Database System

Homework SQL

Write the following queries in SQL (You don't need to show the results). They refer to the following database schema:

Product(maker, <u>model</u>, type)

PC(<u>model</u>, speed, ram, hd, rd, price)

Laptop(<u>model</u>, speed, ram, hd, screen, price)

Printer(<u>model</u>, color, type, price)　color printer 的 color 屬性記錄"Yes", 否則記錄"No"

1.

a) Find the model number, speed, and hard-disk size for all PC's whose price is under $1200 and rename the speed column as *mehahertz* and the hd column as *gigabytes*.

b) Find the manufactures of printers.

c) Find all the tuples in the Printer relation for color printers.

d) Give the manufacturer and speed of laptops with a hard disk of at least 30 gigabytes.

e) Find those pairs of PC models that have both the same speed and RAM. A pair should be listed only once; e.g., list (I, j) nut not (j, i).

f) Find those manufacturers that occur in two or more PCs.

g) Find the average speed of laptops costing over $2500.

h) Find the average price of PCs made by manufacturer "D."

i) Find the manufacturers that make at least three models of PC

2. For questions a) to d), you should use at least one subquery in each of your answers (e.g., using operators IN, ALL, and SOME).

a) Find the all the attributes of printers with the highest price.

b) Find the laptop models whose speeds are slower than at least on PC.

c) Find the maker which produces the PC with the fastest processor and with the smallest amount of RAM among all PCs.

d) Find the average hard disk size of the PC whose maker also produces printers.