

**CMSC 23500 Introduction to Database Systems  
Spring 2009 S. Salveter**

## **Homework 3**

**Electronic copy due Wednesday 22 April 2009 7:00 pm via hws submit**

**Hard copy due Thursday 23 April in class**

**Make sure to put your CS account name and your real name on your hard copy!**

All problems are from the text.

1. Exercise 6.30 page 218 parts b, c (\* is natural join), d, f and h.  
Only write the equivalent tuple calculus expression.
2. Exercise 6.32 page 219.
3. Exercise 8.13 page 290.  
Test your SQL queries against the SQLite database provided at  
<http://www.classes.cs.uchicago.edu/archive/2009/spring/23500-1/homework/hw3database.db>  
(Available by Friday afternoon.)  
This is the COMPANY database whose schema is given in Figure 5.5 page 157, and the instance shown in Figure 5.6 page 159.  
Submit an SQL file `exercise3.sql` with the solution to your exercises. The SQL code in the file must run correctly under SQLite. Your code will be tested like this:  

```
$ sqlite3 hw3database.db < exercise3.sql
```
4. Exercise 8.24 page 292 part d.  
Submit an SQL file `exercise4.sql` with the solution. The SQL code in the file must run correctly under SQLite. Your code will be tested like this:  

```
$ sqlite3 hw3database.db < exercise4.sql
```