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An important technique is to use nested queries in the FROM clause. This helps solve queries that require an intermediate table to be generated before the final solution can be formulated.

FROM (select from where) as T -- define a new table using a nested query and name it T
WHERE T -- here you can refer to T's attributes

Example 1: exercise 3.21, problem 3.

E – emp(empno, name, office, age)

B – books(isbn, ..., publisher)

L – loan(empno, isbn, date)

E >< L >< B

e	l	b	pub
e1		b5	p1
e2		b2	p2
e3		b1	p1
e5		b1	p2

T (eno, name, count, pub)

Emp >< department select avg(sal)

	sal
d1	55k
d2	56k

See the homework 2 solutions for the SQL query

Example 2 Q. Return the min of departmental avg salary

MIN(AVG(salary)) will not work since SQL does not allow nested aggregates.

Solution: first define a table that shows all departmental avg salaries, then select the min from this table.

Things to read

1. Security in SQL
 - a. GRANT _____ ON _____ TO _____
2. Active Queries
 - a. Triggers
3. Views in SQL

A new conceptual table can be formed by putting attributes from different database tables (T1, T2, T3) into a new schema:

T1A1	T1A2	T2A1					
...					
...					
T1							
	A1	A2	A3	A4	A5

T2							
	A1	A2	A3	A4	A5

T3							
	A1	A2	A3	A4	A5

View is a higher level abstraction of the DB
 View is a virtual table
 View is the result of some query

View maintenance

1. Keep it as virtual
2. View materialization

Example: to build a view that captures information from part of the players table and regularseason table:

```
create view myplayerlist(firstname, lastname, feet, weight, pts, reb) as  
(select P.firstname, P.lastname, P.h_feet, P.weight, avg(pts), avg(reb)  
from system.players P, system.playerregularseason PR  
where P.ilkid = PR.ilkid  
group by P.ilkid, P.firstname, P.lastname, P.h_feet, P.weight)
```

Oracle 10 doesn't use EXCEPT

Procedural language by DBMS vendors

PL/SQL Oracle

“IS” may be “AS” – FOR PROJECT USE*****