```
SQL*Plus: Release 21.0.0.0.0 - Production on Tue Sep 27 09:01:04 2022
Version 21.3.0.0.0

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Enter user-name: sys
Enter password:
ERROR:
ORA-28009: connection as SYS should be as SYSDBA or SYSOPER


Enter user-name: system
Enter password:
Last Successful login time: Tue Sep 27 2022 08:54:51 +05:30

Connected to:
Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0

SQL> create user vnd identified by vnd;
create user vnd identified by vnd
                *
ERROR at line 1:
ORA-65096: invalid common user or role name
SQL> alter session set "_oracle_script"=true;

Session altered.

SQL> create user vnd identified by vnd;

User created.

SQL> grant all privileges to vnd;

Grant succeeded.

SQL> conn;
Enter user-name: vnd
Enter password:
Connected.

SQL> create table person(driver_id int primary key, name varchar(20), address varchar(10));

Table created.

SQL> desc person
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 DRIVER_ID                                 NOT NULL NUMBER(38)
 NAME                                               VARCHAR2(20)
 ADDRESS                                            VARCHAR2(10)

SQL> insert into person values(&driver_id,'&name','&address');
Enter value for driver_id: 101
Enter value for name: nilesh
Enter value for address: pune
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old   1: insert into person values(&driver_id,'&name','&address')
new   1: insert into person values(101,'nilesh','pune')

1 row created.

SQL> /
Enter value for driver_id: 102
Enter value for name: ramesh
Enter value for address: mumbai
old   1: insert into person values(&driver_id,'&name','&address')
new   1: insert into person values(102,'ramesh','mumbai')

1 row created.

SQL> /
Enter value for driver_id: 103
Enter value for name: samarth
Enter value for address: pune
old   1: insert into person values(&driver_id,'&name','&address')
new   1: insert into person values(103,'samarth','pune')

1 row created.

SQL> /
Enter value for driver_id: 104
Enter value for name: shivani
Enter value for address: mumbai
old   1: insert into person values(&driver_id,'&name','&address')
new   1: insert into person values(104,'shivani','mumbai')

1 row created.

SQL> /
Enter value for driver_id: 105
Enter value for name: anvit
Enter value for address: madras
old   1: insert into person values(&driver_id,'&name','&address')
new   1: insert into person values(105,'anvit','madras')

1 row created.

SQL> select * from person;

 DRIVER_ID NAME                 ADDRESS
---------- -------------------- ----------
       101 nilesh               pune
       102 ramesh                 mumbai
       103 samarth              pune
       104 shivani              mumbai
       105 anvit                madras
SQL> create table car(license varchar(20), model varchar(20), year int);

Table created.

SQL> desc car;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
```

```
 LICENSE                                                   VARCHAR2(20)
 MODEL                                                     VARCHAR2(20)
 YEAR                                                      NUMBER(38)

SQL> insert into car values('abc123','breeza',2018);

1 row created.

SQL> insert into car values('abc456','swift',2019);

1 row created.

SQL> insert into car values('xyz456','creata',2019);

1 row created.

SQL> insert into car values('xyz123','i20',2020);

1 row created.

SQL> insert into car values('abcxyz123','audi',2020);

1 row created.

SQL> select * from car;

LICENSE              MODEL                YEAR
-------------------- -------------------- ----------
abc123               breeza                2018
abc456               swift                2019
xyz456               creata               2019
xyz123               i20                  2020
abcxyz123            audi                  2020

SQL> create table accident(report_no int primary key, date_acc date, location varchar(20));

Table created.

SQL> desc accident;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 REPORT_NO                                 NOT NULL NUMBER(38)
 DATE_ACC                                           DATE
 LOCATION                                           VARCHAR2(20)

SQL> insert into accident values(11,'12/jan/2012','pune');

1 row created.

SQL> insert into accident values(10,'1/jul/2018','pune');

1 row created.

SQL> insert into accident values(23,'1/jul/2018','mumbai');

1 row created.
```

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SQL> insert into accident values(7,'9/aug/2019','nagpur');

1 row created.

