MYSQL MAIN PROJECT

SUBMISSION DATE: 07.02.2024

Create a database named library and create following TABLES in the database:
1. Branch 2. Employee 3. Customer 4. IssueStatus 5. ReturnStatus 6. Books

Attributes for the tables:

1.BRANCH	BRANCH_NO- PRIMARY KEY MANAGER-ID BRANCH_ADDRESS CONTACT_NO
2.EMPLOYEE	EMP_ID-PRIMARY KEY EMP_NAME POSITION SALARY BRANCH_NO FOREIGN KEY, REF BRANCH TABLE (BRANCH_NO)
3.CUSTOMER	CUSTOMER_ID- PRIMARY KEY CUSTOMER_NAME CUSTOMER_ADDRESSS REG_DATE
4.BOOKS	ISBN- PRIMARY KEY BOOK_TITLE CATEGORY RENTAL_PRICE STATUS AUTHOR PUBLISHER
5.ISSUE_STATUS	ISSUE_ID- PRIMARY KEY ISSUED-CUST- FOREIGN KEY, REF CUSTOMER TABLE(CUSTOMER_ID) ISSUED_BOOK_NAME ISSUED-DATE ISBN_BOOK-FOREIGN KEY, REF BOOK TABLE (ISBN)
6.RETURN-STATUS	RETURN_ID- PRIMARY KEY RETURN_CUST RETURN_BOOK_NAME RETURN_DATE ISBN_BOOL2- FOREIGN KEY, REF BOOK TABLE (ISBN)

TABLE:1

```
# MySQL MAIN_PROJECT

CREATE DATABASE LIBRARY;

USE LIBRARY;

#TABLE 1: BRANCH
CREATE TABLE BRANCH
(BRANCH_NO INT PRIMARY KEY,
MANAGER_ID INT,
BRANCH_ADDRESS VARCHAR(50),
CONTACT_NO VARCHAR(10));

INSERT INTO BRANCH (BRANCH_NO, MANAGER_ID, BRANCH_ADDRESS,CONTACT_NO) VALUES
(12, 123, '12_ABC', '1112223335'),
(34, 456, '34_DEF', '2223334446'),
(56, 789, '56_GHI', '3334445557'),
(78, 987, '78_JKL', '5556667779'),
(910, 654,'910_MNO', '9998887775');
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	13:59:12	CREATE DATABASE LIBRARY	1 row(s) affected	0.015 sec
2	13:59:20	USE LIBRARY	0 row(s) affected	0.000 sec
3	13:59:26	CREATE TABLE BRANCH (BRANCH_NO INT PRIMARY KEY, MANAGER_ID INT, BRANCH_ADDRESS VARCH...	0 row(s) affected	0.031 sec
4	13:59:30	INSERT INTO BRANCH (BRANCH_NO, MANAGER_ID, BRANCH_ADDRESS,CONTACT_NO) VALUES (12, 123, '...	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.015 sec

TABLE:2

```
#TABLE 2: EMPLOYEE
CREATE TABLE EMPLOYEES
(EMP_ID INT PRIMARY KEY,
EMP_NAME VARCHAR(50),
POSITION VARCHAR(30),
SALARY DECIMAL(8, 2),
BRANCH_NO INT, FOREIGN KEY (BRANCH_NO) REFERENCES BRANCH(BRANCH_NO));

