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### Mysql Day 5: 05-10-2023

#### Group by function:

**Incase of group by, we have keyword having.**

select dno, count(\*) from tbl\_employee1 group by dno having min(salary)=3000;

```
mysql> select dno, count(*) from tbl_employee1 group by dno;
+-----+-----+
| dno | count(*) |
+-----+-----+
| 10 | 2 |
| 20 | 3 |
+-----+-----+
2 rows in set (0.00 sec)

mysql> select dno, count(*) from tbl_employee1 group by dno having min(salary)=3000;
+-----+-----+
| dno | count(*) |
+-----+-----+
| 10 | 2 |
+-----+-----+
1 row in set (0.00 sec)
```

#### Single row function: (Explore more on this)

```
mysql> select name from tbl_employee1;
+-----+
| name |
+-----+
| Valan |
| Naveen |
| Mahesh |
| Gayathri |
| Aravind |
+-----+
5 rows in set (0.00 sec)

mysql> select upper(name) from tbl_employee1;
+-----+
| upper(name) |
+-----+
| VALAN |
| NAVEEN |
| MAHESH |
| GAYATHRI |
| ARAVIND |
+-----+
5 rows in set (0.00 sec)
```

### View:

create view myview as select \* from tbl\_employee1 where dno =10;  
select \* from myview;

```
mysql> create view myview as select * from tbl_employee1 where dno =10;
Query OK, 0 rows affected (0.01 sec)

mysql> select * from myview;
+-----+-----+-----+-----+
| id | name | salary | dno |
+-----+-----+-----+-----+
| 101 | Valan | 3000 | 10 |
| 102 | Naveen | 4000 | 10 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

### Update the view table:

update myview set salary = 7000 where id = 101;

It also reflects in the base table.

```
mysql> update myview set salary = 7000 where id = 101;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from myview;
+-----+-----+-----+-----+
| id | name | salary | dno |
+-----+-----+-----+-----+
| 101 | Valan | 7000 | 10 |
| 102 | Naveen | 4000 | 10 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from tbl_employee1;
+-----+-----+-----+-----+
| id | name | salary | dno |
+-----+-----+-----+-----+
| 101 | Valan | 7000 | 10 |
| 102 | Naveen | 4000 | 10 |
| 103 | Mahesh | 5000 | 20 |
| 104 | Gayathri | 6000 | 20 |
| 105 | Aravind | 7000 | 20 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

Same in reverse procedure:

```
mysql> update tbl_employee1 set salary = 9000 where id = 102;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from tbl_employee1;
+-----+-----+-----+-----+
| id | name   | salary | dno |
+-----+-----+-----+-----+
| 101 | Valan  | 7000   | 10  |
| 102 | Naveen | 9000   | 10  |
| 103 | Mahesh | 5000   | 20  |
| 104 | Gayathri | 6000  | 20  |
| 105 | Aravind | 7000   | 20  |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from myview;
+-----+-----+-----+-----+
| id | name   | salary | dno |
+-----+-----+-----+-----+
| 101 | Valan  | 7000   | 10  |
| 102 | Naveen | 9000   | 10  |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> update myview set salary = null where dno = 10;
Query OK, 2 rows affected (0.02 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select * from myview;
+-----+-----+-----+-----+
| id | name   | salary | dno |
+-----+-----+-----+-----+
| 101 | Valan  | NULL   | 10  |
| 102 | Naveen | NULL   | 10  |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

### Joins:

**create table tbl\_agents(agent\_code varchar(5),agent\_name varchar(20), working\_area varchar(20));**

```
mysql> desc tbl_agents;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| agent_code | varchar(5) | YES  |     | NULL    |      |
| agent_name | varchar(20) | YES  |     | NULL    |      |
| working_area | varchar(20) | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

### Inserting values to the agent table:

```
mysql> insert into tbl_agents values("A101","agent1",Chennai);
```

```
">
```

```
"> ;
```

```
"> ^C
```

```
mysql>
```

```
mysql> insert into tbl_agents values("A101","agent1","Chennai");
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into tbl_agents values("A102","agent2","Chennai");
```

```
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into tbl_agents values("A103","agent3","Bangalore");
```

```
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into tbl_agents values("A104","agent4","Bangalore");
```

```
Query OK, 1 row affected (0.00 sec)
```

```
mysql> commit;
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> select * from tbl_agents;
```

```
+-----+-----+-----+
| agent_code | agent_name | working_area |
+-----+-----+-----+
| A101      | agent1     | Chennai     |
| A102      | agent2     | Chennai     |
| A103      | agent3     | Bangalore   |
| A104      | agent4     | Bangalore   |
+-----+-----+-----+
```

```
4 rows in set (0.00 sec)
```

```
create table tbl_customers(customer_code varchar(5),customer_name  
varchar(20),customer_area varchar(20));
```

```
mysql> desc tbl_customers;
```

```
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| customer_code | varchar(5) | YES  |     | NULL    |       |
| customer_name | varchar(20) | YES  |     | NULL    |       |
| customer_area | varchar(20) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
```

```
3 rows in set (0.00 sec)
```

