ACIT 1630
Relational Database Design and SQL

Lab Exercise
Lesson 11

1. List the name, city, and state from the authors table, and the title, and type from the titles table where the state of the author is CA or TN. The name of the author should be formatted as the last name followed by a comma and space followed by the first name. There should be a row produced in the result set for each row in the authors table. Order the result set by the author's last name. The query should produce the result set listed below. (Hint: LEFT OUTER JOIN statement)

```
name                      city               state     title                                                         type
------------------------  -----------------  -------   ------------------------------------------------------------  --------------------
Bennet, Abraham           Berkeley            CA       The Busy Executive's Database Guide                           business
Carson, Cheryl            Berkeley            CA       But Is It User Friendly?                                      popular_comp
Dull, Ann                 Palo Alto           CA       Secrets of Silicon Valley                                     popular_comp
.....
Stringer, Dirk            Oakland             CA       NULL                                                          NULL
White, Johnson            Menlo Park          CA       Prolonged Data Deprivation: Four Case Studies                 psychology
Yokomoto, Akiko           Walnut Creek        CA       Sushi, Anyone?                                                trad_cook

(20 row(s) affected)
```

```
Select concat(authors.au_lname, ', ', authors.au_fname) as 'name',
city, state, titles.title, titles.type
from authors
left outer join titleauthor on authors.au_id = titleauthor.au_id
left OUTER JOIN titles on titleauthor.title_id = titles.title_id
where (state in ('CA', 'TN'))
order by name
```

2. Using the INSERT command, insert a new row into the employee table. The employee has an id of TYS54321M, a first name of John, a last name of Smith, a job id of 12, a job level of 25, a pub id of 0877, and a hire date of March 1, 2012.

```
insert into employee values
(
    'TYS54321M', 'John', null,  'Smith', 12, 25, '0877', '2012-04-01'
)
```

3. Using the UNION command, calculate new prices for the books bases on the current price for each book in the titles table. If the price is greater than or equal to $15.00 and less than or equal to $20.00, add 10% to the price of the book, and if the price is greater than $20.00, add 5% to the price of the book. Order the result set by the title. The query should produce the result set listed below.

```
title                                                                               price           new_price
----------------------------------------------------------------------------------- -----------     ---------------
But Is It User Friendly?                                                            22.95           24.097500
Computer Phobic AND Non-Phobic Individuals: Behavior Variations                     21.59           22.669500
Onions, Leeks, and Garlic: Cooking Secrets of the Mediterranean                     20.95           21.997500
Prolonged Data Deprivation: Four Case Studies                                       19.99           21.989000
Secrets of Silicon Valley                                                           20.00           22.000000
Silicon Valley Gastronomic Treats                                                   19.99           21.989000
Straight Talk About Computers                                                       19.99           21.989000
The Busy Executive's Database Guide                                                 19.99           21.989000

(8 row(s) affected)
```

```sql
select title, price, (price + price*0.05) as 'price'
from titles
where price > 20
union
select title, price, (price + price*0.1) as 'new_price'
from titles
where price between 15 and 20
```

4. List the sum of quantity, and the sum of the year to date sales for each order by store id, store name, quantity, and year to date sales where the sum of the quantity is greater than 10. Display the store id, and quantity from the sales table, the store name from the stores table, and the year to date sales from the titles table. The query should produce the result set listed below.

```
stor_id      stor_name                                            quantity       ytd_sales
---------    ---------------------------------------------------- -----------    -----------
7066         Barnum's                                             125            6140
7067         News & Brews                                         90             21611
7131         Doc-U-Mat: Quality Laundry and Books                 130            32185
7896         Fricative Bookshop                                   60             24849
8042         Bookbeat                                             80             38997

(5 row(s) affected)
```

```sql
select stores.stor_id, stores.stor_name, sum(sales.qty),
sum(titles.ytd_sales)
from stores
inner join sales on stores.stor_id = sales.stor_id
INNER join titles on sales.title_id = titles.title_id
GROUP by stores.stor_id, stores.stor_name
having sum(qty) > 10
```

