# DATABASE ASSIGNMENT 10

Solve the following

1. write a procedure to insert record into employee table.

the procedure should accept empno, ename, sal, job, hiredate as input parameter

write insert statement inside procedure insert_rec to add one record into table

create procedure insert_rec(peno int,pnm varchar(20),psal decimal(9,2),pjob

varchar(20),phiredate date)

begin

 insert into emp(empno,ename,sal,job,hiredate)

values(peno,pnm,psal,pjob,phiredate)

end//

```
delimiter //

create procedure insert_record(in peno int,pname varchar(20),pjob varchar(20),phrdt date,psal float(9,2))
begin
insert into  emp(empno,ename,job,hiredate,sal) values(peno,pname,pjob,phrdt,psal);
end //
OK, 0 rows affected, 1 warning (0.02 sec)


delimiter ;
call insert_record(2000,'navin','mgr','2024-09-05',80000);
OK, 1 row affected (0.04 sec)
```

| 1100 | lll | manager | 2245 | 2024-03-29 | 2450.00 | NULL | 10 |
| 1111 | ploi | manager | 2245 | 2024-03-29 | 2450.00 | NULL | 30 |
| 2000 | navin | mgr | NULL | 2024-09-05 | 80000.00 | NULL | NULL |
| 7369 | SMITH | CLERK | 7902 | 1980-12-17 | 800.00 | NULL | 20 |
| 7499 | ALLEN | SALESMAN | 7698 | 1981-02-20 | 1600.00 | 300.00 | 30 |

2. write a procedure to delete record from employee table.

the procedure should accept empno as input parameter.

write delete statement inside procedure delete_emp to delete one record from emp

table

```
mysql> select * from emp;
+-------+--------+---------+-------+------------+---------+--------+--------+
| EMPNO | ENAME  | JOB     | MGR   | HIREDATE   | SAL     | COMM   | DEPTNO |
+-------+--------+---------+-------+------------+---------+--------+--------+
|    11 | ADAM_S | MANAGER | 7566  | 1987-02-12 |  850.00 | 600.00 |     40 |
|  1000 | NULL   | NULL    | NULL  | NULL       |    NULL |   NULL |   NULL |
|  1001 | mnhg   | manager | 2245  | 2024-03-29 | 2450.00 |   NULL |     10 |
|  1100 | lll    | manager | 2245  | 2024-03-29 | 2450.00 |   NULL |     10 |
```

Delete

```
mysql> delimiter //
mysql>  create procedure delete_record(dempno int)
    -> begin
    -> delete from emp
    -> where empno=dempno;
    -> end //
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> delimiter ;
mysql> call delete_record(1000);
```

```
mysql> select * from emp;
+-------+--------+---------+-------+------------+---------+--------+--------+
| EMPNO | ENAME  | JOB     | MGR   | HIREDATE   | SAL     | COMM   | DEPTNO |
+-------+--------+---------+-------+------------+---------+--------+--------+
|    11 | ADAM_S | MANAGER | 7566  | 1987-02-12 |  850.00 | 600.00 |     40 |
|  1001 | mnhg   | manager | 2245  | 2024-03-29 | 2450.00 |   NULL |     10 |
|  1100 | lll    | manager | 2245  | 2024-03-29 | 2450.00 |   NULL |     10 |
|  1111 | ploi   | manager | 2245  | 2024-03-29 | 2450.00 |   NULL |     30 |
```

3. write a procedure to display empno,ename,deptno,dname for all employees with sal

> given salary. pass salary as a parameter to procedure

```
ql> delimiter //
ql>  create procedure diaplay_emp(psal float(9,2))
 -> begin
 ->  select empno,ename,e.deptno,dname
 -> from emp e ,dept d
 -> where d.deptno=e.deptno
 -> and sal>psal;
 -> end //
y OK, 0 rows affected, 1 warning (0.03 sec)

ql>
ql>
ql> delimiter ;
ql> call display_emp(5000);
```

```
mysql> call diaplay_emp(2000);
+--------+--------+--------+------------+
| empno  | ename  | deptno | dname      |
+--------+--------+--------+------------+
|  1001  | mnhg   |    10  | ACCOUNTING |
|  1100  | 111    |    10  | ACCOUNTING |
|  1111  | ploi   |    30  | SALES      |
|  7566  | JONES  |    20  | RESEARCH   |
|  7698  | BLAKE  |    30  | SALES      |
|  7782  | CLARK  |    10  | ACCOUNTING |
|  7788  | SCOTT  |    20  | RESEARCH   |
|  7839  | KING   |    10  | ACCOUNTING |
|  7902  | FORD   |    20  | RESEARCH   |
+--------+--------+--------+------------+
9 rows in set (0.00 sec)
```

