Module 2: Database Project

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CONTENTS

Overview

Build a project based on Library Management System. It keeps track of all information about books in the library, their cost, status and total number of books available in the library.

Goals

- Centralized Database Management
- Efficient Book Management
- Streamlined Customer Management
- Effective Employee and Branch Management

Specific Objectives:

- Design and Implementation of Database Schema
- Data Integrity and Constraints
- Sample Data Insertion
- Transaction Management
- Reporting and Queries

Expected Outcomes:

- Improved Efficiency
- Data Accuracy
- Easy Access to Information
- Automation of Routine Tasks
- Scalability

Database Table details and its attributes

1. Branch
2. Employee
3. Books
4. Customer
5. IssueStatus
6. ReturnStatus
Attributes for the tables:

1. Branch

- Branch_no - Set as PRIMARY KEY

- Manager_Id
- Branch_address
- Contact_no

2. Employee

- Emp_Id – Set as PRIMARY KEY
- Emp_name
- Position
- Salary
- Branch_no - Set as FOREIGN KEY and it refer Branch_no in Branch table

3. Books

- ISBN - Set as PRIMARY KEY
- Book_title
- Category
- Rental_Price
- Status [Give yes if book available and no if book not available]
- Author
- Publisher

4. Customer

- Customer_Id - Set as PRIMARY KEY
- Customer_name
- Customer_address
- Reg_date

5. IssueStatus

- Issue_Id - Set as PRIMARY KEY
- Issued_cust – Set as FOREIGN KEY and it refer customer_id in CUSTOMER table
  Issued_book_name
- Issue_date
- Isbn_book – Set as FOREIGN KEY and it should refer isbn in BOOKS table

6. ReturnStatus

- Return_Id - Set as PRIMARY KEY
- Return_cust
- Return_book_name
- Return_date
- Isbn_book2 - Set as FOREIGN KEY and it should refer isbn in BOOKS table

DB scripts to create tables

```sql
-- Create the database
CREATE DATABASE library;

-- Use the library database
USE library;

-- Create the Branch table
CREATE TABLE Branch (
    Branch_no INT PRIMARY KEY,
    Manager_Id INT,
    Branch_address VARCHAR(255),
    Contact_no VARCHAR(15)
);

-- Create the Employee table
CREATE TABLE Employee (
    Emp_Id INT PRIMARY KEY,
    Emp_name VARCHAR(255),
    Position VARCHAR(50),
    Salary DECIMAL(10, 2),
    Branch_no INT,
    FOREIGN KEY (Branch_no) REFERENCES Branch(Branch_no)
);

-- Create the Books table
CREATE TABLE Books (
    ISBN VARCHAR(13) PRIMARY KEY,
    Book_title VARCHAR(255),
    Category VARCHAR(100),
    Rental_Price DECIMAL(10, 2),
    Status ENUM('yes', 'no'),
    Author VARCHAR(255),
    Publisher VARCHAR(255)
);

-- Create the Customer table
CREATE TABLE Customer (
    Customer_Id INT PRIMARY KEY,
    Customer_name VARCHAR(255),
    Customer_address VARCHAR(255),
    Reg_date DATE
```

```sql
);

-- Create the IssueStatus table
CREATE TABLE IssueStatus (
    Issue_Id INT PRIMARY KEY,
    Issued_cust INT,
    Issued_book_name VARCHAR(255),
    Issue_date DATE,
    Isbn_book VARCHAR(13),
    FOREIGN KEY (Issued_cust) REFERENCES Customer(Customer_Id),
    FOREIGN KEY (Isbn_book) REFERENCES Books(ISBN)
);

-- Create the ReturnStatus table
CREATE TABLE ReturnStatus (
    Return_Id INT PRIMARY KEY,
    Return_cust INT,
    Return_book_name VARCHAR(255),
    Return_date DATE,
    Isbn_book2 VARCHAR(13),
    FOREIGN KEY (Return_cust) REFERENCES Customer(Customer_Id),
    FOREIGN KEY (Isbn_book2) REFERENCES Books(ISBN)
);
```