### Inserting values to the customer table:

```
mysql> insert into tbl_customers (customer_code,customer_name,customer_area) values
("C101","customer1","Chennai"),
```

```
->
```

```
("C102","customer2","Chennai"),("C103","customer3","Chennai"),("C104","customer4","Bangalore"),
```

```
-> ("C105","customer5","Bangalore");
```

```
Query OK, 5 rows affected (0.01 sec)
```

```
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> commit;
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> select * from tbl_customers;
```

```
+-----+-----+-----+
| customer_code | customer_name | customer_area |
+-----+-----+-----+
| C101          | customer1     | Chennai       |
| C102          | customer2     | Chennai       |
| C103          | customer3     | Chennai       |
| C104          | customer4     | Bangalore     |
| C105          | customer5     | Bangalore     |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> select
```

```
tbl_agents.agent_code,tbl_agents.agent_name,tbl_customers.customer_name from
tbl_agents,tbl_customers where tbl_agents.working_area =
tbl_customers.customer_area;
```

```
+-----+-----+-----+
| agent_code | agent_name | customer_name |
+-----+-----+-----+
| A102       | agent2     | customer1     |
| A101       | agent1     | customer1     |
| A102       | agent2     | customer2     |
| A101       | agent1     | customer2     |
| A102       | agent2     | customer3     |
| A101       | agent1     | customer3     |
| A104       | agent4     | customer4     |
| A103       | agent3     | customer4     |
| A104       | agent4     | customer5     |
| A103       | agent3     | customer5     |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

### Using Table name:

mysql> **select**

**tbl\_agents.agent\_code,tbl\_agents.agent\_name,tbl\_customers.customer\_name from**  
**tbl\_agents,tbl\_customers where tbl\_agents.working\_area =**  
**tbl\_customers.customer\_area order by tbl\_agents.agent\_code asc;**

```
+-----+-----+-----+
| agent_code | agent_name | customer_name |
+-----+-----+-----+
| A101      | agent1     | customer1     |
| A101      | agent1     | customer2     |
| A101      | agent1     | customer3     |
| A102      | agent2     | customer1     |
| A102      | agent2     | customer2     |
| A102      | agent2     | customer3     |
| A103      | agent3     | customer4     |
| A103      | agent3     | customer5     |
| A104      | agent4     | customer4     |
| A104      | agent4     | customer5     |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

### Using alias:

mysql> **select a.agent\_code,a.agent\_name,c.customer\_name from tbl\_agents**  
**a,tbl\_customers c where a.working\_area = c.customer\_area;**

```
+-----+-----+-----+
| agent_code | agent_name | customer_name |
+-----+-----+-----+
| A102      | agent2     | customer1     |
| A101      | agent1     | customer1     |
| A102      | agent2     | customer2     |
| A101      | agent1     | customer2     |
| A102      | agent2     | customer3     |
| A101      | agent1     | customer3     |
| A104      | agent4     | customer4     |
| A103      | agent3     | customer4     |
| A104      | agent4     | customer5     |
| A103      | agent3     | customer5     |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

```
mysql> select a.agent_code,a.agent_name,c.customer_name from tbl_agents  
a,tbl_customers c where a.working_area = c.customer_area order by a.agent_code;
```

```
+-----+-----+-----+  
| agent_code | agent_name | customer_name |  
+-----+-----+-----+  
| A101      | agent1    | customer1     |  
| A101      | agent1    | customer2     |  
| A101      | agent1    | customer3     |  
| A102      | agent2    | customer1     |  
| A102      | agent2    | customer2     |  
| A102      | agent2    | customer3     |  
| A103      | agent3    | customer4     |  
| A103      | agent3    | customer5     |  
| A104      | agent4    | customer4     |  
| A104      | agent4    | customer5     |  
+-----+-----+-----+  
10 rows in set (0.00 sec)
```

#### **Using Inner Join:**

```
mysql> select a.agent_code,a.agent_name,c.customer_name from tbl_agents a join  
tbl_customers c on a.working_area = c.customer_area;
```

