Database 2

ORACLE ENVIRONMENT

LAB 3

Outline

Lab 1	Oracle Administration
1	Types of users in Oracle
2	Types of Oracle Clients
3	Connecting to SQLPLUS
4	Creating user and define user privileges
Lab 2	Privileges
1	Grant System Privilege / Object Privileges
2	Revoke System Privilege / Object Privileges
3	Lock and Expire Accounts

Outline

Lab 3	SQL Developer
1	Create user using/ Create Table
2	Show Connected user and Disconnect
3	Connect Disconnected User
4	Roles and Granting

Check System or Object Privileges

Table Name	Description
DBA_SYS_PRIVS	System Privileges Table for Admin Privileges
USER_SYS_PRIVS	System Privileges Table for any user Privileges
DBA_TAB_PRIVS	Object Privileges Table for Admin Privileges
USER_TAB_PRIVS	Object Privileges Table for User Privileges

How can I know my System Privileges?

- Admin user:
  - **select* from dba_sys_privs;**
- Regular user:
  - **select* from user_sys_privs;**

System Privileges Table for Admin Privileges

SQL> select * from DBA_SYS_PRIVS;

```
SQL> select * from dba_sys_privs;

GRANTEE                        PRIVILEGE                                ADM
------------------------------ ---------------------------------------- ---
DBA                            CREATE SESSION                           YES
DBA                            ALTER SESSION                            YES
DBA                            DROP TABLESPACE                          YES
DBA                            BECOME USER                              YES
DBA                            DROP ROLLBACK SEGMENT                    YES
DBA                            SELECT ANY TABLE                         YES
DBA                            INSERT ANY TABLE                         YES
DBA                            UPDATE ANY TABLE                         YES
DBA                            DROP ANY INDEX                           YES
DBA                            SELECT ANY SEQUENCE                      YES
DBA                            CREATE ROLE                              YES
```

System Privileges Table for user Privileges

SQL> select * from USER_SYS_PRIVS;

```
SQL> conn khaled/admin;
Connected.
SQL> select * from user_sys_privs;

USERNAME                       PRIVILEGE
                 ADM
------------------------------ ----------------
-------- ---
KHALED                         CREATE SESSION
                 NO
KHALED                         CREATE TABLE
                 NO
```

How can I know my object Privileges?

- Admin user:
  - **select* from dba_tab_privs;**
- Regular user:
  - **select* from user_tab_privs;**

```
SQL> select * from user_tab_privs;

GRANTEE                          OWNER
-------------------------------- --------------------
TABLE_NAME                       GRANTOR
-------------------------------- --------------------
PRIVILEGE                                GRA HIE
---------------------------------------- --- ---
ALI                              KHALED
EMPLOYEE                         KHALED
SELECT                                   NO  NO
```

How to grant all system privileges to specific user?

- Grant all privileges to user_name;

```
SQL> grant all privileges to khaled;

Grant succeeded.
```

How to revoke all system privileges to specific user?

- revoke all privileges from user_name;

```
SQL> revoke all privileges from khaled;

Revoke succeeded.
```

- Show all Khaled’s system privileges

```
SQL> show user;
USER is "KHALED"
SQL> select * from user_sys_privs;

no rows selected
```

Regular user can grant another user an system privilege!

```
SQL> conn sys as sysdba
Enter password:
Connected.
SQL> grant create table to ali with admin option;

Grant succeeded.
```

Regular user can grant another user an system privilege!

```
SQL> conn ali/ 222;
Connected.
SQL> select * from user_sys_privs;

USERNAME                       PRIVILEGE                                ADM
------------------------------ ---------------------------------------- ---
ALI                            CREATE SESSION                           NO
ALI                            CREATE TABLE                             YES

SQL> grant create table to ahmed;

Grant succeeded.
```

2

Regular user can grant another user an system privilege!

```
SQL> conn ahmed /123
Connected.
SQL> select * from user_sys_privs;

USERNAME                       PRIVILEGE                                ADM
------------------------------ ---------------------------------------- ---
AHMED                          CREATE TABLE                             NO
```

Regular user can grant another user an object privilege!

1

```
SQL> conn ali / 222;
Connected.
SQL> grant select on employee to ahmed with grant option;

Grant succeeded.
```

2

```
SQL> conn ahmed / 123;
Connected.
SQL> grant select on ali.employee to rawan;

Grant succeeded.
```

Regular user can grant another user an object privilege!

```
SQL> conn rawan/ 123;
Connected.
SQL> select * from ali.employee;

        ID NAME
---------- --------------------
         1 ali
         2 ahmed
         3 rawan
```

How to drop user?

- The user must be disconnected ;
- Cascade keyword used to delete all objects in user's schema.

