DBMS LAB-04

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- QUESTION-1

1. Calculate the total number of employees name available in the table
2. Display the maximum salary of each department and also all departments put together
3. Find the employees whose salary is between 100000 and 500000 but not exactly 120000.
4. Get the count of employees whose income is more than 1 lakh.
5. List the employees according to ascending order of salary
6. For each department, retrieve the department name, the number of employees in the department, and Maximum income for the department.
7. List the number of employees in each place.
8. List the number of employee in each country sorted high to low
9. List the number of employees in each place. (Only include places with more than 1 employee)
10. List the number of employees in each place, except the California, sorted high to low. Only include places with 2 or more employees

```
mysql> select * from employee;
+--------+----------+------------+---------+------------+--------+------------+
| emp_id | emp_name | emp_dept   | emp_age | place      | income | doj        |
+--------+----------+------------+---------+------------+--------+------------+
|   2505 | peter    | Finance    |      32 | Newyork    | 100000 | 2002-08-25 |
|   2506 | Mark     | HR         |      32 | California | 120000 | 1980-03-25 |
|   2507 | Donald   | Finance    |      28 | Arizona    | 100000 | 1995-12-26 |
|   2508 | Obama    | Management |      35 | Florida    | 500000 | 1990-10-30 |
|   2509 | Linklon  | HR         |      25 | Georgia    |  25000 | 2008-08-08 |
|   2510 | Kane     | Sales      |      29 | Alaska     |  30000 | 2000-01-01 |
|   2511 | Adam     | Management |      38 | California |  54000 | 2020-10-25 |
|   2512 | Mac      | Finance    |      40 | Florida    | 280000 | 1970-06-09 |
|   2513 | Manas    | Accounts   |      29 | India      | 600000 | 1990-12-11 |
|   2514 | Vasin    | Accounts   |      30 | India      | 800000 | 1989-10-10 |
|   2515 | peter    | Finance    |      32 | Newyork    | 100000 | 1989-10-10 |
|   2516 | Mark     | HR         |      32 | California | 120000 | 1990-12-11 |
|   2517 | Donald   | Finance    |      28 | Arizona    | 100000 | 1970-06-09 |
|   2518 | Obama    | Management |      35 | Florida    | 500000 | 2020-10-25 |
|   2519 | Linklon  | HR         |      25 | Georgia    |  25000 | 2000-01-01 |
|   2520 | Kane     | Sales      |      29 | Alaska     |  30000 | 2008-08-08 |
|   2521 | Adam     | Management |      38 | California |  54000 | 1990-10-30 |
|   2522 | Mac      | Finance    |      40 | Florida    | 280000 | 1995-12-26 |
|   2523 | Manas    | Accounts   |      29 | India      | 600000 | 1980-03-25 |
|   2524 | Vasin    | Accounts   |      30 | India      | 800000 | 2002-08-25 |
+--------+----------+------------+---------+------------+--------+------------+
20 rows in set (0.00 sec)

mysql> alter table employee
    -> add primary key(emp_id);
Query OK, 0 rows affected (0.12 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select count emp_name
    -> from employee;
ERROR 1054 (42S22): Unknown column 'count' in 'field list'
mysql> select count (emp_name)
    -> from employee;
ERROR 1630 (42000): FUNCTION labfour.count does not exist. Check the 'Function Name Par
mysql> select count(emp_name)
    -> from employee;
+-----------------+
| count(emp_name) |
+-----------------+
|              20 |
+-----------------+
1 row in set (0.01 sec)
```

```
mysql> select emp_dept,Max(income)
    -> from employee
    -> group by emp_dept;
+------------+-------------+
| emp_dept   | Max(income) |
+------------+-------------+
| Finance    |      280000 |
| HR         |      120000 |
| Management |      500000 |
| Sales      |       30000 |
| Accounts   |      800000 |
+------------+-------------+
5 rows in set (0.00 sec)

mysql> select emp_dept,Max(income)
    -> from employee;
+----------+-------------+
| emp_dept | Max(income) |
+----------+-------------+
| Finance  |      800000 |
+----------+-------------+
1 row in set (0.00 sec)

mysql> select * from employee
    -> where income>100000 and income<500000 and income!=120000;
+--------+----------+----------+---------+---------+--------+------------+
| emp_id | emp_name | emp_dept | emp_age | place   | income | doj        |
+--------+----------+----------+---------+---------+--------+------------+
|   2512 | Mac      | Finance  |      40 | Florida | 280000 | 1970-06-09 |
|   2522 | Mac      | Finance  |      40 | Florida | 280000 | 1995-12-26 |
+--------+----------+----------+---------+---------+--------+------------+
2 rows in set (0.00 sec)
```

```
mysql> select * from employee
    -> order by income ASC;
+--------+----------+------------+---------+------------+--------+------------+
| emp_id | emp_name | emp_dept   | emp_age | place      | income | doj        |