```
+-----+-----+-----+  
| agent_code | agent_name | customer_name |  
+-----+-----+-----+  
| A102      | agent2    | customer1     |  
| A101      | agent1    | customer1     |  
| A102      | agent2    | customer2     |  
| A101      | agent1    | customer2     |  
| A102      | agent2    | customer3     |  
| A101      | agent1    | customer3     |  
| A104      | agent4    | customer4     |  
| A103      | agent3    | customer4     |  
| A104      | agent4    | customer5     |  
| A103      | agent3    | customer5     |  
+-----+-----+-----+  
10 rows in set (0.00 sec)
```

By default while join is not specified it will be inner join.

### **EQUIV JOIN:**

```
mysql> select a.agent_code,a.agent_name,c.customer_name from tbl_agents a inner join  
tbl_customers c on a.working_area = c.customer_area;
```

agent_code	agent_name	customer_name
A102	agent2	customer1
A101	agent1	customer1
A102	agent2	customer2
A101	agent1	customer2
A102	agent2	customer3
A101	agent1	customer3
A104	agent4	customer4
A103	agent3	customer4
A104	agent4	customer5
A103	agent3	customer5

10 rows in set (0.00 sec)

### **NON EQUIV JOIN:**

```
mysql> select a.agent_code,a.agent_name,c.customer_name from tbl_agents a inner join  
tbl_customers c on a.working_area != c.customer_area;
```

agent_code	agent_name	customer_name
A104	agent4	customer1
A103	agent3	customer1
A104	agent4	customer2
A103	agent3	customer2
A104	agent4	customer3
A103	agent3	customer3
A102	agent2	customer4
A101	agent1	customer4
A102	agent2	customer5
A101	agent1	customer5

10 rows in set (0.00 sec)



```
mysql> select a.agent_code,a.agent_name,c.customer_name from tbl_agents a inner join  
tbl_customers c on a.working_area != c.customer_area order by a.agent_code;
```

```
+-----+-----+-----+  
| agent_code | agent_name | customer_name |  
+-----+-----+-----+  
| A101      | agent1    | customer4     |  
| A101      | agent1    | customer5     |  
| A102      | agent2    | customer4     |  
| A102      | agent2    | customer5     |  
| A103      | agent3    | customer1     |  
| A103      | agent3    | customer2     |  
| A103      | agent3    | customer3     |  
| A104      | agent4    | customer1     |  
| A104      | agent4    | customer2     |  
| A104      | agent4    | customer3     |  
+-----+-----+-----+
```

10 rows in set (0.00 sec)

```
mysql> insert into tbl_agents values("A105","agent5","Sivakasi");  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into tbl_agents values("A106","agent6","Srivi");  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into tbl_customers values("C106","customer6","Rjpm");  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> insert into tbl_customers values("C107","customer7","Ttl");  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select * from tbl_agents;  
+-----+-----+-----+  
| agent_code | agent_name | working_area |  
+-----+-----+-----+  
| A101      | agent1    | Chennai     |  
| A102      | agent2    | Chennai     |  
| A103      | agent3    | Bangalore   |  
| A104      | agent4    | Bangalore   |  
| A105      | agent5    | Sivakasi    |  
| A106      | agent6    | Srivi       |  
+-----+-----+-----+
```

```
mysql> select * from tbl_customers;
```

customer_code	customer_name	customer_area
C101	customer1	Chennai
C102	customer2	Chennai
C103	customer3	Chennai
C104	customer4	Bangalore
C105	customer5	Bangalore
C106	customer6	Rjpm
C107	customer7	Ttl

7 rows in set (0.00 sec)

```
mysql> select * from tbl_agents a left outer join tbl_customers c on a.working_area = c.customer_area;
```

agent_code	agent_name	working_area	customer_code	customer_name	customer_area
A101	agent1	Chennai	C103	customer3	Chennai
A101	agent1	Chennai	C102	customer2	Chennai
A101	agent1	Chennai	C101	customer1	Chennai
A102	agent2	Chennai	C103	customer3	Chennai
A102	agent2	Chennai	C102	customer2	Chennai
A102	agent2	Chennai	C101	customer1	Chennai
A103	agent3	Bangalore	C105	customer5	Bangalore
A103	agent3	Bangalore	C104	customer4	Bangalore
A104	agent4	Bangalore	C105	customer5	Bangalore
A104	agent4	Bangalore	C104	customer4	Bangalore
A105	agent5	Sivakasi	NULL	NULL	NULL
A106	agent6	Srivi	NULL	NULL	NULL

12 rows in set (0.00 sec)