SQL> insert into accident values(6,'9/aug/2019','nashik');

1 row created.

SQL> select * from accident;

 REPORT_NO DATE_ACC    LOCATION
---------- --------- --------------------
          11 12-JAN-12 pune
          10 01-JUL-18 pune
          23 01-JUL-18 mumbai
           7 09-AUG-19 nagpur
           6 09-AUG-19 nashik

SQL>SQL> alter table car add constraint pk1 primary key(license);

Table altered.

SQL> create table owns(driver_id int references person(driver_id), license varchar(20) references car(license));

Table created.

SQL> desc owns;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 DRIVER_ID                                          NUMBER(38)
 LICENSE                                            VARCHAR2(20)

SQL> insert into owns values(101,'abc123');

1 row created.

SQL> insert into owns values(103,'abc456');

1 row created.

SQL> insert into owns values(102,'abcxyz123');

1 row created.

SQL> select * from owns;

 DRIVER_ID LICENSE
---------- --------------------
         101 abc123
         103 abc456
         102 abcxyz123

SQL> create table participated(driver_id int references person(driver_id), model varchar(20),report_no int references accident(report_no),damage_amount int);

Table created.
```

```
SQL> desc participated;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 DRIVER_ID                                          NUMBER(38)
 MODEL                                              VARCHAR2(20)
 REPORT_NO                                          NUMBER(38)
 DAMAGE_AMOUNT                                      NUMBER(38)

SQL> insert into participated values(101,'breeza',23,10000);

1 row created.

SQL> insert into participated values(103,'swift',7,20000);

1 row created.

SQL> insert into participated values(104,'i20',11,5000);

1 row created.

SQL> select * from participated;

 DRIVER_ID MODEL                REPORT_NO DAMAGE_AMOUNT
---------- -------------------- ---------- -------------
       101 breeza                       23         10000
       103 swift                         7         20000
       104 i20                          11          5000

SQL>SQL> create table employee(employee_name varchar(10) primary key,street
varchar(15),city varchar(15));

Table created.

SQL> desc employee;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 EMPLOYEE_NAME                             NOT NULL VARCHAR2(10)
 STREET                                             VARCHAR2(15)
 CITY                                               VARCHAR2(15)

SQL> insert into employee values('nandini','JM road','pune');

1 row created.

SQL> insert into employee values('anvit','FC road','pune');

1 row created.

SQL> insert into employee values('aayushi','Fashion street','mumbai');

1 row created.

SQL> insert into employee values('nilesh','xyz','nagar');

1 row created.
```

```
SQL> insert into employee values('anvesh','abc','nashik');

1 row created.

SQL> select * from employee;

EMPLOYEE_N STREET               CITY
---------- -------------- --------------
nandini    JM road              pune
anvit      FC road              pune
aayushi    Fashion street       mumbai
nilesh     xyz                  nagar
anvesh     abc                  nashik

SQL> create table company(company_name varchar(20) primary key,city varchar(10));

Table created.

SQL> desc company;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 COMPANY_NAME                              NOT NULL VARCHAR2(20)
 CITY                                               VARCHAR2(10)

SQL> insert into company values('cognizant','pune');

1 row created.

SQL> insert into company values('accenture','pune');

1 row created.

SQL> insert into company values('mahindra','mumbai');

1 row created.

SQL> insert into company values('mindtree','mumbai');

1 row created.

SQL> insert into company values('syntel','madras');

1 row created.

SQL> select * from company;

COMPANY_NAME         CITY
-------------------- ----------
cognizant            pune
accenture            pune
mahindra             mumbai
mindtree             mumbai
syntel               madras

SQL> create table works(employee_name varchar(20) references
employee(employee_name),company_name varchar(20) references
company(company_name),salary int);
```

Table created.