DB scripts to Sample data insertions(10-20 rows per table)

```
--Branch table
INSERT INTO Branch (Branch_no, Manager_Id, Branch_address, Contact_no) VALUES
(1, 101, '123 Library St.', '9123456780'),
(2, 102, '456 Reading Rd.', '9123456781'),
(3, 103, '789 Book Ave.', '9123456782'),
(4, 104, '101 Main St.', '9123456783'),
(5, 105, '202 Center Blvd.', '9123456784'),
(6, 106, '303 Elm St.', '9123456785'),
(7, 107, '404 Oak St.', '9123456786'),
(8, 108, '505 Pine St.', '9123456787'),
(9, 109, '606 Cedar St.', '9123456788'),
(10, 110, '707 Birch St.', '9123456789');
--Employee table
INSERT INTO Employee (Emp_Id, Emp_name, Position, Salary, Branch_no) VALUES
(1, 'Arun Kumar', 'Manager', 50000, 1),
(2, 'Sreeja Nair', 'Librarian', 40000, 2),
(3, 'Anoop Menon', 'Assistant', 35000, 3),
(4, 'Divya Pillai', 'Manager', 55000, 4),
(5, 'Ramesh Iyer', 'Librarian', 45000, 5),
(6, 'Lakshmi Devi', 'Assistant', 30000, 6),
(7, 'Manoj Warrier', 'Manager', 60000, 7),
(8, 'Rajesh Sharma', 'Librarian', 42000, 8),
(9, 'Vijaya Raghavan', 'Assistant', 32000, 9),
(10, 'Meera Nambiar', 'Manager', 58000, 10);


--Books table
INSERT INTO Books (ISBN, Book_title, Category, Rental_Price, Status, Author, Publisher) VALUES
('9783161484100', 'God of Small Things', 'Fiction', 10.00, 'yes', 'Arundhati Roy', 'Penguin India'),
('9781234567897', 'The White Tiger', 'Fiction', 12.00, 'yes', 'Aravind Adiga', 'HarperCollins'),
('9780123456789', 'Midnight\'s Children', 'Fiction', 15.00, 'yes', 'Salman Rushdie', 'Vintage Books'),
('9784567890123', 'The Inheritance of Loss', 'Fiction', 9.00, 'yes', 'Kiran Desai', 'Grove Press'),
('9787890123456', 'Train to Pakistan', 'Fiction', 20.00, 'yes', 'Khushwant Singh', 'Penguin India'),
('9780987654321', 'A Suitable Boy', 'Fiction', 11.00, 'yes', 'Vikram Seth', 'HarperCollins'),
('9783216549870', 'The Godfather', 'Fiction', 18.00, 'yes', 'Mario Puzo', 'Penguin Random House'),
('9786549873210', 'The Alchemist', 'Fiction', 14.00, 'yes', 'Paulo Coelho', 'HarperOne'),
('9789876543210', 'Shantaram', 'Fiction', 13.00, 'yes', 'Gregory David Roberts', 'Abacus'),
('9782345678901', 'The Guide', 'Fiction', 16.00, 'yes', 'R. K. Narayan', 'Indian Thought Publications'),
('9780199232765', 'A Brief History of Time', 'Science', 22.00, 'yes', 'Stephen Hawking', 'Bantam Books'),
('9780345803481', 'Sapiens: A Brief History of Humankind', 'History', 25.00, 'yes', 'Yuval Noah Harari', 'Harper'),
('9780393354324', 'The Gene: An Intimate History', 'Science', 19.00, 'yes', 'Siddhartha Mukherjee', 'Scribner'),
('9780241977068', 'Homo Deus: A Brief History of Tomorrow', 'History', 24.00, 'yes', 'Yuval Noah Harari', 'Vintage'),
```

```sql
('9780140449181', 'The Art of War', 'Philosophy', 12.00, 'yes', 'Sun Tzu', 'Penguin Classics'),
('9780140280197', 'The Prince', 'Philosophy', 10.00, 'yes', 'Niccolò Machiavelli', 'Penguin Classics'),
('9780307476708', 'Thinking, Fast and Slow', 'Psychology', 20.00, 'yes', 'Daniel Kahneman', 'Farrar, Straus and Giroux'),