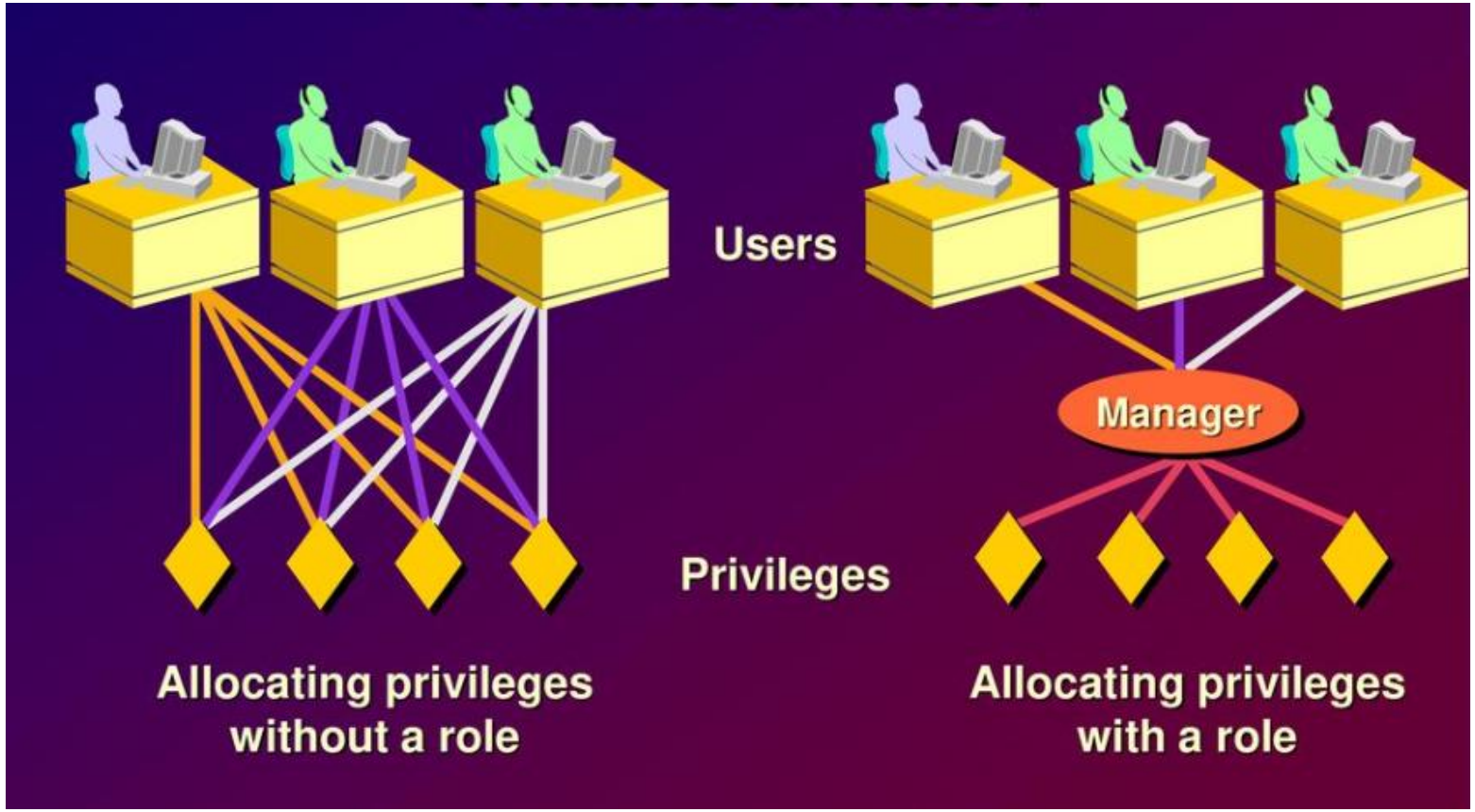
```
SQL> create user fady identified by admin;

User created.

SQL> grant create session to fady;

Grant succeeded.

SQL> drop user fady cascade;

User dropped.
```

ROLES

- **Well a role is a group of privileges in a single package.**

- **This allows for the administrator of database to easily grant or revoke privileges among the database users.**

ROLES


Users
Manager
Privileges
Allocating privileges without a role
Allocating privileges with a role

CREATING ROLES

```
SQL> CREATE ROLE MANAGERROLE;

Role created.

SQL> GRANT CREATE SESSION, CREATE TABLE, SELECT ANY TABLE,
CREATE USER, DROP USER, RESTRICTED SESSION TO MANAGERROLE;

Grant succeeded.
```

GRANTING ROLES

```
SQL> create user ahmed identified by 123;

User created.

SQL> GRANT MANAGERROLE TO AHMED;

Grant succeeded.
```

Retrieving Roles of Users

```
SQL> select* from user_sys_privs;

no rows selected

SQL> select* from role_sys_privs;

ROLE                           PRIVILEGE                      ADM
------------------------------ ------------------------------
---------- ---
MANAGERROLE                    SELECT ANY TABLE               NO
MANAGERROLE                    DROP USER                      NO
MANAGERROLE                    CREATE TABLE                   NO
MANAGERROLE                    CREATE USER                    NO
MANAGERROLE                    RESTRICTED SESSION             NO
MANAGERROLE                    CREATE SESSION                 NO

6 rows selected.
```

CREATING NEW USER

```
SQL> conn ahmed /123;
Connected.
SQL> create user seconduser identified by 123;

User created.
```

GRANTING CREATING ROLE TO USER

```
SQL> conn /as sysdba
Connected.
SQL> GRANT CREATE ROLE TO MANAGERROLE;

Grant succeeded.

SQL> conn ahmed/123;
Connected.
SQL> select * from role_sys_privs;

ROLE                           PRIVILEGE                      ADM
------------------------------ ---------------------------------------
---
MANAGERROLE                    SELECT ANY TABLE               NO
MANAGERROLE                    DROP USER                      NO
MANAGERROLE                    CREATE TABLE                   NO
MANAGERROLE                    CREATE USER                    NO
MANAGERROLE                    RESTRICTED SESSION             NO
MANAGERROLE                    CREATE SESSION                 NO
MANAGERROLE                    CREATE ROLE                    NO
```

Grant update on table

- **Update all columns in specific table.**

  grant update on table_name to user_name;

- **Update specific column in specific table.**

  grant update(col_name) on table_name to user_name;

Grant update on table

```
SQL> grant update(name) on
  2  ali.employee to ahmed;
```

```
SQL> update ali.employee set name = 'rawan'
  2  where id = 3;

1 row updated.

SQL> commit;

Commit complete.

SQL> select * from ali.employee;

        ID NAME
---------- --------------------
         1 ali
         2 ahmed
         3 rawan
```