INSERT INTO EMPLOYEES (EMP_ID, EMP_NAME, POSITION, SALARY, BRANCH_NO) VALUES
(101, 'AMIT FRANCIS', 'MANAGER', 55000.00, 12),
(201, 'KEERTHANA S', 'MANAGER', 45000.00, 34),
(301, 'ERICK BENNY', 'MANAGER', 52000.00, 56),
(401, 'AHMED D', 'MANAGER', 50000.00, 78),
(501, 'KRISHNARJUN', 'MANAGER', 45000.00, 910),
(105, 'RIYA JOSEPH', 'CLERK', 35000.00, 12),
(205, 'DEEPAK DEV', 'CLERK', 40000.00, 34),
(305, 'DEEPTHI R', 'CLERK', 40000.00, 56),
(405, 'KISHORE VASUDEV', 'CLERK', 37000.00, 78),
(505, 'JEMI ROSE', 'CLERK', 35000.00, 910);
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	13:59:12	CREATE DATABASE LIBRARY	1 row(s) affected	0.015 sec
2	13:59:20	USE LIBRARY	0 row(s) affected	0.000 sec
3	13:59:26	CREATE TABLE BRANCH (BRANCH_NO INT PRIMARY KEY, MANAGER_ID INT, BRANCH_ADDRESS VARCH...	0 row(s) affected	0.031 sec
4	13:59:30	INSERT INTO BRANCH (BRANCH_NO, MANAGER_ID, BRANCH_ADDRESS,CONTACT_NO) VALUES (12, 123, '...	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.015 sec
5	14:02:10	CREATE TABLE EMPLOYEES (EMP_ID INT PRIMARY KEY, EMP_NAME VARCHAR(50), POSITION VARCHAR(3...	0 row(s) affected	0.031 sec
6	14:02:14	INSERT INTO EMPLOYEES (EMP_ID, EMP_NAME, POSITION, SALARY, BRANCH_NO) VALUES (101, 'AMIT FR...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.015 sec

TABLE:3

```sql
#TABLE 3: CUSTOMER
CREATE TABLE CUSTOMER
(CUSTOMER_ID INT PRIMARY KEY,
CUSTOMER_NAME VARCHAR(50),
CUSTOMER_ADDRESS VARCHAR(50),
REG_DATE DATE);

INSERT INTO CUSTOMER (CUSTOMER_ID, CUSTOMER_NAME, CUSTOMER_ADDRESS, REG_DATE) VALUES
(1001, 'JAMES JOHN', 'ABCD_123-11', '2022-10-10'),
(2001, 'SMRITHI M', 'EFGH_456-22', '2022-10-23'),
(999, 'ALFINA ALI', 'IJKL_789-33', '2022-09-12'),
(3001, 'NAMITHA JOSEPH', 'MNOP_987-44', '2022-12-25'),
(4001, 'GOPIKA GOPAN', 'QRST_654-55', '2022-11-09'),
(5001, 'SHERIN VARGHEESE', 'UVWX_321-66', '2023-01-01'),
(4004, 'JOSNA JOSE', 'YZAB_234-77', '2023-11-20'),
(3002, 'ABHINA M RAJAN', 'CDEF_567-88', '2022-12-30'),
(1006, 'ALEENA TOM', 'GHIJ_891-99', '2022-11-10'),
(2009, 'SHEON WILSON', 'KLMN_198-98', '2022-12-08'),
(5007, 'JENY MARET', 'OPQR_765-76', '2023-02-20'),
(1234, 'KARTHIK SANTHOSH', '123-ABC-11', '2024-01-12'),
(2345, 'AARIF MUHAMMED', '456-DEF-22', '2024-01-15'),
(3456, 'SINJU S', '789-GHI-33', '2024-01-31'),
(4567, 'ALEENA JOSEPH', '987-JKL-44', '2024-02-01'),
(5678, 'CATHERIN JACOB', '654-MNO-55', '2024-02-06');
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
7	14:05:01	CREATE TABLE CUSTOMER (CUSTOMER_ID INT PRIMARY KEY, CUSTOMER_NAME VARCHAR(50), CUST...	0 row(s) affected	0.031 sec
8	14:05:25	INSERT INTO CUSTOMER (CUSTOMER_ID, CUSTOMER_NAME, CUSTOMER_ADDRESS, REG_DATE) VAL...	16 row(s) affected Records: 16 Duplicates: 0 Warnings: 0	0.015 sec

TABLE:4

