```
create or replace trigger trig21 instead of insert on empview for each row
begin
        dbms_output.put_line('Instead of trigger');
end;
/
-----------------------------------------------------------------------------
create or replace trigger trig22 instead of delete on stockview for each row
begin
        if :old.qty>0 then
                dbms_output.put_line('Qty still in stock, can not delete');
        else
                delete from stockinhand where itemcd=:old.itemcd;
                dbms_output.put_line('Qty 0, product deleted');
        end if;
end;
/
-----------------------------------------------------------------------------
create or replace trigger trig23 instead of insert on admview for each row
declare
        rseats course_master.rem_seats%type;
begin
        select rem_seats into rseats from course_master where
        ccd=:new.ccd;
        if rseats>0 then
                update course_master set rem_seats=rem_seats-1
                where ccd=:new.ccd;
                insert into adm_master values(:new.admno,:new.name,:new.ccd);
                dbms_output.put_line('Admission Granted !! Seats Updated');
        else
                dbms_output.put_line('No seats left');
        end if;
end;
/
-----------------------------------------------------------------------------
create or replace trigger trig24 instead of  insert on insview for each row
declare
        bal number;
        excess number;
begin
        select balance into bal from loan_master where acno=:new.acno;
        if bal>0 then
                if :new.amt>bal then
                        update loan_master set balance=0
                        where acno=:new.acno;
                        excess:=:new.amt-bal;
                        dbms_output.put_line('Excess amount ' || excess || '
returned');
                        insert into installments values(:new.acno,bal);
                else
                        update loan_master set balance=balance-:new.amt
```

```
                          where acno=:new.acno;
                          insert into installments values(:new.acno,:new.amt);
                    end if;
              else
                          dbms_output.put_line('Load already paid');
              end if;

end;
/
================================================================================
                              SQL CODE
================================================================================
SQL*Plus: Release 10.2.0.1.0 - Production on Sat Dec 27 08:36:32 2025

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SQL> conct
SP2-0042: unknown command "conct" - rest of line ignored.
SQL> connect
Enter user-name: prince
Enter password:
Connected.
SQL> ed c:/oracle/trig21

SQL> @ c:/oracle/trig21
create or replace trigger trig21 instead of insert on emp1 for each row
                                                          *
ERROR at line 1:
ORA-25002: cannot create INSTEAD OF triggers on tables


SQL> create view empview as select * from emp1;

View created.

SQL> select * from empview;

     EMPNO NAME            SALARY
---------- ---------- ----------
         1 A                 5000

SQL> ed c:/oracle/trig21

SQL> @ c:/oracle/trig21

Trigger created.

SQL> ed c:/oracle/trig21

SQL> insert into emp1 values(2,'B',5000);
```

```
1 row created.

SQL> select * from emp1;

    EMPNO NAME          SALARY
---------- ---------- ----------
        1 A               5000
        2 B               5000

SQL> insert into empview values(3,'B',5000);

1 row created.

SQL> select * from emp1;

    EMPNO NAME          SALARY
---------- ---------- ----------
        1 A               5000
        2 B               5000

SQL> select * from empview;

    EMPNO NAME          SALARY
---------- ---------- ----------
        1 A               5000
        2 B               5000

SQL> ed c:/oracle/trig21

SQL> create table stockinhand(itemcd int,qty int);

Table created.

SQL>
SQL> insert into stockinhand(1,50);
insert into stockinhand(1,50)
                     *
ERROR at line 1:
ORA-00928: missing SELECT keyword


SQL> insert into stockinhand values(1,50);

1 row created.

SQL> insert into stockinhand values(2,30);

1 row created.
```

```
SQL> insert into stockinhand values(3,10);

1 row created.

SQL> insert into stockinhand values(4,1);

1 row created.

SQL> insert into stockinhand values(5,0);

1 row created.

SQL> select * from stockinhand;

    ITEMCD         QTY
---------- ----------
         1          50
