Lab 4 – 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 consist of two files:

(a) A single text-based SQL file with appropriate header and commenting – and
(b) An output file demonstrating that your queries work

 Please ensure your SQL file runs when the entire file is executed.

Your file names should be **L04-*lastname-firstname***

For example: L04-King-Les.sql and L04-King-Les.output or L04-King-Les.pdf, etc.

Your submission needs to be commented. At a minimum, your comments before each SQL statement should include the complete question below you are answering.

Style Guide

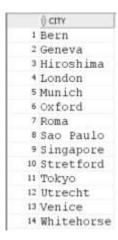Your SQL should be written using the standard coding style:

- 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)
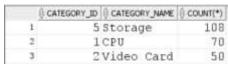
See the following sample:

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

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 to 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 you 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)

Example Submission

```
-- **********************
-- Name: Your Name
-- ID: ########
-- Date: The current date
-- Purpose: Lab 4 DBS311
-- **********************


-- Question 1 – Copy the question from above here
-- Q1 SOLUTION --

SELECT * FROM TABLE;


-- Question 2 – Copy the question from above here
-- Q2 Solution –

SELECT * FROM TABLE;
```