Database Design for Central Library of Calgary

SUBTITLE: Supporting Community Access to Knowledge

- Group 5 team members
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- Harleen kaur
- Lucky Patel
- Chander Shekhar

Introduction

- The Central Library of Calgary is an active and community-focused facility that provides services to thousands of its members through a broad collection of publications, digital resources, and events. To keep up with its rising demands, an accurate and scalable database system must be installed to automate library operations and improve user experience.

Overview

- Mission statement
- Objectives
- Tables
- Relationships
- Feedback

Mission statement

The mission of the Central Library Calgary is to serve our community by making a vast array of books, and resources easily accessible.

Diversity of books

Easy accessibility

- objectives
- To manage the catalogue of books efficiently.
- To facilitate user registrations and account management.
- To provide reports for library management and decision-making.

Tables

Branch

Employee

Books

Customer

Issues status

Return Status

Event and program data

Supplier

Table structure

Branch table

Field	Data Type
Branch ID	INT (Primary key)
Branch Name	VARCHAR (200)
Address	VARCHAR (100)
Contact	VARCHAR (20)

Employees table

Field	Data Type
Employee ID	INT (primary key)
name	VARCHAR (200)
position	VARCHAR (100)
salary	VARCHAR (20)
Branch id	INT(foreign key)
Hired date	INT

Books

Field	Data Type
Book ID	INT (primary key)
Title	VARCHAR (200)
Author	VARCHAR (100)
ISBN	VARCHAR (20)
Publish Date	Date
Branch ID	INT

Issue status

Field	Data Type
Issue ID	INT (Primary)
Book id	INT(FOREIGN)
Customer id	INT(FOREIGN)
Issue Date	DATE
Due date	DATE
status	VARCHAR

Customer

Field	Data Type
Customer id	INT (primary key)
Name	VARCHAR (200)
email	VARCHAR (100)
phone	VARCHAR (20)

Return status

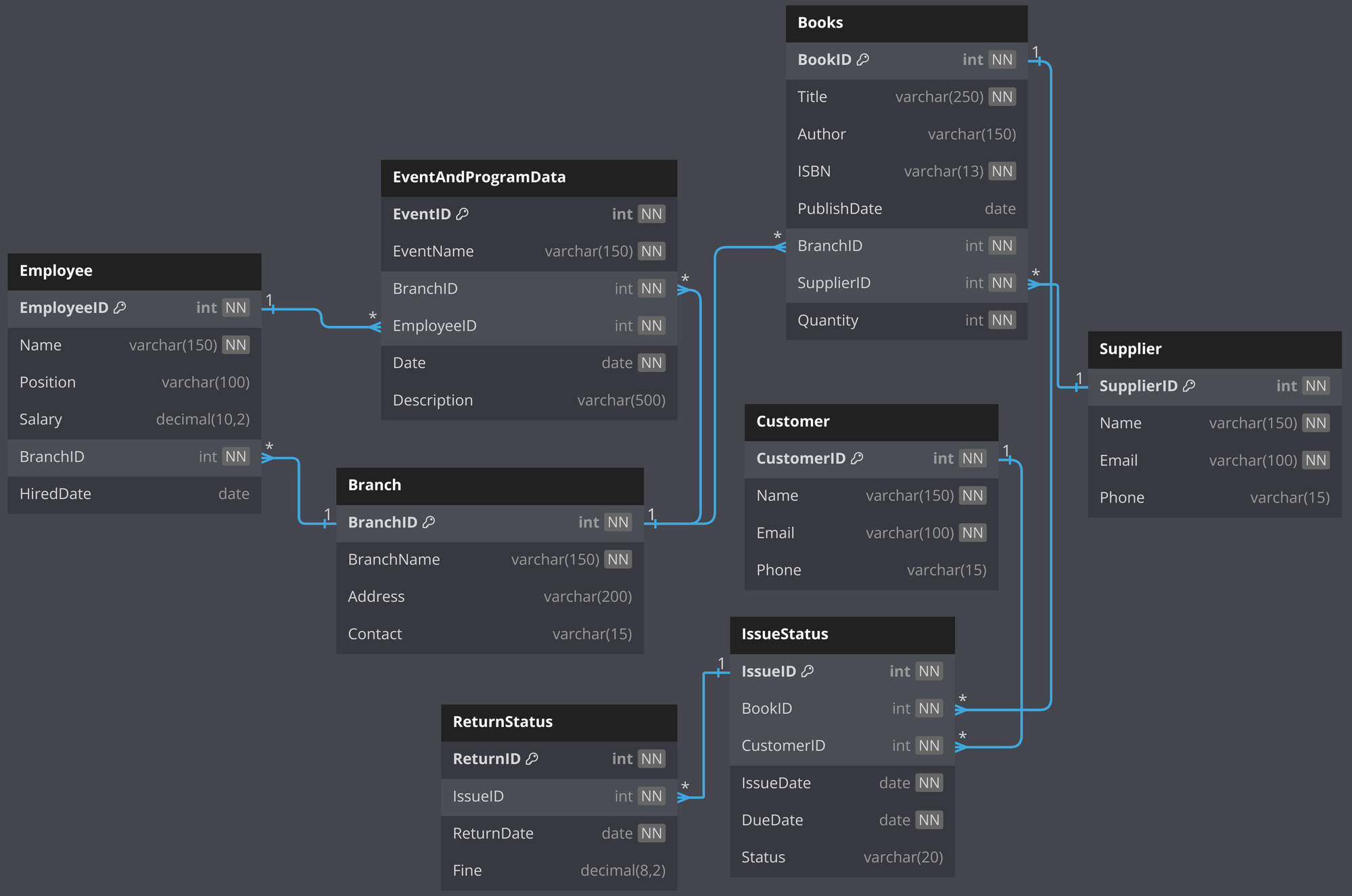
Field	Data Type
RETURN ID	INT (PRIMARY)
ISSUE ID	INT(FOREIGN)
RETURN DATE	DATE
FINE	DECIMAL

