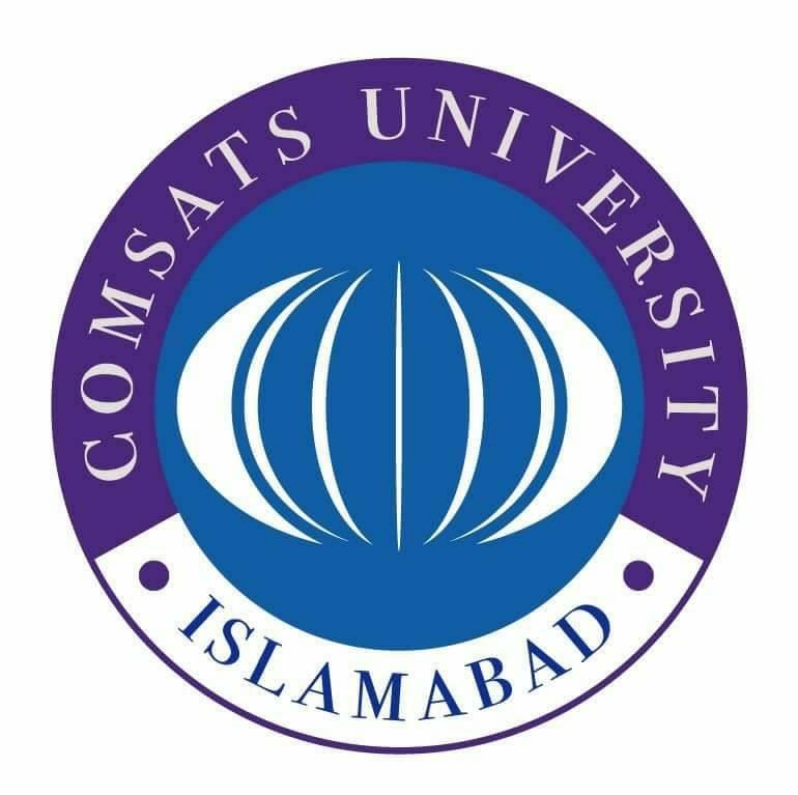

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LAB 3

Activity 1:

Using table “employee” from sql_hr database

• Display all attributes of the employee’s table.

Query:

```
1 • use sql_hr;
2 • select * from employees;
3
```

Table:

employee_id	first_name	last_name	job_title	salary	reports_to	office_id
33391	D'arcy	Nortunen	Account Executive	62871	37270	1
37270	Yovonnda	Magrannell	Executive Secretary	63996	NULL	10
37851	Sayer	Matterson	Statistician III	98926	37270	1
40448	Mindy	Crissil	Staff Scientist	94860	37270	1
56274	Keriann	Alloisi	VP Marketing	110150	37270	1
63196	Alaster	Scutchin	Assistant Professor	32179	37270	2
67009	North	de Clerc	VP Product Management	114257	37270	2
67370	Elladine	Rising	Social Worker	96767	37270	2
68249	Nisse	Voysey	Financial Advisor	52832	37270	2
72540	Guthrey	Iacopetti	Office Assistant I	117690	37270	3
72913	Kass	Hefferan	Computer Systems Anal...	96401	37270	3
75900	Virge	Goodrum	Information Systems M...	54578	37270	3
76196	Mirilla	Janowski	Cost Accountant	119241	37270	3
80529	Lynde	Aronson	Junior Executive	77182	37270	4
80679	Mildrid	Sokale	Geologist II	67987	37270	4
84791	Hazel	Tarbert	General Manager	93760	37270	4
95213	Cole	Kesterton	Pharmacist	86119	37270	4

Activity 2:

1. Display the structure of the table using a query.

Query:

```
1 • use sql_hr;
2 • describe employees;
3
```

Table:

Field	Type	Null	Key	Default	Extra
employee_id	int	NO	PRI	NULL	
first_name	varchar(50)	NO		NULL	
last_name	varchar(50)	NO		NULL	
job_title	varchar(50)	NO		NULL	
salary	int	NO		NULL	
reports_to	int	YES	MUL	NULL	
office_id	int	NO	MUL	NULL	

