The University of Chicago
Department of Computer Science

CMSC 15200 – Introduction to Computer Science 2
Summer Quarter 2007
Homework #9 (08/22/2007)
Due: 08/24/2007 @ 5:00pm

Name:

Student ID:

Instructor: Borja Sotomayor

Do not write in this area

1	2	TOTAL

Maximum possible points: 10+15

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Exercise 1 <<10 points + Extra Credit 5 points>>

Using the scientists database from Lab #5, write a Python program that prints out the name of each scientist, and the number of projects each scientist works on. The correct result is the following (your output does not need to look exactly like this):

```
SCI_Name                  Projects
-----------------------------------------------
Emmett Brown              3
Zefram Cochrane           3
Bruce Banner              2
Charles Francis Xavier    2
Eleanor Arroway           2
Henry McCoy               2
Mohinder Suresh           2
Reed Richards             2
Sam Beckett               2
Susan Calvin              2
Egon Spengler             1
Hari Seldon               1
Henry Jones Jr.           1
Ian Malcolm               1
Miles Bennett Dyson       1
Peter Venkman             1
Raymond Stantz            1
```

Extra Credit (5 points): Do the above in such a way that the SQL query returns the final results (i.e., don't compute the number of projects per scientist using Python; all that must be accomplished through SQL). Furthermore, the list must be sorted by number of projects (from most projects to least projects, as shown above). This requires SQL clauses we have not seen in class.

Exercise 1 <<Extra credit: 10 points>>

Write a Python program that prints the names of projects with more than one PI in them, along with the number of PIs. The correct result is the following (your output does not need to look exactly like this):

```
PROJ_Name                                                          PIs
-------------------------------------------------------------------------
Space Elevator                                                     2
Theoretical Foundations of Warp Drives                             2
Use of Dilithium Crystals to Regulate Matter/Antimatter reactions  2
```