EVENT AND PROGRAM DATA

Field	Data Type
EVENT ID	INT (Primary)
EVENT Name	VARCHAR (200)
BRANCH ID	INT(FOREIGN)
DATE	DATE
DESCRIPTION	VARCHAR

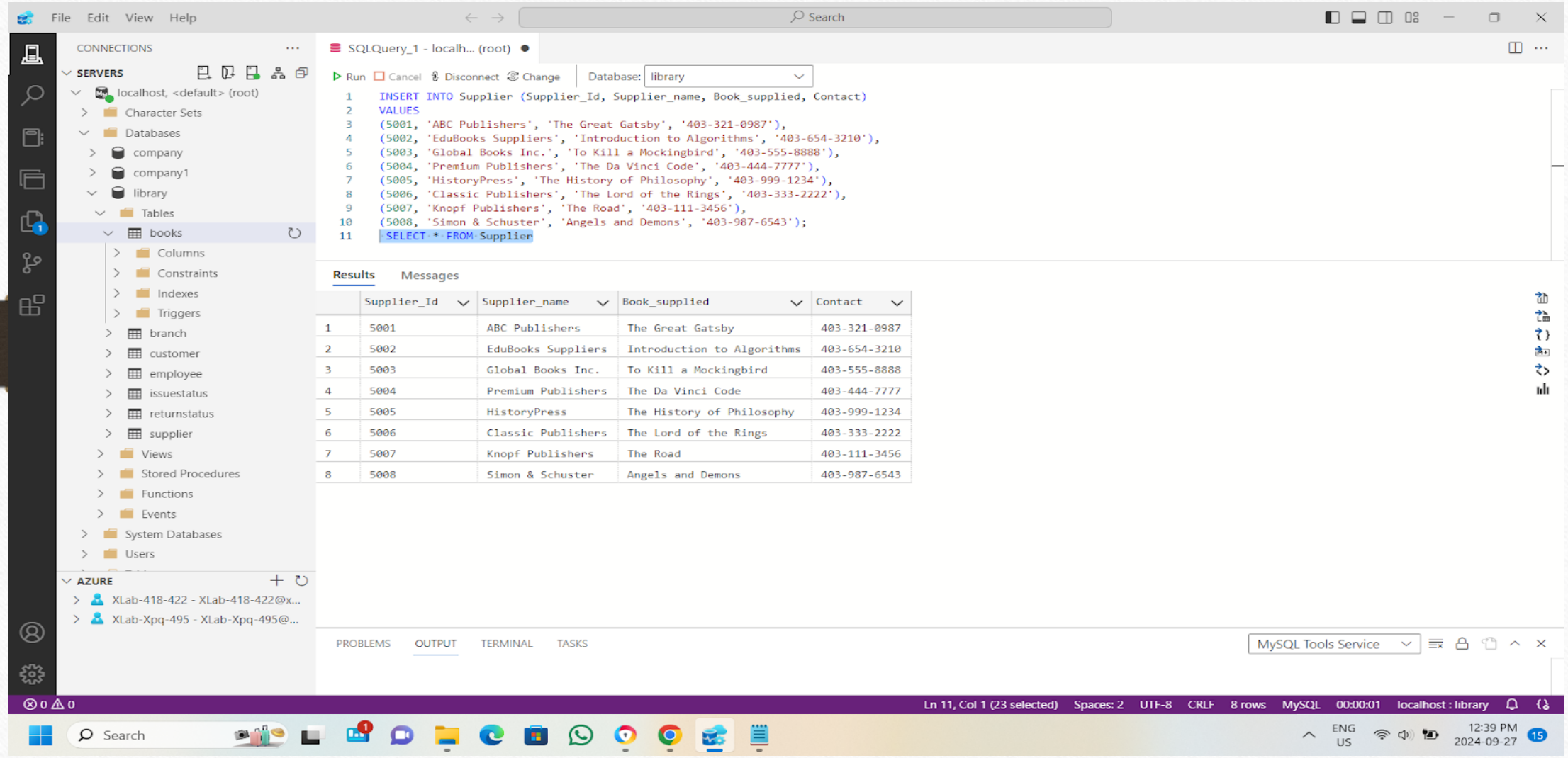
SUPPLIER

Field	Data Type
SUPPLIER id	INT (PRIMARY)
Name	VARCHAR (200)
email	VARCHAR (100)
phone	VARCHAR (20)



