**Week 5 Homework: Recursive Relationships**

The following practice may need to be completed using the databases hosted on wmc3317-2 using WB. Use WB whether you are running queries or creating a relational schema (a data model, essentially). Submit homework as a SQL script file. To mark the answers I will copy+paste the SQL script into my WB and execute the code. You could even write essay answers in an MS Word file or the SQL script itself – or in a separate MS Word/PDF file. If there is any dirty data, clean it by making reasonable assumptions.

**Database: ‘employees’. Copy/paste your answers to the queries below after testing that they work. See the Appendix next page for further instructions.**

1. Find employee (pairs) who have been posted in the same department at the same time (with atleast 1 day of overlap). (2 pts)
2. Find the supervisor (dept\_manager) who has had the most number of employees reporting to him/her (2 pts).
3. Identify three different queries that you would want to ask as a manager using the employees data (including the salaries table). *You do not need to write the actual queries – just the business context surrounding them. (*2 pts)

**Copy the necessary tables from ‘sakila’ database to db\_<yoursfuusername> database. Understand the data model by examining the referential integrity constraints. Copy/paste your answers to the queries below after testing that they work.**

1. Identify the movies that have never been rented. (2 pts)
2. Write a query that finds, for each customer, other customers who have rented atleast one movie in common with X. Order the results by the number of overlapping movies (2 pts).

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**Appendix**

If the Employees database is too big and keeps you waiting, try copying some of it to your db using the following:   
  
#################  
use db\_nsaraf;  
create table dept\_emp as  
select \* from employees.dept\_emp limit 0,2000;  
  
create table emp as  
select \* from employees.employees where emp\_no in (select distinct emp\_no from dept\_emp);  
  
create table dept as  
select \* from employees.departments where dept\_no in (select distinct dept\_no from dept\_emp);  
  
###############  
  
This code should let you see three new tables in db\_<yourdb> for Questions 1a and 1b. Note, however, that the FKs are not set among the new tables -- but that should not stop you from writing and running the queries on these tables.