نظم قواعد المعطيات المتقدمة

الجلسة الثالثة

Creating a User

To create a user in the database, you use the CREATE USER statement. The simplified syntax for the CREATE USER statement is as follows:

```
CREATE USER user_name IDENTIFIED BY password
[DEFAULT TABLESPACE default_tablespace]
[TEMPORARY TABLESPACE temporary_tablespace];
```

Creating a User

Where:
user_name: is the name of the database user.
password is the password for the database user.

default_tablespace : is the default tablespace where database objects are stored. If you omit a default tablespace, the default USERS tablespace, which always exists in a database, is used.

temporary_tablespace : is the default tablespace where temporary objects are stored.
These objects include temporary tables. If you omit a temporary tablespace, the default `TEMP` tablespace is used.

يكون حساب المستخدم في إحدى الحالات التالية :

- **OPEN** The account is available for use.
- **LOCKED** This indicates that the DBA deliberately locked the account. No user can connect to a locked account.
- **EXPIRED** This indicates that the lifetime has expired. Passwords can have a limited lifetime. No user can connect to an EXPIRED account until the password is reset.
- **EXPIRED & LOCKED** Not only has the account been locked, but its password has also expired.

ويمكن ببساطة تغيير حالة الحساب بتنفيذ التعليمة التالية:

To lock and unlock an account, use these commands:

```
ALTER USER username ACCOUNT LOCK ;
ALTER USER username ACCOUNT UNLOCK ;
```

To force a user to change his password, use this command:

```
ALTER USER username PASSWORD EXPIRE;
```

ويمكن الاستعلام عن الحسابات الموجودة حالياً في قاعدة المعطيات و مشاهدة خصائصها من خلال استخدام قاموس البيانات و الاستعلام بتعليمة Select على الـ DBA_USERS view.

```
Desc DBA_USERS
SELECT * FROM DBA_USERS;

Select USERNAME , PASSWORD, ACCOUNT_STATUS, DEFAULT_TABLESPACE
From DBA_USERS
Where USERNAME  LIKE 'S%'
```

Changing a User's Password

You can change a user's password using the ALTER USER statement. For example:

```
ALTER USER u1 IDENTIFIED BY button ;
```