('9780307946308', 'The Power of Habit', 'Psychology', 18.00, 'yes', 'Charles Duhigg', 'Random House'),
('9780812981605', 'The Book Thief', 'Literature', 14.00, 'yes', 'Markus Zusak', 'Knopf'),
('9780345453747', 'The Da Vinci Code', 'Thriller', 15.00, 'yes', 'Dan Brown', 'Doubleday');

--Customer table
INSERT INTO Customer (Customer_Id, Customer_name, Customer_address, Reg_date) VALUES
(1, 'Anil Kumar', '789 MG Road', '2022-12-31'),
(2, 'Bindu Nair', '456 Church St.', '2023-01-01'),
(3, 'Chetan Reddy', '123 Mall Road', '2023-02-01'),
(4, 'Deepa Menon', '101 Gandhi Nagar', '2023-03-01'),
(5, 'Eashwar Iyer', '202 Indira Nagar', '2023-04-01'),
(6, 'Fathima Begum', '303 Brigade Road', '2023-05-01'),
(7, 'Ganesh Pillai', '404 Koramangala', '2023-06-01'),
(8, 'Harini Devi', '505 JP Nagar', '2023-07-01'),
(9, 'Irfan Khan', '606 HSR Layout', '2023-08-01'),
(10, 'Jayanthi Rao', '707 Whitefield', '2023-09-01')
(11, 'Akhil Nair', 'Thiruvananthapuram, Kerala', '2021-12-15'),
(12, 'Divya Menon', 'Kochi, Kerala', '2021-11-30'),
(13, 'Ravi Kumar', 'Thrissur, Kerala', '2021-10-20'),
(14, 'Meera Suresh', 'Kozhikode, Kerala', '2021-09-25'),
(15, 'Arjun Reddy', 'Kannur, Kerala', '2021-08-14'),
(16, 'Priya Varma', 'Palakkad, Kerala', '2021-07-19'),
(17, 'Vikram Shenoy', 'Alappuzha, Kerala', '2021-06-30'),
(18, 'Sneha Iyer', 'Kollam, Kerala', '2021-05-10'),
(19, 'Rajesh Pillai', 'Pathanamthitta, Kerala', '2021-04-01'),
(20, 'Anjali Mohan', 'Malappuram, Kerala', '2021-03-22');

--IssueStatus
INSERT INTO IssueStatus (Issue_Id, Issued_cust, Issued_book_name, Issue_date, Isbn_book) VALUES
(1, 1, 'God of Small Things', '2023-06-10', '9783161484100'),
(2, 2, 'The White Tiger', '2023-06-15', '9781234567897'),
(3, 3, 'Midnight\'s Children', '2023-06-20', '9780123456789'),
(4, 4, 'The Inheritance of Loss', '2023-07-01', '9784567890123'),
(5, 5, 'Train to Pakistan', '2023-07-05', '9787890123456'),
(6, 6, 'A Suitable Boy', '2023-07-10', '9780987654321'),
(7, 7, 'The Godfather', '2023-07-15', '9783216549870'),
(8, 8, 'The Alchemist', '2023-07-20', '9786549873210'),
(9, 9, 'Shantaram', '2023-07-25', '9789876543210'),
(10, 10, 'The Guide', '2023-07-30', '9782345678901');
```

```sql
--ReturnStatus Table
INSERT INTO ReturnStatus (Return_Id, Return_cust, Return_book_name, Return_date, Isbn_book2) VALUES
(1, 1, 'God of Small Things', '2023-07-11', '9783161484100'),
(2, 2, 'The White Tiger', '2023-07-12', '9781234567897'),
(3, 3, 'Midnight\'s Children', '2023-07-13', '9780123456789'),
(4, 4, 'The Inheritance of Loss', '2023-07-14', '9784567890123'),
(5, 5, 'Train to Pakistan', '2023-07-15', '9787890123456'),
(6, 6, 'A Suitable Boy', '2023-07-16', '9780987654321'),
(7, 7, 'The Godfather', '2023-07-17', '9783216549870'),
(8, 8, 'The Alchemist', '2023-07-18', '9786549873210'),
(9, 9, 'Shantaram', '2023-07-19', '9789876543210'),
(10, 10, 'The Guide', '2023-07-20', '9782345678901');
```

