Instituto Tecnológico de Querétaro

Ing. Sistemas Computacionales

Administración de base de datos.

8° Semestre

Trabajo: Practice 8.

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Practice 8-1: Creating and Using a Profile

In this practice, you create the INVENTORY user to own the new Inventory application. You create a profile to limit the idle time of users. If a user is idle or forgets to log out after 15 minutes, the user session is ended.

1) Mandatory task: Review and run the lab_08_01_01.sh script (located in the /home/oracle/labs directory) to create the INVENTORY user (with a password of oracle_4U), which you will use in the next practice.

```
[oracle@localhost ~]$ cd labs/
[oracle@localhost labs]$ chmod -x lab_08_01_01.sh
[oracle@localhost labs]$ . lab_08_01_01.sh
ORACLE_SID = [ORCL22] ? The Oracle base remains unchanged with value /u01/app/oracle

SQL*Plus: Release 19.0.0.0.0 - Production on Wed May 31 15:43:15 2023
Version 19.3.0.0.0

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Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

SQL> SQL> drop user inventory cascade
         *
ERROR at line 1:
ORA-01918: user 'INVENTORY' does not exist


SQL> SQL>   2
User created.

SQL> SQL>
Grant succeeded.

SQL> SQL> Disconnected from Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
[oracle@localhost labs]$
```

2) Create a profile named HRPROFILE that allows only 15 minutes idle time.

```
[oracle@localhost labs]$ sqlplus / as sysdba

SQL*Plus: Release 19.0.0.0.0 - Production on Wed May 31 15:47:34 2023
Version 19.3.0.0.0

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Version 19.3.0.0.0

SQL> create profile HRPROFILE limit idle_time 15;

Profile created.

SQL>
```

3) Set the RESOURCE_LIMIT initialization parameter to TRUE so that your profile limits are enforced.

```
SQL> alter system set resource_limit= true;

System altered.

SQL>
```

Practice 8-2: Creating Roles

In this practice, you create the HRCLERK and HRMANAGER roles that will be used in the next practice.

1) Create the role named HRCLERK with SELECT and UPDATE permissions on the HR.EMPLOYEES table.

```
SQL> create role HRCLERK not identified;

Role created.

SQL> grant select on HR.EMPLOYEES to HRCLERK;

Grant succeeded.

SQL> grant update on HR:EMPLOYEES to HRCLERK;
SP2-0552: Bind variable "EMPLOYEES" not declared.
SQL> grant update on HR.EMPLOYEES to HRCLERK;

Grant succeeded.
```

2) Create the role named HRMANAGER with INSERT and DELETE permissions on the HR.EMPLOYEES table. Grant the HRCLERK role to the HRMANAGER role.

```
SQL> create role HRMANAGER not identified;

Role created.

SQL> grant insert on HR.EMPLOYEES to HRMANAGER;

Grant succeeded.

SQL> grant delete on HR.EMPLOYEES to HRMANAGER;

Grant succeeded.

SQL>
```

```
SQL> grant HRCLERK to HRMANAGER;

Grant succeeded.
```

Practice 8-3: Creating and Configuring Users

In this practice, you create the following users and assign appropriate profiles and roles to these users:

Name Username Description

David Hamby   DHAMBY   A new HR Clerk

Rachel Pandya   RPANDYA   A new HR Clerk

Jenny Goodman   JGOODMAN   A new HR Manager

1) Create an account for David Hamby, a new HR clerk.

```
SQL> create user DHAMBY profile HRPROFILE identified by newuser password expire;
User created.
SQL> grant HRCLERK to DHAMBY;
Grant succeeded.
SQL> grant connect to DHAMBY;
Grant succeeded.
SQL> ▮
```

2) Create an account for Rachel Pandya, another new HR clerk. Repeat the steps shown above in step 1 but with RPANDYA as the username.

```
SQL> create user RPANDYA profile HRPROFILE identified by newuser password expire;
User created.
SQL> grant HRCLERK to RPANDYA;
Grant succeeded.
SQL> grant connect to RPANDYA;
Grant succeeded.
```

3) Create an account for Jenny Goodman, the new HR manager. Repeat the steps under step 1 but use JGOODMAN as the username and select the HRMANAGER role instead of the HRCLERK role.

```
SQL> create user JGOODMAN profile HRPROFILE identified by newuser password expire account unlock;
User created.
SQL> grant HRMANAGER to JGOODMAN;
Grant succeeded.
SQL> grant connect to JGOODMAN;
Grant succeeded.
```

4) Test the new users in SQL*Plus. Connect to the orcl database as the DHAMBY user. Use oracle_4U as the new password. Select the row with EMPLOYEE_ID=197 from the HR.EMPLOYEES table. Then attempt to delete it. (You should get the "insufficient privileges" error.)

```
[oracle@localhost labs]$ sqlplus DHAMBY

SQL*Plus: Release 19.0.0.0.0 - Production on Wed May 31 17:42:01 2023
Version 19.3.0.0.0

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Enter password:
ERROR:
ORA-28001: the password has expired


Changing password for DHAMBY
New password:
Retype new password:
Password changed

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

SQL> select salary from HR.EMPLOYEES where EMPLOYEE_ID=197;

    SALARY
----------
      3000

SQL> delete from HR.EMPLOYEES where EMPLOYEE_ID=197;
delete from HR.EMPLOYEES where EMPLOYEE_ID=197
              *
ERROR at line 1:
ORA-01031: insufficient privileges
```

5) Repeat the test as the JGOODMAN user. Use oracle_4U as the new password.

After deleting the row, issue a rollback, so that you still have the original 107 rows.

```
[oracle@localhost labs]$ sqlplus JGOODMAN

SQL*Plus: Release 19.0.0.0.0 - Production on Wed May 31 17:45:30 2023
Version 19.3.0.0.0

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Enter password:
ERROR:
ORA-28001: the password has expired


Changing password for JGOODMAN
New password:
Retype new password:
Password changed

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
```

```
SQL> select salary from HR.EMPLOYEES where EMPLOYEE_ID=197

    SALARY
----------
      3000

SQL> delete from HR.EMPLOYEES where EMPLOYEE_ID=197;

1 row deleted.

SQL> rollback
  2  ;

Rollback complete.

SQL>
```

6) Use SQL*Plus to connect to the orcl database as the RPANDYA user. Change the password to oracle_4U. (You must change the password, because this is the first connection as RPANDYA.) Leave RPANDYA connected during the next lesson or at the end of the day. HRPROFILE specifies that users whose sessions are inactive for more than 15 minutes will automatically be logged out. Verify that the user was automatically logged out by trying to select from the HR.EMPLOYEES table again.

```
Enter user-name: RPANDYA
Enter password:
ERROR:
ORA-28001: the password has expired


Changing password for RPANDYA
New password:
Retype new password:
Password changed

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

      ▬

SQL> select salary from HR.EMPLOYEES;
select salary from HR.EMPLOYEES
*
ERROR at line 1:
ORA-02396: exceeded maximum idle time, please connect again
```