

Course : CSE 2004 – Database Management Systems
Lab slot : L55+ L56
Faculty : Dr. B Saleena
Ex. No: 3

Date: 28/7/17

SQL - DML Commands & Aggregate functions

Table Books : *(Table forwarded from the last exercise)*

ISBN TITLE	PRICE	QUANTITY	TOTAL_COST
-----	-----	-----	-----
42364 The Underground Railroad	1727.6	1816	3501248
36118 The Vegetarian	1343.6	1320	2038080
72116 War and Turpentine	1724.6	1190	2290750
47901 Dark Monkey	1919.6	1060	2247200
18141 The North Water	1599.6	1211	2179800
85085 The Return: Father and Sons	2174.6	1816	4313000
40458 Anatomy of a Disappearance	1449.6	1206	1989900
55161 Sag Harbour	1279.6	1032	1527360
93282 The Intuitionist	1724.6	1103	2123275
46729 Human Acts	1598.6	1460	2626540
34120 There Comes a Boy	1199.6	1682	2354800

Table Authors : *(Table forwarded from the last exercise)*

AUTHOR_ID	EMAIL_ID	AUTHOR_NAME
-----	-----	-----
3855	colson.whitehead@bookworld.com	Colson Whitehead
1101	han.kang@bookworld.com	Han Kang
1018	stefan.hertmans@bookworld.com	Stefan Hertmans
3079	jane.mayer@bookworld.com	Jane Mayer
2501	ian.mcguire@bookworld.com	Ian McGuire
8129	hisham.matar@bookworld.com	Hisham Matar

Table Books Authors : (Table forwarded from the last exercise)

ISBN_NUM	AUTH_ID
-----	-----
42364	3855
36118	1101
72116	1018
47901	3079
18141	2501
85085	8129
40458	8129
55161	3855
93282	3855
46729	1101
34120	1101

1. Increase the price of all the books by Rs. 200

SQL> UPDATE Books SET Price = Price + 200;

11 rows updated.

SQL> SELECT * FROM Books;

ISBN	TITLE	PRICE	QUANTITY	TOTAL_COST
-----	-----	-----	-----	-----
42364	The Underground Railroad	1927.6	1816	3501248
36118	The Vegetarian	1543.6	1320	2038080
72116	War and Turpentine	1924.6	1190	2290750
47901	Dark Monkey	2119.6	1060	2247200
18141	The North Water	1799.6	1211	2179800
85085	The Return: Father and Sons	2374.6	1816	4313000
40458	Anatomy of a Disappearance	1649.6	1206	1989900
55161	Sag Harbour	1479.6	1032	1527360
93282	The Intuitionist	1924.6	1103	2123275
46729	Human Acts	1798.6	1460	2626540
34120	There Comes a Boy	1399.6	1682	2354800

2. List the author names without repetition from book_authors

```
SQL> SELECT DISTINCT ba.Auth_ID, a.Author_name FROM Books_Authors ba, Authors a WHERE ba.Auth_ID
= a.Author_ID;
```

AUTH_ID	AUTHOR_NAME
3079	Jane Mayer
1101	Han Kang
3855	Colson Whitehead
1018	Stefan Hertmans
2501	Ian McGuire
8129	Hisham Matar

6 rows selected.

3. List the author details whose name as well as email starts with 's'

```
SQL> SELECT * FROM Authors WHERE Email_ID LIKE 's%';
```

AUTHOR_ID	EMAIL_ID	AUTHOR_NAME
1018	stefan.hertmans@bookworld.com	Stefan Hertmans

4. Copy the author table contents and name the table as author_new

```
SQL> CREATE TABLE Authors_new AS SELECT * FROM Authors;
```

Table created.

5. Rename the 'author_name' attribute as 'name'

```
SQL> ALTER TABLE Authors_new RENAME COLUMN Author_name TO Name;
```

Table altered.

6. Delete all author details from author_new table, whose author_name has 'i' as a character

```
SQL> DELETE FROM Authors_new WHERE Name LIKE '%i%';
```

3 rows deleted.