         2          30
         3          10
         4           1
         5           0

SQL> ed c:/oracle/trig22

SQL> @ c:/oracle/trig22

Trigger created.

SQL> delete from stockinhand where itemcd=1;

1 row deleted.

SQL> set serveroutput on
SQL> delete from stockinhand where itemcd=2;
Qty still in stock, can not delete

1 row deleted.

SQL> select * from stockinhand;

    ITEMCD         QTY
---------- ----------
         3          10
         4           1
         5           0

SQL> ed c:/oracle/trig22

SQL> drop trigger trigg22;
drop trigger trigg22
```

```
        *
ERROR at line 1:
ORA-04080: trigger 'TRIGG22' does not exist


SQL> drop trigger trig22;

Trigger dropped.

SQL> ed c:/oracle/trig22

SQL> create view stockview as select * from stockinhand;

View created.

SQL> @ c:/oracle/trig22
create or replace trigger trig22 before delete on stockview for each row
                              *
ERROR at line 1:
ORA-25001: cannot create this trigger type on views


SQL> ed c:/oracle/trig22

SQL> @ c:/oracle/trig22

Trigger created.

SQL> select * from stockview;

    ITEMCD        QTY
---------- ----------
         3         10
         4          1
         5          0

SQL> delete from stockview where itemcd=3;
Qty still in stock, can not delete

1 row deleted.

SQL> select * from stockinhand;

    ITEMCD        QTY
---------- ----------
         3         10
         4          1
         5          0

SQL> delete from stockview where itemcd=5;
```

```
1 row deleted.

SQL> select * from stockinhand;

    ITEMCD        QTY
---------- ----------
         3         10
         4          1
         5          0

SQL> ed c:/oracle/trig22

SQL> @ c:/oracle/trig22

Trigger created.

SQL> delete from stockinhand where itemcd=3;

1 row deleted.

SQL> delete from stockview where itemcd=4;
Qty still in stock, can not delete

1 row deleted.

SQL> delete from stockview where itemcd=0;

0 rows deleted.

SQL> delete from stockview where itemcd=1;

0 rows deleted.

SQL> delete from stockview where itemcd=5;
Qty 0, product deleted

1 row deleted.

SQL> select * from stockinhand;

    ITEMCD        QTY
---------- ----------
         4          1

SQL> ed c:/oracle/trig22

SQL> ed c:/oracle/trig22

SQL> grant create view to rahul;
```

```
grant create view to rahul
*
ERROR at line 1:
ORA-01031: insufficient privileges


SQL> create table course_master
  2  (ccd number,cname varchar(10),total_seats number,rem_seats number);

Table created.

SQL> insert into course_master values
  2  (1,'CS',60,60);

1 row created.

SQL> insert into course_master values
  2  (1,'AI',40,40);

1 row created.

SQL> insert into course_master values
  2  (3,'Mech',30,30);

1 row created.

SQL> select * from course_master;

       CCD CNAME      TOTAL_SEATS  REM_SEATS
---------- ---------- ----------- ----------
         1 CS                  60         60
         1 AI                  40         40
         3 Mech                30         30

SQL> update course_master set ccd=2 where cname='AI';

1 row updated.

SQL> select * from course_master;

       CCD CNAME      TOTAL_SEATS  REM_SEATS
---------- ---------- ----------- ----------
         1 CS                  60         60
         2 AI                  40         40
         3 Mech                30         30

SQL> create table adm_master (admno number, name varchar(10),ccd number);

Table created.
```

```
SQL> ed c:/oracle/trig23

SQL> create view admview as select * from adm_master;

View created.

SQL> ed c:/oracle/trig23

SQL> @ c:/oracle/trig23
 16  /

Trigger created.

SQL> insert into admview values(101,'A',1);
Admission Granted !! Seats Updated

1 row created.

SQL> select * from course_master;

       CCD CNAME      TOTAL_SEATS  REM_SEATS
---------- ---------- ----------- ----------
         1 CS                  60         59
         2 AI                  40         40
         3 Mech                30         30

SQL> insert into admview values(102,'A',1);
Admission Granted !! Seats Updated

1 row created.

SQL> insert into admview values(103,'A',2);
Admission Granted !! Seats Updated

1 row created.

SQL> select * from course_master;

       CCD CNAME      TOTAL_SEATS  REM_SEATS
---------- ---------- ----------- ----------
         1 CS                  60         58
         2 AI                  40         39
         3 Mech                30         30

SQL> update course_master set rem_seats=1 where ccd=1;

1 row updated.

SQL> select * from course_master;
