INFO20003 Week 5 Lab Solutions

Section 2: Beginning SQL

- **Task 2.3** Type the SQL to select all data from the *employee* table.

```
SELECT *
FROM employee;
```

- **Task 2.4** Type an SQL query to select the first name, last name and department ID for every employee in the *employee* table.

```
SELECT FirstName, LastName, departmentID
FROM employee;
```

- **Task 2.5** Type a query to return the first and last name, salary and department ID of all employees who earn exactly $45,000.

```
SELECT FirstName, LastName, Salary, departmentID
FROM employee
WHERE Salary = 45000;
```


- **Task 2.7** Type a query that returns the first and last name and salary of all employees who earn more than $45,000. Order the result from the highest earner to the lowest.


```
SELECT FirstName, LastName, Salary
FROM employee
WHERE Salary > 45000
ORDER BY Salary DESC;
```


- **Task 2.9** Write a query to list the first and last names of the five highest-paid employees.

```
SELECT FirstName, LastName
FROM employee
ORDER BY Salary DESC
LIMIT 5;
```

- **Task 2.10** Type a query to find how many employees work in each department. Alias the two columns of the result set to *dept* and *staff_count* respectively.

```
SELECT departmentID AS dept, COUNT(*) AS staff_count
FROM employee
GROUP BY departmentID;
```

◆ **Task 2.11** What is the maximum salary for each department? Use the MAX() aggregate function.

```
SELECT departmentID, MAX(Salary) AS MAXSAL
FROM employee
GROUP BY departmentID;
```

◆ **Task 2.12** Find the department which has the highest **average** salary.

```
SELECT departmentID, AVG(Salary) AS AvgSalary
FROM employee
GROUP BY departmentID
ORDER BY AvgSalary DESC
LIMIT 1;
```

◆ **Task 2.13** Find the department IDs of departments with only one employee.

```
SELECT departmentID
FROM employee
GROUP BY departmentID
HAVING COUNT(*) = 1;
```

◆ **Task 2.14** Find the names of employees who work in the 'Marketing' department.


```
SELECT FirstName, LastName
FROM employee
WHERE departmentID = (SELECT departmentID
                      FROM department
                      WHERE Name = 'Marketing');
```


◆ **Task 2.15** Type the names and salaries of the employees who earn more than any employee in the marketing department.


```
SELECT FirstName, LastName, Salary
FROM employee
WHERE Salary > (SELECT MAX(Salary)
                FROM employee NATURAL JOIN department
                WHERE Name = 'Marketing');
```

Note: Solutions to Tasks 2.16 and 2.17 are provided in the lab sheet.