yes (3)	Ava_BookList, RoomBookedList, UserHistory
Computed Columns based on a user defined function (UDF)	Yes (1)	AGE
Table level check constraint	Yes (5)	Book_Type_CHK, Postion_CHK, Available_Count_CHK, Person_Type_CHK, Book_Count_CHK,
Stored procedures	Yes (4)	BookInsert, BookReturn, CancelRoom, RoomReserve
Column Data Encryption	Yes (1)	CERTIFICATE UserPass, SYMMETRIC KEY UserPass_SM
Non-Clustered Indexes	Yes (12)	Assigned_PK, Book_ID_PK, Book_Reserve_PK, E_Book_ID_PK, Library_ID_PK, S_Person_ID_PK, Location_ID_PK, P_Book_ID_PK, Person_ID_PK, Room_ID_PK, Room_Reserve_PK, U_Person_ID_PK
DML Trigger	Yes (2)	room_booked, book_reserved
BI Data Visualization	Yes	Insights about books categories, salary of library staff, total users and borrowed users, location of libraries, and counts of books.
GUI for CRUD	Yes	Created a JAVA based GUI application which connects to our Library DB and performs CRUD operations.
Email	Yes	The user receives a mail from librarian with dynamic details (due date, borrowed book name, room number, date of booking, and description) of the performed action - books a room or borrows a book.

Team Members (Group - 5): -

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