Deleting a User

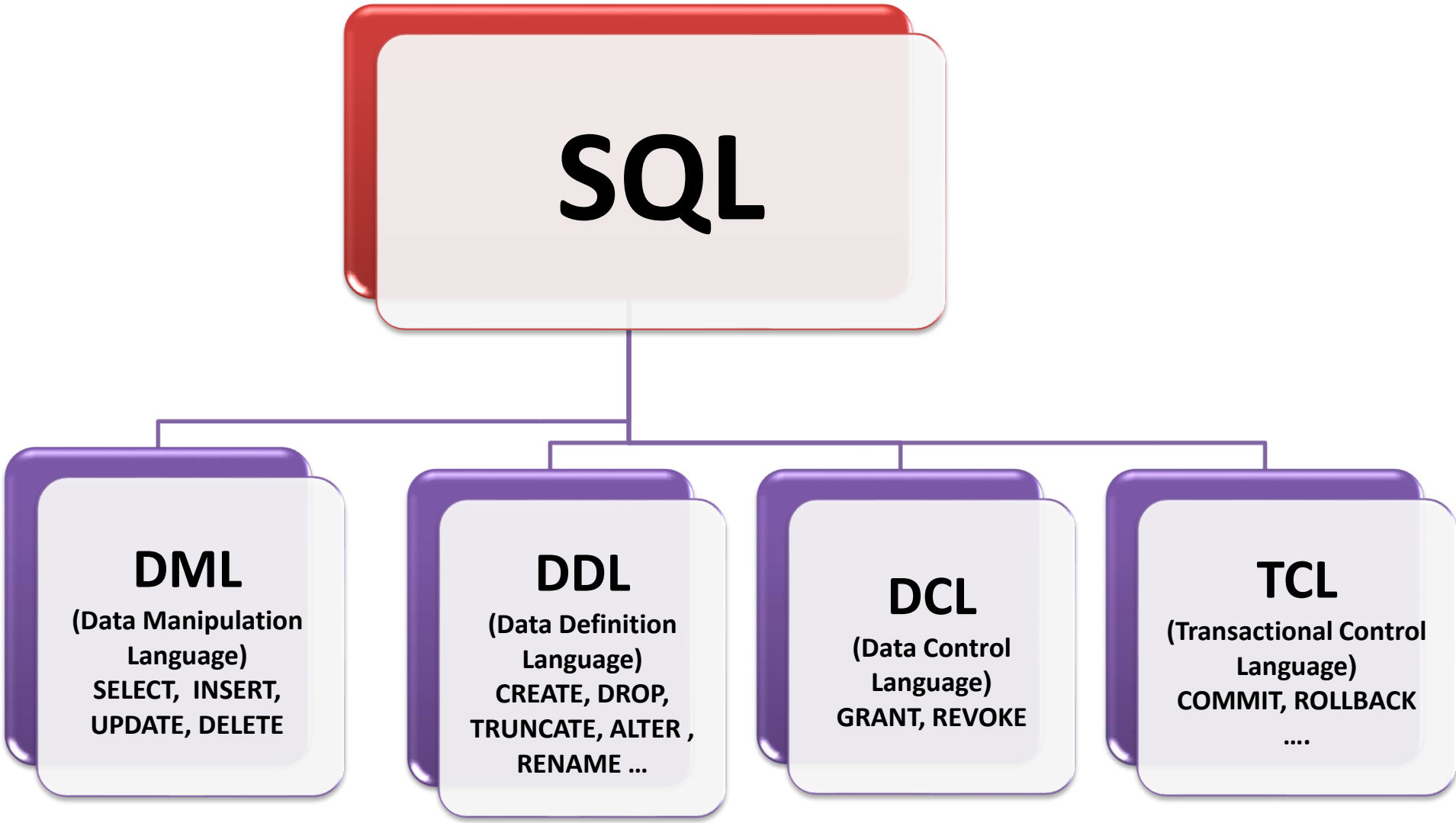
You delete a user using the DROP USER statement.

```
CONNECT system

DROP USER u1;
```

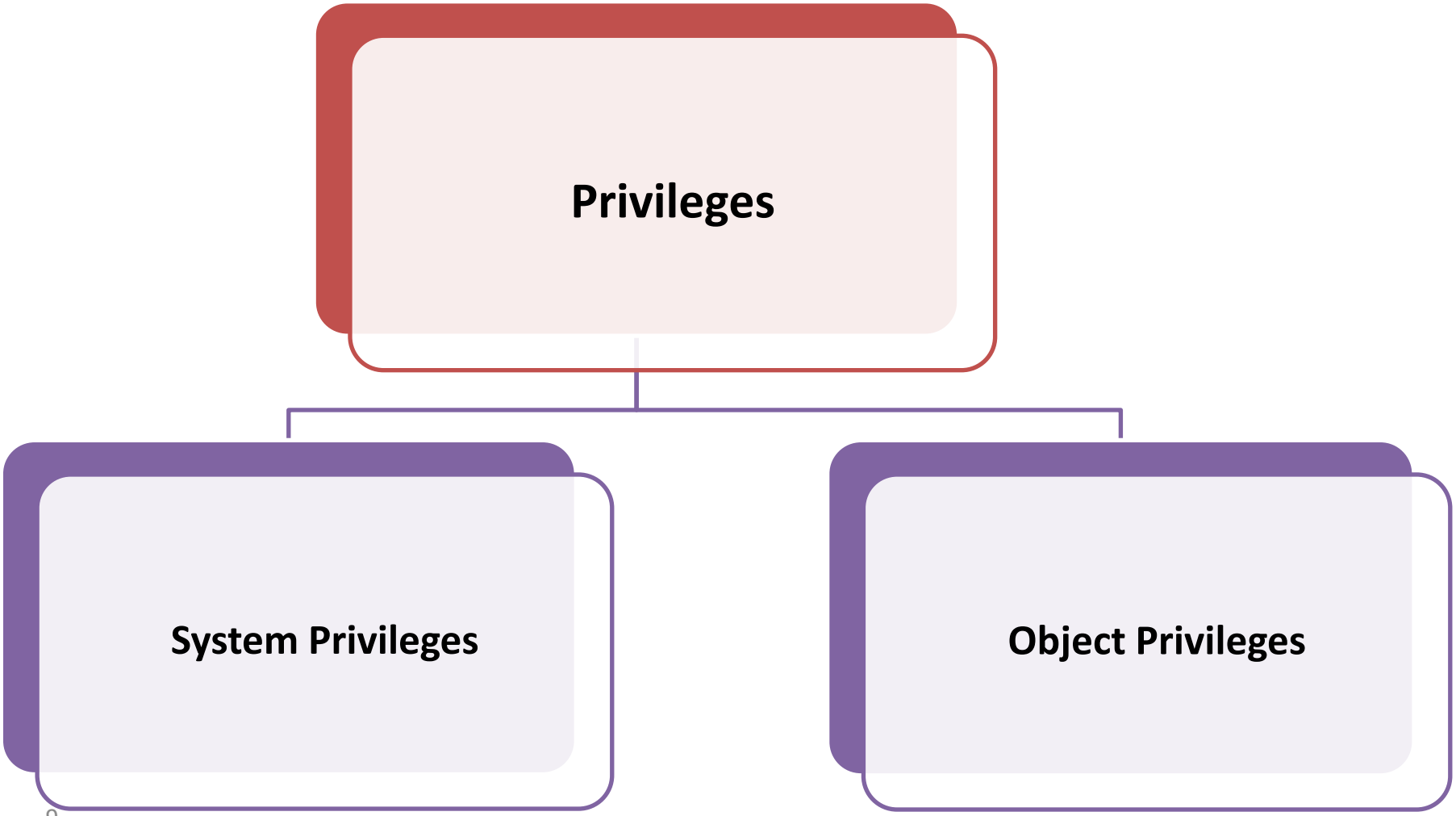
NOTE : *You must add the keyword* `CASCADE` *after the user's name in the* `DROP USER` *statement if that user's schema contains objects such as tables. However, you should ensure no other users need access to those objects before doing this.*

```
DROP USER u1 CASCADE;
```



