Last login: Mon Mar 18 07:50:07 on console Macbook@Kshitijs=MacBook-Air ~ % mysql -u root
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.3.0 Homebrew

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

Reading table information for completion of table and column names You can turn off this feature to get a quicker startup with -A

Database changed mysql> select \* from emp;

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980–12–17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	j 30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	j 30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	j 30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	j 30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	j 10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	j 30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	j 20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	j 10
1001	gopal	NULL	NULL	NULL	4000.00	NULL	NULL
+	+	+	+	+	+	+	+

15 rows in set (0.01 sec)

<code>mysql></code> create or replace view v1 as select empno,ename,job from emp; Query OK, 0 rows affected (0.02 sec)

mysql> select \* from v1;

, , ,		
empno	ename	job
7369	SMITH	CLERK
7499	ALLEN	SALESMAN
7521	WARD	SALESMAN
7566	JONES	MANAGER
7654	MARTIN	SALESMAN
7698	BLAKE	MANAGER
7782	CLARK	MANAGER
7788	SCOTT	ANALYST
7839	KING	PRESIDENT
7844	TURNER	SALESMAN
7876	ADAMS	CLERK
7900	JAMES	CLERK
7902	FORD	ANALYST
7934	MILLER	CLERK
1001	gopal	NULL
+	·	++

15 rows in set (0.00 sec)

mysql> inset into v1
-> values(1002,"Queen","Rest");
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'inset......

into v1
values(1002,"Queen","Rest")' at line 1
mysql> insert into v1 values(1002,"Queen","Rest");
Query OK, 1 row affected (0.00 sec)

mysql> select \* from emp;

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		L					
empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	j 30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	j 36
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	36
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	16
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	26
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	j 16
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	36
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	36
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	26
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	16
1001	gopal	NULL	NULL	NULL	4000.00	NULL	NULI
1002	Queen	Rest	NULL	NULL	NULL	NULL	NULI
	+						

16 rows in set (0.00 sec)

mysql> lock table emp read; Display all 862 possibilities? (y or n) mysql> lock table emp read; Query OK, 0 rows affected (0.00 sec)

# lock the table

mysql> insert into v1 values(1003,"Dasi","Kaam");
ERROR 1100 (HY000): Table 'v1' was not locked with LOCK TABLES
mysql> unlock tables # it will unlock the table

Query OK, 0 rows affected (0.00 sec)

mysql> insert into v1 values(1003,"Dasi","Kaam");
Query OK, 1 row affected (0.00 sec)

mysql> select \* from emp;

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10
1001	gopal	NULL	NULL	NULL	4000.00	NULL	NULL
1002	Queen	Rest	NULL	NULL	NULL	NULL	NULL
1003	Dasi	Kaam	NULL	NULL	NULL	NULL	NULL

17 rows in set (0.00 sec)

mysql> lock table v1 read;

# lock the table

Query OK, 0 rows affected (0.00 sec)

mysql> insert into v1 values(1003,'Arjit','sing'); ERROR 1099 (HY000): Table 'emp' was locked with a READ lock and can't be updated

mysql> unlock tables;

Query OK, 0 rows affected (0.00 sec)

mysql> insert into v1 values(1003,'Arjit','sing'); Query OK, 1 row affected (0.01 sec)

mysql> create or replace view emp\_v2

-> as
-> select e.empno,e.ename,e.job,d.deptno,d.dname from emp e join dept d on(d.deptno=e.deptno);
ERROR 1054 (42S22): Unknown column 'd.deptno' in 'field list'
mysql> select \* from dept;

dno	dname	1oc
10   20   30   40   50	ACCOUNTING RESEARCH SALES OPERATIONS testing	NEW YORK   DALLAS   CHICAGO   BOSTON

5 rows in set (0.01 sec)

mysql> create or replace view emp\_v2 as select e.empno,e.ename,e.job,d.no,d.dname from emp e join dept d on(d.dno=e.deptno); ERROR 1054 (42S22): Unknown column 'd.no' in 'field list' mysql> create or replace view emp\_v2 as select e.empno,e.ename,e.job,d.dno,d.dname from emp e join dept d on(d.dno=e.deptno); Query OK, 0 rows affected (0.00 sec)

mysql> select \* from emp\_v2;

III y	mysqr> serect * from emp_vz,								
ļ	empno	ename	job	dno	dname				
Ī	7369	SMITH	CLERK	20	RESEARCH	l			
İ	7499	ALLEN	SALESMAN	30	SALES	ĺ			
İ	7521	WARD	SALESMAN	30	SALES	İ			
İ	7566	JONES	MANAGER	20	RESEARCH	ĺ			
İ	7654	MARTIN	SALESMAN	30	SALES	ĺ			
İ	7698	BLAKE	MANAGER	30	SALES	ĺ			
İ	7782	CLARK	MANAGER	10	ACCOUNTING	ĺ			
İ	7788	SCOTT	ANALYST	20	RESEARCH	ĺ			
İ	7839	KING	PRESIDENT	10	ACCOUNTING	ĺ			
İ	7844	TURNER	SALESMAN	30	SALES	ĺ			
İ	7876	ADAMS	CLERK	20	RESEARCH	ĺ			
	7900	JAMES	CLERK	30	SALES	l			
	7902	FORD	ANALYST	20	RESEARCH	ı			
	7934	MILLER	CLERK	10	ACCOUNTING				