```
mysql> select * from tbl_agents a right outer join tbl_customers c on a.working_area = c.customer_area;
```

agent_code	agent_name	working_area	customer_code	customer_name	customer_area
A102	agent2	Chennai	C101	customer1	Chennai
A101	agent1	Chennai	C101	customer1	Chennai
A102	agent2	Chennai	C102	customer2	Chennai

A101	agent1	Chennai	C102	customer2	Chennai	
A102	agent2	Chennai	C103	customer3	Chennai	
A101	agent1	Chennai	C103	customer3	Chennai	
A104	agent4	Bangalore	C104	customer4	Bangalore	
A103	agent3	Bangalore	C104	customer4	Bangalore	
A104	agent4	Bangalore	C105	customer5	Bangalore	
A103	agent3	Bangalore	C105	customer5	Bangalore	
NULL	NULL	NULL	C106	customer6	Rjpm	
NULL	NULL	NULL	C107	customer7	Ttl	

+-----+-----+-----+-----+-----+-----+

12 rows in set (0.00 sec)

mysql> **select \* from tbl\_agents a cross join tbl\_customers;**

+-----+-----+-----+-----+-----+-----+

agent_code	agent_name	working_area	customer_code	customer_name	customer_area	
------------	------------	--------------	---------------	---------------	---------------	--

+-----+-----+-----+-----+-----+-----+

A106	agent6	Srivi	C101	customer1	Chennai	
A105	agent5	Sivakasi	C101	customer1	Chennai	
A104	agent4	Bangalore	C101	customer1	Chennai	
A103	agent3	Bangalore	C101	customer1	Chennai	
A102	agent2	Chennai	C101	customer1	Chennai	
A101	agent1	Chennai	C101	customer1	Chennai	
A106	agent6	Srivi	C102	customer2	Chennai	
A105	agent5	Sivakasi	C102	customer2	Chennai	
A104	agent4	Bangalore	C102	customer2	Chennai	
A103	agent3	Bangalore	C102	customer2	Chennai	
A102	agent2	Chennai	C102	customer2	Chennai	
A101	agent1	Chennai	C102	customer2	Chennai	
A106	agent6	Srivi	C103	customer3	Chennai	
A105	agent5	Sivakasi	C103	customer3	Chennai	
A104	agent4	Bangalore	C103	customer3	Chennai	
A103	agent3	Bangalore	C103	customer3	Chennai	
A102	agent2	Chennai	C103	customer3	Chennai	
A101	agent1	Chennai	C103	customer3	Chennai	
A106	agent6	Srivi	C104	customer4	Bangalore	
A105	agent5	Sivakasi	C104	customer4	Bangalore	
A104	agent4	Bangalore	C104	customer4	Bangalore	
A103	agent3	Bangalore	C104	customer4	Bangalore	
A102	agent2	Chennai	C104	customer4	Bangalore	
A101	agent1	Chennai	C104	customer4	Bangalore	
A106	agent6	Srivi	C105	customer5	Bangalore	
A105	agent5	Sivakasi	C105	customer5	Bangalore	
A104	agent4	Bangalore	C105	customer5	Bangalore	

A103	agent3	Bangalore	C105	customer5	Bangalore	
A102	agent2	Chennai	C105	customer5	Bangalore	
A101	agent1	Chennai	C105	customer5	Bangalore	
A106	agent6	Srivi	C106	customer6	Rjpm	
A105	agent5	Sivakasi	C106	customer6	Rjpm	
A104	agent4	Bangalore	C106	customer6	Rjpm	
A103	agent3	Bangalore	C106	customer6	Rjpm	
A102	agent2	Chennai	C106	customer6	Rjpm	
A101	agent1	Chennai	C106	customer6	Rjpm	
A106	agent6	Srivi	C107	customer7	Ttl	
A105	agent5	Sivakasi	C107	customer7	Ttl	
A104	agent4	Bangalore	C107	customer7	Ttl	
A103	agent3	Bangalore	C107	customer7	Ttl	
A102	agent2	Chennai	C107	customer7	Ttl	
A101	agent1	Chennai	C107	customer7	Ttl	

+-----+-----+-----+-----+-----+-----+

42 rows in set (0.00 sec)

**IDE -> from: 10 Aug 2023 to: 10 Aug 2023, (1)**

**Source Repository -> from: 11 Aug 2023 to: 18 Aug 2023, (5), 21 Aug 2023,  
Quiz+lab= 2.45 hrs**

**HTML,CSS, JS, BS -> from : 22 Aug 2023 to: 31 Aug 2023, (9), 6&7 Sep 2023,  
Quiz+lab = 5.00 hrs**

**Angular -> from: 11 Sep 2023 to: 20 Sep 2023, (8), 23 Sep 2023,  
Quiz+lab = 4.30 hrs.**

**Database -> from: 27 Sep 2023 to: 06 Oct 2023, (7), (tbd)**