dbdiagram.io

For example;-


File Edit View Help
Search
CONNECTIONS
SERVERS
localhost, <default> (root)
Character Sets
Databases
company
company1
library
Tables
books
Columns
Constraints
Indexes
Triggers
branch
customer
employee
issuestatus
returnstatus
supplier
Views
Stored Procedures
Functions
Events
System Databases
Users
AZURE
XLab-418-422 - XLab-418-422@x...
XLab-Xpq-495 - XLab-Xpq-495@...
SQLQuery_1 - localh... (root)
Run Cancel Disconnect Change
Database: library
1 INSERT INTO Supplier (Supplier_Id, Supplier_name, Book_supplied, Contact)
2 VALUES
3 (5001, 'ABC Publishers', 'The Great Gatsby', '403-321-0987'),
4 (5002, 'EduBooks Suppliers', 'Introduction to Algorithms', '403-654-3210'),
5 (5003, 'Global Books Inc.', 'To Kill a Mockingbird', '403-555-8888'),
6 (5004, 'Premium Publishers', 'The Da Vinci Code', '403-444-7777'),
7 (5005, 'HistoryPress', 'The History of Philosophy', '403-999-1234'),
8 (5006, 'Classic Publishers', 'The Lord of the Rings', '403-333-2222'),
9 (5007, 'Knopf Publishers', 'The Road', '403-111-3456'),
10 (5008, 'Simon & Schuster', 'Angels and Demons', '403-987-6543');
11 SELECT * FROM Supplier
Results
Messages
Supplier_Id
Supplier_name
Book_supplied
Contact
1 5001 ABC Publishers The Great Gatsby 403-321-0987
2 5002 EduBooks Suppliers Introduction to Algorithms 403-654-3210
3 5003 Global Books Inc. To Kill a Mockingbird 403-555-8888
4 5004 Premium Publishers The Da Vinci Code 403-444-7777
5 5005 HistoryPress The History of Philosophy 403-999-1234
6 5006 Classic Publishers The Lord of the Rings 403-333-2222
7 5007 Knopf Publishers The Road 403-111-3456
8 5008 Simon & Schuster Angels and Demons 403-987-6543
PROBLEMS OUTPUT TERMINAL TASKS
MySQL Tools Service
Ln 11, Col 1 (23 selected) Spaces: 2 UTF-8 CRLF 8 rows MySQL 00:00:01 localhost : library
Search
ENG US
12:39 PM 2024-09-27

Conclusion

The proposed structure of databases for the Central Library of Calgary is intended to enhance library operations, user experience, and resource management efficiency.

Overall, this database serves as the foundation for the library's aim of delivering accessible, structured, and efficient services to its users while being adaptive to future requirements and advancements in technology.

Contribution

Lucky Patel : Focused on reviced ER diagram and relationships

Jashanpreet : Contribute in table structure and data type

Harleen Kaur : Focused on mission statement and objectives

Chandrashekhar : Focused on database and Its correlation as well

Thank you

Developing the skill to provide constructive feedback is essential, and it's a distinct ability that needs nurturing. Participate actively in group discussions and provide valuable feedback on the presentations. Remember to assess your own performance in comparison to other groups at the end.

Criteria:	**Beginning [0-3]; Developing [4-6]; Accomplished [7-9]; Excellent [10]**						
Group Number	**Content clarity, organization and Delivery [0-10]**	**Table/entity identification [0-10]**	**Relevance of the attribute to the table [0-10]**	**Relationships and associations and their degree [0-10]**	**Database diagram [0-10]**	**Total Score [50]**	**Your written constructive feedback on the presenting group**
G-1	**9**	9	9	9	9	45	Excellent presentation, full clerity and good explaination
G-2	**8**	8	7	8	9	40	Presentation was well delivered and addressed 70% of the instructor's question.
G-3	**8**	8	8	9	8	41	Good presentation , clear explaination , relevent to the point
G-4	**7**	8	8	7	6	36	All good but ER diagram is not clear.
G-5	**8**	9	8	5	7	37	ER diagram was not connected to its entities properly, Presentation went good.
G-6	8	8	8	9	9	42	Good topic with very well explaination .