14 rows in set (0.01 sec)

mysql> select

- -> TABLE\_SCHEMA, -> TABLE\_NAME,
- -> TABLE TYPE
- -> FROM information\_schema.TABLES
- -> where TABLE\_SCHEMA LIKE 'impact' AND TABLE\_TYPE LIKE 'VIEW';

TABLE_SCHEMA	TABLE_NAME	TABLE_TYPE
impact   impact	v1 emp_v2	VIEW

2 rows in set (0.01 sec)

mysql> show create view v1;

| View | Create View

| character\_set\_client | collation\_connection |

| v1 | CREATE ALGORITHM—UNDEFINED DEFINER=`root'@`localhost` SQL SECURITY DEFINER VIEW `v1` AS select `emp`.`empno` AS `empno`, `emp`.`ename` AS `ename`, `emp`.`job` AS `job` from `emp` | utf8mb4 | utf8mb4\_0900\_ai\_ci |

1 row in set (0.01 sec)

mysql> alter view v1 as select empno,ename,job,mgr from emp;

Query OK, 0 rows affected (0.01 sec)

mysql> show create view v1;

```
| View | Create View
                                                        | character_set_client | collation_connection |
        | CREATE ALGORITHM=UNDEFINED DEFINER=`root'@`localhost` SQL SECURITY DEFINER VIEW `v1` AS select `emp`.`empno`, AS `empno`, `empno`, `empno`, `ename`, `emp`.`ename` AS `ename`, `emp`.
 'job` AS 'job`, 'emp`.'mgr` AS 'mgr` from 'emp' | utf8mb4
                                                                                   | utf8mb4_0900_ai_ci |
1 row in set (0.01 sec)
mysql> select*from v1:
  empno | ename | job
                                   | mgr
   7369
           SMITH
                      CLERK
                                     7902
   7499
           ALLEN
                       SALESMAN
                                     7698
   7521
                      SALESMAN
           WARD
                                     7698
                                    7839
7698
   7566
           JONES
                      MANAGER
           MARTIN
                      SALESMAN
   7654
   7698
           BI AKE
                       MANAGER
                                     7839
           CLARK
                       MANAGER
   7782
   7788
           SCOTT
                      ANALYST
                                     7566
           KING
                       PRESIDENT
   7839
                                     NULL
   7844
           TURNER
                      SALESMAN
                                     7698
   7876
           ADAMS
                      CLERK
                                     7788
           JAMES
   7900
                      CLERK
                                     7698
   7902
           FORD
                       ANALYST
                                     7566
                                     7782
           MILLER
                      CLERK
   7934
           gopal
Queen
   1001
                      NULL
                                    NULL
   1002
                      Rest
                                     NULL
   1003
           Dasi
                       Kaam
                                    NULL
           Arjit
18 rows in set (0.00 sec)
mysql> show create view emp_v2;
| View | Create View
                                                                                                                                                 | character_set_client | collation_conn
ection I
 -----+
emp_v2 | CREATE ALGORITHM=UNDEFINED DEFINER=`root`@`localhost` SQL SECURITY DEFINER VIEW `emp_v2` AS select `e`.`empno` AS `empno`,'e`.`ename` AS `ename`,
job` AS `job`,`d`.`dno` AS `dno`,`d`.`dname` AS `dname` from (`emp` `e` join `dept` `d` on((`d`.`dno` = `e`.`deptno`))) | utf8mb4 | utf8mb4_89
 job` AS
                                                                                                                                                                            | utf8mb4_0900_a
i_ci
1 row in set (0.00 sec)
```

mysql> alter view v1 as select e.empno,e.ename,e.job,e.mgr,d.dno,d.dname from emp e join dept d on(d.dno=e.deptno); Query OK, 0 rows affected (0.00 sec)

+	+	+	+	L
empno	ename	job	dno	dname
7369	SMITH	CLERK	20	RESEARCH
7499	ALLEN	SALESMAN	30	SALES
7521	WARD	SALESMAN	30	SALES
7566	JONES	MANAGER	20	RESEARCH
7654	MARTIN	SALESMAN	30	SALES
7698	BLAKE	MANAGER	30	SALES
7782	CLARK	MANAGER	10	ACCOUNTING
7788	SCOTT	ANALYST	20	RESEARCH
7839	KING	PRESIDENT	10	ACCOUNTING
7844	TURNER	SALESMAN	30	SALES
7876	ADAMS	CLERK	20	RESEARCH
7900	JAMES	CLERK	30	SALES
7902	FORD	ANALYST	20	RESEARCH
7934	MILLER	CLERK	10	ACCOUNTING
+	+	+	+	<del> </del>

14 rows in set (0.00 sec)

mysql> drop view v1;

Query OK, 0 rows affected (0.01 sec)

mysql> create or replce view test\_v12

-> as select

-> empno, ename, sal, deptno from where deptno=30 with check option:

ERROR 1864 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'replc e view test v12 as select

empno,ename,sal,deptno from where deptno=30 with ' at line 1

mysql> create or replace view test\_v12 as select empno,ename,sal,deptno from where deptno=30 with check option;

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'where deptno=30 with check option' at line 1

mysql> create or replace view test\_v12 as select empno,ename,sal,deptno from emp where deptno=30 with check option;

Query OK, 0 rows affected (0.01 sec)

mysql> select \* from test v12;

empno	ename	sal	deptno
7499 7521 7654 7698 7844 7900	ALLEN   WARD   MARTIN   BLAKE   TURNER   JAMES	1600.00   1250.00   1250.00   2850.00   1500.00   950.00	30   30   30   30   30

6 rows in set (0.00 sec)

mysql> insert into test\_v12 values(7143,'RAJESH',5000,30);

Query OK, 1 row affected (0.00 sec)

```
mysql> insert into test_v12 values(7143,'RAJESH',5000,10);
ERROR 1369 (HY000): CHECK OPTION failed 'impact.test_v12'
                                                                                    #invalid
mysql> use assignment;
ERROR 1049 (42000): Unknown database 'assignment'
mysql> show databases;
| Database
  assignments
  impact
  information schema
  mysq1
  performance_schema
7 rows in set (0.01 sec)
mysql> use assignments;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
Database changed
mysql> show tables;
| Tables_in_assignments |
  customer
  dept
  emn
  orders
  orderstatus
6 rows in set (0.00 sec)
mysql> create table saleman(salesman_id int,name varchar(20),city varchar(20),commission float)
Query OK, 0 rows affected (0.02 sec)
mysql> insert into salesman values (5001, 'James Hoog', 'New York', 0.15),
Display all 808 possibilities? (v or n)
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '' at
insert into salesman values (5001, 'James Hoog', 'New York', 0.15), (5002, 'Nail Knite', 'Paris', 0.13), (5005, 'Pit Alex', 'London', 0.11), (5006, 'Mc Lyon', 'Paris'
mysdir insert into sateshein values (ood), sames noog, new out, olla), (5007, Paul Adam', Rome', 0.13), (5003, 'Lauson Hen', 'San Jose', 0.15); ERROR 1146 (42S02): Table 'assignments.salesman' doesn't exist
mysql> insert into saleman values (5001,'James Hoog','New York',0.15), (5002,'Nail Knite','Paris',0.13),(5005,'Pit Alex','London',0.11),(5006,'Mc Lyon','Paris',
0.14),(5007,'Paul Adam','Rome',0.13),(5003,'Lauson Hen','San Jose',0.15);
Query OK, 6 rows affected (0.00 sec)
Records: 6 Duplicates: 0 Warnings: 0
mysql> create or replace view salespeople select * from saleman where city='New York';
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'select * from saleman where city='New York'' at line 1
mvsql> select *from saleman:
| salesman id | name
                               | city
                                            | commission |
          5001
                                                     0.15
                  James Hoog
                                 New York
          5002
                  Nail Knite
                                 Paris
                                                     0.13
          5005
                  Pit Alex
                                  London
                                                     0.11
          5006
                  Mc Lyon
                                 Paris
                                                     0.14
                  Paul Adam
                                  Rome
          5003 | Lauson Hen |
                                 San Jose
                                                     0.15
6 rows in set (0.00 sec)
mysql> create or replace view salespeople as select * from saleman where city='New York';
Query OK, 0 rows affected (0.00 sec)
mysql> select * from salespeople:
 salesman id | name
                               | citv
                                            | commission
          5001 | James Hoog | New York |
                                                     0.15
1 row in set (0.00 sec)
mysql> create or replace view salespersons as select salesman_id,name,city from saleman;
Query OK, 0 rows affected (0.00 sec)
mvsal>
mysql> select * from salespersons;
                               | city
| salesman id | name
          5001
                  James Hoog |
                                 New York
                  Nail Knite
          5002
                                 Paris
          5005
                  Pit Alex
                                 London
                  Mc Lyon
          5006
                                 Paris
          5007
                  Paul Adam
                                 Rome
          5003 | Lauson Hen |
                                 San Jose
6 rows in set (0.01 sec)
mysql> drop table customer:
ERROR 3730 (HY000): Cannot drop table 'customer' referenced by a foreign key constraint 'orders_ibfk_2' on table 'orders'.
mysql> drop table orders;
Query OK, 0 rows affected (0.02 sec)
```