GRANT UPDATE ROLE

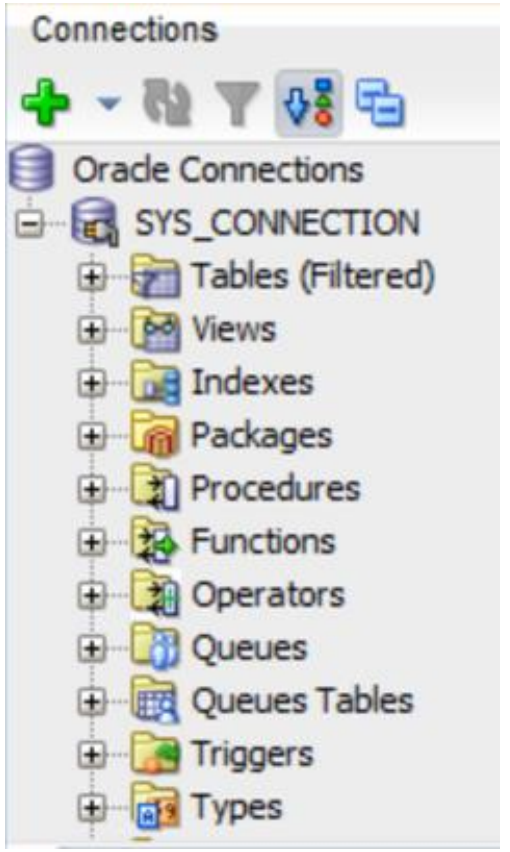
```
SQL> conn /as sysdba
Connected.
SQL> GRANT UPDATE ANY TABLE TO AHMED;

Grant succeeded.
```

```
SQL> update testuser.employee set name = 'khaled'
 where ID= 2;

1 row updated.

SQL> commit;

Commit complete.

SQL> select * from testuser.employee;

        ID NAME                 GENDER
---------- -------------------- ----------
---
         1 ALI                  MALE
         2 khaled               MALE
         3 NADIA                FEMALE
```