5. List all the authors in California who have written more than 1 book.

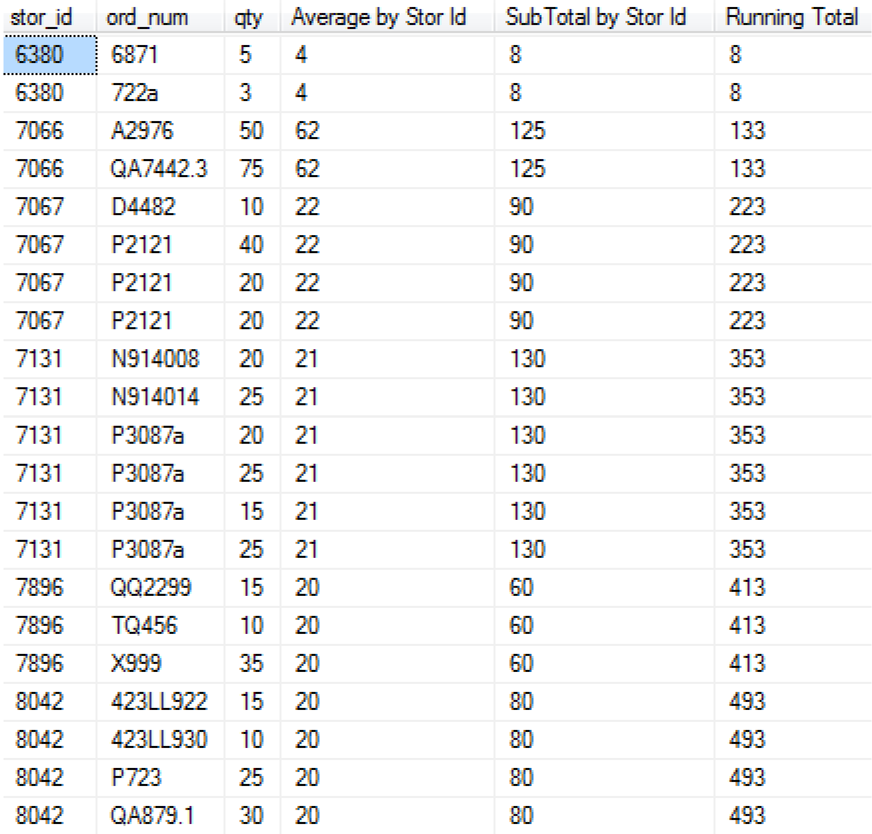
```
au_lname                              au_fname
```

```
--------------------------------          -----------------
Green                                     Marjorie
Locksley                                  Charlene
MacFeather                                Stearns
O'Leary                                   Michael

(4 row(s) affected)
```

```
select au_lname, au_fname
from authors
inner join titleauthor on authors.au_id = titleauthor.au_id
where authors.state = 'CA'
GROUP by au_lname, au_fname
HAVING count(1) > 1
```

6. List the average quantity, and the sum of the quantity from the sales table by store id, and the sum of the quantity of all the sales. Display the store id, order number, and quantity. The query should produce the result set listed below. (Hint: Use OVER)



stor_id	ord_num	qty	Average by Stor Id	SubTotal by Stor Id	Running Total
6380	6871	5	4	8	8
6380	722a	3	4	8	8
7066	A2976	50	62	125	133
7066	QA7442.3	75	62	125	133
7067	D4482	10	22	90	223
7067	P2121	40	22	90	223
7067	P2121	20	22	90	223
7067	P2121	20	22	90	223
7131	N914008	20	21	130	353
7131	N914014	25	21	130	353
7131	P3087a	20	21	130	353
7131	P3087a	25	21	130	353
7131	P3087a	15	21	130	353
7131	P3087a	25	21	130	353
7896	QQ2299	15	20	60	413
7896	TQ456	10	20	60	413
7896	X999	35	20	60	413
8042	423LL922	15	20	80	493
8042	423LL930	10	20	80	493
8042	P723	25	20	80	493
8042	QA879.1	30	20	80	493

(21 row(s) affected)

```
select stor_id, ord_num, qty, avg(qty) over (PARTITION by stor_id) as
'Average by Stor id',sum(qty) over (PARTITION by stor_id), sum(qty) over
(order by stor_id)
```

```
from sales
```