Mentoring Session Week 2

Pl. 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 options as video has details of SQL lite and hence there is every chance that participants are not familiar with MYSQL Workbench.

Before taking this session, please ensure that participants are well aware and familiar with basic MYSQL commands as in this session focus in on Joins and subquery.

Section A: Joins and Sub-Queries

- Execute following basic commands to get started with the session

```
show databases;

use hr;

show tables;
```

- Write a query in SQL to display those employees who contain a letter z to their first name and also display their last name, department, city, and state province. (3 rows)

```
select e.first_name, e.last_name, e.department_id, d.department_name,
l.city,l.state_province

from employees e inner join departments d

on e.department_id=d.department_id

inner join locations l

on d.location_id=l.location_id where e.first_name like "%z%";
```

- Write a query in SQL to display the job title, department id, full name (first and last name) of employee, starting date and end date for all the jobs which started on or after 1st January, 1993 and ending with on or before 31 August, 2000. (8 rows)

```
select j.job_id,e.department_id,concat(e.first_name,' ',
e.last_name) full_name, j.start_date , j.end_date from
employees e join job_history j
on e.employee_id = j.employee_id
```

```
where j.start_date >='1993-01-01' and end_date<= '2000-08-31';
```

- Display the employee number, name (first name and last name) and job title for all employees whose salary is smaller than the minimum salary of those employees whose job title is Programmer using subquery. (44 rows)

```
select e.employee_id, concat(e.first_name, ' ', e.last_name) as Name,
j.job_title from employees as e left join jobs as j
on e.job_id = j.job_id
where e. salary<
(select min(salary) from employees as k left join jobs as l
 on k.job_id=l.job_id
where l.job_title = "Programmer");
```

- Write a query in SQL to display the country name, city, and number of those departments where at least 2 employees are working. (5 rows)

```
select country_name,city, count(department_id)
from countries
join locations using (country_id)
join departments using (location_id)
where department_id in
  (select department_id
from employees
group by department_id
having COUNT(employee_id)>=2)
group by country_name,city;
```

- Write a query to fetch the employee ID, First Name, Last Name, Salary and Department ID of those employees who draw a salary more than the average salary of their respective department. (38 rows)

```
select employee_id, concat(first_name,' ',last_name) Name,salary,department_id
from employees o
where salary > (select avg(salary) from employees i where o.department_id =
i.department_id);
```

- Write a query in SQL to display the first and last name, salary, and department ID for those employees who earn less than the average salary, and also work at the department where the employee Laura is working as a first name holder. (41 rows)

```
select * from employees where salary < (select avg(salary) from employees) and
department_id like (select department_id from employees where first_name like
"Laura");
```

- Using HR Schema, write a Query to find the maximum salary of the most recent job that every employee holds.

```
select e.employee_id, e.hire_date,e.job_id,j.max_salary from employees e left join
jobs j
on e.job_id= j.job_id;
```

- Using HR Schema, write a Query to List the old designation and new designation of all the employees in the company where old designation is not null. (10 rows)

```
select distinct e.employee_id,e.first_name,e.last_name,e.job_id as
current_job,j.job_id as old_job,jo.job_title as current
from employees as e inner join job_history as j on e.employee_id=j.employee_id
inner join jobs as jo on jo.job_id=e.job_id;
```

Section B: General Queries without using any dataset

- Write a Query to display the word 'Great Learning' by removing the vowels.

```
select regexp_replace ("Great Learning","[a,e,i,o,u]","");
```

- Write a Query to remove all the leading and trailing exclamatory marks from the string '!!!!!Great Learning!!!!!!'.

```
select replace('!!!!!Great Learning!!!!!!',"!","");
```

- Write a Query to divide the number 100 by 3 and print the remainder after division.

```
select 100 mod 3;
```

- Display 'Great Learnings' in capital letter

```
select upper('Great Learnings');
```

- -Display the difference between '2020-01-21' and '2020-01-21'

```
select datediff('2020-01-21', '2020-01-01') as Difference_Between_Dates;
```

- Display the age if the date of birth is '1999-09-08'

```
select datediff(curdate(), '1999-09-08')/365 as Age;
```

- Display '1' if 2<>0 condition is true otherwise display '0'

```
select if (2<>0,1,0);
```

- Display the user name in MySQL

```
select current_user();
```

- -Display the square of 9

  select power(9,2);

