Green University of Bangladesh

Department of Computer Science and Engineering(CSE)

Faculty of Sciences and Engineering

Semester: (Spring, Year:2021), B.Sc. in CSE

(Day)

LAB REPORT NO #4

Course Title:Database System lab

Course Code:CSE210 Section:PC-193D

Student Details

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Lab Date : 14.08.2021

Submission Date : 21.08.2021

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[For Teachers use only: Don't Write Anything inside this box]

Lab Report Status

Marks: …… Signature:.....

Comments:..... Date:.....

❖ Lab Experiment Name:

Querying and Filtering data in a MySql table.

❖ Objective:

Gather knowledge about Querying and Filtering data in a MySql table.

❖ Problem analysis:

We mainly use the queries in databases, spreadsheets and many other data manipulation software packages. In the context of business, different organization levels need different information such as top levels managers interested in knowing whole figures and not the individual details. These functions produce the summarised data from our database. Thus they are extensively used in economics and finance to represent the economic health or stock and sector performance.

❖ IMPLEMENTATION:

Firstly, We will do some Query in the mySql table(Name:employees).We will create column in the table.

```
CREATE TABLE employees(
    employee_id int UNIQUE NOT NULL,
    first_name varchar(25),
    last_name varchar(25),
    email varchar(25),
    phone_number varchar(25),
    hire_date date,
    job_id varchar(25),
    salary decimal(8,2),
    commission_pct decimal(2,2),
    manager_id int,
    department_id int
    );
```

Now,inserting all the values into the employees table.

```
INSERT INTO employees
VALUES (100,'Steven','King','SKING','515.123.4567','1987-06-17','AD_PRES',24000.00,0.00,0,90),
(101,'Neena','Kochhar','NKOCHHAR','515.123.4568','1987-06-18','AD_VP',17000.00,0.00,100,90),
(102,'Lex','De Haan','LDEHAAN','515.123.4569','1987-06-19','AD_VP',17000.00,0.00,100,90),
(103,'Alexander','Hunold','AHUNOLD','590.423.4567','1987-06-20','IT_PROG',9000.00,0.00,102,60),
(104,'Bruce','Ernst','BERNST','590.423.4568','1987-06-21','IT_PROG',6000.00,0.00,103,60),
(105,'David','Austin','DAUSTIN','590.423.4569','1987-06-22','IT_PROG',4800.00,0.00,103,60),
(106,'Valli','Pataballa','VPATABAL','590.423.4560','1987-06-23','IT_PROG',4800.00,0.00,103,60),
(107,'Diana','Lorentz','DLORENTZ','590.423.5567','1987-06-24','IT_PROG',4200.00,0.00,103,60),