2. Use Column Alias to remain Employee_id as Employee, Last_ Name as “Sur Name” and First_Name as First Name.

Query:

```
USE sql_hr;
SELECT employee_id AS Employee, last_name AS 'Sur Name', first_name AS 'First Name' FROM employees;

```

Table:

Employee	Sur Name	First Name
33391	Nortunen	D'arcy
37270	Magrannell	Yovonnda
37851	Matterson	Sayer
40448	Crissil	Mindy
56274	Alloisi	Keriann
63196	Scutchin	Alaster
67009	de Clerc	North
67370	Rising	Elladine
68249	Voysey	Nisse
72540	Iacopetti	Guthrey

3. Instead of retrieving all 107 rows from the employees’ table, find only distinct office codes.

Query:

```
USE sql_hr;
SELECT DISTINCT office_id from employees;

```

Table:

office_id
1
2
3
4
5
10

4. Use Sql_Store databas, return all products with name and unit price and new price (Unit_price *1.1).

Query:

```
USE sql_store;
select name, unit_price, unit_price * 1.1 from products;

```

Table:

name	unit_price	unit_price * 1.1
Foam Dinner Plate	1.21	1.331
Pork - Bacon,back Peameal	4.65	5.115
Lettuce - Romaine, Heart	3.35	3.685
Brocolinni - Gaylan, Chinese	4.53	4.983
Sauce - Ranch Dressing	1.63	1.793
Petit Baguette	2.39	2.629
Sweet Pea Sprouts	3.29	3.619
Island Oasis - Raspberry	0.74	0.814
Longan	2.26	2.486
Broom - Push	1.09	1.199

5. Displaying credit limit from customers database.

Query:

```
1 • USE sql_store;
2 • select points from customers;
3
```

Table:

points
2273
947
2967
457
3675
3073
1672

6. Display employee names along with their job titles.

Query:

```
1 • USE classicmodels;
2 • select firstName, lastName, jobTitle from employees;
3
```

Table:

firstName	lastName	jobTitle
Diane	Murphy	President
Mary	Patterson	VP Sales
Jeff	Firrelli	VP Marketing
William	Patterson	Sales Manager (APAC)
Gerard	Bondur	Sale Manager (EMEA)
Anthony	Bow	Sales Manager (NA)
Leslie	Jennings	Sales Rep
Leslie	Thompson	Sales Rep
Julie	Firrelli	Sales Rep
Steve	Patterson	Sales Rep

7. Concatenate first and last name as full_name.

Query:

```
1 • USE classicmodels;
2 • select concat(firstName, lastName) as "Full_Name" from employees;
```

Table:

Full_Name
DianeMurphy
MaryPatterson
JeffFirrelli
WilliamPatterson
GerardBondur
AnthonyBow
LeslieJennings
LeslieThompson
JulieFirrelli

8. Display employee details while renaming salary to Monthly_Salary.

Query:

```
1 • USE hr;
2 • select *, salary as Monthly_Salary from employees;
```

Table:

last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id	Monthly_Salary
King	SKING	515.123.4567	1987-06-17	AD_PRES	24000.00	NULL	NULL	90	24000.00
Kochhar	NKOCHHAR	515.123.4568	1989-09-21	AD_VP	17000.00	NULL	100	90	17000.00
De Haan	LDEHAAN	515.123.4569	1993-01-13	AD_VP	17000.00	NULL	100	90	17000.00
Hunold	AHUNOLD	590.423.4567	1990-01-03	IT_PROG	9000.00	NULL	102	60	9000.00
Ernst	BERNST	590.423.4568	1991-05-21	IT_PROG	6000.00	NULL	103	60	6000.00
Austin	DAUSTIN	590.423.4569	1997-06-25	IT_PROG	4800.00	NULL	103	60	4800.00
Pataballa	VPATABAL	590.423.4560	1998-02-05	IT_PROG	4800.00	NULL	103	60	4800.00
Lorentz	DLORENTZ	590.423.5567	1999-02-07	IT_PROG	4200.00	NULL	103	60	4200.00
Greenberg	NGREENBE	515.124.4569	1994-08-17	FI_MGR	12000.00	NULL	101	100	12000.00

9. Compute annual salary and display it.

Query:

```
1 • USE hr;
2 • select salary, salary*12 as 'Annual Salary' from employees;
```