```

```
         CCD CNAME        TOTAL_SEATS  REM_SEATS
---------- ---------- ----------- ----------
         1 CS                  60           1
         2 AI                  40          39
         3 Mech                30          30

SQL> insert into admview values(103,'A',1);
Admission Granted !! Seats Updated

1 row created.

SQL> select * from course_master;

         CCD CNAME        TOTAL_SEATS  REM_SEATS
---------- ---------- ----------- ----------
         1 CS                  60           0
         2 AI                  40          39
         3 Mech                30          30

SQL> insert into admview values(103,'A',1);
No seats left

1 row created.

SQL> select * from course_master;

         CCD CNAME        TOTAL_SEATS  REM_SEATS
---------- ---------- ----------- ----------
         1 CS                  60           0
         2 AI                  40          39
         3 Mech                30          30

SQL> select * from adm_master;

     ADMNO NAME              CCD
---------- ---------- ----------
       101 A                   1
       102 A                   1
       103 A                   2
       103 A                   1

SQL> insert into admview values(103,'A',1);
No seats left

1 row created.

SQL> select * from adm_master;

     ADMNO NAME              CCD
---------- ---------- ----------
```

```
      101 A                    1
      102 A                    1
      103 A                    2
      103 A                    1

SQL> set feedback off;
SQL> insert into admview values(103,'A',1);
No seats left
SQL> @ c:/oracle/trig23
 16  /
SQL> ed c:/oracle/trig23

SQL> create table loan_master
  2  (acno number, name varchar(10), loan_amt number,balance number);
SQL> set feedback on;
SQL> insert into loan_master values
  2  (1,'A',50000,50000);

1 row created.

SQL> insert into loan_master values
  2  (2,'B',60000,60000);

1 row created.

SQL> insert into loan_master values
  2  (3,'C',90000,90000);

1 row created.

SQL> select * from loan_master;

      ACNO NAME          LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
         1 A              50000      50000
         2 B              60000      60000
         3 C              90000      90000

3 rows selected.

SQL> create table installments(acno number,amt number);

Table created.

SQL> ed c:/oracle/trig24

SQL> ed c:/oracle/trig24

SQL> @ c:/oracle/trig24
create or replace trigger trig24 instead of insview for each row
```

```
                                                              *
ERROR at line 1:
ORA-04072: invalid trigger type


SQL> create view insview as select * from installments;

View created.

SQL> @ c:/oracle/trig24
create or replace trigger trig24 instead of insview for each row
                                                              *
ERROR at line 1:
ORA-04072: invalid trigger type


SQL> ed c:/oracle/trig24

SQL> @ c:/oracle/trig24

Trigger created.

SQL> select * from loan_master;

      ACNO NAME           LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
         1 A              50000      50000
         2 B              60000      60000
         3 C              90000      90000

3 rows selected.

SQL> insert into insview values(2,5000);

1 row created.

SQL> select * from loan_master;

      ACNO NAME           LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
         1 A              50000      50000
         2 B              60000      55000
         3 C              90000      90000

3 rows selected.

SQL> select * from installments;

no rows selected
```

```
SQL>
SQL> ed c:/oracle/trig24

SQL> @ c:/oracle/trig24

Trigger created.

SQL> insert into insview values(2,5000);

1 row created.

SQL> select * from loan_master;

     ACNO NAME          LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A              50000      50000
        2 B              60000      50000
        3 C              90000      90000

3 rows selected.

SQL> select * from installments;

     ACNO        AMT
---------- ----------
        2       5000

1 row selected.

SQL> insert into insview values(2,50000);

1 row created.

SQL> select * from loan_master;

     ACNO NAME          LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A              50000      50000
        2 B              60000          0
        3 C              90000      90000

3 rows selected.

SQL> select * from installments;

     ACNO        AMT
---------- ----------
        2       5000
        2      50000
```