(108,'Nancy','Greenberg','NGREENBE','515.124.4569','1987-06-25','FI_MGR',12000.00,0.00,101,100),
(109,'Daniel','Faviet','DFAVIET','515.124.4169','1987-06-26','FI_ACCOUNT',9000.00,0.00,108,100),
(110,'John','Chen','JCHEN','515.124.4269','1987-06-27','FI_ACCOUNT',8200.00,0.00,108,100),
(111,'Ismael','Sciarra','ISCIARRA','515.124.4369','1987-06-28','FI_ACCOUNT',7700.00,0.00,108,100),
(112,'Jose Manuel','Urman','JMURMAN','515.124.4469','1987-06-29','FI_ACCOUNT',7800.00,0.00,108,100),
(113,'Luis','Popp','LPOPP','515.124.4567','1987-06-30','FI_ACCOUNT',6900.00,0.00,108,100),
(114,'Den','Raphaely','DRAPHEAL','515.127.4561','1987-07-01','PU_MAN',11000.00,0.00,100,30),
(115,'Alexander','Khoo','AKHOO','515.127.4562','1987-07-02','PU_CLERK',3100.00,0.00,114,30),
(116,'Shelli','Baida','SBAIDA','515.127.4563','1987-07-03','PU_CLERK',2900.00,0.00,114,30),
(117,'Sigal','Tobias','STOBIAS','515.127.4564','1987-07-04','PU_CLERK',2800.00,0.00,114,30),
(118,'Guy','Himuro','GHIMURO','515.127.4565','1987-07-05','PU_CLERK',2600.00,0.00,114,30),
(119,'Karen','Colmenares','KCOLMENA','515.127.4566','1987-07-06','PU_CLERK',2500.00,0.00,114,30),
(120,'Matthew','Weiss','MWEISS','650.123.1234','1987-07-07','ST_MAN',8000.00,0.00,100,50),
(121,'Adam','Fripp','AFRIPP','650.123.2234','1987-07-08','ST_MAN',8200.00,0.00,100,50),
(122,'Payam','Kaufling','PKAUFLIN','650.123.3234','1987-07-09','ST_MAN',7900.00,0.00,100,50),
(123,'Shanta','Vollman','SVOLLMAN','650.123.4234','1987-07-10','ST_MAN',6500.00,0.00,100,50),
(124,'Kevin','Mourgos','KMOURGOS','650.123.5234','1987-07-11','ST_MAN',5800.00,0.00,100,50),
(125,'Julia','Nayer','JNAYER','650.124.1214','1987-07-12','ST_CLERK',3200.00,0.00,120,50),
(126,'Irene','Mikkilineni','IMIKKILI','650.124.1224','1987-07-13','ST_CLERK',2700.00,0.00,120,50),
(127,'James','Landry','JLANDRY','650.124.1334','1987-07-14','ST_CLERK',2400.00,0.00,120,50),
(128,'Steven','Markle','SMARKLE','650.124.1434','1987-07-15','ST_CLERK',2200.00,0.00,120,50),
(129,'Laura','Bissot','LBISSOT','650.124.5234','1987-07-16','ST_CLERK',3300.00,0.00,121,50),
(130,'Mozhe','Atkinson','MATKINSO','650.124.6234','1987-07-17','ST_CLERK',2800.00,0.00,121,50),
(131,'James','Marlow','JAMRLOW','650.124.7234','1987-07-18','ST_CLERK',2500.00,0.00,121,50),
(132,'TJ','Olson','TJOLSON','650.124.8234','1987-07-19','ST_CLERK',2100.00,0.00,121,50),
(133,'Jason','Mallin','JMALLIN','650.127.1934','1987-07-20','ST_CLERK',3300.00,0.00,122,50);
```

