COMP 3090 - Database I Student: Phong Vo HOME WORK#2 2/2 ID: 01790283 Exercise 2.4.1 (p.52) a) What PC models have a speed of at least 3.00? The ode (Speed > 3.00 (PC)) **SELECT model** Result: model FROM pc WHERE speed \geq 3.00; 1005 1006 1013 b) which manufacturers make laptops with a hard disk of at least 100GB? Maker (Enoduct) on of (Laptop)) Result: maker **SELECT** maker **FROM** product WHERE model IN (SELECT model FROM laptop WHERE hd >= 100);

Product(maker, model, type)
PC(model, speed, ram, hd, price)
Laptop(model, speed, ram, hd, screen, price)
Printer(model, color, type, price)

c) Find the model number and price of all products (of any type made by manufactures B.

Result := R, U R2 UR3

model	price
1004	6 49
1005	630
1006	1049
2007	1429

Product(maker, model, type)
PC(model, speed, ram, hd, price)
Laptop(model, speed, ram, hd, screen, price)
Printer(model, color, type, price)

d) Find the model numbers of all colon laxer printers

Result:

SELECT model FROM printer WHERE (color=1 AND type='laser');

e) Find those manufacturers that sell Laptop, but not PCs

Result:

maker	
F	
G	

SELECT DISTINCT maker
FROM product
WHERE type='laptop' AND maker NOT IN
(SELECT maker
FROM product
WHERE type='pc');

f) Find those hard disk sizes that occur in two or more PCs

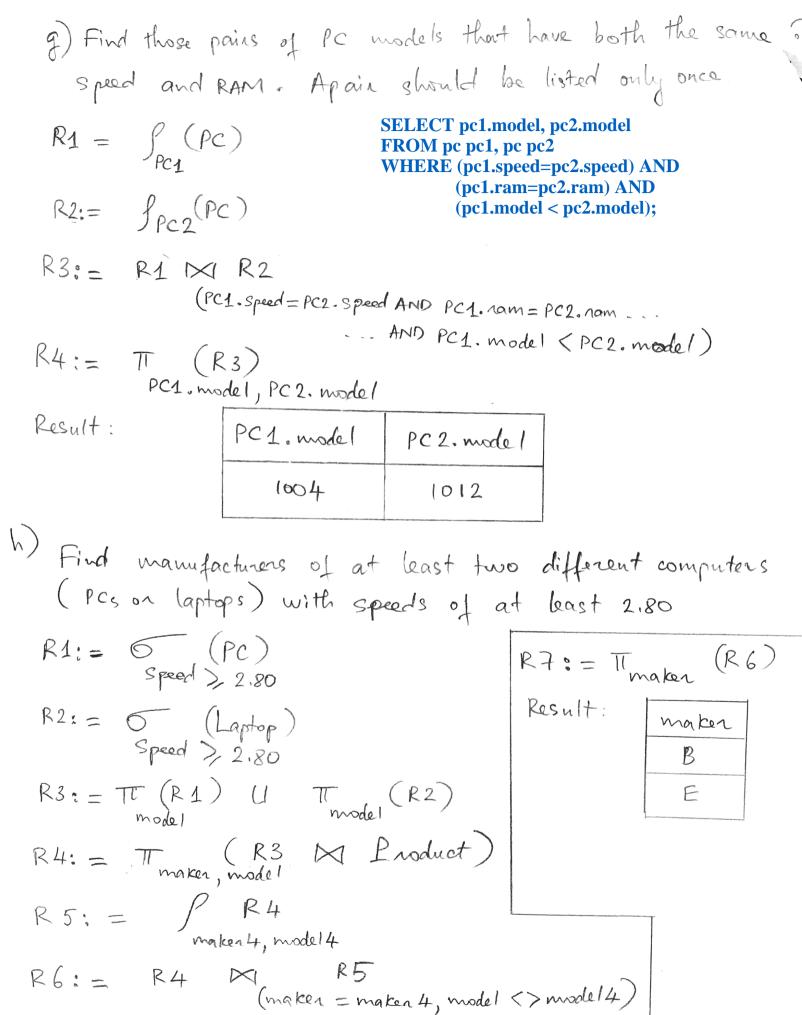
$$R1 := \int_{PC1} (PC)$$
 $R_2 := \int_{PC_2} (PC)$

$$R_4 := \pi_{hd} \left(R_3 \right)$$

Result: 250

SELECT DISTINCT pc1.hd FROM pc pc1, pc pc2

WHERE pc1.model <> pc2.model AND pc1.hd=pc2.hd;



i) Find the manufacturers of the computer (PC or laptop) with the highest available speed. R1:= TT (PC) U TT (Laptop)
model, speed R2 := (R1)model 2, speed 2 $R3:=R1 \bowtie R2$ (Speed (Speed2) R4:= TT (R3) // R4 contains the slower speed mode's R5: = R1-R4 // R5 contains the fastest speed models R6:= Tmaker (R5 × Product) Result:

SELECT DISTINCT maker

FROM product

WHERE model IN (SELECT model

FROM pc

WHERE speed >= ALL(SELECT speed FROM pc));

Product(maker, model, type)
PC(model, speed, ram, hd, price)
Laptop(model, speed, ram, hd, screen, price)
Printer(model, color, type, price)