```sql

#TABLE 4: BOOKS
CREATE TABLE BOOKS
(ISBN INT PRIMARY KEY,
BOOK_TITLE VARCHAR(100),
CATEGORY VARCHAR(50),
RENTAL_PRICE DECIMAL(10, 2),
STATUS VARCHAR (5),
AUTHOR VARCHAR(50),
PUBLISHER VARCHAR(70));

INSERT INTO BOOKS (ISBN, BOOK_TITLE, CATEGORY, RENTAL_PRICE, STATUS, AUTHOR, PUBLISHER) VALUES
(123456789, 'UNTIL HER LAST BREADTH', 'ROMANCE', 150.000, 'YES', 'JULEYA THOMAS', 'WRITERS POCKET'),
(234567891, 'THE BEST OF ME', 'CLASSIC', 140.00, 'YES', 'NICHOLAS SPARKS', 'SPHERE'),
(345678912, 'THINGS FALL APART', 'CLASSIC', 130.00, 'YES', 'CHINUA ACHEBE', 'PENGUIN BOOKS'),
(456789123, 'MY SISTERS KEEPER', 'CLASSIC', 130.00, 'YES', 'JODI PICOULT', 'ASTRIA BOOKS'),
(567891234, 'THE WEB OF LIES', 'DRAMA', 135.00, 'YES', 'SOURABH MUKHARJEE', 'SRISHTI PUBLICATIONS'),
(678912345, 'THE RESCUE', 'THRILLER', 140.00, 'NO', 'NICHOLAS SPARKS', 'SPHERE'),
(789123456, 'THE HIGHWAY MURDERS', 'THRILLER', 145.00, 'YES', 'SOURABH MUKHARJEE', 'SRISHTI PUBLICATIONS'),
(891234567, 'PERFECT MATCH', 'ROMANCE', 120.00, 'NO', 'JODI PICOULT', 'ASTRIA BOOKS'),
(912345678, 'THE WINGS OF FIRE', 'AUTOBIOGRAPHY', 145.00, 'NO', 'A.P.J. ABDHUL KALAM', 'PRABHAT PRAKASHAN PVT.LTD');

```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
9	14:06:29	CREATE TABLE BOOKS (ISBN INT PRIMARY KEY, BOOK_TITLE VARCHAR(100), CATEGORY VARCHAR(50),...	0 row(s) affected	0.047 sec
10	14:06:34	INSERT INTO BOOKS (ISBN, BOOK_TITLE, CATEGORY, RENTAL_PRICE, STATUS, AUTHOR, PUBLISHER) ...	Error Code: 1136. Column count doesn't match value count at row 7	0.000 sec
11	14:07:28	INSERT INTO BOOKS (ISBN, BOOK_TITLE, CATEGORY, RENTAL_PRICE, STATUS, AUTHOR, PUBLISHER) ...	9 row(s) affected Records: 9 Duplicates: 0 Warnings: 0	0.015 sec

TABLE: 5

```sql
#TABLE 5: ISSUE STATUS
CREATE TABLE ISSUE_STATUS
(ISSUE_ID INT PRIMARY KEY,
ISSUED_CUST INT,
ISSUED_BOOK_NAME VARCHAR(100),
ISSUED_DATE DATE,
ISBN_BOOK INT,
FOREIGN KEY (ISSUED_CUST) REFERENCES CUSTOMER(CUSTOMER_ID), FOREIGN KEY (ISBN_BOOK) REFERENCES BOOKS(ISBN));

