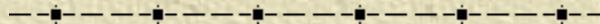


Structured Query Language (SQL)



Prepared by: Mr. Heng Jooi Huang

4) Data Definition Commands

– CREATE VIEW, DROP VIEW

Virtual Table: Creating a VIEW

- 🐼 A **view** is a virtual table based on a SELECT query.
- 🐼 The table(s) on which the **view** is based are called **base table(s)**.
- 🐼 Virtual table only exist in **memory**.
- 🐼 The **DBMS** stores the **definition of the view** in the database.
- 🐼 You can treat this virtual table as a real table.
- 🐼 The CREATE VIEW command's syntax:

```
CREATE VIEW ViewName AS SELECT Query
```

```
CREATE OR REPLACE VIEW ViewName AS SELECT Query
```

4) Data Definition Commands

– CREATE VIEW, DROP VIEW

EXTRA NOTE FOR VIEW:



There are two basic types of views:

- 1) Simple views, which contain a query that retrieves from one base table.
- 2) Complex views, which contain a query that:
 - Retrieves from multiple base tables
 - Groups rows using a GROUP BY or DISTINCT clause
 - Contains a function call





Getting information on View Constraints (Oracle):

```
SELECT Owner, Constraint_Name, Constraint_Type,  
       Table_Name, Status  
FROM   User_Constraints  
ORDER BY Owner, Table_Name;
```

4) Data Definition Commands

– CREATE VIEW, DROP VIEW

EXTRA NOTE FOR VIEW:

-  An approach called **view resolution**, look up the view definition and translates the request into an equivalent request against the source tables of the view and then performs the request.
 -  An alternative approach called **view materialization**, stores the view as a temporary table in the database and maintains the currency of the view as the underlying base tables are updated.
- ❖ **WITH READ ONLY CONSTRAINT**
 - ❖ **WITH CHECK OPTION CONSTRAINT**

4) Data Definition Commands

– CREATE VIEW, DROP VIEW

Removing the View

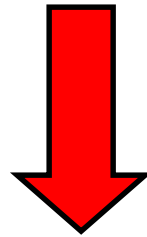
- 🐼 Use DROP VIEW command to remove a view from database.
- 🐼 DROP VIEW causes the definition of the view to be deleted from the database.
- 🐼 The DROP VIEW command's syntax:

DROP VIEW ViewName [RESTRICT (default) | CASCADE]

- 🐼 If **RESTRICT (default)** is specified and there are any **other objects that depend for their existence**, the command is **rejected**.
- 🐼 If **CASCADE** is specified, **DROP VIEW** deletes **all related dependent objects**.

Retrieving Records with the JOIN - ON clause

```
SELECT    R.Rno, FName, LName, Pno, VComment  
FROM      Renter R, Viewing V  
WHERE     R.Rno = V.Rno;
```



```
SELECT    R.Rno, FName, LName, Pno, VComment  
FROM      Renter R JOIN Viewing V ON R.Rno = V.Rno;
```

Recursive Join (join Back the same table)

Staff1 : Table

	Sno	FName	LName	Position	Bno	MGR_Sno
	SA12	Eric	Heng	Manager	B7	
	SA9	Mary	Howe	Assistant	B7	SA12
	SG14	David	Ford	Deputy	B3	SG5
	SG23	Alex	Lim	Assistant	B3	SG5
	SG37	Ann	Beech	Snr Asst	B3	SG5
	SG5	Susan	Brand	Manager	B3	
	SL18	Esther	Goh	Snr Asst	B5	SL21
	SL21	John	White	Manager	B5	
	SL41	Julie	Lee	Assistant	B5	SL21
▶						

— • — • — • — • — • — • —

Outer Joins (include the unmatched data)

LEFT

RIGHT

Microsoft Access - [Branch1 : Table]

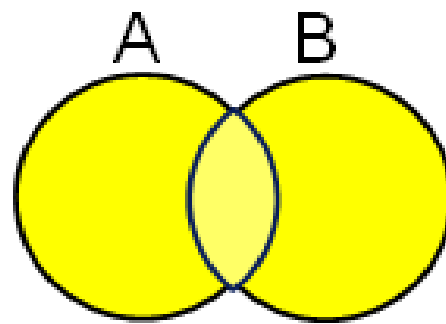
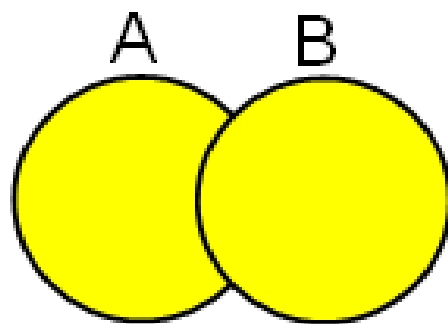
	Bno	City
	B2	London
	B3	Glasgow
	B4	Bristol
	B5	London
	B7	Aberdeen

Microsoft Access - [Property_For_Rent1 : Table]

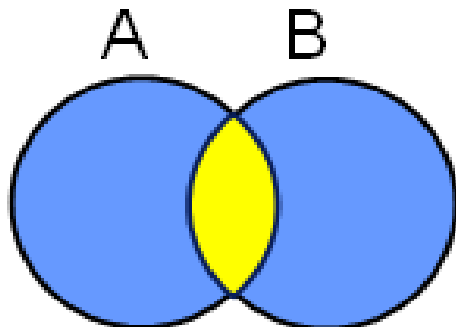
	Pno	City	Bno
	PA10	Aberdeen	B1
	PA14	Aberdeen	B7
	PA9	Aberdeen	B6
	PG16	Glasgow	B3
	PG21	Glasgow	B3
	PG36	Glasgow	B3
	PG4	Glasgow	B3
	PL94	London	B5

FULL = LEFT + RIGHT

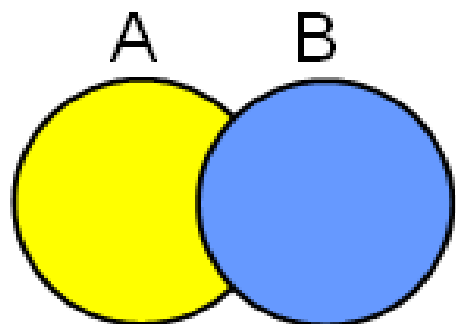
SET OPERATORS:



UNION (eliminate
duplicate) / UNION ALL
(A + B)



INTERSECT (In A and B)



MINUS (In A but Not In B)