Table:

salary	Annual Salary
24000.00	288000.00
17000.00	204000.00
17000.00	204000.00
9000.00	108000.00
6000.00	72000.00
4800.00	57600.00
4800.00	57600.00
4200.00	50400.00

10. Display the structure of all tables in databases using query.

1st Query:

```
1 • Use classicmodels;
2 • describe employees;
```

Table:

Field	Type	Null	Key	Default	Extra
employeeNumber	int	NO	PRI	NULL	
lastName	varchar(50)	NO		NULL	
firstName	varchar(50)	NO		NULL	
extension	varchar(10)	NO		NULL	
email	varchar(100)	NO		NULL	
officeCode	varchar(10)	NO	MUL	NULL	
reportsTo	int	YES	MUL	NULL	
jobTitle	varchar(50)	NO		NULL	

2nd Query:

```
1 • Use sql_hr;
2 • describe employees;
```

Table:

Field	Type	Null	Key	Default	Extra
employee_id	int	NO	PRI	NULL	
first_name	varchar(50)	NO		NULL	
last_name	varchar(50)	NO		NULL	
job_title	varchar(50)	NO		NULL	
salary	int	NO		NULL	
reports_to	int	YES	MUL	NULL	
office_id	int	NO	MUL	NULL	

3rd Query:

```
1 • Use sql_store;
2 • describe orders;
```

Table:

Field	Type	Null	Key	Default	Extra
order_id	int	NO	PRI	NULL	auto_increment
customer_id	int	NO	MUL	NULL	
order_date	date	NO		NULL	
status	tinyint	NO	MUL	1	
comments	varchar(2000)	YES		NULL	
shipped_date	date	YES		NULL	
shipper_id	smallint	YES	MUL	NULL	

Post Lab:

1. The HR department wants a query to display each employee's last name, job ID, hire date, and employee ID, with the employee ID appearing first. Provide an alias STARTDATE for the HIRE_DATE column.

Query:

```
1 • use hr;
2 • select employee_id, last_name, job_id, hire_date as STARTDATE from employees;
```

Table:

employee_id	last_name	job_id	STARTDATE
100	King	AD_PRES	1987-06-17
101	Kochhar	AD_VP	1989-09-21
102	De Haan	AD_VP	1993-01-13
103	Hunold	IT_PROG	1990-01-03
104	Ernst	IT_PROG	1991-05-21
105	Austin	IT_PROG	1997-06-25
106	Pataballa	IT_PROG	1998-02-05
107	Lorentz	IT_PROG	1999-02-07

2. The HR department has requested a report of all employees and their job IDs. Display the last name concatenated with the job ID (separated by a comma and space) and name the column Employee and Title.

Query:

```
1 • use hr;
2 • select concat(last_name, job_id) as "Employee and Title" from employees;
3
```

Table:

Employee and Title
KingAD_PRES
KochharAD_VP
De HaanAD_VP
HunoldIT_PROG
ErnstIT_PROG
AustinIT_PROG
PataballaIT_PROG

3. To familiarize yourself with the data in the EMPLOYEES table, create a query to display all the data from that table. Separate each column output by a comma. Name the column title THE_OUTPUT.

Query:

```
use hr;
select concat(first_name, last_name, email, phone_number, hire_date, job_id, salary,
department_id, manager_id) as "THE OUTPUT" from employees;
```

Table:

THE OUTPUT
NULL
NeenaKochharNKOCHHAR515.123.45681989-0...
LexDe HaanLDEHAAN515.123.45691993-01-13...
AlexanderHunoldAHUNOLD590.423.45671990-...
BruceErnstBERNST590.423.45681991-05-21IT_...
DavidAustinDAUSTIN590.423.45691997-06-25I...
ValliPataballaVPATABAL590.423.45601998-02-0...
DianaLorentzDLORENTZ590.423.55671999-02-...

Critical Analysis

The lab is very useful for building foundational skills in SQL, as it covers common and important operations like querying tables, using aliases, performing calculations, and manipulating data. By working through these exercises, we gain a better understanding of how to interact with databases to extract meaningful information. The tasks are well-structured, starting with simple queries and moving on to more complex ones, which helps in gradually mastering SQL.

Lab Assessment		
Lab Task Evaluation	**/6**	**/10**
Lab Report	**/4**	
Instructor Signature and Comments		