4. write a procedure to find min,max,avg of salary and number of employees in the

given deptno.

deptno --→ in parameter

min,max,avg and count ---→ out type parameter

execute procedure and then display values min,max,avg and count

```
mysql> delimiter //
mysql>  create procedure diaplay_emp1(edeptno int,out emin float(9,2),out emax float(9,2),out eavg float(9,2), out ecount int
    -> begin
    ->
    -> select min(sal),max(sal),avg(sal),count(*)into emin ,emax,eavg ,ecount from emp
    -> where deptno=edeptno;
    ->  end //
Query OK, 0 rows affected, 3 warnings (0.02 sec)

mysql>
mysql> delimiter ;
mysql> call diaplay_emp1(10);
ERROR 1318 (42000): Incorrect number of arguments for PROCEDURE iacsd0324.diaplay_emp1; expected 5, got 1
mysql> call diaplay_emp1(10,@m,@n,@o,@p);
Query OK, 1 row affected (0.00 sec)

mysql> select @m,@n,@o,@p;
------+------+------+------+
 @m   | @n   | @o   | @p   |
------+------+------+------+
 1300 | 5000 | 2730 |    5 |
------+------+------+------+
 row in set (0.00 sec)
```

## 5. write a procedure to display all pid,pname,cid,cname and salesman name(use product,category and salesman table)

```
mysql> delimiter $
mysql> create procedure display()
    -> begin
    -> select pid,pname,c.cid,cname,s.sid,sname
    ->  from product p inner join category c on c.cid=p.cid
    ->  inner join salesman s on s.sid=p.sid;
    ->  end $
Query OK, 0 rows affected (0.01 sec)

mysql>   delimiter ;
mysql>  call display();
+-----+----------+-----+---------+------+---------+
| pid | pname    | cid | cname   | sid  | sname   |
+-----+----------+-----+---------+------+---------+
|   3 | nice     |  20 | biscuit | 1000 | rajesh  |
|   4 | pringles |  10 | chips   | 1000 | rajesh  |
|   1 | lays     |  10 | chips   | 1001 | ajinkya |
|   2 | 50-50    |  20 | biscuit | 1001 | ajinkya |
+-----+----------+-----+---------+------+---------+
```

## 6. write a procedure to display all vehicles bought by a customer. pass cutome name as

## a parameter.(use vehicle,salesman,custome and relation table)

```
mysql> delimiter //
mysql> create procedure vehiclebuy(dcname varchar(20))
    -> begin
    -> select c.custid,c.canme,v.vid,v.vname from
    -> cust_vehicle cv inner join customer c on c.custid=cv.custid
    -> inner join vehicle v on v.vid=cv.vid
    -> and c.canme = dcname;
    -> end //
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> delimiter ;
mysql> call vehiclebuy('Pankaj');
+--------+--------+-----+------------+
| custid | canme  | vid | vname      |
+--------+--------+-----+------------+
|      3 | Pankaj |   3 | Motor Bike |
|      3 | Pankaj |   2 | Santro     |
+--------+--------+-----+------------+
2 rows in set (0.00 sec)
```

7. Write a procedure that displays the following information of all emp

Empno,Name,job,Salary,Status,deptno

Note: - Status will be (Greater, Lesser or Equal) respective to average salary of their own