Screenshot of all the created tables and data

```
146 •      describe Branch;
147
```

Field	Type	Null	Key	Default
Branch_no	int	NO	PRI	NULL
Manager_Id	int	YES		NULL
Branch_address	varchar(255)	YES		NULL
Contact_no	varchar(15)	YES		NULL

```
1 •      SELECT * FROM Branch;
2
3
4
5
```

Branch_no	Manager_Id	Branch_address	Contact_no
1	101	123 Library St.	9123456780
2	102	456 Reading Rd.	9123456781
3	103	789 Book Ave.	9123456782
4	104	101 Main St.	9123456783
5	105	202 Center Blvd.	9123456784
6	106	303 Elm St.	9123456785
7	107	404 Oak St.	9123456786
8	108	505 Pine St.	9123456787
9	109	606 Cedar St.	9123456788
10	110	707 Birch St.	9123456789

```sql
1  Describe Employee;
2  SELECT * FROM Employee;
3
4
5
```

Field	Type	Null	Key	Default
Emp_Id	int	NO	PRI	NULL
Emp_name	varchar(255)	YES		NULL
Position	varchar(50)	YES		NULL
Salary	decimal(10,2)	YES		NULL
Branch_no	int	YES	MUL	NULL


```sql
1  Describe Employee;
2  SELECT * FROM Employee;
3
4
5
```

Emp_Id	Emp_name	Position	Salary	Branch_no
1	Arun Kumar	Manager	50000.00	1
2	Sreeja Nair	Librarian	40000.00	2
3	Anoop Menon	Assistant	35000.00	3
4	Divya Pillai	Manager	55000.00	4
5	Ramesh Iyer	Librarian	45000.00	5
6	Lakshmi Devi	Assistant	30000.00	6
7	Manoj Warrier	Manager	60000.00	7
8	Rajesh Sharma	Librarian	42000.00	8
9	Vijaya Raghavan	Assistant	32000.00	9
10	Meera Nambiar	Manager	58000.00	10

Filter objects

- ▼ library
  - ▶ Tables
  - Views
  - Stored Procedures
  - Functions
- ▶ organisation
- ▶ product
- ▶ sales
- ▶ school
- ▶ sys

```sql
1  Describe Books;
2  SELECT * FROM Books;
3
4
5
```

Limit to 1000 rows

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default
ISBN	varchar(13)	NO	PRI	NULL
Book_title	varchar(255)	YES		NULL
Category	varchar(100)	YES		NULL
Rental_Price	decimal(10,2)	YES		NULL
Status	enum('yes','no')	YES		NULL
Author	varchar(255)	YES		NULL
Publisher	varchar(255)	YES		NULL

Administration   Schemas

```sql
2  SELECT * FROM books;
3
4
5
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
9780199232765	A Brief History of Time	Science	22.00	yes	Stephen Hawking	Bantam Books
9780241977068	Homo Deus: A Brief History of Tomorrow	History	24.00	yes	Yuval Noah Harari	Vintage
9780307476708	Thinking, Fast and Slow	Psychology	20.00	yes	Daniel Kahneman	Farrar, Straus and Giroux
9780307946308	The Power of Habit	Psychology	18.00	yes	Charles Duhigg	Random House
9780345453747	The Da Vinci Code	Thriller	15.00	yes	Dan Brown	Doubleday
9780345803481	Sapiens: A Brief History of Humankind	History	25.00	yes	Yuval Noah Harari	Harper
9780393354324	The Gene: An Intimate History	Science	19.00	yes	Siddhartha Mukherjee	Scribner
9780812981605	The Book Thief	Literature	14.00	yes	Markus Zusak	Knopf
9780987654321	A Suitable Boy	Fiction	11.00	yes	Vikram Seth	HarperCollins
9781234567897	The White Tiger	Fiction	12.00	yes	Aravind Adiga	HarperCollins
9782345678901	The Guide	Fiction	16.00	yes	R. K. Narayan	Indian Thought Publications
9783161484100	God of Small Things	Fiction	10.00	yes	Arundhati Roy	Penguin India
9783216549870	The Godfather	Fiction	18.00	yes	Mario Puzo	Penguin Random House
9784567890123	The Inheritance of Loss	Fiction	9.00	yes	Kiran Desai	Grove Press

books 39 ×

Output

Action Output

#	Time	Action	Message
✓ 63	11:35:02	INSERT INTO Books (ISBN, Book_title, Category, Rental_Price, Status, Author, Publisher) V...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0
✓ 64	11:36:09	SELECT * FROM books LIMIT 0, 1000	20 row(s) returned

Query 1 SQL File 3* SQL File 4* SQL File 4* persons SQL File 7*

Limit to 1000 rows

```sql
1  Describe Customer;
2  SELECT * FROM Customer;
3
4
5
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default
Customer_Id	int	NO	PRI	NULL
Customer_name	varchar(255)	YES		NULL
Customer_address	varchar(255)	YES		NULL
Reg_date	date	YES		NULL