mysql> drop table customer; Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

mysql> create table customer(customer\_id int,cust\_name varchar(20),city varchar(10),grade int,salesman\_id int);

```
mysql> insert into customer values(3002, 'Nick Rimando', 'New York', 100, 5001);
Query OK, 1 row affected (0.00 sec)
mysql> insert into customer values(3007, 'Brad Davis', 'New York', 200 ,5001);
Query OK, 1 row affected (0.00 sec)
mysql> insert into customer values (3005, 'Graham Zusi', 'California', 200, 5002);
<code>mysql></code> insert into customer values (3008, 'Julian Green', 'London', 300, 5002); Query OK, 1 row affected (0.00 sec)
mysql> insert into customer values (3004, 'Fabian Johnson', 'Paris', 300, 5006);
Query OK, 1 row affected (0.00 sec)
mysql> insert into customer values (3009, 'Geoff Cameron', 'Berlin', 100, 5003);
Query OK, 1 row affected (0.00 sec)
mysql> insert into customer values (3003,'Jozy Altidor','Moscow',200,5007);
Query OK, 1 row affected (0.00 sec)
mysql> insert into customer values (3001,' Brad Guzan','London',null,5005);
Query OK, 1 row affected (0.00 sec)
mysql> create table orders (ord_no int,purch_amt float,ord_date date,customer_id int,salesman_id int);
Query OK, 0 rows affected (0.01 sec)
<code>mysql></code> insert into orders values(70001,150.5,'2012-10-05',3005,5002); Query OK, 1 row affected (0.00 sec)
mysql> insert into orders values(70009,270.65,'2012-09-10',3001,5005);
Query OK, 1 row affected (0.00 sec)
mysql> insert into orders values(70002,65.26,'2012-10-05',3002,5001);
Query OK, 1 row affected (0.00 sec)
mysql> insert into orders values(70004,110.5,'2012-08-17',3009,5003);
Query OK, 1 row affected (0.00 sec)
mysql> insert into orders values(70007,948.5,'2012-09-10',3005,5002);
Query OK, 1 row affected (0.00 sec)
mysql> insert into orders values(70005,2400.6,'2012-07-27',3007,5001);
Query OK, 1 row affected (0.00 sec)
<code>mysql></code> insert into orders values(70008,5760,'2012-09-10',3002,5001); Query OK, 1 row affected (0.00 sec)
```

## mvsal> select \* from orders:

70001   150.5   2012-10-05   3005   5002   70009   270.65   2012-09-10   3001   5005   70002   65.26   2012-10-05   3002   5001   70004   110.5   2012-08-17   3009   5003	_	.,					
70009     270.65     2012-09-10     3001     5005       70002     65.26     2012-10-05     3002     5001       70004     110.5     2012-08-17     3009     5003       70007     948.5     2012-09-10     3005     5002       70005     2400.6     2012-07-27     3007     5001	į	ord_no	purch_amt	ord_date	customer_id	salesman_id	i
/0008   5/60   2012-09-10   3002   5001	1	70009 70002 70004 70007 70005	270.65 65.26 110.5 948.5 2400.6	2012-09-10 2012-10-05 2012-08-17 2012-09-10 2012-07-27	3001 3002 3009 3005 3007		
		70000	5/00	2012-09-10	3002	1 2001	!

7 rows in set (0.00 sec)

## mysql> select \* from customer;

_	·	·			
	customer_id	cust_name	city	grade	salesman_id
	3002 3007	Nick Rimando   Brad Davis	New York	100	5001   5001
	3005	Graham Zusi	California	200	5002
	3008 3004	Julian Green   Fabian Johnson	London   Paris	300   300	5002     5006
	3009 3003	Geoff Cameron   Jozv Altidor	Berlin   Moscow	100 200	5003   5007
	3001	Brad Guzan	London	NULL	5005

8 rows in set (0.00 sec)

mysql> create or replace view v3 as select distinct(c.customer\_id),avg(o.purch\_amt),sum(o.purch\_amt),o.ord\_date from customer c join orders o on(o.customer\_id=c.customer\_id) order by o.ord\_date; Query OK, 0 rows affected (0.01 sec)

mysql> select \* form v3; ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'form v3' at line 1

ws at line 1
mysql > select \* from v3;
ERROR 1140 (42000): In aggregated query without GROUP BY, expression #1 of SELECT list contains nonaggregated column 'assignments.c.customer\_id'; this is incomp mysql> create or replace view v3 as select distinct(c.customer\_id),avg(o.purch\_amt),sum(o.purch\_amt),o.ord\_date from customer c join orders o on(o.customer\_id=c

.customer\_id) group by o.ord\_date; Query OK, 0 rows affected (0.01 sec)

ERROR 1055 (42000): Expression #1 of SELECT list is not in GROUP BY clause and contains nonaggregated column 'assignments.c.customer\_id' which is not functional ly dependent on columns in GROUP BY clause; this is incompatible with sql\_mode=only\_full\_group\_by

mysql> create or replace view v3 as select count(c.customer\_id),avg(o.purch\_amt),sum(o.purch\_amt),o.ord\_date from customer c join orders o on(o.customer\_id=c.cu stomer\_id) group by o.ord\_date; Query OK, 0 rows affected (0.01 sec)

mysql> select \* from v3;

count(c.customer_id)   avg(o.purch_amt)   sum(o.purch_amt)   ord_date   3   2326.383331298828   6979.149993896484   2012-09-10	
	;
2   107.88000106811523   215.76000213623047   2012-10-05   1   2400.60009765625   2400.60009765625   2012-07-27   1   110.5   110.5   2012-08-17	-05   -27

mysql> create or replace view v32 as select ord\_date,count(distinct(customer\_id)) as uniqueCustomer,

mysql> select \* from v32;

ord_date	uniqueCustomer	avg	sum
2012-07-27   2012-08-17   2012-09-10   2012-10-05	1 1 1 3 1 2	2400.60009765625 110.5 2326.383331298828 107.88000106811523	2400.60009765625 110.5 6979.149993896484 215.76000213623047