7. Display the author_new table after deletion

```
SQL> SELECT * FROM Authors_new;
```

AUTHOR_ID	EMAIL_ID	NAME
1101	han.kang@bookworld.com	Han Kang
1018	stefan.hertmans@bookworld.com	Stefan Hertmans
3079	jane.mayer@bookworld.com	Jane Mayer

8. Delete all tuples from author_new

```
SQL> TRUNCATE TABLE Authors_new;
```

Table truncated.

9. Display the author_new table after deletion

```
SQL> SELECT * FROM Authors_new;
```

no rows selected

```
SQL> DESCRIBE Authors_new;
```

Name	Null?	Type
AUTHOR_ID	NOT NULL	NUMBER
EMAIL_ID	NOT NULL	VARCHAR2(50)
NAME		VARCHAR2(30)

10. Delete the structure of author_new table and check the existence of the structure after deletion.

```
SQL> DROP TABLE Authors_new;
```

Table dropped.

```
SQL> DESCRIBE Authors_new;
```

ERROR:

ORA-04043: object Authors_new does not exist

11. Find the number of tuples from books

```
SQL> SELECT COUNT(*) AS Num_of_books FROM Books;
```

```
NUM_OF_BOOKS
```

```
-----
```

```
11
```

12. List the distinct authors from books_authors

```
SQL> SELECT DISTINCT ba.Auth_ID, a.Author_name FROM Books_Authors ba, Authors a WHERE a.Author_ID = ba.Auth_ID;
```

AUTH_ID	AUTHOR_NAME
3079	Jane Mayer
1101	Han Kang
3855	Colson Whitehead
1018	Stefan Hertmans
2501	Ian McGuire
8129	Hisham Matar

6 rows selected

13. Find the total number of quantities of books available in books relation

```
SQL> SELECT SUM(Quantity) AS Total_Quantity FROM Books;
```

TOTAL_QUANTITY
14896

14. Find the average price of the books in books relation

```
SQL> SELECT AVG(Price) AS Avg_book_Cost FROM Books;
```

AVG_BOOK_COST
1812.87273

```
SQL> SELECT ROUND(AVG(Price),0) AS Rounded_avg_book_Cost FROM Books;
```

ROUNDED_AVG_BOOK_COST
1813

15. List the author_id with the number of books written by each author from book_authors

```
SQL> SELECT Auth_ID, COUNT(*) AS Books_written FROM Books_Authors GROUP BY Auth_ID;
```

AUTH_ID	BOOKS_WRITTEN
1101	3
3079	1
3855	3
1018	1
2501	1
8129	2

6 rows selected.

16. Find the author_id who have wtitten equal or more than 2 books from book_authors

```
SQL> SELECT Auth_ID, COUNT(*) AS Books_Written FROM Books_Authors GROUP BY Auth_ID HAVING
COUNT(*) >= 2;
```

AUTH_ID	BOOKS_WRITTEN
1101	3
3855	3
8129	2

17. Display the first 5 characters of all email ids from authors

```
SQL> SELECT SUBSTR(Email_ID, 1, 5) AS First_5_characters FROM Authors;
```

```
FIRST_5_CHARACTERS
```

```
-----
```

```
colso
han.k
hisha
ian.m
jane.
stefa
```

```
6 rows selected.
```

18. List the author_id and the number of characters present in their email ids from authors

```
SQL> SELECT Author_ID, LENGTH(Email_ID) AS Char_In_Mail FROM Authors;
```

AUTHOR_ID	CHAR_IN_MAIL
3855	30
1101	22
1018	29
3079	24
2501	25
8129	26

```
6 rows selected.
```

19. Display the price of the books with no decimal points from books relation

```
SQL> SELECT Title, CAST(Price AS INT) AS Price_no_decimal FROM Books;
```

TITLE	PRICE_NO_DECIMAL
-----	-----
The Underground Railroad	1928
The Vegetarian	1544
War and Turpentine	1925
Dark Monkey	2120
The North Water	1800
The Return: Father and Sons	2375
Anatomy of a Disappearance	1650
Sag Harbour	1480
The Intuitionist	1925
Human Acts	1799
There Comes a Boy	1400

11 rows selected.

20. Consider a date (dd/mmm/yyyy) and display the month after 3 months from the given date.

```
SQL> SELECT SYSDATE, ADD_MONTHS(SYSDATE, 3) FROM DUAL;
```

SYSDATE	ADD_MONTH
-----	-----
29-JUL-17	29-OCT-17