Use of SQL functions and Joins – LAB 4

1. Write a query to display all the last names of employees whose last name starts with 'a'.

```
select e.last_name from employee as e where e.last_name like 'a%';
```

2. Write a query to display the last name and the email of each employee (append '@novaims.unl.pt' to the email column).

```
select e.last_name, concat(e.email,'@novaims.unl.pt') from employee as e;
```

3. Update the column EMAIL of the employees to append '@novaims.unl.pt'.

```
update employee as e
set e.email = concat(e.email,'@novaims.unl.pt');
```

4. Write a query to display the number of employees whose first names contains an 'a' and that have the same job.

```
select e.job_id, count(e.employee_id) from employee as e
where e.first_name like '%a%'
group by e.job_id;
```

5. Write a query to get the average salary for all departments employing more than 15 employees. Round the average salary to two decimals.

```
select e.department_id, round(avg(e.salary),2) as avg_salary,
count(e.employee_id) as emp_x_dep
from employee as e
group by e.department_id
having emp_x_dep > 15;
```

6. List locations with theirs' addresses including country names

```
SELECT STREET_ADDRESS, POSTAL_CODE, CITY, STATE_PROVINCE, COUNTRY_NAME
FROM location l
JOIN country c ON l.COUNTRY_ID=c.COUNTRY_ID;
```

7. Same of above but with department name

```
SELECT DEPARTMENT_NAME, STREET_ADDRESS, POSTAL_CODE, CITY, STATE_PROVINCE,
COUNTRY_NAME
FROM location l
JOIN country c ON l.COUNTRY_ID=c.COUNTRY_ID
JOIN department d on d.LOCATION_ID=l.location_ID;
```

8. Are there locations without any department? list them.

```
SELECT l.STREET_ADDRESS, l.POSTAL_CODE, l.CITY, l.STATE_PROVINCE,
d.DEPARTMENT_ID
FROM location l
LEFT JOIN department d on l.LOCATION_ID=d.location_ID
WHERE d.DEPARTMENT_ID IS NULL;
```

9. List the job titles with number of employees and average salary, sorted by average salary from highest to lowest.

```
SELECT j.JOB_TITLE, ROUND(AVG(e.salary),2) as aver_sal, COUNT(1) as
numb_emp
FROM job j
```

```
JOIN employee e on e.JOB_ID=j.JOB_ID
GROUP BY j.JOB_ID
ORDER BY aver_sal DESC;
```

10. List the department names with number of employees of each one including the ones without employee s

```
SELECT d.DEPARTMENT_NAME, count(e.EMPLOYEE_ID) as numb_emp
FROM department d
LEFT JOIN employee e on e.DEPARTMENT_ID = d.DEPARTMENT_ID
GROUP BY d.DEPARTMENT_ID;
```

11. List employees' names with their managers' names (self join). The manager name should concatenate the name and family name in one single field.

```
SELECT e.FIRST_NAME, e.LAST_NAME, concat(s.FIRST_NAME, " ", s.LAST_NAME)
as ManagerName
from employee as e
join employee as s on e.MANAGER_ID=s.EMPLOYEE_ID;
```