4 rows in set (0.00 sec)

mysql> # Subquery

Query OK, 0 rows affected (0.02 sec)

mysql> # 1. Single Row subquery Query OK, 0 rows affected (0.00 sec)

 $\label{eq:mysql} \mbox{ select * from emp where sal >(select sal from emp where ename='ALLEN');}$ 

empno	ename	job	mgr	hiredate	sal	comm	deptno
7566   7698   7782   7788   7839   7902		MANAGER	7839 7566 NULL	1981-04-02   1981-05-01   1981-06-09   1982-12-09   1981-11-17   1981-12-03	2850.00 2450.00 3000.00 5000.00		20   30   10   20   10   20

6 rows in set (0.03 sec)

mysql> select \* from emp;

	empno	ename	job	mgr	hiredate	sal	comm	deptno
-	7369 7499 7521 7566 7654 7698 7782 7788 7839	SMITH ALLEN WARD JONES MARTIN BLAKE CLARK SCOTT KING	CLERK SALESMAN SALESMAN MANAGER SALESMAN MANAGER MANAGER MANAGER ANALYST PRESIDENT	7902   7698   7698   7698   7839   7698   7839   7839   7566   NULL	1980-12-17   1981-02-20   1981-02-22   1981-04-02   1981-09-28   1981-05-01   1981-06-09   1982-12-09   1981-11-17	800.00   1600.00   1250.00   2975.00   1250.00   2850.00   2450.00   3000.00	NULL 300.00 500.00 NULL 1400.00 NULL NULL NULL	20   30   30   20   30   30   10   20
	7844   7876	TURNER   ADAMS	SALESMAN   CLERK	7698   7788	1981-09-08   1983-01-12	1500.00   1100.00	0.00   NULL	30     20
	7900   7902   7934	JAMES   FORD   MILLER	CLERK   ANALYST   CLERK	7698   7566   7782	1981-12-03   1981-12-03   1982-01-23	950.00   3000.00   1300.00	NULL NULL NULL	30   20   10

14 rows in set (0.00 sec)

mysql> select \* from emp where job = (select job from emp where ename = 'ALLEN') and sal = (select sal from emp where ename='ALLEN');

+	 ename	-	 hiredate	comm	 +
Ī			 1981-02-20		

1 row in set (0.01 sec)

mysql> select max(sal) from emp where sal > (select sal from emp where sal>max(sal));

mysql> select max(sal) from emp where sal > (select sal from emp where sal>max(sal));

ERROR 1111 (HY000): Invalid use of group function
mysql> select max(sal) from emp where sal < (select sal from emp where sal>max(sal));

ERROR 1111 (HY000): Invalid use of group function
mysql> select max(sal) from emp where sal <select max(sal) from emp);

ERROR 1046 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'select max(sal) from emp)' at line 1

mysql> select max(sal) from emp where sal <(select max(sal) from emp);

| max(sal) 3000.00

1 row in set (0.00 sec)

mysql> Select \* from emp Where sal > ALL(Select sal from emp Where deptno = 30);

ا		ename			hiredate	•		
	7566 7788 7839	JONES SCOTT KING	MANAGER ANALYST PRESIDENT	7839 7566 NULL	1981-04-02   1982-12-09   1981-11-17   1981-12-03	2975.00 3000.00 5000.00	NULL   NULL   NULL	20   20   10

4 rows in set (0.01 sec)

mysql> select \* from emp where sal > ANY(1600,1250,1250,2850);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '1600, 1250,1250,2850)' at line 1
mysql> Select \* from emp where sal > ANY(select sal from emp where deptno = 30);

	empno	ename	job	mgr	hiredate	sal	comm	deptno
•	7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
	7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
	7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
	7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
	7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
	7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
	7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
	7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
	7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
	7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
	7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
	7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10
					L			

12 rows in set (0.00 sec)

 ${\it mysql> select * from emp where(job,sal) \ IN(select job,sal from emp where deptno=30);}$ 

	empno	ename	job	mgr	hiredate	sal	comm	deptno	
-	7499 7521 7654 7698 7844	ALLEN WARD MARTIN BLAKE TURNER JAMES	SALESMAN SALESMAN SALESMAN MANAGER SALESMAN CLERK		1981-02-20   1981-02-22   1981-09-28   1981-05-01   1981-09-08   1981-12-03	1600.00	300.00   500.00   1400.00   NULL   0.00	30 30 30 30 30 30 30 30	
									i