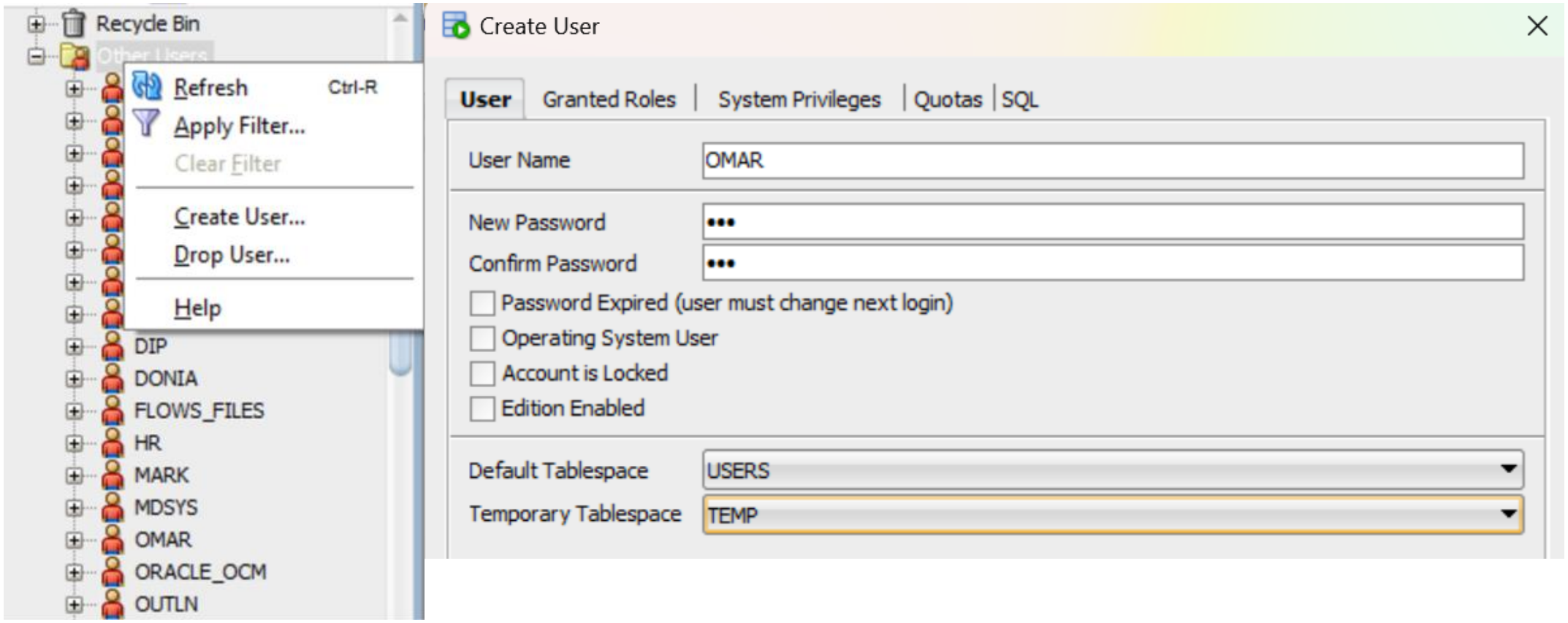
ORACLE SQL DEVELOPER

1. Get Connected
2. Login by SYS or User
3. Creating New User and Assign Privileges
4. Creating Table
5. Roles

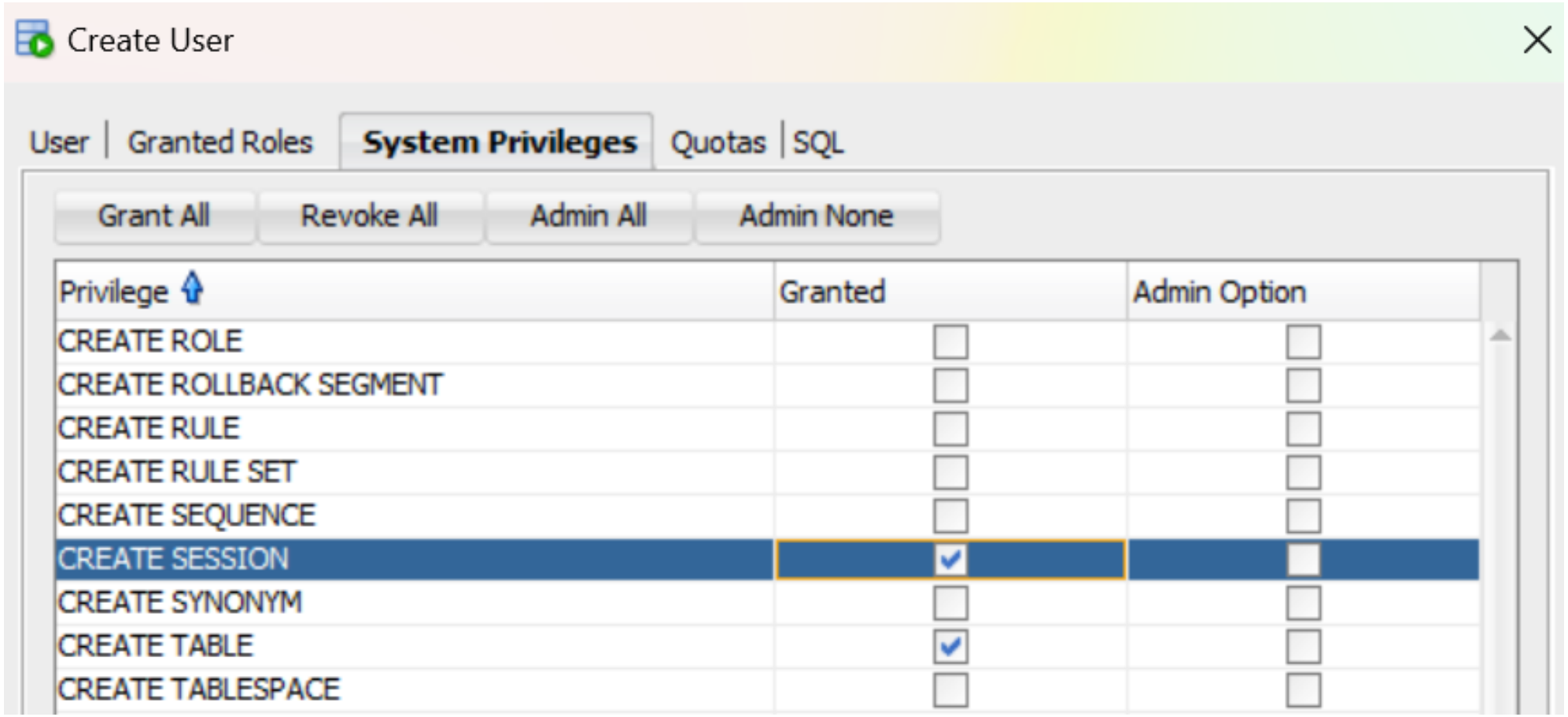
