Tutorial 08: An Introduction to SQL Using Oracle's SQL*PLUS

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Create SQL queries to answer each of the following questions:

1. Show all columns and rows in the `authors` table.

```
SELECT *
FROM    authors;
```

2. Display the schema of the `titles` table.

```
describe titles
```

3. Display the first and last names of all authors, and make the column headings (labels) at the top "FirstName" and "LastName" (with no blanks). Use column aliases for this.

```
SELECT au_fname AS "FirstName", au_lnane AS "LastName"
FROM    authors;
```

4. Which authors live in Walnut Creek? Show all columns of the table in your result.

```
SELECT *
FROM    authors
WHERE   city='Walnut Creek';
```

5. Determine the orders that are incomplete. In particular, list the `title_id` and the number of titles that still have to be shipped before the order is complete. Show only those rows where not as many titles have been shipped as have been ordered. Use the `salesdetails` table for this.

```
SELECT title_id, qty_ordered-qty_shipped
FROM    salesdetails
WHERE   qty_ordered > qty_shipped;
```

6. Consider the `editors` table. List all editors (first and last names) who do not have a boss.

```
SELECT ed_fname, ed_lname
FROM   editors
WHERE  ed_boss IS NULL;
```

7. Which editors do *not* have 993-86-0420 as a boss? List the last name of all such editors and their bosses. Hint: This may not be quite as easy as it looks because of presence of NULLs.

```
SELECT ed_lname, ed_boss
FROM   editors
WHERE  ed_boss IS NULL OR ed_boss <> '993-86-0420';
```

8. Which business books cost between $20 and $30, inclusive? List the title and price of each such book.

```
SELECT title, price
FROM   titles
WHERE  type='business' AND price BETWEEN 20 AND 30;
```

9. List the last names of all authors who have the letter 'y' or 'Y' in their last name.

```
SELECT au_lname
FROM   authors
WHERE  LOWER(au_lname) LIKE '%y%';
```

10. List all titles followed by the name of their publisher. Order them alphabetically by title.

```
SELECT title, pub_name
FROM   titles, publishers
WHERE  titles.pub_id = publishers.pub_id
ORDER BY title;
```

11. List the first and last names of all authors of the book called "Secrets of Silicon Valley".

```
SELECT au_fname, au_lname
FROM   authors
WHERE  au_id IN (SELECT au_id
                 FROM titleauthors A, titles T
                 WHERE T.title = 'Secrets of Silicon Valley'
                       AND A.title_id = T.title_id);
```

12. List the titles of books that have more than one author. Only list the title once for each book.

```
SELECT DISTINCT title
FROM   titles
WHERE  title_id IN (SELECT A.title_id
                    FROM titleauthors A, titleauthors B
                    WHERE A.title_id = B.title_id
                        AND A.au_id <> B.au_id);
```

13. Create an SQL query of your own choice that is substantially different from the queries above. Your query should join 3 tables and explicitly sort the results in a meaningful way (e.g., ascending or descending order by one of the attributes). Your output must display at least 3 rows in the result set. In addition to listing your query, copy-and-paste the answer to your SQL query (i.e., the results) in your handin deliverables.

Intent Select title and type of books that are edited by California (CA) editors. Sort in ascending order by type.

```
SELECT title, type
FROM   titles
WHERE  title_id IN (SELECT title_id
                    FROM   titleditors T, editors E
                    WHERE  E.state = 'CA' AND T.ed_id = E.ed_id)
ORDER BY type;
```

Result

```
TITLE                                              TYPE
-------------------------------------------------- --------------------
The Busy Executive's Database Guide                business

Cooking with Computers: Surreptitious Balance Sheets business

You Can Combat Computer Stress!                    business

Straight Talk About Computers                      business

But Is It User Friendly?                           popular_comp

Secrets of Silicon Valley                          popular_comp


6 rows selected.
```

3