6 rows in set (0.01 sec)

mysql> Select \* from emp e where sal > (select AVG(sal) from emp where deptno = e.deptno):

empno	ename	job	mgr	hiredate	sal	comm	deptno	
7499 7566 7698 7788 7839 7902	ALLEN JONES BLAKE SCOTT KING FORD	SALESMAN MANAGER MANAGER ANALYST PRESIDENT ANALYST	7698 7839 7839 7566 NULL 7566	1981-02-20   1981-04-02   1981-05-01   1982-12-09   1981-11-17   1981-12-03	1600.00   2975.00   2850.00   3000.00   5000.00	300.00   NULL   NULL   NULL   NULL   NULL	30   20   30   20   10	
+		<b></b>	+	·	·	+	+	۰

6 rows in set (0.00 sec)

mysql> select deptno,dname,loc, (select sum(sal) from emp where deptno= d.deptno) sum\_sal from dept d;

deptno	dname	loc	sum_sal
10	ACCOUNTING RESEARCH SALES OPERATIONS	NEW YORK	8750.00
20		DALLAS	10875.00
30		CHICAGO	9400.00
40		BOSTON	NULL

4 rows in set (0.01 sec)

į		•	total_amt	
	10 20 30		8750.00 10875.00 9400.00	1

3 rows in set (0.01 sec)

mysql> select \* from emp;

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

14 rows in set (0.00 sec)

mysgl> select ename.hiredate from emp deptno = ALL(select deptno from emp where deptno='BLAKE'):

mysql> select ename, hiredate from emp deptho = ALL(select deptho from emp where deptho='BLAKE');

ERROR 1864 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '= ALL (select deptho from emp where deptho='BLAKE') at line 1

mysql> select ename, hiredate from emp deptho = ALL(select deptho from emp where ename='BLAKE');

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '= ALL (select deptho from emp where ename='BLAKE')' at line 1

mysql> Select \* from emp Where sal > ALL(Select sal from emp Where deptho = 30);

empno	ename			hiredate				٠.
7566	JONES	MANAGER	7839	1981-04-02   1982-12-09	2975.00	NULL	20	İ
7839	KING	PRESIDENT	NULL	1981-11-17   1981-12-03	5000.00	NULL	10	

4 rows in set (0.00 sec)

 ${\tt mysql}{\gt select \ ename, hiredate \ from \ emp \ where \ deptno \ = \ ALL(select \ deptno \ from \ emp \ where \ ename='BLAKE');}$ 

ename	hiredate
ALLEN WARD MARTIN BLAKE TURNER JAMES	1981-02-20   1981-02-22   1981-09-28   1981-05-01   1981-09-08   1981-12-03

6 rows in set (0.00 sec)

mysql> select ename, hiredate from emp where deptno = ANY(select deptno from emp where ename='BLAKE');

er	name	hiredate
W/   M/   Bl   Tl	LEN   ARD   ARTIN   AKE   JRNER	1981-02-20 1981-02-22 1981-09-28 1981-05-01 1981-09-08 1981-12-03

6 rows in set (0.00 sec)

mysql> select ename, hiredate from emp where deptno != ALL(select deptno from emp where ename='BLAKE');

ename	hiredate
SMITH JONES CLARK SCOTT KING ADAMS FORD MILLER	1980-12-17   1981-04-02   1981-06-09   1982-12-09   1981-11-17   1983-01-12   1981-12-03   1982-01-23

8 rows in set (0.00 sec)

mysql> select ename, hiredate from emp where deptno = ALL(select deptno from emp where ename!='BLAKE'); Empty set (0.00 sec)

 $mysql> select\ ename, hiredate\ from\ emp\ where\ deptno\ = (select\ deptno\ from\ emp\ where\ ename='BLAKE')\ and\ ename!='BLAKE';$ 

ename	hiredate
ALLEN WARD MARTIN TURNER JAMES	1981-02-20     1981-02-22     1981-09-28     1981-09-08     1981-12-03

5 rows in set (0.00 sec)

mysql> select empno,ename from emp where sal > ALL(select avg(sal) from emp) order by sal desc;

İ	empno	İ	ename	ļ
i	7839	i	KING	i
İ	7788	İ	SCOTT	Ĺ
ĺ	7902	ĺ	FORD	ĺ
	7566		JONES	
	7698		BLAKE	
1	7782	1	CLARK	

6 rows in set (0.00 sec)

mysql> select empno, ename from emp ename = ANY(select ename from emp where ename like '%T%');

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '= ANY (select ename from emp where ename like '%T%')' at line 1
mysql> select empno, ename from emp ename = (select ename from emp where ename like '%T%');

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '= (se lect ename from emp where ename like '%T%')' at line 1
mysql> select empno, ename from emp where ename = (select ename from emp where ename like '%T%');

ERROR 1242 (21000): Subquery returns more than 1 row
mysql> select empno, ename from emp where ename = any(select ename from emp where ename like '%T%');

em	pno	ename
7	369   654   788	SMITH MARTIN SCOTT TURNER

4 rows in set (0.00 sec)

mysql> select empno, ename from emp where ename = all(select ename from emp where ename like '%T%'); Empty set (0.00 sec)

mysql> select empno, ename from emp where ename = any(select ename from emp where ename like '%T%');

+-		+		-+
ļ	empno	ļ	ename	ļ
+-		+		-+
ı	7369	I	SMITH	١
ĺ	7654	ĺ	MARTIN	ĺ
Ĺ	7788	ĺ	SCOTT	ĺ
Ĺ	7844	Ĺ	TURNER	ĺ