Note : DDL & DCL are autocommit (do commit implicitly)

Privileges



Checking System Privileges Granted to a User

You can check which system privileges a user has by querying user_sys_privs. Table below describes some of the columns in user_sys_privs.

NOTE : user_sys_privs forms part of the Oracle database's data dictionary. The data dictionary stores information about the database itself.

Column	Type	Description
username	VARCHAR2(30)	Name of the current user
privilege	VARCHAR2(40)	The system privilege the user has
admin_option	VARCHAR2(3)	Whether the user is able to grant the privilege to another user

Example:

```
CONNECT system

SELECT *

FROM user_sys_privs

ORDER BY privilege;
```

System Privileges

A *system privilege allows a user to perform certain actions within the database,* such as executing DDL statements. For examples :

CREATE SESSION	Connect to a database.
CREATE TABLE	Create a table in the user's schema.
CREATE ANY TABLE	Create a table in any schema.
DROP TABLE	Drop a table from the user's schema.
DROP ANY TABLE	Drop a table from any schema.
CREATE USER	Create a user.
DROP USER	Drop a user.

Granting System Privileges to a User :

GRANT ***privilege [, privilege...]*** **TO** ***username [, another_username ...]*** **[WITH ADMIN OPTION]*;***

[WITH ADMIN OPTION] *:*
To give a user the ability to grant a system privileges they have to other users :

Revoking System Privileges from a User :

Revoke *privilege [, privilege...]* **FROM** *username [, another_username...];*

Practical Work

Create user u1 Identified by u1
Default tablespace users
Temporary tablespace temp;

Alter user u1
Quota 1m on users;

Practical Work

- Create 2 users (user1,user2)
- Give user user1,user2 connect to db privilege
- Lets user user1 create table table1
- Lets user user2 create table table2
- Give user1 **Create Any Table Privilege**
- Lets user user1 create table table3 in user2 schema
- (show user1 tables , show user2 tables)
- (can user1 select from table3 table in user2 schema ???)

Note : the user who has "**Create Any Table Privilege**" can create a table in another schemas without having a quota , the quota must be assigned to the user schema in which the table created in .