department. Display an error message Emp table is empty if there is no matching

record.

```
mysql> delimiter //
mysql> create procedure displaystatus()
    -> begin
    -> declare vempno,vdeptno ,vfinished int default 0;
    -> declare cnt int default 0;
    -> declare vename,vjob,vstatus varchar(30);
    -> declare vsal ,vavgsal float(9,2);
    -> declare empcur cursor for select empno,ename,job,sal,deptno from emp;

    -> declare continue handler for NOT FOUND set vfinished=1;
    -> open empcur;
    -> label1:loop
    -> fetch empcur into vempno,vename,vjob,vsal,vdeptno;
    -> if vfinished = 1 then
    ->      if cnt=0 then
    ->   select "EMP TABLE IS EMPTY";
    ->   end if;
    ->      leave label1;
    ->   end if;
    ->   select avg(sal) into vavgsal from emp where deptno=vdeptno;
    ->    if vsal<vavgsal then
    ->        set vstatus='lesser';
    ->    elseif vsal=vavgsal then
    ->         set vstatus='equal';
    ->    else
    ->       set vstatus='Greater';
    ->       end if;
    ->    select vempno,vename,vjob,vsal,vavgsal,vstatus;
    ->
    ->    end loop;
    ->    close empcur;
    -> end//
Query OK, 0 rows affected, 1 warning (0.01 sec)
```

```
ysql>
ysql>    delimiter ;
ysql> call displaystatus();
```

| vempno | vename | vjob  | vsal   | vavgsal | vstatus |
|--------|--------|-------|--------|---------|---------|
| 7369   | SMITH  | CLERK | 800.00 | 2175.00 | lesser  |

```
row in set (0.01 sec)
```

| vempno | vename | vjob    | vsal    | vavgsal | vstatus |
|--------|--------|---------|---------|---------|---------|
| 7566   | JONES  | MANAGER | 2975.00 | 2175.00 | Greater |

```
row in set (0.01 sec)
```

| vempno | vename  | vjob   | vsal  | vavgsal | vstatus |
|--------|---------|--------|-------|---------|---------|
| 7775   | athrava | design | 45.00 | NULL    | Greater |

```
+--------------------+
| EMP TABLE IS EMPTY |
+--------------------+
| EMP TABLE IS EMPTY |
+--------------------+
1 row in set (0.05 sec)
```

## 8. Write a procedure to update salary in emp table based on following rules.

Exp< =35 then no Update

Exp> 35 and <=38 then 20% of salary

Exp> 38 then 25% of salary

```
mysql> delimiter //
mysql> create procedure updatesalexp()
    -> begin
    -> declare vfinished int default 0;
    -> declare vempno ,vexp int ;
    -> declare vsal,vinsal float(9,2);
    -> declare vename varchar(20);
    -> declare vhiredate date;
    -> declare empcur cursor for select empno,ename,hiredate,sal from emp;
    -> declare continue handler for NOT FOUND set vfinished =1;
    -> open empcur;
    -> label1:loop
    ->  fetch empcur into vempno,vename,vhiredate,vsal;
    ->  if vfinished=1 then
    ->         leave label1;
    ->  end if;
    ->  select floor(datediff(curdate(),hiredate)/365) exp into vexp from emp
    ->  where empno=vempno ;
    ->  if vexp=43 then
    ->         set vinsal=vsal*1.25;
    ->         update emp
    ->         set sal=vinsal
    ->         where empno=vempno;
    ->
    ->  elseif vexp=42 then
    ->         set vinsal=vsal*1.20;
    ->         update emp
    ->         set sal=vinsal
    ->         where empno=vempno;
    ->
    ->  else
    ->          set vinsal=vsal+vsal*0;
    ->           update emp
    ->          set sal=vinsal
    ->          where empno=vempno;
    ->  end if;
    ->  select vempno,vename,vhiredate,vsal,vexp,vinsal;
    ->   end loop;
    ->   close empcur;
    ->   end //
Query OK, 0 rows affected, 1 warning (0.07 sec)
```

```
mysql>
mysql> call updatesalexp();
+--------+--------+------------+---------+------+---------+
| vempno | vename | vhiredate  | vsal    | vexp | vinsal  |
+--------+--------+------------+---------+------+---------+
|   7369 | SMITH  | 1980-12-17 | 2250.00 |   43 | 2812.50 |
+--------+--------+------------+---------+------+---------+
1 row in set (0.01 sec)

+--------+--------+------------+---------+------+---------+
| vempno | vename | vhiredate  | vsal    | vexp | vinsal  |
+--------+--------+------------+---------+------+---------+
|   7499 | ALLEN  | 1981-02-20 | 3375.00 |   43 | 4218.75 |
+--------+--------+------------+---------+------+---------+
1 row in set (0.01 sec)

+--------+--------+------------+---------+------+---------+
| vempno | vename | vhiredate  | vsal    | vexp | vinsal  |
+--------+--------+------------+---------+------+---------+
|   7521 | WARD   | 1981-02-22 | 2636.72 |   43 | 3295.90 |
+--------+--------+------------+---------+------+---------+
1 row in set (0.02 sec)

+--------+--------+------------+---------+------+---------+
| vempno | vename | vhiredate  | vsal    | vexp | vinsal  |
+--------+--------+------------+---------+------+---------+
|   7566 | JONES  | 1981-04-02 | 7030.76 |   43 | 8788.45 |
+--------+--------+------------+---------+------+---------+
1 row in set (0.02 sec)
```