+--------+----------+------------+---------+------------+--------+------------+
|   2509 | Linklon  | HR         |      25 | Georgia    |  25000 | 2008-08-08 |
|   2519 | Linklon  | HR         |      25 | Georgia    |  25000 | 2000-01-01 |
|   2510 | Kane     | Sales      |      29 | Alaska     |  30000 | 2000-01-01 |
|   2520 | Kane     | Sales      |      29 | Alaska     |  30000 | 2008-08-08 |
|   2511 | Adam     | Management |      38 | California |  54000 | 2020-10-25 |
|   2521 | Adam     | Management |      38 | California |  54000 | 1990-10-30 |
|   2505 | peter    | Finance    |      32 | Newyork    | 100000 | 2002-08-25 |
|   2507 | Donald   | Finance    |      28 | Arizona    | 100000 | 1995-12-26 |
|   2515 | peter    | Finance    |      32 | Newyork    | 100000 | 1989-10-10 |
|   2517 | Donald   | Finance    |      28 | Arizona    | 100000 | 1970-06-09 |
|   2506 | Mark     | HR         |      32 | California | 120000 | 1980-03-25 |
|   2516 | Mark     | HR         |      32 | California | 120000 | 1990-12-11 |
|   2512 | Mac      | Finance    |      40 | Florida    | 280000 | 1970-06-09 |
|   2522 | Mac      | Finance    |      40 | Florida    | 280000 | 1995-12-26 |
|   2508 | Obama    | Management |      35 | Florida    | 500000 | 1990-10-30 |
|   2518 | Obama    | Management |      35 | Florida    | 500000 | 2020-10-25 |
|   2513 | Manas    | Accounts   |      29 | India      | 600000 | 1990-12-11 |
|   2523 | Manas    | Accounts   |      29 | India      | 600000 | 1980-03-25 |
|   2514 | Vasin    | Accounts   |      30 | India      | 800000 | 1989-10-10 |
|   2524 | Vasin    | Accounts   |      30 | India      | 800000 | 2002-08-25 |
+--------+----------+------------+---------+------------+--------+------------+
20 rows in set (0.00 sec)

mysql> select count(income)
    -> from employee
    -> where income>100000;
+---------------+
| count(income) |
+---------------+
|            10 |
+---------------+
1 row in set (0.00 sec)
```

```
mysql> select emp_dept,count(emp_dept),max(income)
    -> from employee
    -> group by emp_dept;
+------------+-----------------+-------------+
| emp_dept   | count(emp_dept) | max(income) |
+------------+-----------------+-------------+
| Finance    |               6 |      280000 |
| HR         |               4 |      120000 |
| Management |               4 |      500000 |
| Sales      |               2 |       30000 |
| Accounts   |               4 |      800000 |
+------------+-----------------+-------------+
5 rows in set (0.00 sec)

mysql> select count(place)
    -> from employee;
+--------------+
| count(place) |
+--------------+
|           20 |
+--------------+
1 row in set (0.00 sec)

mysql> select count(place)
    -> from employee
    -> group by place;
+--------------+
| count(place) |
+--------------+
|            2 |
|            4 |
|            2 |
|            4 |
|            2 |
|            2 |
|            4 |
+--------------+
7 rows in set (0.00 sec)
```

```
mysql> select place,count(place)
    -> from employee
    -> group by place;
+------------+--------------+
| place      | count(place) |
+------------+--------------+
| Newyork    |            2 |
| California |            4 |
| Arizona    |            2 |
| Florida    |            4 |
| Georgia    |            2 |
| Alaska     |            2 |
| India      |            4 |
+------------+--------------+
7 rows in set (0.00 sec)

mysql> select place,count(place)
    -> from employee
    -> group by place order by count(place);
+------------+--------------+
| place      | count(place) |
+------------+--------------+
| Newyork    |            2 |
| Arizona    |            2 |
| Georgia    |            2 |
| Alaska     |            2 |
| California |            4 |
| Florida    |            4 |
| India      |            4 |
+------------+--------------+
7 rows in set (0.00 sec)
```

```
mysql> select place,count(place)
    -> from employee
    -> group by place having count(place)>1;
+-----------+--------------+
| place     | count(place) |
+-----------+--------------+
| Newyork   |            2 |
| California |           4 |
| Arizona   |            2 |
| Florida   |            4 |
| Georgia   |            2 |
| Alaska    |            2 |
| India     |            4 |
+-----------+--------------+
7 rows in set (0.00 sec)

mysql>  select count(*),place from employee
    ->     -> group by place
    ->     -> having place!="california" and count(*)>2
    ->
    -> ;
ERROR 1064 (42000): You have an error in your SQL syntax; che
    -> having place!="california" and count(*)>2' at line 2
mysql> select count(*),place from employee
    -> group by place
    -> having place!='california' and count(*)>2
    -> order by count(*) desc;
+----------+---------+
| count(*) | place   |
+----------+---------+
|        4 | Florida |
|        4 | India   |
+----------+---------+
2 rows in set (0.01 sec)
```