INSERT INTO ISSUE_STATUS ( ISSUE_ID, ISSUED_CUST, ISSUED_BOOK_NAME, ISSUED_DATE, ISBN_BOOK) VALUES
(12, 1234, 'UNTIL HER LAST BREATH', '2024-01-12', 123456789),
(23, 3002, 'THE BEST OF ME', '2023-11-25', 234567891),
(45, 2009, 'CHINUA ACHEBE- THINGS FALL APART', '2023-12-05', 345678912),
(67, 5678, 'MY SISTERS KEEPER', '2024-01-21', 456789123),
(89, 1234, 'THE WEB OF LIES', '2024-02-01', 567891234);
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
12	14:08:27	CREATE TABLE ISSUE_STATUS (ISSUE_ID INT PRIMARY KEY, ISSUED_CUST INT, ISSUED_BOOK_NAME ...	0 row(s) affected	0.046 sec
13	14:08:34	INSERT INTO ISSUE_STATUS (ISSUE_DATE, ISSUED_CUST, ISSUED_BOOK_NAME, ISSUED_DATE, ISBN...	Error Code: 1054. Unknown column 'ISSUE_DATE' in 'field list'	0.000 sec
14	14:09:10	INSERT INTO ISSUE_STATUS (ISSUE_ID, ISSUED_CUST, ISSUED_BOOK_NAME, ISSUED_DATE, ISBN_B...	Error Code: 1292. Incorrect date value: '2006' for column 'ISSUED_DATE' at row 3	0.016 sec
15	14:09:30	INSERT INTO ISSUE_STATUS (ISSUE_ID, ISSUED_CUST, ISSUED_BOOK_NAME, ISSUED_DATE, ISBN_B...	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.031 sec

TABLE:6

```sql
#TABLE 6: RETURN STATUS
CREATE TABLE RETURN_STATUS
(RETURN_ID INT PRIMARY KEY,
RETURN_CUST INT,
RETURN_BOOK_NAME VARCHAR(100),
RETURN_DATE DATE,
ISBN_BOOK2  INT, FOREIGN KEY (RETURN_CUST) REFERENCES CUSTOMER(CUSTOMER_ID), FOREIGN KEY (ISBN_BOOK2) REFERENCES BOOKS(ISBN));

INSERT INTO RETURN_STATUS (RETURN_ID, RETURN_CUST, RETURN_BOOK_NAME, RETURN_DATE, ISBN_BOOK2) VALUES
(023, 3002, 'THE BEST OF ME', '2024-01-12', 234567891),
(012, 1234, 'UNTIL HER LAST BREATH', '2024-01-01', 123456789),
(067, 5678, 'MY SISTERS KEEPER', '2024-02-06', 456789123);
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
14	14:09:10	INSERT INTO ISSUE_STATUS (ISSUE_ID, ISSUED_CUST, ISSUED_BOOK_NAME, ISSUED_DATE, ISBN_B...	Error Code: 1292. Incorrect date value: '2006' for column 'ISSUED_DATE' at row 3	0.016 sec
15	14:09:30	INSERT INTO ISSUE_STATUS (ISSUE_ID, ISSUED_CUST, ISSUED_BOOK_NAME, ISSUED_DATE, ISBN_B...	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.031 sec
16	14:12:14	CREATE TABLE RETURN_STATUS (RETURN_ID INT PRIMARY KEY, RETURN_CUST INT, RETURN_BOOK...	0 row(s) affected	0.031 sec
17	14:12:20	INSERT INTO RETURN_STATUS (RETURN_ID, RETURN_CUST, RETURN_BOOK_NAME, RETURN_DATE, ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.031 sec

Write the queries for the following:

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

```
# Write the queries for the following:
# 1. Retrieve the book title, category, and rental price of all available books.

SELECT BOOK_TITLE, CATEGORY, RENTAL_PRICE FROM BOOKS WHERE STATUS = 'YES';
```

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

BOOK_TITLE	CATEGORY	RENTAL_PRICE
UNTIL HER LAST BREADTH	ROMANCE	150.00
THE BEST OF ME	CLASSIC	140.00
THINGS FALL APART	CLASSIC	130.00
MY SISTERS KEEPER	CLASSIC	130.00
THE WEB OF LIES	DRAMA	135.00
THE HIGHWAY MURDERS	THRILLER	145.00

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

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

SELECT EMP_NAME, SALARY FROM EMPLOYEES ORDER BY SALARY DESC;
```

