Lab 5 – Week 5 (Joins)

This week's lab continues using the SELECT command in addition to now incorporating multiple tables in the FROM statement to gather information together.

Getting Started

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 L05_ID#_LASTNAME.sql

Tasks

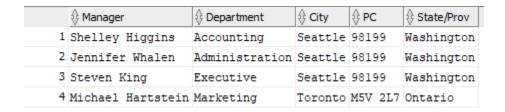## Part-A – Simple Joins

(FROM <table1, table2>)

1. Display the department name, city, street address and postal code for departments sorted by city and department name.

	DEPARTMENT	CITY	ADDRESS	Postal Code
1	Sales	Oxford	Magdalen Centre, The Oxford Science Park	OX9 9ZB
2	Accounting	Seattle	2004 Charade Rd	98199
3	Administration	Seattle	2004 Charade Rd	98199
4	Contracting	Seattle	2004 Charade Rd	98199
5	Executive	Seattle	2004 Charade Rd	98199
6	Shipping	South San Francisco	2011 Interiors Blvd	99236
7	IT	Southlake	2014 Jabberwocky Rd	26192
8	Marketing	Toronto	147 Spadina Ave	M5V 2L7

2. Display full name of employees as a single field using format of "Last, First", their hire date, salary, department name and city, but only for departments with names starting with an A or I sorted by department name and employee name.

	EMPLOYEE	HIRED	SALARY	DEPARTMENT	CITY
1	Gietz, William	94-06-07	8300	Accounting	Seattle
2	Higgins, Shelley	94-06-07	12000	Accounting	Seattle
3	Whalen, Jennifer	87-09-17	4400	Administration	Seattle
4	Ernst, Bruce	91-05-21	6000	IT	Southlake
5	Hunold, Alexander	90-01-03	9000	IT	Southlake
6	Lorentz, Diana	99-02-07	4200	IT	Southlake

3. Display the full name of the manager of each department in states/provinces of Ontario, New Jersey and Washington along with the department name, city, postal code and province name.   Sort the output by city and then by department name.

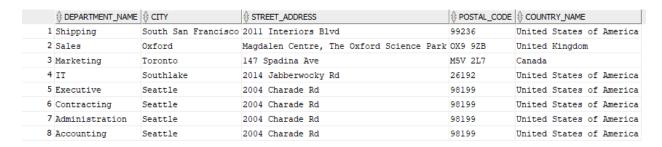|	Manager	Department	City	PC	State/Prov
1	Shelley Higgins	Accounting	Seattle	98199	Washington
2	Jennifer Whalen	Administration	Seattle	98199	Washington
3	Steven King	Executive	Seattle	98199	Washington
4	Michael Hartstein	Marketing	Toronto	M5V 2L7	Ontario

4. Display employee's last name and employee number along with their manager's last name and manager number for employees in department 20,50, and 60. Label the columns Employee, Emp#, Manager, and Mgr# respectively.

	Employee	Emp#	Manager	Mgr#
1	Hunold	103	De Haan	102
2	Fay	202	Hartstein	201
3	Lorentz	107	Hunold	103
4	Ernst	104	Hunold	103
5	Mourgos	124	King	100
6	Hartstein	201	King	100
7	Vargas	144	Mourgos	124
8	Matos	143	Mourgos	124
9	Davies	142	Mourgos	124
10	Rajs	141	Mourgos	124

Part-B – Non-Simple Joins
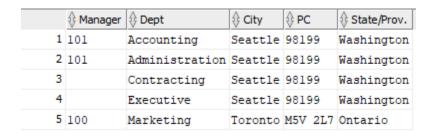
Using the JOIN statement

5. Display the department name, city, street address, postal code and country name for all Departments. Use the JOIN and USING form of syntax. Sort the output by department name descending.

	DEPARTMENT_NAME	CITY	STREET_ADDRESS	POSTAL_CODE	COUNTRY_NAME
1	Shipping	South San Francisco	2011 Interiors Blvd	99236	United States of America
2	Sales	Oxford	Magdalen Centre, The Oxford Science Park	OX9 9ZB	United Kingdom
3	Marketing	Toronto	147 Spadina Ave	M5V 2L7	Canada
4	IT	Southlake	2014 Jabberwocky Rd	26192	United States of America
5	Executive	Seattle	2004 Charade Rd	98199	United States of America
6	Contracting	Seattle	2004 Charade Rd	98199	United States of America
7	Administration	Seattle	2004 Charade Rd	98199	United States of America
8	Accounting	Seattle	2004 Charade Rd	98199	United States of America

6. Display full name of the employees, their hire date and salary together with their department name, but only for departments which names start with A or I.
   a. Full name should be formatted: First / Last.
   b. Use the JOIN and ON form of syntax.
   c. Sort the output by department name and then by last name.

	EMPLOYEE	HIRE_DATE	SALARY	Dept.
1	William / Gietz	94-06-07	$8,300.00	Accounting
2	Shelley / Higgins	94-06-07	$12,000.00	Accounting
3	Jennifer / Whalen	87-09-17	$4,400.00	Administration
4	Bruce / Ernst	91-05-21	$6,000.00	IT
5	Alexander / Hunold	90-01-03	$9,000.00	IT
6	Diana / Lorentz	99-02-07	$4,200.00	IT

7. Display full name of the manager of each department in provinces Ontario, New Jersey and Washington plus department name, city, postal code and province name.
   a. Full name should be formatted: Last, First.
   b. Use the JOIN and ON form of syntax.
   c. Sort the output by city and then by department name.

	Manager	Dept	City	PC	State/Prov.
1	101	Accounting	Seattle	98199	Washington
2	101	Administration	Seattle	98199	Washington
3		Contracting	Seattle	98199	Washington
4		Executive	Seattle	98199	Washington
5	100	Marketing	Toronto	M5V 2L7	Ontario

8. Display the department name and Highest, Lowest and Average pay per each department. Name these results High, Low and Avg.
   a. Use JOIN and ON form of the syntax.
   b. Sort the output so that department with highest average salary are shown first.

	DEPT	High	Low	Avg
1	Executive	$24,000.00	$17,000.00	$19,333.33
2	Sales	$12,000.00	$7,000.00	$10,558.33
3	Accounting	$12,000.00	$8,300.00	$10,150.00
4	Marketing	$13,000.00	$6,000.00	$9,500.00
5	IT	$9,000.00	$4,200.00	$6,400.00
6	Administration	$4,400.00	$4,400.00	$4,400.00
7	Shipping	$5,800.00	$2,500.00	$3,500.00

9. Display the employee last name and employee number along with their manager's last name and manager number. Label the columns Employee,
   a. Emp#, Manager, and Mgr#, respectively.
   b. Include also employees who do NOT have a manager and also employees who do NOT supervise anyone (or you could say managers without employees to supervise).

Example Submission

```
-- **********************
-- Name: Your Name
-- ID: #########
-- Date: The current date
-- Purpose: Lab 3 DBS301
-- **********************


-- Question 1 – write a brief note about what the question is asking
-- Q1 SOLUTION --

SELECT * FROM TABLE;

-- Question 2 – blah blah blah
```