2 rows selected.

SQL> insert into insview values(2,5000);

1 row created.

SQL> select * from installments;

```
      ACNO         AMT
---------- ----------
         2        5000
         2       50000
```

2 rows selected.

SQL> select * from loan_master;

```
      ACNO NAME         LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
         1 A              50000      50000
         2 B              60000          0
         3 C              90000      90000
```

3 rows selected.

SQL> insert into insview values(1,55000);

1 row created.

SQL> select * from loan_master;

```
      ACNO NAME         LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
         1 A              50000      -5000
         2 B              60000          0
         3 C              90000      90000
```

3 rows selected.

SQL> select * from installments;

```
      ACNO         AMT
---------- ----------
         2        5000
         2       50000
         1       55000
```

3 rows selected.

SQL> ed c:/oracle/trig24

```
SQL> @ c:/oracle/trig24

Trigger created.

SQL> select * from loan_master;

     ACNO NAME          LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A              50000      -5000
        2 B              60000          0
        3 C              90000      90000

3 rows selected.

SQL> select * from installments;

     ACNO        AMT
---------- ----------
        2       5000
        2      50000
        1      55000

3 rows selected.

SQL> update loan_master set balance=50000 where acno=1;

1 row updated.

SQL> update loan_master set balance=60000 where acno=2;

1 row updated.

SQL> select * from loan_master;

     ACNO NAME          LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A              50000      50000
        2 B              60000      60000
        3 C              90000      90000

3 rows selected.

SQL> truncate table installments;

Table truncated.

SQL> insert into insview values(1,2000);

1 row created.
```

```
SQL> select * from loan_master;

     ACNO NAME           LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A                50000      48000
        2 B                60000      60000
        3 C                90000      90000

3 rows selected.

SQL> truncate table installments;

Table truncated.

SQL> update loan_master set balance=60000 where acno=2;

1 row updated.

SQL> select * from loan_master;

     ACNO NAME           LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A                50000      48000
        2 B                60000      60000
        3 C                90000      90000

3 rows selected.

SQL> insert into insview values(1,5000);

1 row created.

SQL> select * from loan_master;

     ACNO NAME           LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A                50000      43000
        2 B                60000      60000
        3 C                90000      90000

3 rows selected.

SQL> select * from installments;

     ACNO        AMT
---------- ----------
        1       5000

1 row selected.
```

```
SQL> insert into insview values(1,43000);

1 row created.

SQL> select * from loan_master;

     ACNO NAME          LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A               50000          0
        2 B               60000      60000
        3 C               90000      90000

3 rows selected.

SQL> select * from installments;

     ACNO        AMT
---------- ----------
        1       5000
        1      43000

2 rows selected.

SQL> insert into insview values(1,5000);

1 row created.

SQL> select * from loan_master;

     ACNO NAME          LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A               50000          0
        2 B               60000      60000
        3 C               90000      90000

3 rows selected.

SQL> select * from installments;

     ACNO        AMT
---------- ----------
        1       5000
        1      43000

2 rows selected.

SQL> insert into insview values(2,70000);
Excess amount 10000 returned
```

1 row created.

SQL> select * from loan_master;

```
     ACNO NAME          LOAN_AMT    BALANCE
---------- ---------- ---------- ----------
        1 A              50000          0
        2 B              60000          0
        3 C              90000      90000
```

3 rows selected.

SQL> select * from installments;

```
     ACNO        AMT
---------- ----------
        1       5000
        1      43000
        2      60000
```

3 rows selected.

SQL> ed c:/oracle/trig24

SQL> note