CONNECTING BY ADMIN



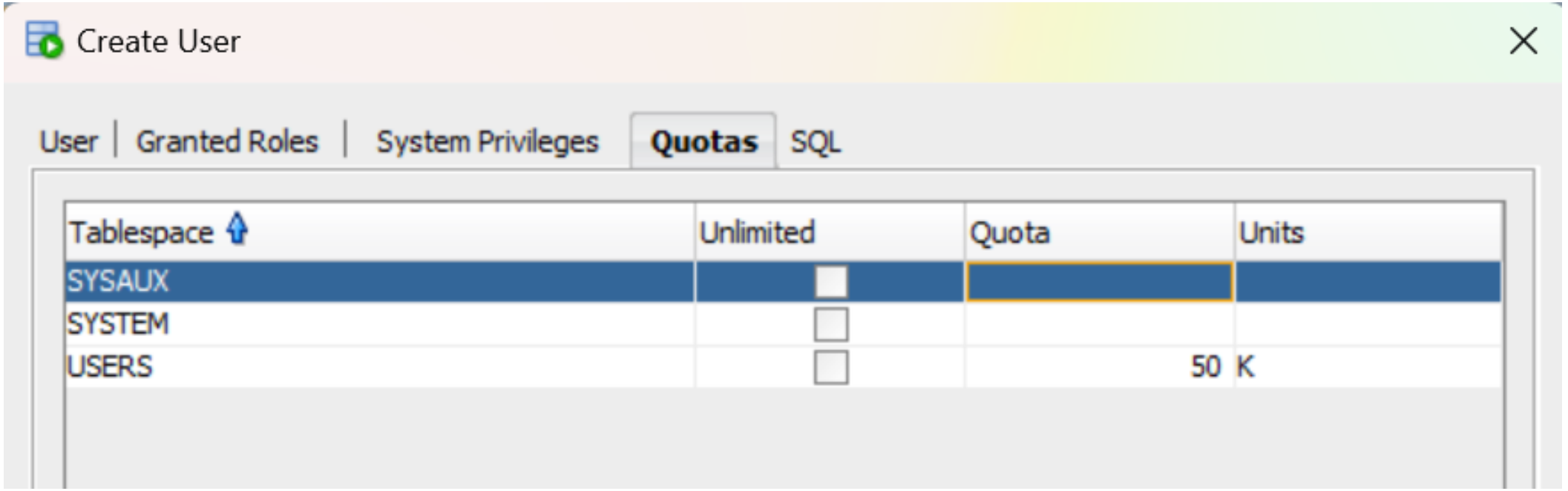
CREATING NEW USER



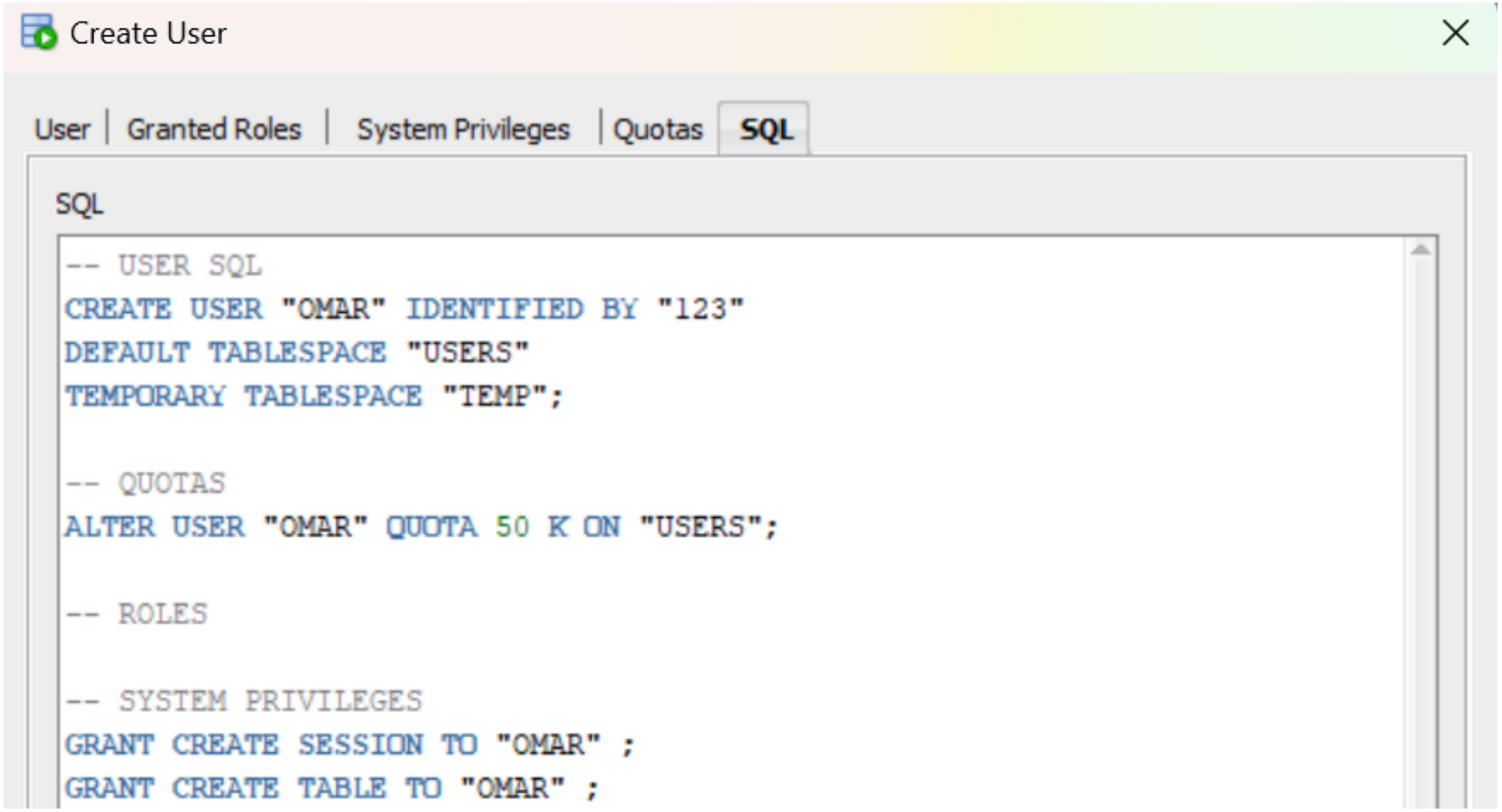
GRANTING PRIVILEGES TO USER



DEFINE QUOTAS TO USER