4 rows in set (0.00 sec)

mysql> mysql> select empno, ename from emp where deptno = any(delect deptno from emp where ename like '%T%');

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'deptn o from emp where ename like '%T%')' at line 1 mysql> select empno, ename from emp where ename=any (select ename from emp where ename like '%T%');

+	ļ
7369   SMITH   7654   MARTIN   7788   SCOTT   7844   TURNER	

4 rows in set (0.00 sec)

mysql> select empno,ename from emp where deptno=any (select deptno from emp where ename like '%t%');

l	empno	ename
	7369 7499 7521 7566 7654 7698 7788 7844 7876 7900 7902	SMITH ALLEN WARD JONES MARTIN BLAKE SCOTT TURNER ADAMS JAMES FORD
+-		+

11 rows in set (0.00 sec)

```
mysql> select ename, deptno, job from emp where d.loc=(select loc from dept where loc='DALLAS');
ERROR 1054 (42S22): Unknown column 'd.loc' in 'where clause'
mysql> select ename, deptno, job from emp where d.loc=(select loc from dept d where loc='DALLAS');
ERROR 1054 (42S22): Unknown column 'd.loc' in 'where clause'
mysql> select ename, deptno, job from emp where d.loc=(select d.loc from dept d where loc='DALLAS');
ERROR 1054 (42S22): Unknown column 'd.loc' in 'where clause'
mysql> select ename, deptno, job from emp where deptno=(select deptno from dept where loc="DALLAS");
```

ename	deptno	job
SMITH   JONES   SCOTT   ADAMS   FORD	20 20 20 20 20 20	CLERK     MANAGER     ANALYST     CLERK     ANALYST

5 rows in set (0.00 sec)

 $\verb|mysql>| \verb|select|| ename | \verb|, sal from emp where | \verb|mgr=(select|| empno from emp where | ename='KING'); \\$ 

+	
JONES   2975.00   BLAKE   2850.00   CLARK   2450.00	

3 rows in set (0.00 sec)

mysql> select ename, hiredate from emp where deptno <>(select deptno from emp where ename='BLAKE');

+	+
ename	hiredate
T	
SMITH	1980-12-17
JONES	1981-04-02
CLARK	1981-06-09
SCOTT	1982-12-09
KING	1981-11-17
ADAMS	1983-01-12
FORD	1981-12-03
MILLER	1982-01-23
+	+

8 rows in set (0.00 sec)

 $\verb|mysql>| select empno,ename,sal,dense\_rank()| over (order by sal )| from emp;$ 

			L	
empno	ename	sal	dense_rank() over (order by sal	) j
7369	SMITH	800.00		1
7900	JAMES	950.00	:	2
7876	ADAMS	1100.00	j :	з ј
7521	WARD	1250.00		4
7654	MARTIN	1250.00	į	4
7934	MILLER	1300.00	!	5 j
7844	TURNER	1500.00		6
7499	ALLEN	1600.00		7 j
7782	CLARK	2450.00		8
7698	BLAKE	2850.00	į	9
7566	JONES	2975.00	1	0
7788	SCOTT	3000.00	1:	1
7902	FORD	3000.00	1:	1
7839	KING	5000.00	1:	2
+	·	·	<del> </del>	+

14 rows in set (0.01 sec)

mysql> select empno,ename,sal,deptno,dense\_rank() over (partition by deptno order by sal) from emp;

	empno	ename	sal	deptno	dense_rank() over (partition by deptno order by sal)
1	7934	MILLER	1300.00	10	1
	7782	CLARK	2450.00	10	2
	7839	KING	5000.00	10	3
	7369	SMITH	800.00	20	1
	7876	ADAMS	1100.00	20	2
	7566	JONES	2975.00	20	3
	7788	SCOTT	3000.00	20	4
	7902	FORD	3000.00	20	4
	7900	JAMES	950.00	30	1
	7521	WARD	1250.00	30	2
	7654	MARTIN	1250.00	30	2
	7844	TURNER	1500.00	30	3
	7499	ALLEN	1600.00	30	4
	7698	BLAKE	2850.00	30	5
4	·	·	+	·	++

14 rows in set (0.01 sec)

mysql> select empno,ename,sal,rank() over (order by sal) from emp;

+-	+		+	+				
I	empno	ename	sal	rank()	over	(order	by	sal)
Ī	7369	SMITH	800.00					1
İ	7900	JAMES	950.00					2
İ	7876	ADAMS	1100.00	ĺ				3
İ	7521	WARD	1250.00					4
İ	7654	MARTIN	1250.00					4
İ	7934	MILLER	1300.00	ĺ				6
İ	7844	TURNER	1500.00					7
İ	7499	ALLEN	1600.00					8
İ	7782	CLARK	2450.00					9
İ	7698	BLAKE	2850.00	ĺ				10
İ	7566	JONES	2975.00					11
İ	7788	SCOTT	3000.00					12
1	7902	FORD	3000.00					12
ĺ	7839	KING	5000.00					14

