

Title: Database Creation Assignment

Objective: The purpose of this assignment is to design and create a relational database for a fictional organization. Students will be required to define the tables, establish relationships between them, and create a set of sample data. Additionally, students will need to write SQL queries to retrieve specific information from the database.

Organization Overview: Imagine a small library system that manages books, authors, and borrowers. The library system should keep track of book details, author information, borrower records, and borrowing history.

Tasks:

1. Database Design:

- Define the tables needed for the library system. Consider tables for books, authors, borrowers, and borrowing history.
- Clearly outline the primary key(s) for each table.
- Establish appropriate relationships between tables using foreign keys.

2. Table Creation:

- Write SQL statements to create the tables based on the design in Task 1.
- Ensure that data types, constraints (such as NOT NULL), and primary/foreign key relationships are appropriately defined.

3. Insert Sample Data:

- Insert at least 5 records into each table to represent books, authors, borrowers, and borrowing history. Ensure that the data reflects realistic scenarios.

4. Documentation:

- Provide a brief documentation explaining the rationale behind your database design decisions.
- Include comments in your SQL code to explain complex queries or any assumptions made.

Submission Guidelines:

- Submit the SQL script containing the table creation statements, sample data insertion, and SQL queries.
- Include a separate document with the database design rationale and any additional explanations.

Important Notes:

- Ensure that your SQL code is well-organized and properly formatted.

- Use meaningful names for tables and columns.
- Consider referential integrity when defining relationships.
- Test your queries to ensure they provide accurate and meaningful results.