OUTPUT:

+ Options

	employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
Edit Copy Delete	100	Steven	King	SKING	515.123.4567	1987-06-17	AD_PRES	24000.00	0.00	0	90
Edit Copy Delete	101	Neena	Kochhar	NKOCHHAR	515.123.4568	1987-06-18	AD_VP	17000.00	0.00	100	90
Edit Copy Delete	102	Lex	De Haan	LDEHAAN	515.123.4569	1987-06-19	AD_VP	17000.00	0.00	100	90
Edit Copy Delete	103	Alexander	Hunold	AHUNOLD	590.423.4567	1987-06-20	IT_PROG	9000.00	0.00	102	60
Edit Copy Delete	104	Bruce	Ernst	BERNST	590.423.4568	1987-06-21	IT_PROG	6000.00	0.00	103	60
Edit Copy Delete	105	David	Austin	DAUSTIN	590.423.4569	1987-06-22	IT_PROG	4800.00	0.00	103	60
Edit Copy Delete	106	Valli	Pataballa	VPATABAL	590.423.4560	1987-06-23	IT_PROG	4800.00	0.00	103	60
Edit Copy Delete	107	Diana	Lorentz	DLORENTZ	590.423.5567	1987-06-24	IT_PROG	4200.00	0.00	103	60
Edit Copy Delete	108	Nancy	Greenberg	NGREENBE	515.124.4569	1987-06-25	FI_MGR	12000.00	0.00	101	100
Edit Copy Delete	109	Daniel	Faviet	DFAVIET	515.124.4169	1987-06-26	FI_ACCOUNT	9000.00	0.00	108	100
Edit Copy Delete	110	John	Chen	JCHEN	515.124.4269	1987-06-27	FI_ACCOUNT	8200.00	0.00	108	100
Edit Copy Delete	111	Ismael	Sciarra	ISCIARRA	515.124.4369	1987-06-28	FI_ACCOUNT	7700.00	0.00	108	100
Edit Copy Delete	112	Jose Manuel	Urman	JMURMAN	515.124.4469	1987-06-29	FI_ACCOUNT	7800.00	0.00	108	100
Edit Copy Delete	113	Luis	Popp	LPOPP	515.124.4567	1987-06-30	FI_ACCOUNT	6900.00	0.00	108	100
Edit Copy Delete	114	Den	Raphaely	DRAPHEAL	515.127.4561	1987-07-01	PU_MAN	11000.00	0.00	100	30
Edit Copy Delete	115	Alexander	Khoo	AKHOO	515.127.4562	1987-07-02	PU_CLERK	3100.00	0.00	114	30
Edit Copy Delete	116	Shelli	Baida	SBAIDA	515.127.4563	1987-07-03	PU_CLERK	2900.00	0.00	114	30
Edit Copy Delete	117	Sigal	Tobias	STOBIAS	515.127.4564	1987-07-04	PU_CLERK	2800.00	0.00	114	30
Edit Copy Delete	118	Guy	Himuro	GHIMURO	515.127.4565	1987-07-05	PU_CLERK	2600.00	0.00	114	30
Edit Copy Delete	119	Karen	Colmenares	KCOLMENA	515.127.4566	1987-07-06	PU_CLERK	2500.00	0.00	114	30
Edit Copy Delete	120	Matthew	Weiss	MWEISS	650.123.1234	1987-07-07	ST_MAN	8000.00	0.00	100	50
Edit Copy Delete	121	Adam	Fripp	AFRIPP	650.123.2234	1987-07-08	ST_MAN	8200.00	0.00	100	50
Edit Copy Delete	122	Payam	Kaufling	PKAUFLIN	650.123.3234	1987-07-09	ST_MAN	7900.00	0.00	100	50
Edit Copy Delete	123	Shanta	Vollman	SVOLLMAN	650.123.4234	1987-07-10	ST_MAN	6500.00	0.00	100	50
Edit Copy Delete	124	Kevin	Mourgos	KMOURGOS	650.123.5234	1987-07-11	ST_MAN	5800.00	0.00	100	50

Check all With selected: Edit Copy Delete Export

Console

1. **Write a query to list the number of jobs available in the employees' table.**

Ans:

```
1 SELECT COUNT(DISTINCT job_id) FROM employees;
```

OUTPUT:

COUNT(DISTINCT job_id)
9

2. **Write a query to get the minimum salary from the employees table.**

Ans:

```
1 SELECT MIN(salary) FROM employees;
```

OUTPUT:

+ Options

MIN(salary)
2100.00

3. **Write a query to get the maximum salary of an employee working as a Programmer.**

Ans:

```
SELECT MAX(salary)
FROM employees
WHERE job_id = 'IT_PROG';
```

OUTPUT:

+ Options

MAX(salary)
9000.00

4. **Write a query to get the average salary for each job ID excluding programmer.**

Ans:

```
SELECT job_id, AVG(salary)
FROM employees
WHERE job_id <> 'IT_PROG'
GROUP BY job_id;
```

OUTPUT:

+ Options

	job_id	AVG(salary)
Edit Copy Delete	AD_PRES	24000.000000
Edit Copy Delete	AD_VP	17000.000000
Edit Copy Delete	FI_ACCOUNT	7920.000000
Edit Copy Delete	FI_MGR	12000.000000
Edit Copy Delete	PU_CLERK	2780.000000
Edit Copy Delete	PU_MAN	11000.000000
Edit Copy Delete	ST_CLERK	2722.222222
Edit Copy Delete	ST_MAN	7280.000000

5. **Attach with query codes and with output screenshots in the report**.

Ans: Please Sir, check implemetation part.

❖ TEST RESULT / OUTPUT:

Run code successfully in MariaDB server by using XAMPP software and checked the validity.

❖ ANALYSIS AND DISCUSSION:

The lab report is usefull to aggregate functions in databases, spreadsheets and many other data manipulation software packages. SQL functions are similar to SQL operators in that both manipulate data items and both return a result.SQL functions differ from SQL operators in the format in which they appear with their arguments.I did not face any problem when I work MariaDB.

❖ SUMMARY:

In this lab report, We have learn about filtering and querying in MySQL table.We executed our code in the xampp software.