14 rows in set (0.00 sec)

mysql> select empno,ename,sal,rank() over (partition by deptno order by sal) from emp;

empno	ename	sal	rank()	over	(partition	by	deptno	order	by	sal)	

1	7934   MILLER	1300.00	1
Ĺ	7782   CLARK	2450.00	2
Ĺ	7839   KING	5000.00	3
Ĺ	7369   SMITH	800.00	1
	7876   ADAMS	1100.00	2
1	7566   JONES	2975.00	3
ĺ	7788   SCOTT	3000.00	4
ĺ	7902   FORD	3000.00	4
	7900   JAMES	950.00	1
1	7521   WARD	1250.00	2
ĺ	7654   MARTIN	1250.00	2
	7844   TURNER	1500.00	4
	7499   ALLEN	1600.00	5
	7698   BLAKE	2850.00	6

14 rows in set (0.00 sec)

mysql> select max(sal from emp where sal <(select max(sal) from emp);\
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'from emp where sal <(select max(sal) from emp)' at line 1

mysql's select max(sal from emp where sal <(select max(sal) from emp);

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'from emp where sal <(select max(sal) from emp)' at line 1

mysql's select max(sal) from emp where sal <(select max(sal) from emp);

| max(sal) 1 3000.00

1 row in set (0.00 sec)

mysql> select sal from emp where sal = (select sal form emp where dense\_rank()=2);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'emp where dense\_rank()=2)' at line 1

mysql> select sal from emp where sal = (select sal from emp where dense\_rank()=2);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '=2)' at line 1

mysql's select sal from emp where sal = (select sal from emp where (dense\_rank() over (order by sal ))=2);

ERROR 3593 (HY000): You cannot use the window function 'dense\_rank' in this context.'

mysql's select distinct sal from (select empno, ename, sal, dense\_rank() over (order by sal desc) as a dnk from emp) dnkemp where dnkemp.dnk=2;

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'dnk from emp) dnkemp where dnkemp.dnk=2 at line 1

mysql's elect distinct sal from (calculation of the right syntax to use near 'dnk from emp) dnkemp where dnkemp.dnk=2 at line 1

mysql> select distinct sal from (select empno.ename.sal.dense rank() over (order by sal desc) as dnk from emp) dnkemp where dnkemp.dnk=2;

| sal | 3000.00 |

1 row in set (0.01 sec)

mysql> select \* from emp;

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369 7499 7521 7566 7654 7698 7782	SMITH ALLEN WARD JONES MARTIN BLAKE CLARK	CLERK SALESMAN SALESMAN MANAGER SALESMAN MANAGER MANAGER MANAGER	7902 7698 7698 7698 7839 7698 7839	1980-12-17   1981-02-20   1981-02-22   1981-04-02   1981-09-28   1981-05-01   1981-06-09	800.00   1600.00   1250.00   2975.00   1250.00   2850.00   2450.00	NULL 300.00 500.00 NULL 1400.00 NULL NULL	20   30   30   20   30   30
7788 7839 7844 7876 7900 7902 7934	SCOTT KING TURNER ADAMS JAMES FORD	ANALYST PRESIDENT SALESMAN CLERK CLERK ANALYST CLERK	7566   NULL   7698   7788   7698   7566   7782	1982-12-09   1981-11-17   1981-09-08   1983-01-12   1981-12-03   1981-12-03   1982-01-23	3000.00   5000.00   1500.00   1100.00   950.00   3000.00	NULL NULL 0.00 NULL NULL NULL NULL	20   10   30   20   30   20   10

14 rows in set (0.01 sec)

mysql> select \* from dept;

deptno	dname	loc
10   20   30   40	ACCOUNTING RESEARCH SALES OPERATIONS	NEW YORK     DALLAS     CHICAGO     BOSTON

4 rows in set (0.01 sec)

mysql> select ename,job from emp where job = (select job from emp where ename='JONES');

JONES I MANAGER BLAKE MANAGER CLARK MANAGER

3 rows in set (0.00 sec)

mysql> select ename, d.dname from emp where deptno = (select d.deptno from dept d where loc='DALLAS');

mysql's select ename, d.uname irom emp where depths = (select d.depths from depth d where foc= DALLAS');

ERROR 1054 (42S22): Unknown column 'd.dname' in 'field list'

mysql's select ename from where sal=min(sal);

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'where sal=min(sal)' at line 1

Sal=min(sal) at line 1
mysql> select ename from where sal=(select min(sal) from emp);
ERROR 1864 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'where sal=(select min(sal) from emp)' at line 1
mysql> select ename from emp where sal=(select min(sal) from emp);

ename I SMITH I

1 row in set (0.00 sec)

mysql> select ename from emp where sal<(select min(sal) from emp); Empty set (0.01 sec)

mysql> select ename from emp where sal>(select min(sal) from emp);

+.		-+
į	ename	į
+	ALLEN WARD JONES MARTIN BLAKE CLARK SCOTT KING TURNER ADAMS JAMES FORD MILLER	+    -  -  -  -  -  -  -  -
 +-	MILLER	 -+

13 rows in set (0.00 sec)

mysql>