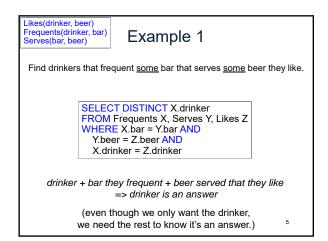
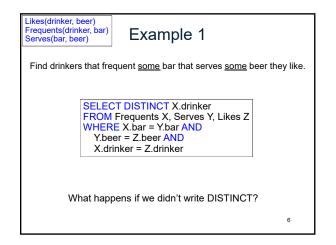


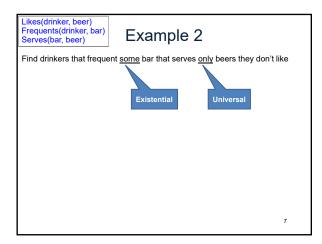
Examples of Complex Queries

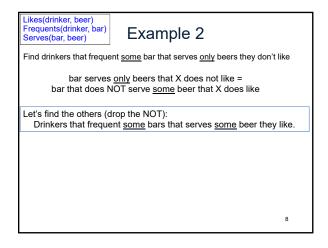
Likes(drinker, beer) Frequents(drinker, bar) Serves(bar, beer)

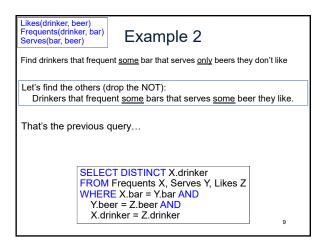
- 1. Find drinkers that frequent some bar that serves some beer they like.
- 2. Find drinkers that frequent some bar that serves only beers they don't like.
- 3. Find drinkers that frequent only bars that serves some beer they like.

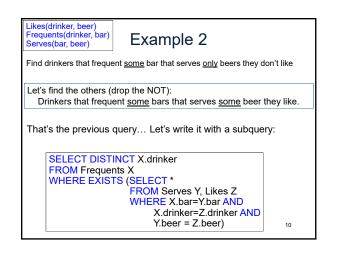


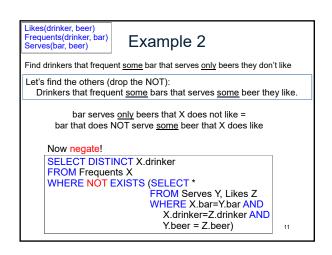


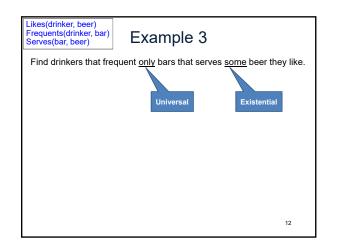


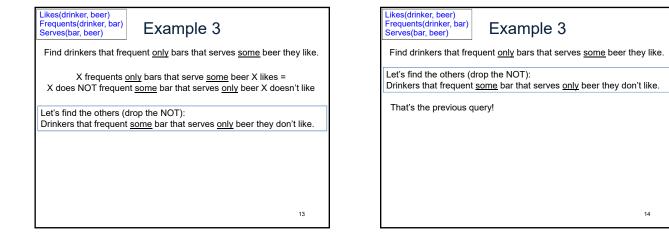


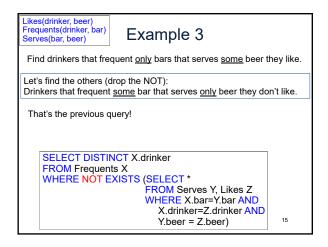


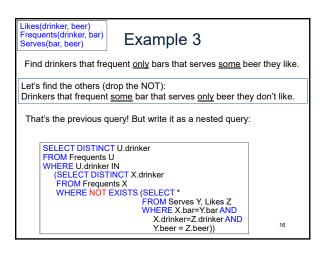


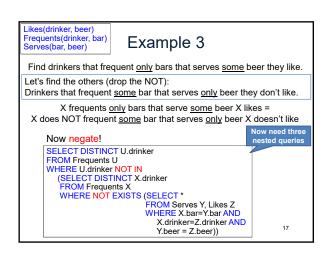


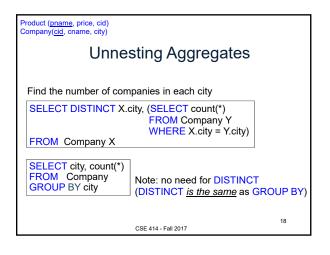












Product (<u>pname</u> , price, cid) Company(<u>cid</u> , cname, city)	
Unnesting Aggregates	
Find the number of companies in each city	
SELECT DISTINCT X.city, (SELECT count(*) FROM Company Y WHERE X.city = Y.city)	
FROM Company X	J
SELECT city, count(*) FROM Company GROUP BY city	3
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Product (<u>pname</u> , price, cid) Company(<u>cid</u> , cname, city)		
Unnesting Aggregates		
Find the number of companies in each city		
SELECT DISTINCT X.c	ity, (SELECT count(*) FROM Company Y WHERE X.city = Y.city)	
FROM Company X		
SELECT city, count(*) FROM Company GROUP BY city	Wait are they equivalent?	
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