Name: Naveenraj Karthikeyan

Emp id: 11958

Mysql Day 3: 03-10-2023

Mysql Alias:

—-> Used to give understandable or meaningful column names while displaying.

```
mysql> select * from tbl_employee;
+------+---------+---------+
| eid  | ename   | esalary |
+------+---------+---------+
|  101 | Valan   |    2000 |
|  102 | Naveen  |    2000 |
|  103 | NULL    |    2000 |
|  104 | Praveen |    2000 |
+------+---------+---------+
4 rows in set (0.00 sec)

mysql> select eid as "Employee Id", ename "Employee Name" from tbl_employee;
+-------------+---------------+
| Employee Id | Employee Name |
+-------------+---------------+
|         101 | Valan         |
|         102 | Naveen        |
|         103 | NULL          |
|         104 | Praveen       |
+-------------+---------------+
4 rows in set (0.00 sec)
```

Select now command:

It is a command to display the system date and time.

```
mysql> select now();
+---------------------+
| now()               |
+---------------------+
| 2023-10-03 09:51:33 |
+---------------------+
1 row in set (0.00 sec)
```

Update the null column:

```
mysql> update tbl_employee set edno = 10 where eid in (101, 102);
Query OK, 2 rows affected (0.00 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select * from tbl_employee;
+------+---------+---------+------+
| eid  | ename   | esalary | edno |
+------+---------+---------+------+
|  101 | Valan   |    2000 | 10   |
|  102 | Naveen  |    2000 | 10   |
|  103 | NULL    |    2000 | NULL |
|  104 | Praveen |    2000 | NULL |
+------+---------+---------+------+
4 rows in set (0.00 sec)

mysql> update tbl_employee set edno = 20 where eid in (103, 104);
Query OK, 2 rows affected (0.00 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select * from tbl_employee;
+------+---------+---------+------+
| eid  | ename   | esalary | edno |
+------+---------+---------+------+
|  101 | Valan   |    2000 | 10   |
|  102 | Naveen  |    2000 | 10   |
|  103 | NULL    |    2000 | 20   |
|  104 | Praveen |    2000 | 20   |
+------+---------+---------+------+
4 rows in set (0.00 sec)
```

Single row subquery:
1) Select * from tbl_employee where edno = (select dno from tbl_dept where dname="LD");
2) Select dname from tbl_dept where dno = (select edno from tbl_employee where ename="Praveen");

```
mysql> Select * from tbl_employee where edno = (select dno from tbl_dept where dname="LD");
+------+---------+---------+------+
| eid  | ename   | esalary | edno |
+------+---------+---------+------+
|  101 | Valan   |    2200 | 10   |
|  102 | Naveen  |    2200 | 10   |
+------+---------+---------+------+
2 rows in set (0.00 sec)

mysql> Select dname from tbl_dept where dno = (select edno from tbl_employee where ename="Praveen");
+---------+
| dname   |
+---------+
| Project |
+---------+
1 row in set (0.00 sec)
```

3) Select dname from tbl_dept where dno = (select edno from tbl_employee where ename is null);

```
mysql> select dname from tbl_dept where dno = (select edno from tbl_employee where ename is null);
+---------+
| dname   |
+---------+
| Project |
+---------+
1 row in set (0.00 sec)
```

4) Update tbl_employee set esalary = esalary + 200 where edno = (select dno from tbl_dept where dname="LD");

```
mysql> Update tbl_employee set esalary = esalary + 200 where edno = (select dno from tbl_dept where dname="LD");
Query OK, 2 rows affected (0.01 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select * from tbl_employee;
+------+---------+---------+------+
| eid  | ename   | esalary | edno |
+------+---------+---------+------+
|  101 | Valan   |    2200 | 10   |
|  102 | Naveen  |    2200 | 10   |
|  103 | NULL    |    2000 | 20   |
|  104 | Praveen |    2000 | 20   |
+------+---------+---------+------+
4 rows in set (0.00 sec)
```