```
SQL> desc works;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 EMPLOYEE_NAME                                      VARCHAR2(20)
 COMPANY_NAME                                       VARCHAR2(20)
 SALARY                                             NUMBER(38)

SQL> insert into works values('aayushi','cognizant',45000);

1 row created.

SQL> insert into works values('nandini','mahindra',50000);

1 row created.

SQL> insert into works values('nilesh','mindtree',60000);

1 row created.

SQL> select * from works;

EMPLOYEE_NAME        COMPANY_NAME              SALARY
-------------------- -------------------- ---------
aayushi              cognizant                 45000
nandini              mahindra                  50000
nilesh               mindtree                  60000

SQL> create table manages(employee_name varchar(20) references
employee(employee_name),manager_name varchar(20));

Table created.

SQL> desc manages;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 EMPLOYEE_NAME                                      VARCHAR2(20)
 MANAGER_NAME                                       VARCHAR2(20)

SQL> insert into manages values('aayushi','xyz');

1 row created.

SQL> insert into manages values('anvit','abc');

1 row created.

SQL> insert into manages values('nandini','pqr');

1 row created.

SQL> select * from manages;

EMPLOYEE_NAME        MANAGER_NAME
-------------------- --------------------
```

aayushi xyz
anvit abc
nandini pqr

1) Create view with the employee_name, company_name by using above tables.

SQL> create view view1 as select employee_name,company_name from works;

View created.

SQL> select * from view1;

EMPLOYEE_NAME COMPANY_NAME
---------- ----------
aayushi cognizant
nandini mahindra
nilesh mindtree

2)Create index for employee & participated table.

SQL> create index emp_city_idx on employee(city);

Index created.

SQL> create index part_driver_id on participated(driver_id);

Index created.

3) Create sequence for person & insert 4 records using sequence.

SQL> create sequence s1 increment by 10 start with 1 maxvalue 50 nocycle;

Sequence created.

SQL> insert into person (driver_id) values (s1.nextval);

1 row created.

SQL> select * from person;

DRIVER_ID NAME ADDRESS
---------- ---------- ----------
101 nilesh pune
102 ramesh mumbai
103 samarth pune
104 shivani mumbai
105 anvit madras
1

6 rows selected.

SQL> insert into person (driver_id) values (s1.nextval);

1 row created.

SQL> insert into person (driver_id) values (s1.nextval);

1 row created.

SQL> insert into person (driver_id) values (s1.nextval);

1 row created.

SQL> select * from person;

```
 DRIVER_ID NAME                 ADDRESS
---------- -------------------- ----------
       101 nilesh               pune
       102 ramesh                 mumbai
       103 samarth              pune
       104 shivani              mumbai
       105 anvit                madras
         1
        11
        21
        31
```

9 rows selected.

4) Create the synonym for table participated & company. Display the record using this table. Update the record using the synonym tables.

SQL> create synonym s1_part for participated;

Synonym created.

SQL> select * from s1_part;

```
 DRIVER_ID MODEL                REPORT_NO DAMAGE_AMOUNT
---------- -------------------- ---------- ------------
       101 breeza                       23        10000
       103 swift                         7        20000
       104 i20                          11         5000
```

SQL> update s1_part set damage_amount=25000 where report_no=11;

1 row updated.

SQL> select * from s1_part;

```
 DRIVER_ID MODEL                REPORT_NO DAMAGE_AMOUNT
---------- -------------------- ---------- ------------
       101 breeza                       23        10000
       103 swift                         7        20000
       104 i20                          11        25000
```

SQL> create synonym s1_comp for company;

Synonym created.

SQL> select * from s1_comp;

```
COMPANY_NAME         CITY
-------------------- ----------
cognizant            pune
accenture            pune
mahindra             mumbai
mindtree             mumbai
syntel               madras

SQL> update s1_comp set city='nashik' where company_name='accenture';

1 row updated.

SQL> select * from s1_comp;

COMPANY_NAME         CITY
-------------------- ----------
cognizant            pune
accenture            nashik
mahindra             mumbai
mindtree             mumbai
syntel               madras
```