Query 1 SQL File 3* SQL File 4* SQL File 4* persons SQL File 7*

Limit to 1000 rows

```sql
1  Describe Customer;
2  SELECT * FROM Customer;
3
4
5
```

Result Grid | Filter Rows: | Edit: | Export/Import:

Customer_Id	Customer_name	Customer_address	Reg_date
1	Anil Kumar	789 MG Road	2022-12-31
2	Bindu Nair	456 Church St.	2023-01-01
3	Chetan Reddy	123 Mall Road	2023-02-01
4	Deepa Menon	101 Gandhi Nagar	2023-03-01
5	Eashwar Iyer	202 Indira Nagar	2023-04-01
6	Fathima Begum	303 Brigade Road	2023-05-01
7	Ganesh Pillai	404 Koramangala	2023-06-01
8	Harini Devi	505 JP Nagar	2023-07-01
9	Irfan Khan	606 HSR Layout	2023-08-01
10	Jayanthi Rao	707 Whitefield	2023-09-01
NULL	NULL	NULL	NULL

Query 1 SQL File 3* SQL File 4* SQL File 4* persons SQL File 7*

SCHEMAS

Filter objects

▼ library
  ▶ Tables
    Views
    Stored Procedures
    Functions
▶ organisation
▶ product
▶ sales
▶ school
▶ sys

Administration Schemas

Limit to 1000 rows

```
1  Describe IssueStatus;
2  SELECT * FROM IssueStatus;
3
4
5
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default
Issue_Id	int	NO	PRI	NULL
Issued_cust	int	YES	MUL	NULL
Issued_book_name	varchar(255)	YES		NULL
Issue_date	date	YES		NULL
Isbn_book	varchar(13)	YES	MUL	NULL

SCHEMAS

Filter objects

▼ library
  ▶ Tables
    Views
    Stored Procedures
    Functions
▶ organisation
▶ product
▶ sales
▶ school
▶ sys

Administration Schemas

Information

Limit to 1000 rows

```
1  Describe IssueStatus;
2  SELECT * FROM IssueStatus;
3
4
5
```

Result Grid | Filter Rows: | Edit: | Export/Import:

Issue_Id	Issued_cust	Issued_book_name	Issue_date	Isbn_book
1	1	God of Small Things	2023-06-10	9783161484100
2	2	The White Tiger	2023-06-15	9781234567897
3	3	Midnight's Children	2023-06-20	9780123456789
4	4	The Inheritance of Loss	2023-07-01	9784567890123
5	5	Train to Pakistan	2023-07-05	9787890123456
6	6	A Suitable Boy	2023-07-10	9780987654321
7	7	The Godfather	2023-07-15	9783216549870
8	8	The Alchemist	2023-07-20	9786549873210
9	9	Shantaram	2023-07-25	9789876543210
10	10	The Guide	2023-07-30	9782345678901
NULL	NULL	NULL	NULL	NULL

Queries for data retrieval and its output

1. Retrieve the book title, category, and rental price of all available books.

Query:

```
SELECT Book_title, Category, Rental_Price
FROM Books
WHERE Status = 'yes';
```

Output:

```
5 •    SELECT Book_title, Category, Rental_Price
6      FROM Books
7      WHERE Status = 'yes';
```

Book_title	Category	Rental_Price
Midnight's Children	Fiction	15.00
A Suitable Boy	Fiction	11.00
The White Tiger	Fiction	12.00
The Guide	Fiction	16.00
God of Small Things	Fiction	10.00
The Godfather	Fiction	18.00
The Inheritance of Loss	Fiction	9.00
The Alchemist	Fiction	14.00
Train to Pakistan	Fiction	20.00
Shantaram	Fiction	13.00

2. List the employee names and their respective salaries in descending order of salary.

Query:

```
SELECT Emp_name, Salary
FROM Employee
ORDER BY Salary DESC;
```

Output:

```
5 •    SELECT Emp_name, Salary
6      FROM Employee
7      ORDER BY Salary DESC;
8
```
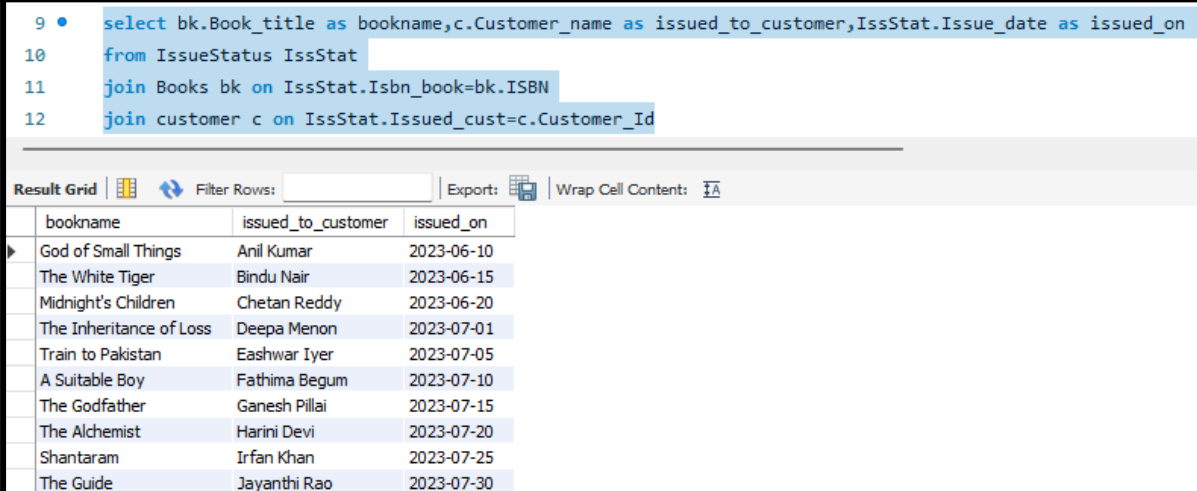
Emp_name	Salary
Manoj Warrier	60000.00
Meera Nambiar	58000.00
Divya Pillai	55000.00
Arun Kumar	50000.00
Ramesh Iyer	45000.00
Rajesh Sharma	42000.00
Sreeja Nair	40000.00
Anoop Menon	35000.00
Vijaya Raghavan	32000.00
Lakshmi Devi	30000.00

3. Retrieve the book titles and the corresponding customers who have issued those books.

Query:

```
select bk.Book_title as bookname,c.Customer_name as issued_to_customer,
IssStat.Issue_date as issued_on
from IssueStatus IssStat
join Books bk on IssStat.Isbn_book=bk.ISBN
join customer c on IssStat.Issued_cust=c.Customer_Id
```

Output:

4. Display the total count of books in each category.

Query:

```
select Category,count(Category) as Count
from books
group by Category;
```

Output:

```
15 ⊠    select Category,count(Category) as Count
16      from books
17      group by Category;
18
19
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: ‡A

Category	Count
▶ Fiction	10
Philosophy	2
Science	2
History	2
Psychology	2
Thriller	1
Literature	1

5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.

Query:

```
SELECT Emp_name, Position
FROM Employee
WHERE Salary > 50000;
```

Output:

```
9 •    SELECT Emp_name, Position
10     FROM Employee
11     WHERE Salary > 50000;
```

Result Grid | Filter Rows: | Export:

Emp_name	Position
▶ Divya Pillai	Manager
Manoj Warrier	Manager
Meera Nambiar	Manager

6. List the customer names who registered before 2022-01-01 and have not issued any books yet.

Query:

```
select c.Customer_Id,c.Customer_name,c.Customer_address
from customer c
left join issuestatus I on I.Issued_cust=c.Customer_Id
where Reg_date <'2022-01-01'
```

Output:

```
10 •    select c.Customer_Id,c.Customer_name,c.Customer_address
11      from customer c
12      left join issuestatus I on I.Issued_cust=c.Customer_Id
13      where Reg_date <'2022-01-01'
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

Customer_Id	Customer_name	Customer_address
11	Akhil Nair	Thiruvananthapuram, Kerala
12	Divya Menon	Kochi, Kerala
13	Ravi Kumar	Thrissur, Kerala
14	Meera Suresh	Kozhikode, Kerala
15	Arjun Reddy	Kannur, Kerala
16	Priya Varma	Palakkad, Kerala
17	Vikram Shenoy	Alappuzha, Kerala
18	Sneha Iyer	Kollam, Kerala
19	Rajesh Pillai	Pathanamthitta, Kerala
20	Anjali Mohan	Malappuram, Kerala

7. Display the branch numbers and the total count of employees in each branch.

Query:

```
select branch_no,count(*) as Total_employees
from employee
group by Branch_no
```

Output:

```
15 •    select branch_no,count(*) as Total_employees
16      from employee
17      group by Branch_no
18
```

branch_no	total_employees
1	1
2	3
3	2
5	2
9	1
10	1

8. Display the names of customers who have issued books in the month of June 2023.

Query:

```
SELECT C.Customer_name
FROM IssueStatus I
JOIN Customer C ON I.Issued_cust = C.Customer_Id
WHERE I.Issue_date BETWEEN '2023-06-01' AND '2023-06-30';
```

Output:

```
15 •    SELECT C.Customer_name
16      FROM IssueStatus I
17      JOIN Customer C ON I.Issued_cust = C.Customer_Id
18      WHERE I.Issue_date BETWEEN '2023-06-01' AND '2023-06-30';
```
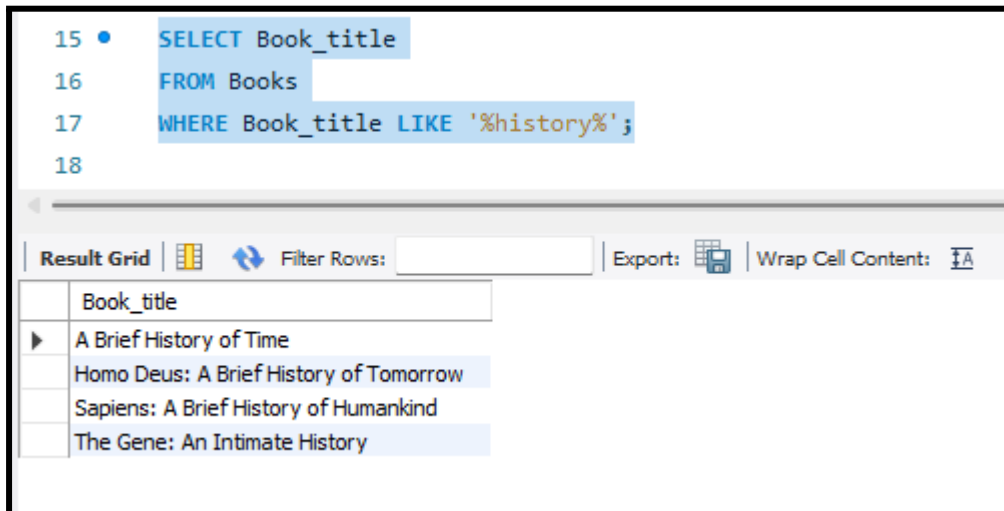
Customer_name
Anil Kumar
Bindu Nair
Chetan Reddy

9. Retrieve book_title from book table containing history.
Query:

```
SELECT Book_title
FROM Books
WHERE Book_title LIKE '%history%';
```

Output:

```
15 •   SELECT Book_title
16     FROM Books
17     WHERE Book_title LIKE '%history%';
18
```
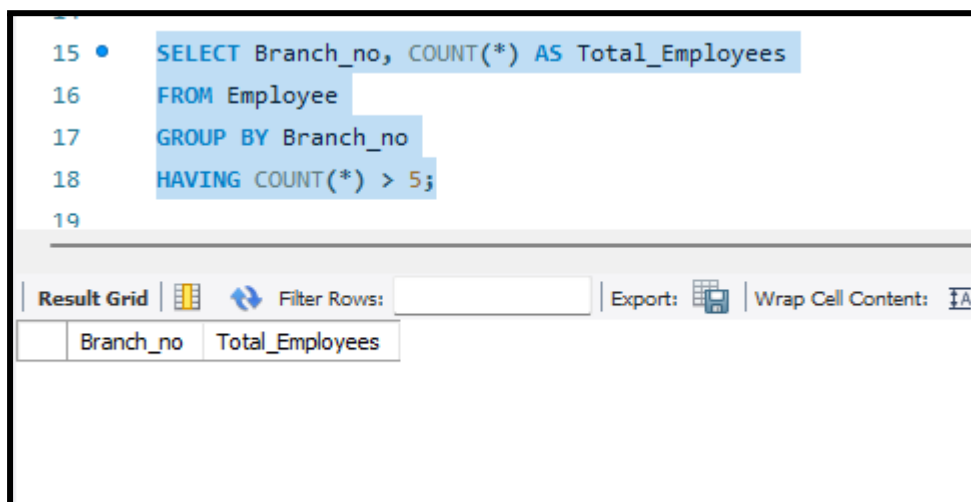
Book_title
A Brief History of Time
Homo Deus: A Brief History of Tomorrow
Sapiens: A Brief History of Humankind
The Gene: An Intimate History

10. Retrieve the branch numbers along with the count of employees for branches having more than 5 employees
Query:

```
SELECT Branch_no, COUNT(*) AS Total_Employees
FROM Employee
GROUP BY Branch_no
HAVING COUNT(*) > 5;
```

Output:

```
15 •   SELECT Branch_no, COUNT(*) AS Total_Employees
16     FROM Employee
17     GROUP BY Branch_no
18     HAVING COUNT(*) > 5;
19
```
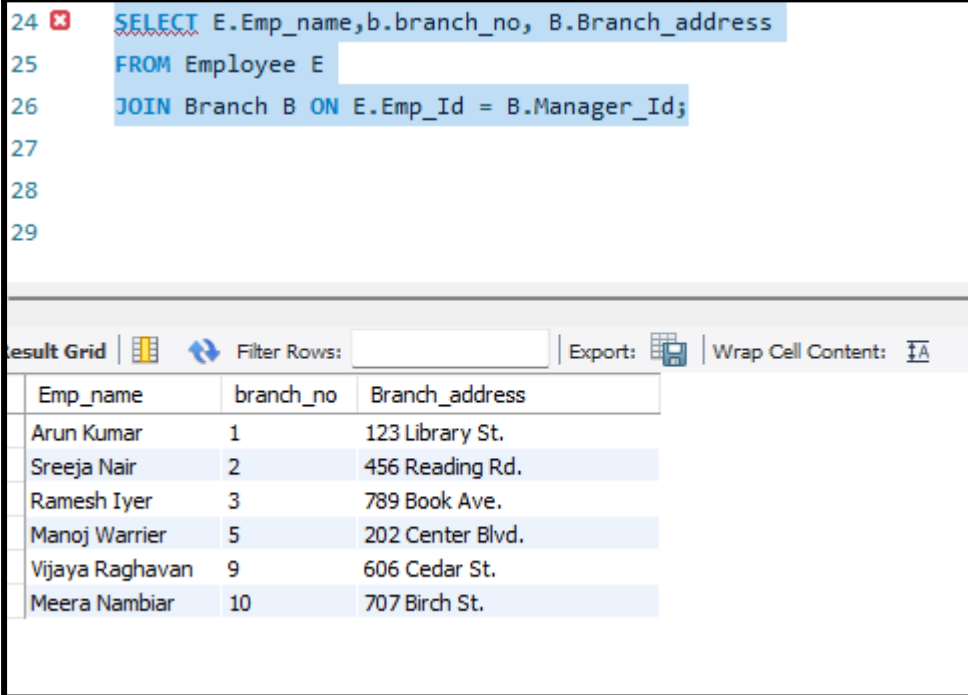
Branch_no	Total_Employees

11. Retrieve the names of employees who manage branches and their respective branch addresses.
Query:

```
SELECT E.Emp_name,b.branch_no, B.Branch_address
FROM Employee E
JOIN Branch B ON E.Emp_Id = B.Manager_Id;
```

Output:

12. Display the names of customers who have issued books with a rental price higher than Rs. 25.

Query:

```
SELECT DISTINCT C.Customer_name,I.Issue_date
FROM IssueStatus I
JOIN Books B ON I.Isbn_book = B.ISBN
JOIN Customer C ON I.Issued_cust = C.Customer_Id
WHERE B.Rental_Price > 25;
```

Output:

```sql
24 ●    SELECT DISTINCT C.Customer_name,I.Issue_date
25      FROM IssueStatus I
26      JOIN Books B ON I.Isbn_book = B.ISBN
27      JOIN Customer C ON I.Issued_cust = C.Customer_Id
28      WHERE B.Rental_Price > 25;
29
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Customer_name	Issue_date
Anil Kumar	2023-06-10
Bindu Nair	2023-06-15
Chetan Reddy	2023-06-20
Deepa Menon	2023-07-01
Eashwar Iyer	2023-07-05
Fathima Begum	2023-07-10
Ganesh Pillai	2023-07-15
Harini Devi	2023-07-20
Irfan Khan	2023-07-25
Jayanthi Rao	2023-07-30