9. Write a procedure and a function.

Function: write a function to calculate number of years of experience of employee.(note:

pass hiredate as a parameter)

Procedure: Capture the value returned by the above function to calculate the additional

allowance for the emp based on the experience.

Additional Allowance = Year of experience x 3000

Calculate the additional allowance

and store Empno, ename,Date of Joining, and Experience in

years and additional allowance in Emp_Allowance table.

```
create table emp_allowance(

empno int,

ename varchar(20),

hiredate date,

experience int,
```

allowance decimal(9,2));

```
    ->      ^C
mysql> delimiter //
mysql> create procedure addallowance()
    -> begin
    -> declare vfinished int default 0;
    -> declare vempno,vexp int ;
    -> declare vename varchar(20);
    -> declare vhiredate date;
    -> declare vsal,vallowance float(9,2);
    ->
    -> declare empcur cursor for select empno,ename,hiredate,sal from emp;
    -> declare continue handler for NOT FOUND set vfinished=1;
    -> open empcur;
    -> label1:loop
    -> fetch empcur into vempno,vename,vhiredate,vsal;
    -> if vfinished=1 then
    ->     leave label1;
    ->     end if;
    ->     set vexp=calexp(vhiredate);
    ->     set vallowance=vexp*3000;
    ->
    ->     select vempno,vename,vhiredate,vsal,vexp,vallowance;
    ->     end loop;
    ->     close empcur;
    ->     end //
Query OK, 0 rows affected, 1 warning (0.07 sec)

mysql>
mysql>     delimiter ;
mysql>
mysql>
mysql>     call addallowance();
+--------+--------+------------+--------+------+------------+
| vempno | vename | vhiredate  | vsal   | vexp | vallowance |
+--------+--------+------------+--------+------+------------+
|   7369 | SMITH  | 1980-12-17 | 960.00 |   43 |  129000.00 |
+--------+--------+------------+--------+------+------------+
1 row in set (0.00 sec)
```

```
mysql> call  addallowance();
Query OK, 0 rows affected (0.14 sec)

mysql> select * from emp_allowance;
+-------+--------+------------+------------+-----------+
| empno | ename  | hiredate   | experience | allowance |
+-------+--------+------------+------------+-----------+
|  7369 | SMITH  | 1980-12-17 |         43 | 129000.00 |
|  7499 | ALLEN  | 1981-02-20 |         43 | 129000.00 |
|  7521 | WARD   | 1981-02-22 |         43 | 129000.00 |
|  7566 | JONES  | 1981-04-02 |         43 | 129000.00 |
|  7654 | MARTIN | 1981-09-28 |         42 | 126000.00 |
|  7698 | BLAKE  | 1981-05-01 |         42 | 126000.00 |
|  7775 | athrava| 2020-01-01 |          4 |  12000.00 |
|  7776 | harish | 2024-06-05 |         -1 |  -3000.00 |
|  7782 | CLARK  | 1981-06-09 |         42 | 126000.00 |
|  7788 | SCOTT  | 1982-12-09 |         41 | 123000.00 |
|  7839 | KING   | 1981-11-17 |         42 | 126000.00 |
|  7844 | TURNER | 1981-09-08 |         42 | 126000.00 |
|  7876 | ADAMS  | 1983-01-12 |         41 | 123000.00 |
|  7900 | JAMES  | 1981-12-03 |         42 | 126000.00 |
|  7902 | FORD   | 1981-12-03 |         42 | 126000.00 |
|  7934 | MILLER | 1982-01-23 |         42 | 126000.00 |
+-------+--------+------------+------------+-----------+
16 rows in set (0.00 sec)
```

11. Write query to 10. Write a function to compute the following. Function should take sal and hiredate

as i/p and return the cost to company.