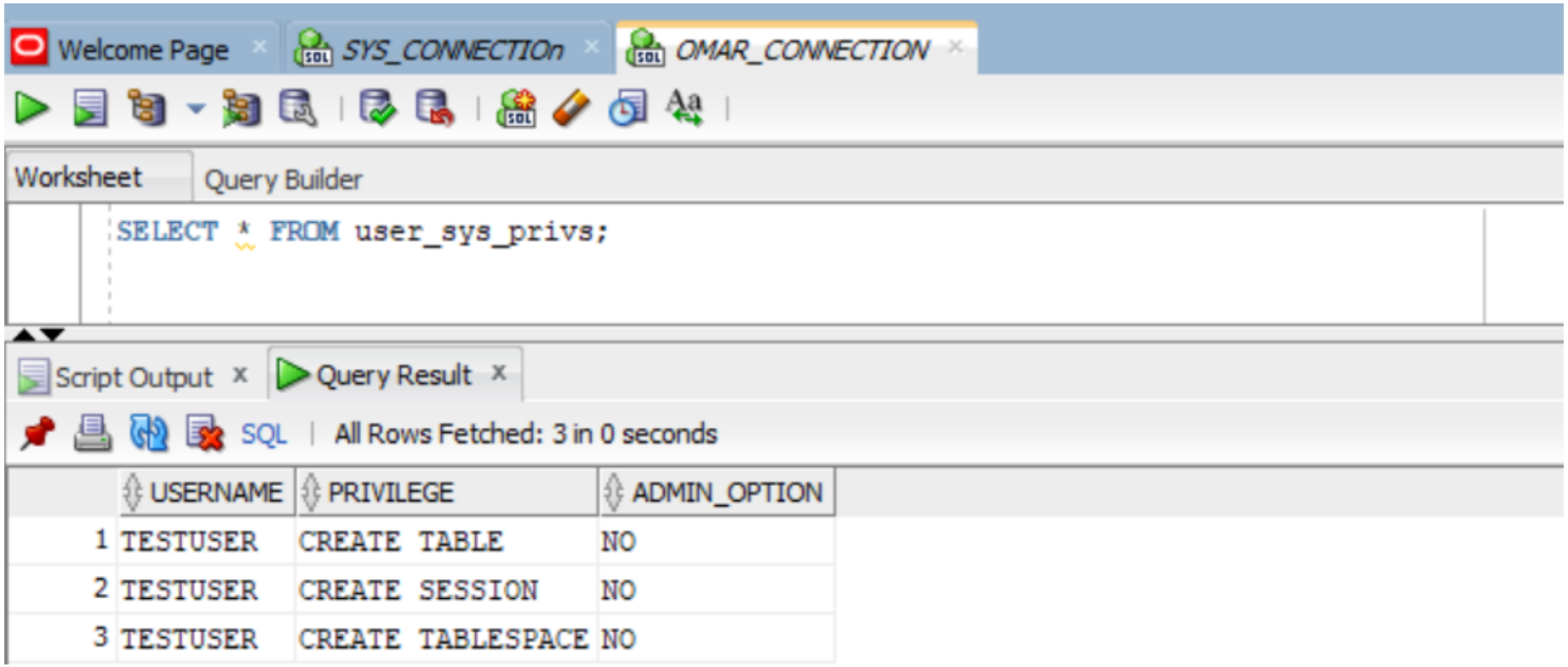


GENERATED SQL STATEMENTS

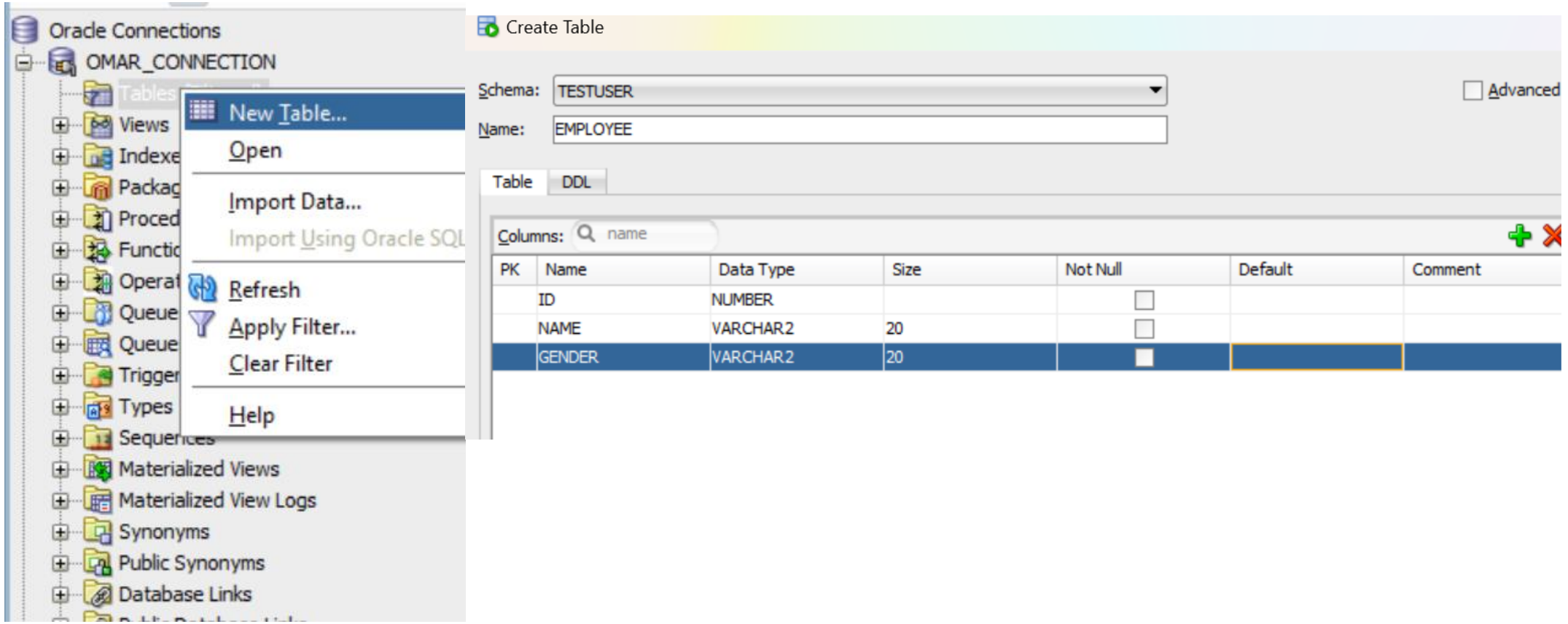


Retrieve User Privileges

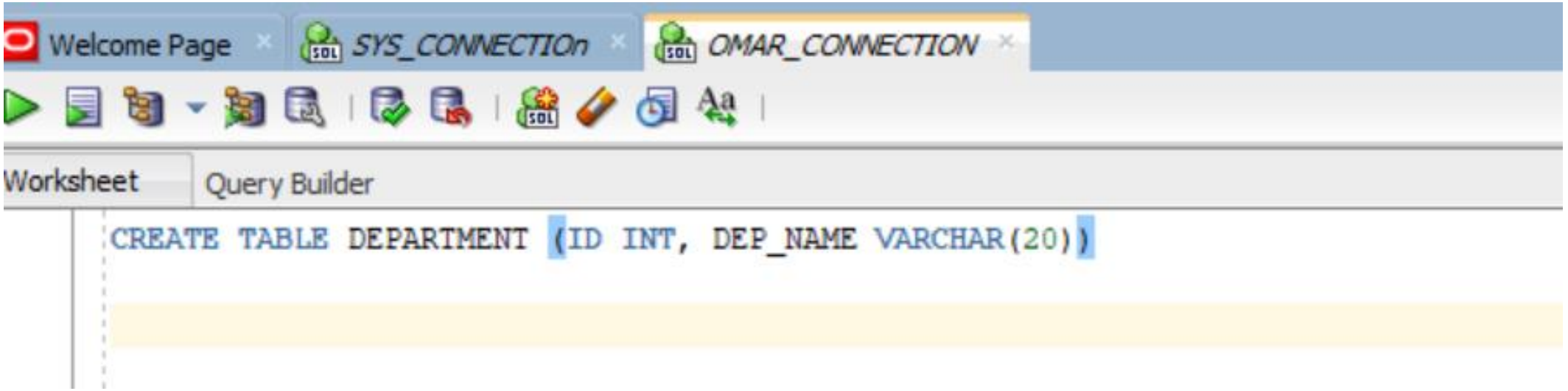
SELECT * FROM user_sys_privs;