Multi row subquery:
Select dname from tbl_dept where dno in (select edno from tbl_employee where eid in (101,103));

```
mysql> select dname from tbl_dept where dno = (select edno from tbl_employee where eid in (101,103));
ERROR 1242 (21000): Subquery returns more than 1 row
mysql> select dname from tbl_dept where dno in (select edno from tbl_employee where eid in (101,103));
+---------+
| dname   |
+---------+
| LD      |
| Project |
+---------+
2 rows in set (0.00 sec)
```

select dname from tbl_dept where dno in (select edno from tbl_employee where esalary > 2000);

```
mysql> select dname from tbl_dept where dno = (select edno from tbl_employee where esalary > 2000);
ERROR 1242 (21000): Subquery returns more than 1 row
mysql> select dname from tbl_dept where dno in (select edno from tbl_employee where esalary > 2000);
+-------+
| dname |
+-------+
| LD    |
+-------+
1 row in set (0.00 sec)
```

Mysql Constraints:

create table tbl_student (rno int(5) primary key, sname varchar(20) not null, smarks int(3) check(smarks>0), smno int(10) unique, sage int(3) default 15);

```
mysql> update tbl_employee set edno = 10 where eid in (101, 102);
Query OK, 2 rows affected (0.00 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select * from tbl_employee;
+------+---------+---------+------+
| eid  | ename   | esalary | edno |
+------+---------+---------+------+
|  101 | Valan   |    2000 | 10   |
|  102 | Naveen  |    2000 | 10   |
|  103 | NULL    |    2000 | NULL |
|  104 | Praveen |    2000 | NULL |
+------+---------+---------+------+
4 rows in set (0.00 sec)

mysql> update tbl_employee set edno = 20 where eid in (103, 104);
Query OK, 2 rows affected (0.00 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> select * from tbl_employee;
+------+---------+---------+------+
| eid  | ename   | esalary | edno |
+------+---------+---------+------+
|  101 | Valan   |    2000 | 10   |
|  102 | Naveen  |    2000 | 10   |
|  103 | NULL    |    2000 | 20   |
|  104 | Praveen |    2000 | 20   |
+------+---------+---------+------+
4 rows in set (0.00 sec)
```

Auto increment:

create table tbl_student(srno int(5) primary key auto_increment, sname varchar(20), smarks int(3));

```
mysql> create table tbl_student(srno int(5) primary key auto_increment, sname varchar(20), smarks int(3));
Query OK, 0 rows affected, 2 warnings (0.02 sec)

mysql> insert into tbl_student (sname, smarks) values ("valan", 30);
Query OK, 1 row affected (0.01 sec)

mysql> select * from tbl_student;
+------+-------+--------+
| srno | sname | smarks |
+------+-------+--------+
|    1 | valan |     30 |
+------+-------+--------+
1 row in set (0.00 sec)

mysql> insert into tbl_student (sname, smarks) values ("naveen", 40);
Query OK, 1 row affected (0.00 sec)

mysql> select * from tbl_student;
+------+--------+--------+
| srno | sname  | smarks |
+------+--------+--------+
|    1 | valan  |     30 |
|    2 | naveen |     40 |
+------+--------+--------+
2 rows in set (0.00 sec)
```

for primary key we can combine two or more related column and make it as primary key.

for int in SQL it can accept based on every programming language 4 bytes.

Deriving the difference b/w primary key and foreign key:

create table tbl_dept (dno int primary key, dname varchar(20));

create table tbl_employee (id int primary key, name varchar(20), salary int, dno int, foreign key(dno) references tbl_dept(dno));

mysql> create table tbl_dept (dno int primary key, dname varchar(20));

Query OK, 0 rows affected (0.02 sec)

mysql> create table tbl_employee (id int primary key, name varchar(20), salary int, dno int, foreign key(dno) references tbl_dept(dno));

```
mysql> desc tbl_dept;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| dno    | int         | NO   | PRI | NULL    |       |
| dname  | varchar(20) | YES  |     | NULL    |       |
+--------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> desc tbl_employee;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| id     | int         | NO   | PRI | NULL    |       |
| name   | varchar(20) | YES  |     | NULL    |       |
| salary | int         | YES  |     | NULL    |       |
| dno    | int         | YES  | MUL | NULL    |       |
+--------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

Inserting the elements:

mysql> insert into tbl_employee values(101, "Valan", 3000, 10);

ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails (`day2`.`tbl_employee`, CONSTRAINT `tbl_employee_ibfk_1` FOREIGN KEY (`dno`) REFERENCES `tbl_dept` (`dno`))

mysql> insert into tbl_dept values(10, "LD");

Query OK, 1 row affected (0.00 sec)

mysql> insert into tbl_employee values(101, "Valan", 3000, 10);

Query OK, 1 row affected (0.00 sec)