SQL Exercises

1. Provide SQL queries for the following on the parts-supplier-shipments database whose schema is in the lecture notes.

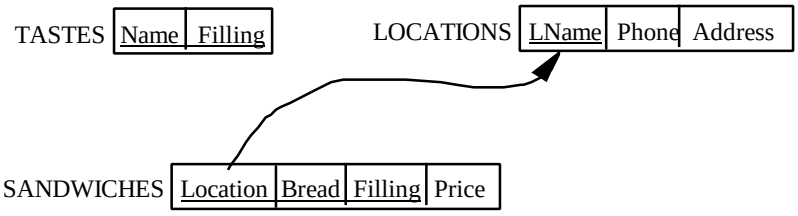
   (a) names of suppliers who supply part P2

   (b) names of suppliers who supply at least one red part

   (c) names of suppliers who supply all parts

   (d) names of suppliers who do not supply part P2

2. Consider the following relational database schema. It is intended to represent who will eat what kinds of sandwiches and the places which serve the various kinds of sandwiches. A sample database instance is also given.



TASTES	NAME	FILLING
	Brown	Turkey
	Brown	Beef
	Brown	Ham
	Jones	Cheese
	Green	Beef
	Green	Turkey
	Green	Cheese

SANDWICHES	LOCATION	BREAD	FILLING	PRICE
	Lincoln	Rye	Ham	1.25
	O'Neill's	White	Cheese	1.20
	O'Neill's	Whole	Ham	1.25
	Old Nag	Rye	Beef	1.35
	Buttery	White	Cheese	1.00
	O'Neill's	White	Turkey	1.35
	Buttery	White	Ham	1.10
	Lincoln	Rye	Beef	1.35
	Lincoln	White	Ham	1.30
	Old Nag	Rye	Ham	1.40

LOCATIONS	LNAME	PHONE	ADDRESS
	Lincoln	683 4523	Lincoln Place
	O'Neill's	674 2134	Pearse St
	Old Nag	767 8132	Dame St
	Buttery	702 3421	College St

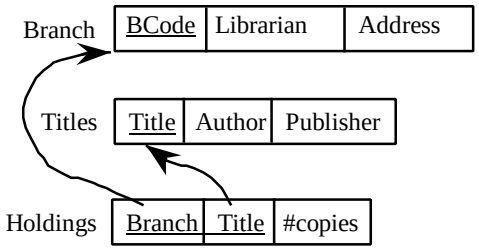
Write SQL statements to retrieve the following information:

(i) places where Jones can eat (using a nested subquery).

(ii) places where Jones can eat (without using a nested subquery).

(ii) for each location the number of people who can eat there.

3. Consider the following relational database schema. It is intended to represent the holdings of a multi-branch library. A sample database instance is also given.



BCode	Librarian	Address
B1	John Smith	2 Anglesea Rd
B2	Mary Jones	34 Pearse St
B3	Francis Owens	Grange X

Title	Author	Publisher
Susannah	Ann Brown	Macmillan
How to Fish	Amy Fly	Stop Press
A History of Dublin	David Little	Wiley
Computers	Blaise Pascal	Applewoods
The Wife	Ann Brown	Macmillan

Branch	Title	#copies
B1	Susannah	3
B1	How to	2
B1	A hist	1
B2	How to	4
B2	Computers	2
B2	The Wife	3
B3	A hist ..	1
B3	Computers	4
B3	Susannah	3
B3	The Wife	1

Write SQL statements to retrieve the following information:

(i) the names of all library books published by Macmillan.

(ii) branches that hold any books by Ann Brown (using a nested subquery).

(iii) branches that hold any books by Ann Brown (without using a nested subquery).

(iv) the total number of books held at each branch.