

CS 457 / 657

Homework 4 Questions

*For each item below, provide the complete SQL query and the results for the data provided in Homework 3.

1. **(20pts) Exercise 6.3.1:** This exercise builds upon the products schema of Exercise 2.4.1. Recall that the database schema consists of four relations, whose schemas are:

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

You should use at least one subquery in each of your answers.

- Find the makers of PCs with a speed of at least 3.0.
- Find the printers with the highest price.
- Find the laptops whose speed is slower than that of any PC.
- Find the model number of the item (PC, laptop, or printer) with the highest price.
- Find the maker of the color printer with the lowest price.
- Find the maker(s) of the PC(s) with the fastest processor among all those PC's that have the smallest amount of RAM.

2. **(20pts) Exercise 6.4.6:** This exercise builds upon the products schema of Exercise 2.4.1. Recall that the database schema consists of four relations, whose schemas are:

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

You should use at least one subquery in each of your answers.

- Find the average speed of PCs.
- Find the average speed of laptops costing over \$1000.
- Find the average price of PC's made by manufacturer "A."
- Find the average price of PC's and laptops made by manufacturer "D."
- Find, for each different speed, the average price of a PC.
- Find for each manufacturer, the average screen size of its laptops.
- Find the manufacturers that make at least three different models of PC.
- Find for each manufacturer who sells PC's the maximum price of a PC.
- Find, for each speed of PC above 2.0, the average price.
- Find the average hard disk size of a PC for all those manufacturers that make printers.