Mentoring session Week-2

Please ensure that HR database is created or downloaded from MySQL sample databases before getting started with this exercise.

Once MySQL workbench is launched, spend couple of minutes in familiarising participants with MYSQL Workbench.

Before taking this session, please ensure that participants are well aware and familiar with basic MYSQL commands.

1. Write a SQL query to print details of the employees whose first name starts with 'a' and contains only 4 alphabets.

```
SELECT *
FROM employees
WHERE length(first_name) = 4
    AND first_name LIKE 'a___';
```

2. Write a SQL query to print details of the employees whose first_name ends with 'h' and contains only 6 alphabets.

```
SELECT *
FROM employees
WHERE first_name LIKE '%h'
    AND length(first_name) = 6;
```

3. Retrieve all the distinct salary values from dataset

```
SELECT DISTINCT salary
FROM employees;
```

```
SELECT *
FROM employees;
```

4. Write a SQL query to print the first name from employees table after removing white spaces from the right side.

```
SELECT RTRIM(first_name) AS Name
FROM employees;
```

5. Write a SQL query to print the first name from employees table after replacing ‘a’ with ‘A’.

```
SELECT replace(first_name, 'a', 'A') AS first_name
FROM employees;
```

6. Write a SQL query to fetch, if there are any duplicate records in the table.

```
SELECT first_name
     ,last_name
     ,department_id
     ,count(*) AS cnt
FROM employees
GROUP BY first_name
     ,last_name
     ,department_id
HAVING count(*) > 1;
```

7. Find the department_ids whose average salary is greate than 8000.

```
SELECT department_id
     , avg (salary)
FROM employees
GROUP BY department_id
HAVING avg(salary) > 8000;
```

8. Write a sql query to fetch the details of an employee -- Generate another as commission percentage column. And wherever there are null values in this column, convert it to 0.

```
SELECT employee_id
     ,first_name
     ,salary
     ,commission_pct
     ,coalesce(commission_pct, 0)
FROM employees;
```

9. Find out how many employees are in department 80.

```
SELECT count('first_name') AS Number_of_Employees
FROM employees
WHERE department_id = 80;
```

10. Write a query to get the number of employees with the same job.

```
SELECT job_id
     ,COUNT(*) AS Number_of_Employees
FROM employees
GROUP BY department_id;
```

11. Write a query to get the difference between the highest and lowest salaries.

```
SELECT MAX(salary) - MIN(salary) DIFFERENCE
FROM employees;
```

12. Write a query to get the department ID and the total salary payable in each department.

```
SELECT department_id
     ,SUM(salary)
FROM employees
GROUP BY department_id;
```

13. Write a query to find the employees fullname, job_id, hire_date with the lowest salary who was hired between the year 1995 and 1997.

```
SELECT CONCAT (
            first_name
            ,' '
            ,last_name
            ) AS Full_Name
    ,job_id
    ,year(hire_date)
    ,min(salary)
FROM employees
WHERE hire_date BETWEEN '1995-01-01'
            AND '1997-01-01'
GROUP BY year(hire_date)
ORDER BY min(salary) limit 1;
```

14. Write a query to get the job_id and related employee's id.

```
SELECT job_id
    ,GROUP_CONCAT(employee_id, ' ') AS 'Employees ID'
FROM employees
GROUP BY job_id;
```

15. Write a query to find the details of employees and with eligibility criteria based on the following:
    a. If Hire_date is less than or equal to '1999-12-31'then eligible else not eligible

```
SELECT employee_id
    ,last_name
    ,hire_date
    ,IF (  hire_date <= '1999-12-31'
            ,"Eligible"
            ,"Not Eligible"
            ) AS scheme_eligibility FROM employees;
```

16. Write a query to assign tax slabs based on the following criteria:
    a. If salary less than or equal to 5000 then 'Tax slab A'
    b. If salary greater than 5000 and less than or equal to 10000 then 'Tax slab B'
    c. If salary greater than 10000 and less than or equal to 15000 then 'Tax slab C'
    d. Else 'Tax slab C'

```
SELECT employee_id
    ,last_name
    ,salary
    ,CASE
            WHEN salary <= 5000
                THEN 'Tax slab A'
            WHEN salary >= 5000 and salary<= 10000
                THEN 'Tax slab B'
            WHEN salary <= 15000
                THEN 'Tax slab C'
            ELSE 'Tax slab D'
            END AS taxation
FROM employees;
```

17. Write a query to find the hire year of each employees

```
SELECT employee_id
     ,last_name
     ,year(hire_date)
FROM employees;
```

18. Write a query to find the count of employees hired in each year and sort them.

```
SELECT year(hire_date)
     ,Count(employee_id)
FROM employees
GROUP BY year(hire_date)
ORDER BY year(hire_date) DESC;
```