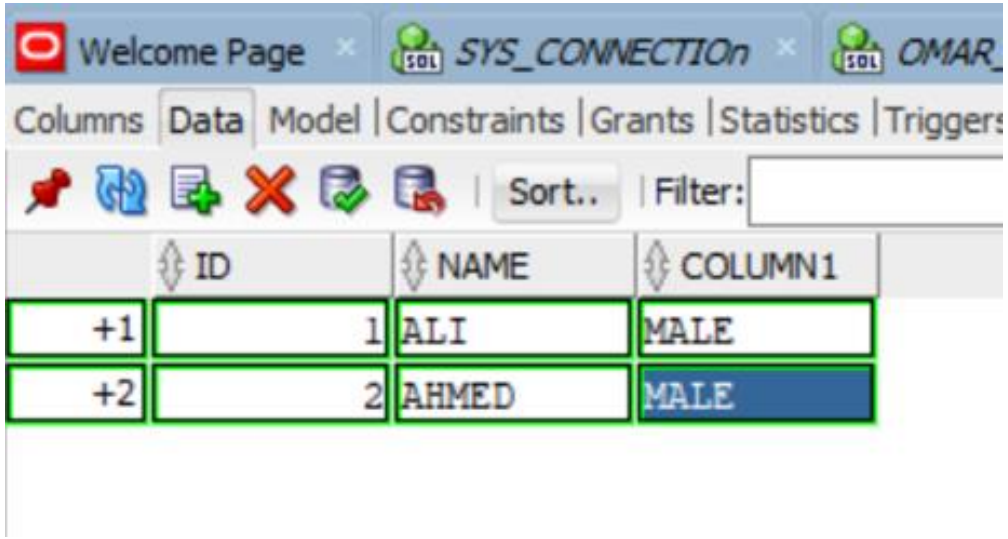
Creating Table

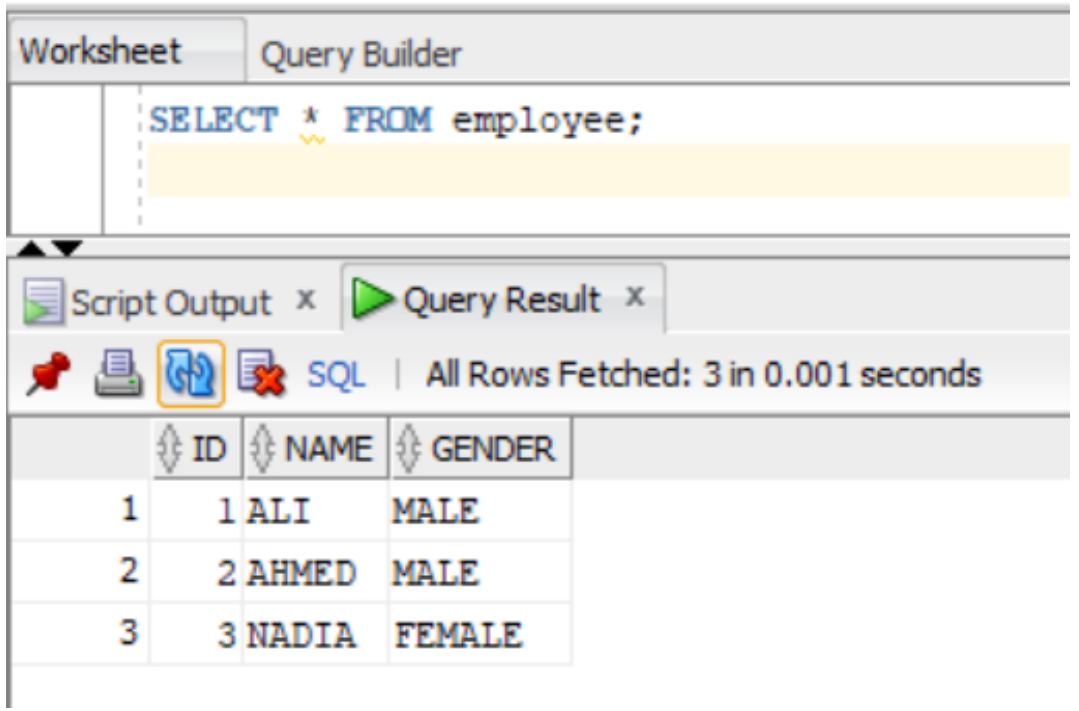


Creating Table



Inserting Data Into Table



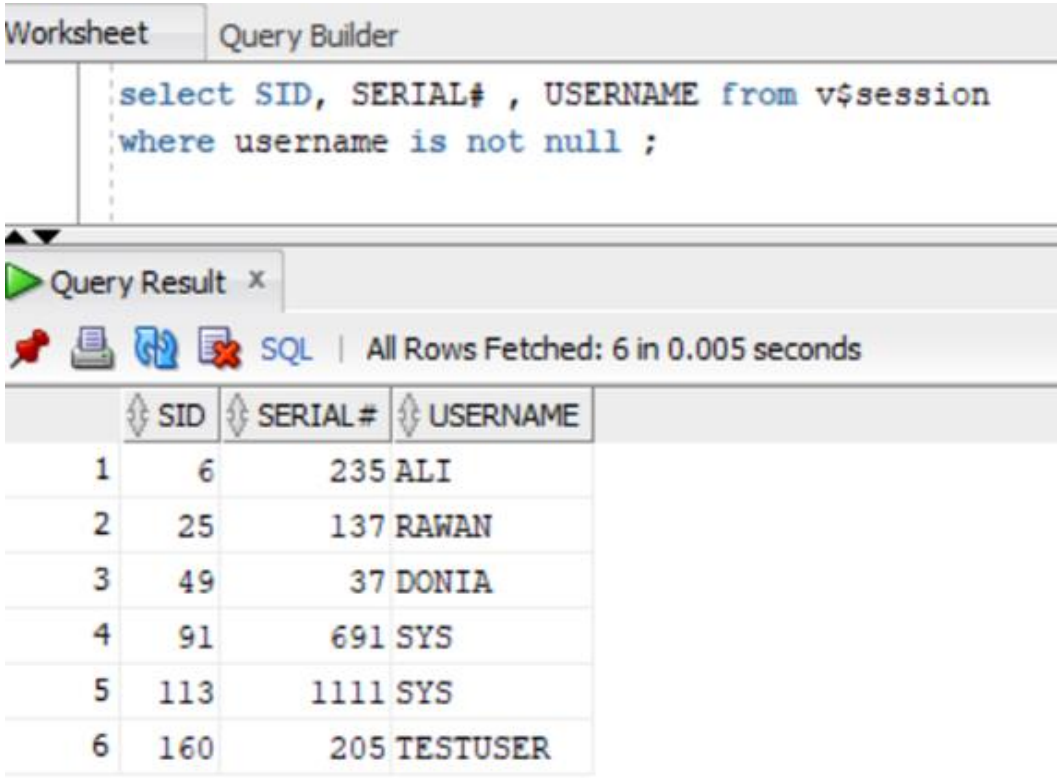


CONNECTED USERS

V$SESSION TABLE: store all data about connected users.

DESC V$SESSION;

select SID, SERIAL# ,