DA = 15% Salary, HRA= 20% of Salary, TA= 8% of Salary.

Special Allowance will be decided based on the service in the company.

< 1 Year Nil

>=1 Year< 2 Year 10% of Salary

>=2 Year< 4 Year 20% of Salary

>4 Year 30% of Salary

display empno,ename,sal,cost to company for all employees(note:

use function written in question 10)

```
mysql>  delimiter //
mysql> create function cc(vsal float(9,2),vhiredate date) returns float
    -> begin
    -> declare vsa,vcc float(9,2);
    -> declare vexp int ;
    -> set vsa=vsal*.15+vsal*.20+vsal*.08;
    -> set vexp=calexp(vhiredate);
    -> if vexp>41 then
    -> set vcc=vsal*30+vsa;
    -> elseif vexp>40 then
    -> set vcc=vsal*.20+vsa;
    -> elseif vexp>38 then
    -> set vcc=vsal*.10+vsa;
    -> else
    -> set vcc=vsal;
    -> end if;
    -> return vcc;
    -> end //
Query OK, 0 rows affected, 2 warnings (0.07 sec)

mysql>
mysql>  delimiter ;
mysql> select empno,ename,sal,cc(sal,hiredate) from emp;
+--------+---------+---------+-------------------+
| empno  | ename   | sal     | cc(sal,hiredate)  |
+--------+---------+---------+-------------------+
|   7369 | SMITH   |  960.00 |           29212.8 |
|   7499 | ALLEN   | 1600.00 |             48688 |
|   7521 | WARD    | 1250.00 |           38037.5 |
|   7566 | JONES   | 3272.50 |           99582.2 |
|   7654 | MARTIN  | 1250.00 |           38037.5 |
|   7698 | BLAKE   | 2850.00 |           86725.5 |
|   7775 | athrava |   48.60 |              48.6 |
|   7777 | revati  |   48.60 |              48.6 |
|   7782 | CLARK   | 2695.00 |           82008.9 |
|   7788 | SCOTT   | 3240.00 |            2041.2 |
```

Q2. Write trigger

1. Write a tigger to store the old salary details in Emp _Back (Emp _Back has the

same structure as emp table without any

constraint) table.

(note :create emp_back table before writing trigger)

----- to create emp_back table

create table emp_back(

empno int,

ename varchar(20),

oldsal decimal(9,2),

newsal decimal(9,2)

)

(note :

execute procedure written in Q8 and

check the entries in EMP_back table after execution of
the procedure)

```
mysql> select * from emp_back;
+--------+--------+----------+----------+----------------+---------------------+--------------+
| empno  | ename  | oldsal   | newsal   | uname          | changes             | action       |
+--------+--------+----------+----------+----------------+---------------------+--------------+
|   7777 | revati |    52.49 |  1052.49 | root@localhost | 2024-04-01 22:44:07 | updatesalexp |
|   7369 | SMITH  |  1440.00 |  1800.00 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7499 | ALLEN  |  2160.00 |  2700.00 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7521 | WARD   |  1687.50 |  2109.38 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7566 | JONES  |  4499.69 |  5624.61 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7654 | MARTIN |  1620.00 |  1944.00 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7698 | BLAKE  |  3762.00 |  4514.40 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7775 | athrava|    52.49 |    52.49 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7777 | deepa  |  1052.49 |  1052.49 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7782 | CLARK  |  3557.40 |  4268.88 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7788 | SCOTT  |  3499.20 |  3499.20 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7839 | KING   |  6998.40 |  8398.08 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7844 | TURNER |  1944.00 |  2332.80 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7876 | ADAMS  |  1584.00 |  1584.00 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7900 | JAMES  |  1368.00 |  1641.60 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7902 | FORD   | 50000.00 | 60000.00 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
|   7934 | MILLER |  2246.40 |  2695.68 | root@localhost | 2024-04-01 22:47:12 | updatesalexp |
+--------+--------+----------+----------+----------------+---------------------+--------------+
17 rows in set (0.00 sec)
```

2. Write a trigger which add entry in audit table when
user tries to insert or delete

records in employee table store empno,name,username and date on which

operation performed and which action is done insert or delete. in emp_audit table.