- QUESTION 2

1. Create the tables for above schema and load data from the respective .csv files
2. For all customers who have loan from the bank,find their names,loan numbers and loan amount(with and without renaming tables)
3. Find the customer names,loan numbers and loan amounts for all loans at perryridge branch.

4. Find the names of all branches that have assets greater than at least one branch located at Brooklyn.
5. List in alphabetical order all customers who have loans at the perryridge branch.
6. Print the entire Loan relation in descending order of amount.If several loans have the same amount,order them in ascending order by loan number.
7. Find the average balance for all accounts.
8. Find no.of tuples in customer relation.
9. Find the total of all loan amounts.
10. Find the average account balance at the Perryridge branch.
11. Find the average account balance at each branch.
12. Find the average account balance at each branch ,where the account balance is more than 1200.
13. Find the number of depositors for each branch.
14. Find the average balance for each customer who lives in ''Harrison" and has at least 3 accounts

```
mysql> select borrower.customer_name,loan.loan_number,loan.amount
    -> from borrower,loan
    -> where borrower.loan_number=loan.loan_number;
+---------------+-------------+--------+
| customer_name | loan_number | amount |
+---------------+-------------+--------+
| Smith         | L-11        |    900 |
| Hayes         | L-15        |   1500 |
| Adams         | L-16        |   1300 |
| Jones         | L-17        |   1000 |
| Williams      | L-17        |   1000 |
| Smith         | L-23        |   2000 |
| Curry         | L-93        |    500 |
+---------------+-------------+--------+
7 rows in set (0.00 sec)

mysql> select borrower.customer_name,loan.loan_number,loan.amount
    -> from borrower,loan
    -> where borrower.loan_number=loan.loan_number and branch_name='Perryridge';
+---------------+-------------+--------+
| customer_name | loan_number | amount |
+---------------+-------------+--------+
| Hayes         | L-15        |   1500 |
| Adams         | L-16        |   1300 |
+---------------+-------------+--------+
2 rows in set (0.01 sec)

mysql>
```

```
mysql> select branch_name
    -> from branch
    -> where assets>some(select assets from branch where branch_city="Brooklyn");
+-------------+
| branch_name |
+-------------+
| Downtown    |
| Round Hill  |
+-------------+
2 rows in set (0.12 sec)
```

```
mysql> select customer_name
    -> from borrower,loan
    -> where loan.branch_name="Perryridge" and borrower.loan_number=loan.loan_number
    -> order by customer_name;
+---------------+
| customer_name |
+---------------+
| Adams         |
| Hayes         |
+---------------+
2 rows in set (0.01 sec)

mysql> select * from loan
    -> order by amount desc,loan_number asc;
+-------------+-------------+--------+
| loan_number | branch_name | amount |
+-------------+-------------+--------+
| L-23        | Redwood     |   2000 |
| L-14        | Downtown    |   1500 |
| L-15        | Perryridge  |   1500 |
| L-16        | Perryridge  |   1300 |
| L-17        | Downtown    |   1000 |
| L-11        | Round Hill  |    900 |
| L-93        | Mianus      |    500 |
+-------------+-------------+--------+
7 rows in set (0.01 sec)

mysql> select avg(balance)
    -> from account;
+--------------+
| avg(balance) |
+--------------+
|   614.285714 |
+--------------+
1 row in set (0.01 sec)

mysql> select count(customer_name)
    -> from customer;
+----------------------+
| count(customer_name) |
+----------------------+
|                   12 |
+----------------------+
1 row in set (0.02 sec)
```

```
mysql> select sum(amount)
    -> from loan;
+-------------+
| sum(amount) |
+-------------+
|        8700 |
+-------------+
1 row in set (0.00 sec)

mysql> select avg(balance)
    -> from account
    -> where branch_name="Perryridge";
+--------------+
| avg(balance) |
+--------------+
|   400.000000 |
+--------------+
1 row in set (0.01 sec)

mysql> select branch_name,avg(balance)
    -> from account
    -> group by branch_name;
+-------------+--------------+
| branch_name | avg(balance) |
+-------------+--------------+
| Brighton    |   825.000000 |
| Downtown    |   500.000000 |
| Mianus      |   700.000000 |
| Perryridge  |   400.000000 |
| Redwood     |   700.000000 |
| Round Hill  |   350.000000 |
+-------------+--------------+
6 rows in set (0.00 sec)

mysql> select branch_name,avg(balance)
    -> from account
    -> where balance>1200
    -> group by branch_name;
Empty set (0.00 sec)
```

```
mysql> select account.branch_name,count(depositor.customer_name)
    -> from account,depositor
    -> where depositor.account_number=account.account_number
    -> group by branch_name;
+-------------+---------------------------------+
| branch_name | count(depositor.customer_name) |
+-------------+---------------------------------+
| Downtown    |                               1 |
| Perryridge  |                               1 |
| Brighton    |                               2 |
| Mianus      |                               1 |
| Redwood     |                               1 |
| Round Hill  |                               1 |
+-------------+---------------------------------+
6 rows in set (0.01 sec)

mysql> select depositor.customer_name, avg (balance)
    -> from depositor, account, customer
    -> where depositor.account_number = account.account_number and
    -> depositor.customer_name = customer.customer_name and
    -> customer_city = "Harrison"
    -> group by depositor.customer_name
    -> having count(depositor.account_number) >= 3;
Empty set (0.01 sec)
```

THANK YOU