

Lab2 – Privilege role

Is210.l22.htcl

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I. Exercise 1: Do the following things using sqlplus and write out the results

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| Command | Result |
| 1. Open sqlplus and connect to sys user.  sqlplus / as sysdba | Connected to:  Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production  Version 19.3.0.0.0 |
| 2. Show the connection name of current container.  show con\_name | CON\_NAME  ------------------------------  CDB$ROOT |
| 3. Create a pluggable database (PDB) and open this PDB.  CREATE PLUGGABLE DATABASE pdb1 ADMIN USER pdb1user IDENTIFIED BY test123 ROLES=(DBA) file\_name\_convert=('pdbseed', 'pdb1');  alter pluggable database pdb1 open; | Pluggable database created.  #open  Pluggable database altered. |
| 4. Connect to the sys user in the above PDB.  conn sys/Admin123@localhost:1521/pdb1 as sysdba | Connected |
| 5. Show the connection name of current container.  Show con\_name; | CON\_NAME  ------------------------------  PDB2 |
| 6. In this PDB, create 3 user: user1, user2, user3.  create user user1 identified by test123;  create user user2 identified by test123;  create user user3 identified by test123; | User created.  User created.  User created. |

II. Exercise 2: Do the following things using sqlplus and write out the results

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| Command | Result |
| 7. Connect to user1.  conn user1/test123@localhost:1521/pdb2 | ORA-01045: user USER1 lacks CREATE SESSION privilege; logon denied |
| 8. Connect to sys user of PDB above.  conn sys/Admin123@localhost:1521/pdb2 as sysdba | Connected. |
| 9. Create a role named manager.  create role manager; | Role created. |
| 10.Grant CREATE SESSION, CREATE TABLE to manager role.  Grant CREATE SESSION, CREATE TABLE to manager; | Grant succeeded. |
| 11. Grant manager role to user1.  grant manager to user1 ; | Grant succeeded. |
| 12.Connect to user1.  conn user1/test123@localhost:1521/pdb2 | Connected. |
| 13.Create a TEST table (ID NUMBER, NAME VARCHAR2(100))  create table test(id number, name varchar2(100)); | Table created. |
| 14. From user1, grant manager role to user2.  grant manager to user2; | ORA-01932: ADMIN option not granted for role 'MANAGER' |
| 15. From sys user, grant CREATE SESSION privilege to user2;  grant create session to user2; | Grant succeeded. |
| 16. Connect to user 2, create a table.  conn user2/test123@localhost:1521/pdb2  create table test(id number, name varchar2(100)); | Connected.  ORA-01031: insufficient privileges |
| 17. From user2, grant CREATE SESSION privilege to user3;  grant create session to user3; | ORA-01031: insufficient privileges |
| 18. Connect to SYS user of this PDB  conn sys/Admin123@localhost:1521/pdb2 as sysdba | Connected. |
| 19. From sys, grant manager role to user3 WITH ADMIN OPTION.  grant manager to user3 with admin option; | Grant succeeded. |
| 20. Connect to user3.  conn user3/test123@localhost:1521/pdb2 | Connected. |
| 21.Grant manager role to user2.  grant manager to user2; | Grant succeeded. |
| 22.From user3, create a table in user2 schema. (successful or not?).  create table user2.student (id number); | ORA-01031: insufficient privileges |
| 23.From user3, how can you create a table in user2 schema?  conn sys/Admin123@localhost:1521/pdb2 as sysdba  grant create any table to user3;  conn user3/test123@localhost:1521/pdb2;  create table user2.student (id number); | Grant succeeded.  Table created. |
| 24.From user3, query the roles and system privilege of current user.  select \* from user\_role\_privs;  select \* from user\_sys\_privs; | USERNAME -------------------------------------------------------------------------------- GRANTED\_ROLE -------------------------------------------------------------------------------- ADM DEL DEF OS\_ COM INH --- --- --- --- --- --- USER3 MANAGER YES NO YES NO NO NO  USERNAME -------------------------------------------------------------------------------- PRIVILEGE ADM COM INH ---------------------------------------- --- --- --- USER3 CREATE ANY TABLE NO NO NO |
| 25.Use SQLDeveloper to connect to ADMIN USER of this PDB |  |

III. Exercise 3: Using sqlplus to do the following things and write out the

results:

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| Command | Result |
| 1. Start SQL\*Plus and connect to the Database.  sqlplus / as sysdba | Connected to: Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production Version 19.3.0.0.0 |
| 2. CREATE a PLUGGABLE DATABASE (PDB) and open this PDB.  CREATE PLUGGABLE DATABASE pdb3 ADMIN USER pdb3user IDENTIFIED BY test123 ROLES=(DBA) file\_name\_convert=('pdbseed', 'pdb3');  alter pluggable database pdb3 open; | Pluggable database created.  Pluggable database altered. |
| 3. Using sys user to connect to the above PDB.  conn sys/Admin123@localhost:1521/pdb3 as sysdba | Connected. |
| 4. Show connection name.  show con\_name | CON\_NAME ------------------------------ PDB3 |
| 5. Creating a tablespace.  create tablespace tbs\_pdb3 datafile 'D:\Oracle\Database\19c\oradata\ORCL\PDB3\tbs\_pdb3\_01.dbf' size 5M; | Tablespace created. |

