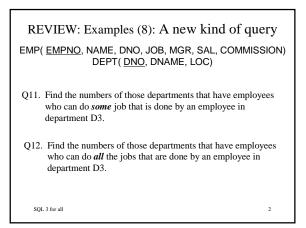


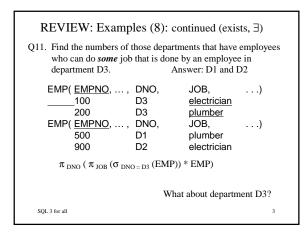
• Went through major standardizations which led to its wide acceptance

- SQL-86 (SQL)

- Queries, basic definitions & manipulation
- SQL-89
 - Referential integrity
- SQL-92
 - Revised & Expanded
- SQL-99
 - Archive rules & triggers, some recursive operations (!), objectoriented features

SQL 3 for all

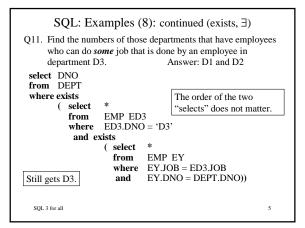




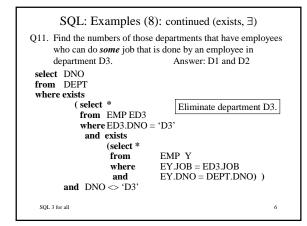


Q12. Find the numbers o	f those dep	continued (for all, \forall) partments that have employees re done by an employee in
department D3.		Answer: D1, but not D2
EMP(<u>EMPNO</u> ,	, DNO,	JOB,)
100	D3	electrician
200	D3	plumber
300	D3	electrician
400	D1	electrician
500	D1	<u>plumber</u>
600	D1	carpenter
700	D2	electrician
800	D2	carpenter
900	D2	electrician
SQL 3 for all		4

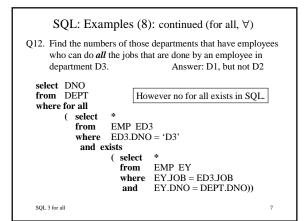














The trick from logic.

For all X there exists a Y such that P(X,Y) is true. is equivalent to There does not exist an X for which there does not exist a Y such that P(X,Y) is true.

8

 $\forall X \exists Y \text{ such that } P(X,Y)$ is equivalent to $\neg \exists X \neg \exists Y \text{ such that } P(X,Y)$

SQL 3 for all

SQL: Examp	les (8)): continued (for all, \forall)		
-		departments that have employ at are done by an employee in Answer: D1, but not D2	ees	
select DNO from DEPT where not exists		However no for all exists in SQL. Use two not exists.		
from El where El	* EMP ED3 ED3.DNO = 'D3'			
and not e	select from where	EY.JOB = ED3.JOB		
SQL 3 for all	and	EY.DNO = DEPT.DNO))	9	