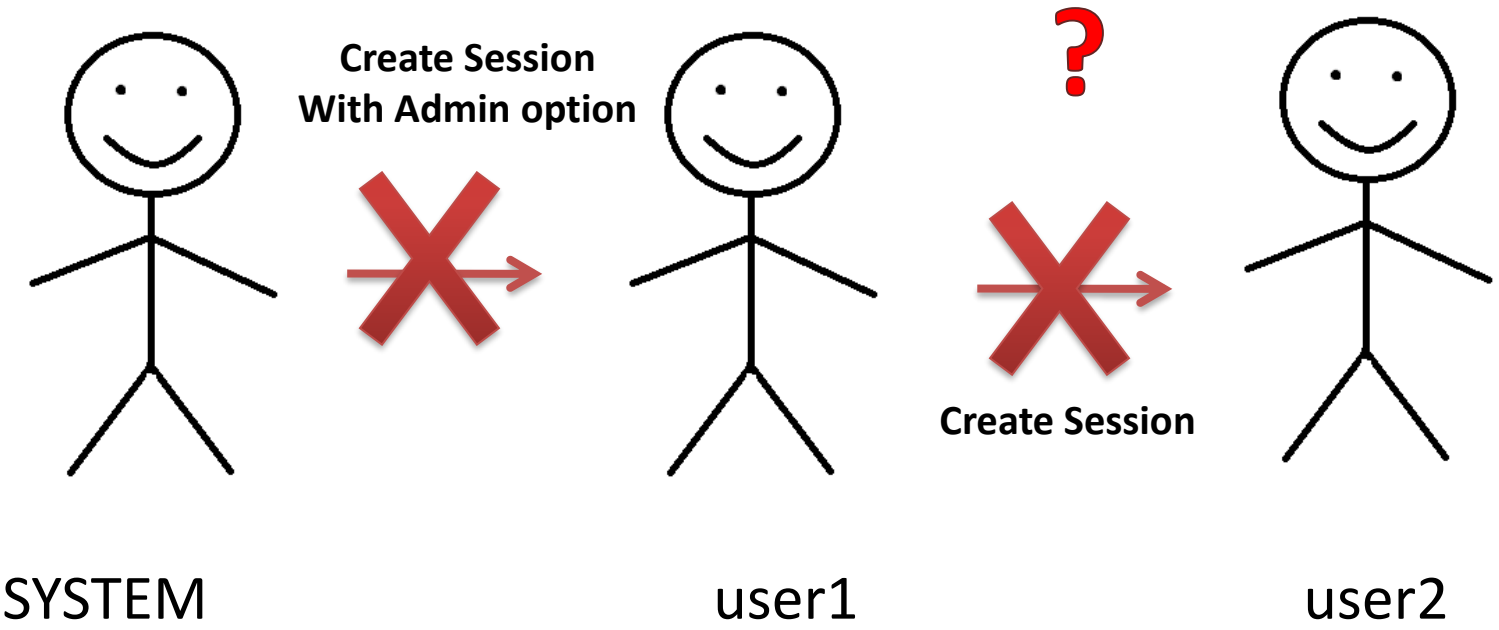
Practical Work

- Create 2 users (user1,user2)
- Give user user1,user2 connect to db privilege (conn system, grant create session to user1, user2)
- Lets user user1 create table table1
  1. conn system
  2. grant create table to user1;
  3. Alter user user1 Quota 1m on Users;
  4. conn user1/user1 (then you can create table)
- Lets user user2 create table table2
- Give user1 **Create Any Table Privilege**
- Lets user1 create table table3 in user2 schema
  1. conn user1/user1
  2. create table user2.table3(id int);
- (show user1 tables , show user2 tables)
  - select table_name from user_tables;
- (can user1 select from table3 table in user2 schema ???) No

Practical Work

Revoke create session privilege from user1,user2
Give user1 Create Session Privilege WITH ADMIN OPTION
Let user user1 GRANT Create Session to user2

System Privileges



user1 has Create Session Privilege WITH ADMIN OPTION
user1 GRANT Create Session to user2 , System user revoke Create Session from user1 , Can user2 still can Create Session ????

Yes