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| 6. Create 4 user with the default tablespace, quota 1M for each user.  create user user1 identified by test123 default tablespace tbs\_pdb3 quota 1M on tbs\_pdb3;  create user user2 identified by test123 default tablespace tbs\_pdb3 quota 1M on tbs\_pdb3;  create user user3 identified by test123 default tablespace tbs\_pdb3 quota 1M on tbs\_pdb3;  create user user4 identified by test123 default tablespace tbs\_pdb3 quota 1M on tbs\_pdb3; | User created.  User created.  User created.  User created. |
| 7. Grant system privilege to user1 so that user1 can connect to the database  grant create session to user1; | Grant succeeded. |
| 8. Show system privilege of user1.  select \* from dba\_sys\_privs where grantee='USER1'; | GRANT PRIVILEGE ADM COM INH ----- ---------------------------------------- --- --- --- USER1 CREATE SESSION NO NO NO |
| 9. Create a programing role and grant privilege CREATE SESSION, CREATE TABLE to this role  create role programming;  grant create session, create table to programming; | Role created.  Grant succeeded. |
| 10. Grant programing role to user2 with admin option.  grant programming to user2 with admin option; | Grant succeeded. |
| 11. Show role and system privileges of user2.  select \* from dba\_role\_privs where grantee='USER2';  select \* from dba\_sys\_privs where grantee='USER2'; | GRANTEE  --------------------------------------------------------------------------------  GRANTED\_ROLE  --------------------------------------------------------------------------------  ADM DEL DEF COM INH  --- --- --- --- ---  USER2  PROGRAMMING  YES NO YES NO NO  no rows selected |
| 12. Connect to the database using user2.  conn user2/test123@localhost:1521/pdb3 | Conneced. |
| 13. From user2, create the employees table: ID, NAME, SALARY, description.  create table employees (id number, name varchar2(100), salary number, description varchar2(100)); | Table created. |
| 14. From user2, insert 2 rows to employees table.  insert into employees values(1, 'Anna', 700, 'hello anna');  insert into employees values(2, 'PHP', 900, 'hello PHP'); | 1 row created.  1 row created. |
| 15. From user2, grant programing role to user3 and grant update (name,  salary) on employees table to user3.  grant programming to user3;  grant update(name, salary) on employees to user3; | Grant succeeded.  Grant succeeded. |
| 16. From user3, grant programing role to user1.  conn user3/test123@localhost:1521/pdb3  grant programming to user1; | ORA-01932: ADMIN option not granted for role 'PROGRAMMING' |
| 17.From user3, show role and object privilege of user3. (using view:  USER\_ROLE\_PRIVS, USER\_COL\_PRIVS).  select \* from user\_role\_privs;  select table\_name, column\_name from user\_col\_privs; | USERNAME -------------------------------------------------------------------------------- GRANTED\_ROLE -------------------------------------------------------------------------------- ADM DEL DEF OS\_ COM INH --- --- --- --- --- --- USER3 PROGRAMMING NO NO YES NO NO NO  TABLE\_NAME -------------------------------------------------------------------------------- COLUMN\_NAME -------------------------------------------------------------------------------- EMPLOYEES SALARY EMPLOYEES NAME |
| 18. From user3, query data from employees table of user2. (successful or  not?)  select \* from user2.employees; | ORA-01031: insufficient privileges |
| 19. From sys, grant select on employees of user2 to user3.  conn sys/Admin123@localhost:1521/pdb3 as sysdba;  grant select on user2.employees to user3; | Connected.  Grant succeeded. |
| 20. From user3, query data from employees table of user2  conn user3/test123@localhost:1521/pdb3 ;  select \* from user2.employees; | ID ---------- NAME -------------------------------------------------------------------------------- SALARY ---------- DESCRIPTION -------------------------------------------------------------------------------- 1 Anna 700 hello anna ID ---------- NAME -------------------------------------------------------------------------------- SALARY ---------- DESCRIPTION -------------------------------------------------------------------------------- 2 PHP 900 hello PHP |
| 21. From sys user, grant create sequence to user3  conn sys/Admin123@localhost:1521/pdb3 as sysdba  grant create sequence to user3; | Connected.  Grant succeeded. |
| 22. From user3, create table students (id number, fullname varchar2(50))  conn user3/test123@localhost:1521/pdb3  create table students(id number, fullname varchar2(50)); | Connected.  Table created. |
| 23. From user3, Create sequence named student\_seq, start with 15,  create sequence student\_seq start with 15 increment by 3;  increment by 3 | Sequence created. |
| 24. From user3, insert data into students table with ID is generated from the  sequence.  insert into students values(student\_seq.NEXTVAL, 'php');  insert into students values(student\_seq.NEXTVAL, '1301'); | 1 row created.  1 row created. |
| 25. From user3, select data from students table.  select \* from students; | ID FULLNAME ---------- -------------------------------------------------- 23 php 26 1301 |
| 26. From sys, grant CREATE SESSION TO user4.  conn sys/Admin123@localhost:1521/pdb3 as sysdba  grant create session to user4; | Connected.  Grant succeeded. |
| 27. How can user4 insert data into students table of user3?  grant insert on user3.students to user4;  grant select on user3.student\_seq to user4;  insert into user3.students values(user3.student\_seq.NEXTVAL, 'user4');  conn user3/test123@localhost:1521/pdb3  select \* from students; | Grant succeeded.  Grant succeeded.  Connected.  select \* from students; ID FULLNAME ---------- -------------------------------------------------- 23 php 26 1301 29 user4 |
| 28. How can user4 delete data from students table of user3  grant delete on user3.students to user4; | Grant succeeded. |