CS386D Database Systems
HW1 Solutions

This is a list of possible queries. Other queries may work as well for the required output.

2.4.1 (b). Which manufacturers make laptops with a hard disk of at least 100GB?

SELECT maker FROM Product
WHERE type = 'laptop' AND model IN (select L.model from Laptop as L where L.hd>= 100)

2.4.1 (e). Find those manufacturers that sell Laptops, but not PC's.

SELECT Product.maker FROM Product WHERE Product.type ='laptop'
EXCEPT
SELECT Product.maker FROM Product WHERE Product.type ='pc'

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

SELECT p1.model, p2.model FROM PC p1, PC p2
WHERE p1.speed = p2.speed
AND p1.ram = p2.ram
AND p1.model<p2.model

2.4.1 (i). Find the manufacturer(s) of the computer (PC or laptop) with the highest available speed.

WITH temp AS (SELECT max(speed) as s, model FROM PC GROUP BY model UNION SELECT max(speed) as a, model FROM Laptop GROUP BY model)
SELECT maker FROM Product where model IN
(SELECT model FROM temp WHERE temp.s = (SELECT max(temp.s) FROM temp))

Note: The query for returning models of highest speeds should take into account ties for top the spot. Sorting and fetching the top row will not always work.