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

EMP_NAME	SALARY
AMIT FRANCIS	55000.00
ERICK BENNY	52000.00
AHMED D	50000.00
KEERTHANA S	45000.00
KRISHNARJUN	45000.00
DEEPAK DEV	40000.00
DEEPTHI R	40000.00
KISHORE VASUDEV	37000.00
RIYA JOSEPH	35000.00
JEMI ROSE	35000.00

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

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

SELECT ISSUE_STATUS.ISSUED_BOOK_NAME AS BOOK_TITLE, CUSTOMER.CUSTOMER_NAME
FROM ISSUE_STATUS JOIN CUSTOMER ON ISSUE_STATUS.ISSUED_CUST = CUSTOMER.CUSTOMER_ID;
```

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

BOOK_TITLE	CUSTOMER_NAME
UNTIL HER LAST BREATH	KARTHIK SANTHOSH
THE BEST OF ME	ABHINA M RAJAN
CHINUA ACHEBE- THINGS FALL APART	SHEON WILSON
MY SISTERS KEEPER	CATHERIN JACOB
THE WEB OF LIES	KARTHIK SANTHOSH

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

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

SELECT CATEGORY, COUNT(*) AS TOTAL_COUNT FROM BOOKS GROUP BY CATEGORY;
```

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

CATEGORY	TOTAL_COUNT
ROMANCE	2
CLASSIC	3
DRAMA	1
THRILLER	2
AUTOBIOGRAPHY	1

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

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

SELECT EMP_NAME, POSITION FROM EMPLOYEES WHERE SALARY > 50000.00;
```

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

EMP_NAME	POSITION
AMIT FRANCIS	MANAGER
ERICK BENNY	MANAGER

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

```
SELECT CUSTOMER.CUSTOMER_NAME
FROM CUSTOMER
LEFT JOIN ISSUE_STATUS ON CUSTOMER.CUSTOMER_ID = ISSUE_STATUS.ISSUED_CUST
WHERE CUSTOMER.REG_DATE < '2022-01-01' AND ISSUE_STATUS.ISSUED_CUST IS NULL;
```

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

CUSTOMER_NAME

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

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

SELECT BRANCH_NO, COUNT(*) AS TOTAL_EMPLOYEES FROM EMPLOYEES GROUP BY BRANCH_NO;
```

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

BRANCH_NO	TOTAL_EMPLOYEES
12	2
34	2
56	2
78	2
910	2

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

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

SELECT DISTINCT CUSTOMER.CUSTOMER_NAME
FROM ISSUE_STATUS
JOIN CUSTOMER ON ISSUE_STATUS.ISSUED_CUST = CUSTOMER.CUSTOMER_ID
WHERE MONTH(ISSUE_STATUS.ISSUED_DATE) = 6 AND YEAR(ISSUE_STATUS.ISSUED_DATE) = 2023;
```

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

CUSTOMER_NAME

9. Retrieve book_title from a book table containing history.

```
# 9. Retrieve book_title from a book table containing history.

SELECT BOOK_TITLE FROM BOOKS WHERE CATEGORY = 'HISTORY';
```

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

BOOK_TITLE

(Retrieve book_title from a book table containing Classic).

```
# Retrieve book_title from a book table containing Classic.

SELECT BOOK_TITLE FROM BOOKS WHERE CATEGORY = 'CLASSIC'
```

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

BOOK_TITLE
THE BEST OF ME
THINGS FALL APART
MY SISTERS KEEPER

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

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

SELECT BRANCH_NO, COUNT(*) AS EMPLOYEE_COUNT
FROM EMPLOYEES
GROUP BY BRANCH_NO
HAVING COUNT(*) > 5;
```

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

BRANCH_NO	EMPLOYEE_COUNT

(Retrieve the branch numbers along with the count of employees for branches having 2 employees.)

```
SELECT BRANCH_NO, COUNT(*) AS EMPLOYEE_COUNT
FROM EMPLOYEES
GROUP BY BRANCH_NO
HAVING COUNT(*) = 2;
```

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

BRANCH_NO	EMPLOYEE_COUNT
12	2
34	2
56	2
78	2
910	2