

Lab 4 – Week 5 (Set Operators)

This week's lab continues using the SELECT command in addition to now incorporating multiple tables and various set operators to produce results.

Submission

Your submission will be a single text-based SQL file with appropriate header and commenting. Please ensure your file runs when the entire file is executed in SQL Developer.

Create a new Worksheet in SQL Developer. Save the file as L04_ID#_LASTNAME.sql

Your submission needs to be commented and include the question number and the solutions.

Using comments to number the question answers, write the SQL code to complete the following tasks.

Example Submission

```
-- *****
-- Name: Your Name
-- ID: #####
-- Date: The current date
-- Purpose: Lab 04 DBS311
-- *****

-- Q1 SOLUTION --
SELECT * FROM TABLE;

-- Q2 Solution -
SELECT * FROM TABLE;
```

Style Guide

Your SQL should be written using the standard coding style:

- all keywords are to be upper case,
- all user-defined names are to be lower case, (example: table and field names)
- there should be a carriage return before each major part of the SQL statements (i.e. before SELECT, FROM, WHERE and ORDER BY)

See the following sample:

```
SELECT columns
FROM tables
WHERE conditions
ORDER BY column1, column2;
```

Marking Scheme

Question	Weight
1	25%
2	25%
3	25%
4	25%

Grade Policy

- Submissions with errors do not get any marks.
 - Execute your `.sql` file using the “Run Script” button to make sure there is no errors in your file.
- If your result in a question does not match the sample output results, you do not get any marks.
- You do not receive marks for the missing solutions.

Your submission needs to be commented and include the question, the solutions.

Tasks

1. Display cities that no warehouse is located in them. (use set operators to answer this question)

CITY
1 Bern
2 Geneva
3 Hiroshima
4 London
5 Munich
6 Oxford
7 Roma
8 Sao Paulo
9 Singapore
10 Stretford
11 Tokyo
12 Utrecht
13 Venice
14 Whitehorse

2. Display the category ID, category name, and the number of products in category 1, 2, and 5. In your result, display first the number of products in category 5, then category 1 and then 2.

CATEGORY_ID	CATEGORY_NAME	COUNT(*)
1	5 Storage	108
2	1 CPU	70
3	2 Video Card	50

3. Display product ID for products whose quantity in the inventory is less than 5. (You are not allowed to use JOIN for this question.)

	PRODUCT_ID
1	17
2	18
3	19
4	20
5	21
6	47
7	101

4. We need a single report to display all warehouses and the state that they are located in and all states regardless of whether they have warehouses in them or not. (Use set operators in your answer.)

WAREHOUSE_NAME	STATE
Beijing	(null)
Bombay	Maharashtra
Mexico City	Distrito Federal,
New Jersey	New Jersey
San Francisco	California
Seattle, Washington	Washington
Southlake, Texas	Texas
Sydney	New South Wales
Toronto	Ontario
(null)	BE
(null)	Bavaria
(null)	Geneve
(null)	Manchester
(null)	Oxford
(null)	Sao Paulo
(null)	Tokyo Prefecture
(null)	Utrecht
(null)	Yukon
(null)	(null)