

CE 223 - DATABASE SYSTEMS

WEEK #8 RECITATION QUESTIONS

- 6.4.6
- 6.5.1

6.4.6

Exercise 6.4.6: Write the following queries, based on the database schema

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

of Exercise 2.4.1, and evaluate your queries using the data of that exercise.

- a) Find the average speed of PC's.
- b) Find the average speed of laptops costing over \$1000.
- c) Find the average price of PC's made by manufacturer "A."
- ! d) Find the average price of PC's and laptops made by manufacturer "D."
- e) Find, for each different speed, the average price of a PC.

6.4.6 (cont'd)

Exercise 6.4.6: Write the following queries, based on the database schema

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

of Exercise 2.4.1, and evaluate your queries using the data of that exercise.

- ! f) Find for each manufacturer, the average screen size of its laptops.
- ! g) Find the manufacturers that make at least three different models of PC.
- ! h) Find for each manufacturer who sells PC's the maximum price of a PC.
- ! i) Find, for each speed of PC above 2.0, the average price.
- !! j) Find the average hard disk size of a PC for all those manufacturers that make printers.

6.5.1

Exercise 6.5.1: Write the following database modifications, based on the database schema

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

of Exercise 2.4.1. Describe the effect of the modifications on the data of that exercise.

- a) Using two INSERT statements, store in the database the fact that PC model 1100 is made by manufacturer C, has speed 3.2, RAM 1024, hard disk 180, and sells for \$2499.
- ! b) Insert the facts that for every PC there is a laptop with the same manufacturer, speed, RAM, and hard disk, a 17-inch screen, a model number 1100 greater, and a price \$500 more.
- c) Delete all PC's with less than 100 gigabytes of hard disk.
- d) Delete all laptops made by a manufacturer that doesn't make printers.

6.5.1 (cont'd)

Exercise 6.5.1: Write the following database modifications, based on the database schema

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

of Exercise 2.4.1. Describe the effect of the modifications on the data of that exercise.

- e) Manufacturer A buys manufacturer B. Change all products made by B so they are now made by A.
- f) For each PC, double the amount of RAM and add 60 gigabytes to the amount of hard disk. (Remember that several attributes can be changed by one UPDATE statement.)
- ! g) For each laptop made by manufacturer B, add one inch to the screen size and subtract \$100 from the price.