Activity 1 -Subquery Part02

Exercise01: Run similar query to determine the employees (first name, last name, salary, department id) that earn less than the average salary of the IT department.

Algorithm to work out the answer:

STEP 1. what is the department id for the IT department.

```
SELECT
        department_id,
        department_name
FROM
        departments
WHERE
        department_name = 'IT';
```

department_id	department_name
6	IT

STEP 2. work out the average salary from the department, corresponding to the IT department.

```
SELECT
        AVG(salary)
FROM
        employees
WHERE
        department_id = 6;
```

AVG(salary)
5760.000000

STEP 3. Write the main query - and use the average salary amount to get a view of the output (THE ANSWER)

```
SELECT
        first_name,
        last_name,
        salary,
        department_id
FROM
        employees
WHERE
        salary < ALL(SELECT
```

```
        AVG(salary)
FROM
        employees
WHERE
        department_id = 6)
ORDER BY
        salary ASC;
```

first_name	last_name	salary	department_id
Karen	Colmenares	2500.00	3
Guy	Himuro	2600.00	3
Irene	Mikkilineni	2700.00	5
Sigal	Tobias	2800.00	3
Shelli	Baida	2900.00	3
Alexander	Khoo	3100.00	3
Britney	Everett	3900.00	5
Sarah	Bell	4000.00	5
Diana	Lorentz	4200.00	6
Jennifer	Whalen	4400.00	1
Valli	Pataballa	4800.00	6
David	Austin	4800.00	6

Exercise02: Determine all of the employees earning more than the minimum salary earnt in the sales department.

STEP 1. What is the department id for the sales department.

```
SELECT
        department_name,
        department_id
FROM
        departments
WHERE
        department_name = 'Sales';
```

department_name	department_id
Sales	8

STEP 2. work out the minimum salary from the department, corresponding to the sales department.

```
SELECT
        MIN(salary)
FROM
        employees
WHERE
        department_id = 8;
```

MIN(salary)
6200.00

STEP 3. Write the main query - and use the min salary from sales department amount to get a view of the output (THE ANSWER)

```
SELECT
        first_name,
        last_name,
        department_id,
        salary
FROM
        employees
WHERE
        salary > 6200
ORDER BY
        salary ASC;
```

first_name	last_name	department_id	salary
Susan	Mavris	4	6500.00
Shanta	Vollman	5	6500.00
Luis	Popp	10	6900.00
Kimberely	Grant	8	7000.00
Ismael	Sciarra	10	7700.00
Jose Manuel	Urman	10	7800.00
Payam	Kaufling	5	7900.00
Matthew	Weiss	5	8000.00
John	Chen	10	8200.00
Adam	Fripp	5	8200.00
William	Gietz	11	8300.00
Jack	Livingston	8	8400.00
Jonathon	Taylor	8	8600.00
Daniel	Faviet	10	9000.00
Alexander	Hunold	6	9000.00
Hermann	Baer	7	10000.00
Den	Raphaely	3	11000.00
Nancy	Greenberg	10	12000.00
Shelley	Higgins	11	12000.00
Michael	Hartstein	2	13000.00
Karen	Partners	8	13500.00
John	Russell	8	14000.00
Lex	De Haan	9	17000.00
Neena	Kochhar	9	17000.00
Steven	King	9	24000.00

STEP 4: Rewrite the query this time with the main + subquery - to generate same answer as STEP 3

```
SELECT
        first_name,
        last_name,
        department_id,
        salary
FROM
        employees
WHERE
        salary > ALL (SELECT
        MIN(salary)
FROM
        employees
WHERE
        department_id = 8)
ORDER BY
        salary ASC;
```

first_name	last_name	department_id	salary
Susan	Mavris	4	6500.00
Shanta	Vollman	5	6500.00
Luis	Popp	10	6900.00
Kimberely	Grant	8	7000.00
Ismael	Sciarra	10	7700.00
Jose Manuel	Urman	10	7800.00
Payam	Kaufling	5	7900.00
Matthew	Weiss	5	8000.00
John	Chen	10	8200.00
Adam	Fripp	5	8200.00
William	Gietz	11	8300.00
Jack	Livingston	8	8400.00
Jonathon	Taylor	8	8600.00
Daniel	Faviet	10	9000.00
Alexander	Hunold	6	9000.00
Hermann	Baer	7	10000.00
Den	Raphaely	3	11000.00
Nancy	Greenberg	10	12000.00
Shelley	Higgins	11	12000.00
Michael	Hartstein	2	13000.00
Karen	Partners	8	13500.00
John	Russell	8	14000.00
Lex	De Haan	9	17000.00
Neena	Kochhar	9	17000.00
Steven	King	9	24000.00