USERNAME from V$SESSION
where username is not null ;

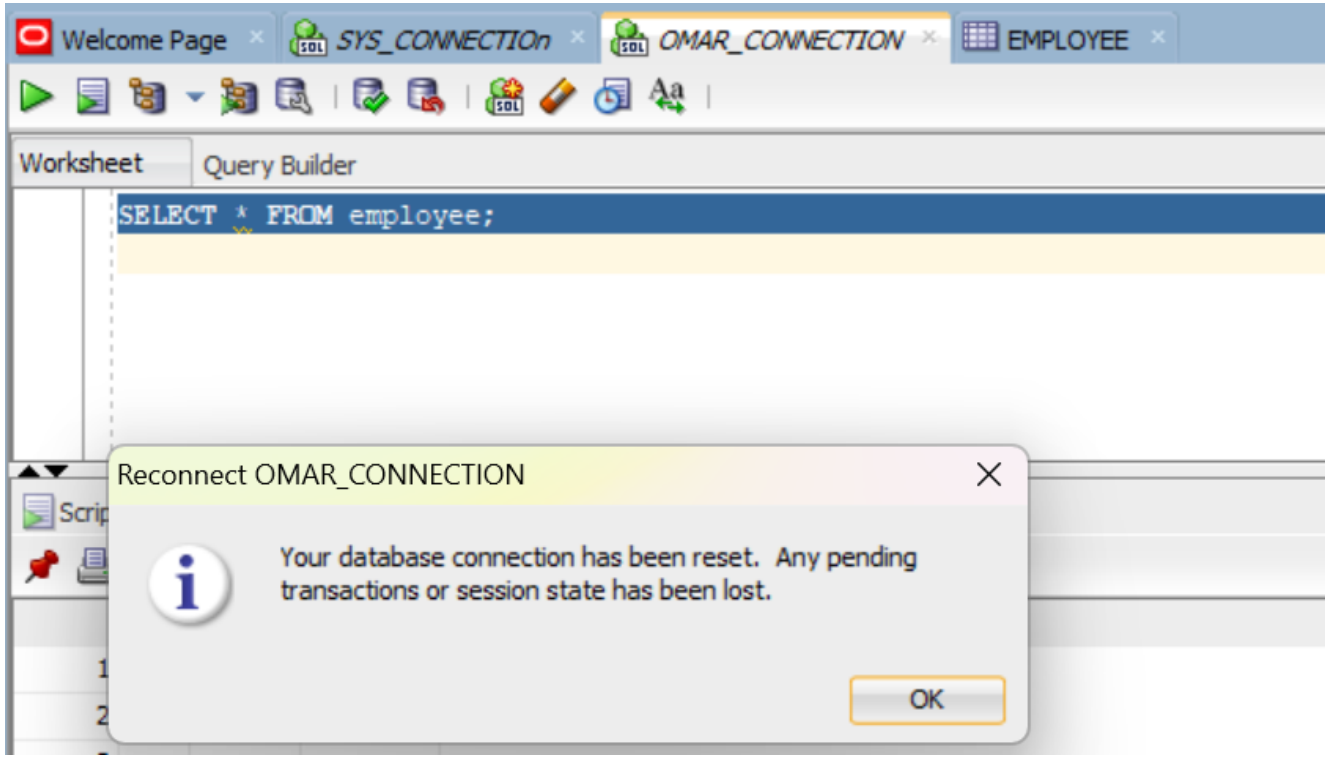


	SID	SERIAL#	USERNAME
1	6	235	ALI
2	25	137	RAWAN
3	49	37	DONIA
4	91	691	SYS
5	113	1111	SYS
6	160	205	TESTUSER

Killing User Session

ALTER SYSTEM KILL SESSION ‘SID, SERIAL#’;

ALTER SYSTEM KILL SESSION '160, 207';



Thank you!