**Lab - Analytical SQL functions**

**1. Import the data**

Run the sample\_data.sql file on Brightspace to create the dept and emp table and insert sample data.

**2. Use Oracle statistical functions to answer the following question**

1. What is the maximum and minimum salary across all employees
2. What is the difference between the maximum and the average salary
3. What is the average salary per department
4. Select the department name and number of employees, who have an employee count greater than 2
5. List all employees who have a salary greater than the average salary
6. List the employees who have a salary greater than the average salary for their department
7. Select the top 2 departments in terms of highest salary variance among employees. For these departments, show the maximum, minimum and average salary
8. For the emp table, compare the results and records generated by using the [SAMPLE](https://docs.oracle.com/en/database/oracle/oracle-database/18/sqlrf/SELECT.html#GUID-CFA006CA-6FF1-4972-821E-6996142A51C6) function.  
     
   SELECT \* FROM emp SAMPLE (10);  
     
   Try the following sample sizes

Sample = 5%

Sample = 10%

Sample = 50%

Sample = 80%

Can you explain the sample size being outputted?

1. Write a query that returns the average salary per department (display the full department name). Rewrite the query using the [PIVOT](https://www.oracletutorial.com/oracle-basics/oracle-pivot/) command to display the departments as columns in the output.