create table before writing trigger.

create table empaudit(

empno int;

ename varchar(20),

username varchar(20);

chdate date;

action varchar(20)

);

```
ql> create trigger insertemp after insert on emp for each row
 -> insert into emp_back values(new.empno,null,new.ename,null,new.sal,null,new.job,
 -> user(),now(),'insert');
ry OK, 0 rows affected (0.01 sec)
```

```
mysql> insert into emp values(7776,'harish','IT',7902,'2024-06-05',5000,null,10);
Query OK, 1 row affected (0.01 sec)

mysql> select * from emp_back;
+-------+---------+---------+--------+---------+--------+--------+----------------+---------------------+--------+
| empno | oldname | newname | oldsal | newsal  | oldjob | newjob | uname          | changes             | action |
+-------+---------+---------+--------+---------+--------+--------+----------------+---------------------+--------+
|  7776 | NULL    | harish  |   NULL | 5000.00 | NULL   | IT     | root@localhost | 2024-04-01 23:32:29 | insert |
+-------+---------+---------+--------+---------+--------+--------+----------------+---------------------+--------+
1 row in set (0.00 sec)
```

```
> create trigger deleteemp after delete on emp for each row
> insert into emp_back values(old.empno,old.ename,null,old.sal,null,old.job,null,
> user(),now(),'delete');
 OK, 0 rows affected (0.01 sec)
```

```
mysql> delete from emp
    -> where empno=7777;
Query OK, 1 row affected (0.01 sec)

mysql> select * from emp_back;
+-------+---------+---------+---------+---------+----------+--------+----------------+---------------------+--------+
| empno | oldname | newname | oldsal  | newsal  | oldjob   | newjob | uname          | changes             | action |
+-------+---------+---------+---------+---------+----------+--------+----------------+---------------------+--------+
|  7776 | NULL    | harish  |    NULL | 5000.00 | NULL     | IT     | root@localhost | 2024-04-01 23:32:29 | insert |
|  7777 | deepa   | NULL    | 1052.49 |    NULL | designer | NULL   | root@localhost | 2024-04-01 23:37:29 | delete |
+-------+---------+---------+---------+---------+----------+--------+----------------+---------------------+--------+
```

# 3. Create table vehicle_history. Write a trigger to store old vehicleprice and new vehicle

price in history table before you update price in vehicle table

(note: use vehicle table).

create table vehicle_history(

vno int,

vname varchar(20),

oldprice decimal(9,2),

newprice decimal(9,2),

chdate date,

username varchar(20)

);

```
create table vehicle_history(
vno int,
vname varchar(20),oldprice decimal(9,2),newprice decimal(9,2),
username varchar(20),changes datetime,action varchar(20));
```

```
ERROR 1146 (42S02): Table 'iacsd.vehicle_historye' doesn't exist
mysql> desc vehicle_history;
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| vno       | int          | YES  |     | NULL    |       |
| vname     | varchar(20)  | YES  |     | NULL    |       |
| oldprice  | decimal(9,2) | YES  |     | NULL    |       |
| newprice  | decimal(9,2) | YES  |     | NULL    |       |
| username  | varchar(20)  | YES  |     | NULL    |       |
| changes   | datetime     | YES  |     | NULL    |       |
| action    | varchar(20)  | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
7 rows in set (0.01 sec)
```

```
ERROR 1054 (42S22): Unknown column 'vno' in 'OLD'
mysql> create trigger vehupdate before update on vehicle for each row
    ->    insert into vehicle_history values(old.vid,old.vname,old.price,new.price
    -> ,user(),now(),'update');
Query OK, 0 rows affected (0.08 sec)
```

```
mysql> update vehicle
    -> set price=85000
    -> where vid=1;
Query OK, 1 row affected (0.07 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from vehicle_history;
+------+--------+----------+----------+----------------+---------------------+--------+
| vno  | vname  | oldprice | newprice | username       | changes             | action |
+------+--------+----------+----------+----------------+---------------------+--------+
|    1 | Activa | 80000.00 | 85000.00 | root@localhost | 2024-04-02 18:34:45 | update |
+------+--------+----------+----------+----------------+---------------------+--------+
1 row in set (0.00 sec)
```