**California State University, Fresno – Fall 2013**

**Computer Science 226, Advanced Database Systems (3 units)**

**Assignment #3: Queries**

**Due:** 10/10

**Value:** 25 points

This assignment will consist of creating a bunch of queries within a single file: assign.3.sql

Upload this file to your GitHub account and send me an email with a pointer to your GitHub repository and let me know that you’ve completed the assignment.

All of the queries will use the schema in the Computer.sql file in the class GitHub repository (everestso).

Each assignment element must ‘outfile’ the query. Each assignment will provide the file name for the query. The code used to outfile a query is:

SELECT \* FROM *table*

INTO OUTFILE '/tmp/NAME.csv’

FIELDS TERMINATED BY ','

ENCLOSED BY '"'

LINES TERMINATED BY '\n'

;

Note that these queries are all taken from Chapter 6 of our textbook. The question number for the text book is given for each part of the assignment for reference.

You will then share your solution file with two classmates who will peer evaluate your queries.

**Part 1 : Question 6.1.3** (5 points) 🡪 OUTFILE = ‘assign.3.1.{a,b,c,d,e,f}.csv’

1. Find the model number, speed, and hard-disk size for all PC’s whose price is under $1000.00.
2. Do the same as (a), but rename the speed column ‘gigahertz’ and the hd column ‘gigabytes’.
3. Find the manufacturers of printers.
4. Find the model number, memory size, and screen size for laptops costing more than $1000.00.
5. Find all the tuples in the Printer relation for color printers. Remember that color is a Boolean-valued attribute.
6. Find the model number and hard-disk size for those PC’s that have a speed of 3.2 and a price less than $2000.00

**Part 2 : Question 6.2.2** (5 points) 🡪 OUTFILE = ‘assign3.2..{a,b,c,d,e,f}.csv’

1. Give the manufacturer and speed of laptops with a hard disk of at least thirty gigabytes.
2. Find the model number and price of all products (of any type) made by manufacturer B.
3. Find those manufacturers that sell Laptops, but not PC’s.
4. Find those hard-disk sizes that occur in two or more PC’s.
5. 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) but not (j,i).
6. Find those manufacturers of at least two different computers (PC’s or laptops) with speeds of at least 3.0.

**Part 3 : Question 6.3.1** (5 points) OUTFILE 🡪 ‘assign.3.3..{a,b,c,d,e,f}..csv’

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

Part 4 : Question 6.4.6 (5 points) OUTFILE 🡪 ‘assign.3.4..{a,…,j}.csv’

1. Find the average speed of PC’s.
2. Find the average speed of laptops costing over $1000.00.
3. Find the average price of PC’s make by manufacturer ‘A’.
4. Find the average price of PC’s and laptops made by manufacturer ‘B’.
5. Find, for each different speed, the average price of a PC.
6. Find for each manufacturer, the average screen size of its laptops.
7. Find the manufacturers that make at least three different models of PC.
8. Find for each manufacturer who sells PC’s the maximum price of a PC.
9. Find, for each speed of PC above 2.0, the average price.
10. Find the average hard disk size of a PC for all those manufactures that make printers.

Part 5 : Question 6.5.1 (5 points) OUTFILE 🡪 ‘assign.3.5..{a,b,c,d,e,f,g,h,I,j}.csv’

1. Using two INSERT statements, store in the database the fact that PC model 1100 is made by manufacturer C, has a speed of 3.2, RAM 1024, hard disk 180, and sells for $2400.00.
2. 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 100 greater, and a price $500.00 more.
3. Delete all PC’s with less than 100 gigabytes of hard disk.
4. Delete all laptops made by a manufacturer that doesn’t make printers.
5. Manufacturer A buys manufacturer B. Change all products made by B so they are now made by A.
6. For each PC, double the amount of RAM and add 60 gigabytes to the amount of hard disk. (Remember that several attributes can by changed by one UPDATE statement).
7. For each laptop made by manufacturer B, add one inch to the screen size and subtract $100.00 from the price.