

Assignment-3

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NAME of the course :- DBMS

Course ID :- CSA0563

Reg No :- 1923A2037

No. of pages :- 04

Submission date :- 31-07-2024.

Create table like below and add the data's into the table as follows:

Authors:-

Author ID	Name	Country
1	Jk bar	us
2	Qero	us
3	Kenny	us

Borrowing:-

Borrowing ID	Book ID	member ID	Borrow date	Return date
1	1	1	24-6-11	Null
2	2	2	24-6-10	24-02-01
3	3	3	24-6-20	Null
4	4	4	24-7-05	24-7

Books:-

Book ID	Title	Author ID	Genre	published year
1	Harry	1	Fantasy	1997
2	1984	2	Dystopian	1949
3	Habbb	3	Fantasy	1937
4	Animal farm	2	Satire	1945

Members:-

Member ID	Name	Join Date	membership type
1	John Doe	23-1-05	Regular
2	Jane Smith	23-03-22	Premium
3	Alice	23-5-10	Regular

1) Find all books by a specific (eg George Orwell).

2) List all members with active borrowings.

3) Find the most popular Genre.

4) List overdue books

5) Find members with the most borrowings

6) Calculate average number of books borrowed per member.

7) List all author and the number of books they have written.

8) Find the oldest book in the library.

Sol's:-

1) SELECT * FROM Books

WHERE Author ID = (SELECT Author ID FROM Author WHERE
NAME = 'George Orwell');

2) SELECT A

FROM Members

WHERE member ID IN (SELECT Member ID FROM Borrowings

WHERE Return Date is NULL);

3) SELECT Genre, COUNT(A) as Count

FROM Books

Group By Genre

ORDER By Count Desc

LIMIT 1;

1. SELECT * FROM

1. SELECT * FROM borrowings

WHERE Return Date < Current Date AND Return Date is NOT NULL;

2) SELECT Member ID, count(*) AS count

FROM borrowings

GROUP BY member ID

ORDER BY count DESC

LIMIT 1;

3) SELECT avg(count)

FROM (SELECT member ID, count(*) AS count

FROM borrowings

GROUP BY member ID;

3) SELECT title, count(*) AS count

FROM authors

Left JOIN books ON a.author ID = b.author ID

GROUP BY title;

3) SELECT * FROM books

ORDER BY published year desc

LIMIT;

2. Create tables like below and add the data's into the table as follows;

Products:-

product ID	product Name	category	price	stock quantity
1	Laptop	electronics	1000	50
2	Smart phone	electronics	600	200
3	T-shirt	clothing	20	500
4	Pearl	clothing	40	800

Customers:-

Customer ID	Name	Email	Join Date
1	John Doe	john.doe@example.com	2022-01-1
2	Jane Smith	jane.smith@example.com	23-02-15
3	Alice	alice@example.com	27-3-18

Orders:-

order ID	customer	order date	total amount
1	1	24-05-01	1200
2	2	24-6-15	600
3	3	24-7-01	40

Order details:-

order details	order ID	product ID	quantity	unit price
1	1	1	1	1000
2	1	2	1	600
3	2	2	1	600
4	3	4	1	40

write a query to find all products in a specific category.

```
SELECT * FROM products
```

```
WHERE Category = 'electronics';
```

Results: Laptop, electronics, toco, so.

write a query to list all customers who have placed at least one order.

```
1. SELECT * FROM Customers
```

```
WHERE Customer ID IN (SELECT Customer ID FROM order)
```

3. write a query to list all orders along with their details (products, quantities, prices).

```
2. SELECT O. order ID, C.Name, P. product Name, OD. quantity, OD. unit price
```

```
FROM orders O
```

```
JOIN Customers C ON O. Customer ID = C. Customer ID
```

```
JOIN orderdetails OD ON O. order ID = OD. order ID
```

```
JOIN product P ON P. product ID = OD. product ID;
```

4. write a query to find the product with the highest no. of units sold.

```
3. SELECT product ID, sum as total quantity
```

```
from order details
```

```
group by product ID
```

5. write a query to find the customer who has spent the most money.

```
2. SELECT C. Customer ID, C.Name, sum (OD. quantity * OD. unit price) as total spent
```

```
FROM Customers C
```

```
JOIN orders O ON C. Customer ID = O. Customer ID
```

```
JOIN orderdetails OD ON O. order ID = OD. order ID
```

```
Group By: C. Customer ID, C.Name
```

```
ORDER BY Total Spent Desc
```

```
LIMIT 1;
```

6. write a query to calculate the average value of all orders.

```
1. SELECT AVG (Total Amount) as Average order value
```

```
FROM orders;
```

8. write a query to find the customer who has been the store the longest.

```
SELECT * FROM Customers
```

```
ORDER BY join date asc
```

```
LIMIT 1;
```

Result :- customer ID: 1 name: john doe,

email: john.doe@example.com,

join date: 2023-04-01.

⑦ write a query to list all products and shows their current stock quantities.

⑧ SELECT product ID, product Name, stock quantity
FROM products.